



Phase II NO_x Averaging Plan

For more information, see instructions and refer to 40 CFR 76.11

This submission is: New Revised Acid Rain Permit Renewal

STEP 1

Identify the units participating in this averaging plan by plant name, State, and boiler ID# from NADB. In column (a), fill in each unit's applicable emission limitation from 40 CFR 76.5, 76.6, or 76.7. In column (b), assign an alternative contemporaneous annual emissions limitation (ACEL) in lb/mmBtu to each unit. In column (c), assign an annual heat input limitation in mmBtu to each unit. Continue to page 3 if necessary.

| Plant Name | State | ID# | (a) Emission Limitation | (b) ACEL | (c) Annual Heat Input Limit |
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STEP 2

Use the formula to enter the Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan and the Btu-weighted annual average emission rate for the same units if they are operated in compliance with 40 CFR 76.5, 76.6, or 76.7. The former must be less than or equal to the latter.

Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan

Btu-weighted annual average emission rate for same units operated in compliance with 40 CFR 76.5, 76.6 or 76.7

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$$\frac{\sum_{i=1}^n (R_{Li} \times HI_i)}{\sum_{i=1}^n HI_i}$$

$$\frac{\sum_{i=1}^n [R_{1i} \times HI_i]}{\sum_{i=1}^n HI_i}$$

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Where,

- R_{Li} = Alternative contemporaneous annual emission limitation for unit i, in lb/mmBtu, as specified in column (b) of Step 1;
- R_{1i} = Applicable emission limitation for unit i, in lb/mmBtu, as specified in column (a) of Step 1;
- HI_i = Annual heat input for unit i, in mmBtu, as specified in column (c) of Step 1;
- n = Number of units in the averaging plan

Plant Name (from Step 1)

STEP 3

Mark one of the two options and enter dates.

This plan is effective for calendar year _____ through calendar year _____ unless notification to terminate the plan is given.

Treat this plan as identical plans, each effective for one calendar year for the following calendar years: _____, _____, _____, _____ and _____ unless notification to terminate one or more of these plans is given.

STEP 4

Read the special provisions and certification, enter the name of the designated representative, and sign and date.

Special Provisions

Emission Limitations

Each affected unit in an approved averaging plan is in compliance with the Acid Rain emission limitation for NO_x under the plan only if the following requirements are met:

- (i) For each unit, the unit's actual annual average emission rate for the calendar year, in lb/mmBtu, is less than or equal to its alternative contemporaneous annual emission limitation in the averaging plan, and
 - (a) For each unit with an alternative contemporaneous emission limitation less stringent than the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7, the actual annual heat input for the calendar year does not exceed the annual heat input limit in the averaging plan,
 - (b) For each unit with an alternative contemporaneous emission limitation more stringent than the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7, the actual annual heat input for the calendar year is not less than the annual heat input limit in the averaging plan, or
 - (ii) If one or more of the units does not meet the requirements of (i), the designated representative shall demonstrate, in accordance with 40 CFR 76.11(d)(1)(ii)(A) and (B), that the actual Btu-weighted annual average emission rate for the units in the plan is less than or equal to the Btu-weighted annual average rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations in 40 CFR 76.5, 76.6, or 76.7.
 - (iii) If there is a successful group showing of compliance under 40 CFR 76.11(d)(1)(ii)(A) and (B) for a calendar year, then all units in the averaging plan shall be deemed to be in compliance for that year with their alternative contemporaneous emission limitations and annual heat input limits under (i).

Liability

The owners and operators of a unit governed by an approved averaging plan shall be liable for any violation of the plan or this section at that unit or any other unit in the plan, including liability for fulfilling the obligations specified in part 77 of this chapter and sections 113 and 411 of the Act.

Termination

The designated representative may submit a notification to terminate an approved averaging plan, in accordance with 40 CFR 72.40(d), no later than October 1 of the calendar year for which the plan is to be terminated.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

| | |
|-----------|------|
| Name | |
| Signature | Date |



Acid Rain Program

Instructions for Phase II NO_x Compliance Plan (40 CFR 76.9)

The U.S. Environmental Protection Agency has promulgated regulations designed to substantially reduce the annual emissions of nitrogen oxides (NO_x) from coal-fired electric utilities. The NO_x Emission Reduction regulations are found at 40 CFR part 76 and apply to each existing coal-fired utility unit that is subject to sulfur dioxide (SO₂) emission reduction requirements under Sections 404, 405, or 409 of the Clean Air Act. Under 40 CFR 76.9, the owner or operator of each affected unit subject to 40 CFR part 76 must include a compliance plan for NO_x emissions in the Acid Rain permit application for that unit. The designated representatives (DRs) of Phase I and Phase II NO_x-affected units with Group 1 or Group 2 boilers must submit an initial Phase II NO_x compliance plan to the North Dakota Department of Health, Division of Air Quality not later than **January 1, 1998**. A Group 1 boiler is a tangentially fired boiler or a dry bottom wall-fired boiler. A Group 2 boiler is a cell burner boiler, cyclone boiler, vertically fired boiler, or a wet bottom boiler. Once the North Dakota Department of Health, Division of Air Quality receives the Phase II NO_x compliance plans, it will in turn review them and incorporate approved plans into the Phase II Acid Rain permits issued by the North Dakota Department of Health, Division of Air Quality to Phase II affected sources.

General Instructions

- (1) Please type or print in black ink.
- (2) NADB is the National Allowance Data Base for the Acid Rain Program. To obtain the database on diskette, call the Acid Rain Hotline at (202) 343-9620. This data file is in dBase format for use on an IBM-compatible PC. It requires 2 megabytes of hard drive memory. If the unit is not listed in NADB, use the plant name, ORIS code, and boiler ID#(s) listed on the Certificate of Representation for the affected source.
- (3) If more space is needed, photocopy the pertinent page. When you have completed the form, indicate the page order and total number of pages (*e.g.*, 1 of 4, 2 of 4, etc.) in the boxes in the upper right hand corner of each page.
- (4) Submit one complete set of all forms with **original** signatures to:
 - (a) North Dakota Department of Health
Division of Air Quality
918 E Divide, 2nd Floor
Bismarck, ND 58501-1947

and

One **copy** to:

 - (b) U.S. Environmental Protection Agency
Clean Air Markets Division (6204J)
Attn: Phase II NO_x
1200 Pennsylvania Ave., NW
Washington, DC 20460
- (5) For assistance, call the Acid Rain Hotline at (202) 343-9620 or the North Dakota Department of Health, Division of Air Quality at (701)328-5188.

NO_x Compliance Options

STEP 2

General

Indicate a proposed method of compliance with the NO_x emissions requirements for each unit at the source affected for NO_x during Phase II. A Phase II NO_x compliance plan must account for each year the Phase II acid rain permit will be effective. Further, a NO_x compliance plan is in effect only through the term of the acid rain permit covering the NO_x-affected units. **A new NO_x compliance plan must be submitted when an acid rain permit renewal application is due.**

NO_x-affected Units

To determine if an affected unit subject to Acid Rain SO₂ requirements is also subject to NO_x emission limitations, see 40 CFR 76.1, the definitions at 40 CFR 76.2, and the emission limitations at 40 CFR 76.5, 76.6, and 76.7. Most existing coal-fired units that are subject to Acid Rain SO₂ requirements and that have a Group 1 or Group 2 boiler are also subject to the NO_x emission limitations under 40 CFR part 76.

Phase I Group 1 Boilers

Compliance options (a) and (b) are standard annual emission limitations, one of which may be selected for a Phase I Group 1 boiler. The limits also apply to Phase II Group 1 boilers that are covered by an early election plan previously approved by U.S. EPA.

Early Election

Compliance option (c), NO_x early election, is available only to Phase II Group 1 boilers with early election plans submitted by January 1, 1997 and approved by U.S. EPA. All such plans terminate no later than December 31, 2007. DRs with NO_x early election units must select option (c) and either (a) or (b), the Phase I Group 1 standard emissions limit specified for the unit in the plan. If the termination date of the plan will be prior to the expiration date of the acid rain permit covering an early election unit, the DR must indicate an additional NO_x compliance option that will apply to the unit beginning when the plan terminates through the date by which the acid rain permit will expire. In such cases the DR must mark option (c) and either (a) or (b), as well as the additional box(es) denoting the additional, follow-on NO_x compliance option. For early election units in a common stack, see also the instructions under Common Stacks.

Phase II Group 1 Boilers

Compliance options (d) and (e) denote standard annual emission limitations, one of which may be selected for a Phase II Group 1 boiler.

Phase II Group 2 Boilers

Compliance options (f) through (i) denote standard annual emission limitations, one of which may be selected for a Phase II Group 2 boiler.

NO_x Averaging

Compliance option (j) denotes the annual emission limitation under a NO_x averaging plan, which may be selected in lieu of a standard annual emission limit for Group 1 or Group 2 boilers with the same owner or operator and the same DR. See instructions below and include Phase II NO_x averaging form.

Common Stacks

A unit that utilizes a common stack and is separately monitored for NO_x (i.e., has its own NO_x monitor and diluent monitor) is treated as the same as a unit that emits only through its own separate stack.

A unit (other than an early election unit) that utilizes a common stack and is not monitored separately must select one of the applicable common stack options. If the unit shares a common stack with other affected units and no non-affected units and if each of the units has a NO_x emission limitation, three options are available: comply with the most stringent NO_x emission limitation applicable

to any unit utilizing the common stack (option (k)); include the units in a NO_x averaging plan (option (l)); or use an approved method for apportioning the combined NO_x emission rate in the common stack (option (m)). If the unit shares a common stack with at least one other unit that does not have a NO_x emission limitation or with at least one non-affected unit, you must use an approved method for apportioning the combined NO_x emission rate (option (m)), unless, of course, the unit is separately monitored. An early election unit that utilizes a common stack, that is not monitored separately, and whose early election plan specifies option (k) or (m) for the unit, must select such option.

If an apportionment option is chosen, check, in addition to option (m), the box at Step 2 that indicates the applicable emission limitation and submit to U.S. EPA the documentation supporting apportionment with the monitoring plan submission.

Alternative Emissions Limitations

Compliance option (n) must be selected by a Phase II Group 1 or Group 2 boiler that is applying for an AEL demonstration period, or final AEL, starting in Phase II. Compliance option (n) must also be chosen by a boiler that is renewing for Phase II a final AEL approved by U.S. EPA (see instructions accompanying Phase II AEL Demonstration Period, Final AEL Petition, and AEL Renewal forms and include appropriate form).

Compliance option (o) must be selected by a boiler that has applied to U.S. EPA for an AEL demonstration period or final AEL which is undergoing review by U.S. EPA. If a final AEL is subsequently approved by U.S. EPA, a revised Phase II NO_x compliance plan must be submitted marking option (o) and attaching an AEL Renewal form. If an AEL demonstration period or final AEL is subsequently disapproved by U.S. EPA, a revised Phase II NO_x compliance plan must be submitted indicating which Phase II NO_x compliance option will be used by the boiler.

Repowering Extension Plans

Compliance option (p) must be selected by a boiler that is covered by either an approved repowering extension plan or a plan that is undergoing review. If a repowering extension plan undergoing review is subsequently disapproved, a revised Phase II NO_x compliance plan must be submitted indicating which Phase II NO_x compliance option will be used by the boiler. If the termination date of either the repowering extension plan undergoing review or the approved plan is prior to the expiration date of the acid rain permit covering the repowered (or replacement) boiler under the plan, the DR must indicate an additional NO_x compliance option that will apply to the boiler beginning when the plan terminates through the date by which the acid rain permit will expire. In such cases the DR must mark option (p), as well as additional box(es) denoting the additional, follow-on NO_x compliance option.

NO_x Averaging Plan

Under 40 CFR 76.11 any affected units under control of the same owner or operator and with the same designated representative may average their NO_x emission rate, rather than each unit complying on an individual-unit basis with the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7. Units with no common owner or operator may not average their emissions. You may submit an averaging plan (or a revision to an approved averaging plan) with the North Dakota Department of Health, Division of Air Quality at any time up to and including January 1 of the calendar year for which the averaging plan will become effective. If the plan is restricted to units located within a single permitting authority's jurisdiction, you may submit the plan at any time up to and including July 1 of the calendar year for which the plan will become effective.

STEP 1

Each unit identified for inclusion in the averaging plan in Phase II must be a Group 1 or Group 2 boiler subject to an emission limitation under 40 CFR 76.5, 76.6, or 76.7. Enter each unit's applicable emission limitation from 40 CFR 76.5, 76.6, or 76.7 in column (a). If a unit with an alternative emission limitation demonstration period or a final alternative emission limitation under 40 CFR 76.10 participates in an averaging plan, enter the applicable emission limitation from 40 CFR 76.5, 76.6, or 76.7, not the interim or alternative limit, in column (a).

For units utilizing a common stack that are averaging pursuant to 40 CFR 75.17(a)(2)(i)(B), the same alternative contemporaneous emission limitation must be entered in column (b) for each unit utilizing the common stack. Different annual heat input limits may be entered for these units in column (c). Units not utilizing the common stack may also be included in the averaging plan with the common stack units.

The annual heat input limit entered at column (c) will be a minimum limit if the value in column (b) is less than the value in column (a) for that unit. It will be a maximum limit if the value in column (b) is greater than the value in column (a). The values entered for each unit at columns (b) and (c) must satisfy the formula at Step 2.

STEP 2

The entries in Step 2 must demonstrate that the Btu-weighted annual emission rate averaged over the units in the plan is less than or equal to the Btu-weighted annual average emission rate for the same units if they are each operated, during the same period of time, in compliance with the applicable emission limitations in 40 CFR 76.5, 76.6, or 76.7. Use the equation that appears in Step 2 to demonstrate that the alternative contemporaneous annual emission limitations and annual heat input values assigned to the units in Step 1 satisfy this criterion. For units with an interim emission limitation or an alternative emission limitation, the applicable emission limitation for the equation shall equal the applicable emissions limitation under 40 CFR 76.5, 76.6, or 76.7.

STEP 3

The second option is included to avoid the need to submit identical plans each for a different year if you want each plan to be effective for only one year.
