

# Air Quality Construction Permit Application

## Form 4.0: Applicable Requirements

**FACILITY NAME:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
**DWEE Facility ID:** \_\_\_\_\_

### Section 4.3: Prevention of Significant Deterioration (PSD) Information

**IMPORTANT: READ THE INSTRUCTIONS ACCOMPANYING THIS SECTION**

Do NOT use pencil to fill out this application. Please type responses or use black ink.

Please check ☐ if a separate document is used as a replacement for this Section. Identify separate summary document with the title of this Section and attach to this form. Be sure to include all requested information.

**1) Is this source included as one of the listed 28 source categories?** ☐ Yes ☐ No

#### 2) Change in Potential to Emit

PSD Regulated Pollutants*	Pre-Project PTE (ton/year)	Post-Project PTE (ton/year)
Particulate Matter, PM		
PM equal to or less than 10 micrometers, PM <sub>10</sub>		
PM equal to or less than 2.5 micrometers, PM <sub>2.5</sub>		
Sulfur dioxide, SO <sub>2</sub>		
Nitrogen dioxide, NO <sub>2</sub>		
Carbon dioxide, CO		
Volatile Organic Compounds, VOC		
Elemental Lead, Pb		
Fluorides, Fl		
Sulfuric Acid Mist, H <sub>2</sub> SO <sub>4</sub>		
Total Reduced Sulfur Compounds, TRS		
Hydrogen Sulfide, H <sub>2</sub> S		
Greenhouse Gases (GHG's)		
Other: _____		

\*See instructions for additional pollutants regulated under the PSD program.

#### 3) Unit Information

List the Emissions Units whose Emissions will be affected by the Proposed Project:

Unit ID	Unit Description	Unit Status (date began operation)	Affected How:
		<input type="checkbox"/> New <input type="checkbox"/> Existing: _____	<input type="checkbox"/> Utilization <input type="checkbox"/> Physical Mod.
		<input type="checkbox"/> New <input type="checkbox"/> Existing: _____	<input type="checkbox"/> Utilization <input type="checkbox"/> Physical Mod.
		<input type="checkbox"/> New <input type="checkbox"/> Existing: _____	<input type="checkbox"/> Utilization <input type="checkbox"/> Physical Mod.
		<input type="checkbox"/> New <input type="checkbox"/> Existing: _____	<input type="checkbox"/> Utilization <input type="checkbox"/> Physical Mod.
		<input type="checkbox"/> New <input type="checkbox"/> Existing: _____	<input type="checkbox"/> Utilization <input type="checkbox"/> Physical Mod.
		<input type="checkbox"/> New <input type="checkbox"/> Existing: _____	<input type="checkbox"/> Utilization <input type="checkbox"/> Physical Mod.
		<input type="checkbox"/> New <input type="checkbox"/> Existing: _____	<input type="checkbox"/> Utilization <input type="checkbox"/> Physical Mod.
		<input type="checkbox"/> New <input type="checkbox"/> Existing: _____	<input type="checkbox"/> Utilization <input type="checkbox"/> Physical Mod.
		<input type="checkbox"/> New <input type="checkbox"/> Existing: _____	<input type="checkbox"/> Utilization <input type="checkbox"/> Physical Mod.

Note: See Instructions for Definitions of New and Existing Units

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**FACILITY NAME:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
**DWEE Facility ID:** \_\_\_\_\_

### Section 4.3: PSD Information (continued)

4) Determine Project Emissions Increase			
Regulated Pollutant being Analyzed:			
Baseline Actual Emissions (BAE) Time Period Selected:			
Unit ID	(A) BAE (ton/yr)	(B) <input type="checkbox"/> PTE or <input type="checkbox"/> Projected Annual Emissions (PAE) (ton/yr)	(B) – (A) (ton/yr)
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
<b>Total Project Emissions (ton/yr)</b>			
<b>Regulated Pollutant PSD Threshold (ton/yr)</b>			
Note: If a BAE was adjusted or PAE used, attach an additional page explaining the adjustment(s) and/or assumptions that were made.			
4) Determine Project Emissions Increase			
Regulated Pollutant being Analyzed:			
BAE Time Period Selected:			
Unit ID	(A) BAE (ton/yr)	(B) <input type="checkbox"/> PTE or <input type="checkbox"/> PAE (ton/yr)	(B) – (A) (ton/yr)
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
<b>Total Project Emissions (ton/yr)</b>			
<b>Regulated Pollutant PSD Threshold (ton/yr)</b>			
Note: If a BAE was adjusted, attach an additional page explaining the adjustment(s) that was made.			

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## Form 4.0: Applicable Requirements

FACILITY NAME: _____	DATE: _____
DWEE Facility ID: _____	

### Section 4.3: PSD Information (continued)

5) Determine Net Emissions Increase			
Regulated Pollutant being Analyzed: _____			
Projected date Construction will Commence: _____			
Projected date Operation will Commence: _____			
Unit ID	Date of Emissions Increase or Decrease	BAE Time Period Selected	
Unit ID	(A) BAE (ton/yr)	(B) <input type="checkbox"/> PTE or <input type="checkbox"/> PAE (ton/yr)	(B) – (A) (ton/yr)
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
	<input type="checkbox"/> Adjusted		
<b>Total NET Emissions (ton/yr)</b>			
<b>Regulated Pollutant PSD Threshold (ton/yr)</b>			
Note: If a BAE was adjusted, attach an additional page explaining the adjustment(s) that was made.			

- 6) Have all the decreases in emissions that were accounted for in the above netting calculation been previously made federally enforceable?    ☐ YES    ☐ NO
- 7) Have any of the emissions accounted for in the above netting calculation previously been permitted through another PSD permitting process?    ☐ YES    ☐ NO
- 8) If Demand Growth Exclusion was used to net out of PSD for the project, all demand growth exclusion documentation must be submitted to the Department with this PSD Notification.    ☐ Demand Growth Exclusion Information Attached.

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## Form 4.0: Applicable Requirements

FACILITY NAME: _____	DATE: _____
DWEE Facility ID: _____	

### Section 4.3: PSD Information (continued)

#### Plant-wide Applicability Limits

9) Are you interested in obtaining a Plant-wide Applicability Limit, also known as a PAL? ☐ YES ☐ NO

If YES, contact the Department in order to discuss the necessary information needed to establish the PAL(s).

#### Best Available Control Technology (BACT) - Chapter 4, Section 001

[Title 129, Chapter 4](#), Section 001 requires a new major stationary source or a major modification to apply BACT for each regulated new source review (NSR) pollutant for which there would be a significant net emissions increase at the source. BACT must be applied to each emissions unit that undergoes a physical change or change in method of operation that emits the pollutant for which there is a significant net emissions increase at the source.

10) Select each regulated NSR pollutant for which there will be a significant net emissions increase at the source as a result of the project (significance thresholds for each listed pollutant are in parenthesis).

- |  |  |
|--|--|
| <input type="checkbox"/> Particulate Matter, PM (25 tpy)<br><input type="checkbox"/> PM with aerodynamic diameter equal to or less than 10 micrometers, PM <sub>10</sub> (15 tpy)<br><input type="checkbox"/> PM with aerodynamic diameter equal to or less than 2.5 micrometers, PM <sub>2.5</sub> (10 tpy)<br><input type="checkbox"/> Nitrogen dioxide, NO <sub>2</sub> (40 tpy)<br><input type="checkbox"/> Sulfur dioxide, SO <sub>2</sub> (40 tpy)<br><input type="checkbox"/> Carbon dioxide, CO (100 tpy)<br><input type="checkbox"/> Volatile Organic Compounds, VOC (40 tpy)<br><input type="checkbox"/> Elemental Lead, Pb (0.6 tpy)<br><input type="checkbox"/> Fluorides (3 tpy)<br><input type="checkbox"/> Other: _____ | <input type="checkbox"/> Sulfuric Acid Mist, H <sub>2</sub> SO <sub>4</sub> (7 tpy)<br><input type="checkbox"/> Municipal Solid Waste Landfill Emissions, Non-Methane Organic Compounds (50 tpy)<br><input type="checkbox"/> Total Reduced Sulfur Compounds, TRS (10 tpy)<br><input type="checkbox"/> Hydrogen Sulfide, H <sub>2</sub> S (10 tpy)<br><input type="checkbox"/> Municipal Waste Combustor Acid Gases (40 tpy)<br><input type="checkbox"/> MWC Metals (15 tpy)<br><input type="checkbox"/> MWC Organics (3.5 x 10 <sup>-6</sup> tpy)<br><input type="checkbox"/> Ozone Depleting Substances, ODS (Any increase)<br><input type="checkbox"/> Greenhouse Gases, GHGs (75,000 tpy CO <sub>2</sub> e and 100 tpy by mass) |
|--|--|

For each of the pollutants selected above, a best available control technology (BACT) analysis must be conducted for each emission unit that is emitting that pollutant if that unit is being physically modified or undergoing a change in method of operation. A BACT analysis must be submitted to the Department as an attachment to this permit application. Contact the Department if help is needed determining the information that should be submitted for the BACT analysis and be sure to review the guidance document available on the Department's website.

☐ Best Available Control Technology Analysis and Determination for each pollutant selected above is attached.

#### Ambient Air Impact Analysis – Chapter 4, Section 001

[Title 129, Chapter 4](#), Section 001 requires the owner or operator of the proposed source or modification to demonstrate that the allowable emission increases from the proposed source or modification will not cause or contribute to air pollution in violation of any ambient air quality standard or increment. Please consult the “PSD and Minor Source Modeling” guidance document for information on PSD modeling. This document can be found on the Department's website ([DWEE.AirQuality@nebraska.gov](mailto:DWEE.AirQuality@nebraska.gov)). The guidance document also contains information on the proper procedure for conducting and submitting modeling to the Department. Contact the Department if there are any questions on whether or not modeling is required. Form 2.0 must be completed as appropriate.

☐ An Air Dispersion Modeling Protocol has been approved by the Department and is attached.

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## Form 4.0: Applicable Requirements

<b>FACILITY NAME:</b> _____	<b>DATE:</b> _____
<b>DWEE Facility ID:</b> _____	

### Section 4.3: PSD Information (continued)

#### Pre-application Ambient Air Quality Analysis – Chapter 4, Section 001

Title 129, Chapter 4, Section 001 requires a source needing to obtain a PSD construction permit to conduct an analysis of the ambient air quality in the area where the major stationary source or major modification will occur for and the pollutants for which the source will have the potential to emit the pollutant in excess of the significance threshold or for which there will be a significant net emissions increase as a result of the major modification. If a pre-application analysis is necessary, you may request to utilize pre-existing ambient air quality data if the data is representative of the air quality where the major source is/will be located. Refer to USEPA document EPA-450/4-87-007 titled “*Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)*” for guidance on the use of representative air quality data.

#### Additional Impact Analysis - Chapter 4, Section 001

Title 129, Chapter 4, Section 001 requires the owner or operator to provide an analysis of the impairment to visibility, soils, and vegetation that would occur as a result of the source or modification as well as general commercial, residential, industrial, and other growth associated with the source or major modification.

☐ Additional Impact Analysis is attached.