APPENDIX B TO PART 76—PROCEDURES AND METHODS FOR ESTIMATING COSTS OF NITROGEN OXIDES CONTROLS APPLIED TO GROUP 1, BOILERS

1. PURPOSE AND APPLICABILITY

This technical appendix specifies the procedures, methods, and data that the Administrator will use in establishing "***the degree of reduction achievable through this retrofit application of the best system of continuous emission reduction, taking into account available technology, costs, and energy and environmental impacts; and which is comparable to the costs of nitrogen oxides controls set pursuant to subsection (b)(1) (of section 407 of the Act)." In developing the allowable NO\textsubscript{X} emissions limitations for Group 2 boilers pursuant to subsection (b)(2) of section 407 of the Act, the Administrator will consider only those systems of continuous emission reduction that, when applied on a retrofit basis, are comparable in cost to the cost in constant dollars of low NO\textsubscript{X} burner technology applied to Group 1, Phase I boilers.

The Administrator will evaluate the capital cost (in dollars per kilowatt electrical ($/kW)), the operating and maintenance costs (in $/year), and the cost-effectiveness (in annualized $/ton NO\textsubscript{X} removed) of installed low NO\textsubscript{X} burner technology controls over a range of boiler sizes (as measured by the gross electrical capacity of the associated generator in megawatt electrical (MW)) and utilization rates (in percent gross nameplate capacity on an annual basis) to develop estimates of the capital costs and cost effectiveness for Group 1, Phase 1 boilers. The following units will be excluded from these determinations of the capital costs and cost effectiveness of NO\textsubscript{X} controls set pursuant to subsection (b)(1) of section 407 of the Act: (1) Units employing an alternative technology, or overfire air as applied to wall-fired boilers or separated overfire air as applied to tangentially fired boilers, in lieu of low NO\textsubscript{X} burner technology for reducing NO\textsubscript{X} emissions; (2) units employing no controls, only controls installed before November 15, 1990, or only modifications to boiler operating parameters (e.g., burners out of service or fuel switching) for reducing NO\textsubscript{X} emissions; and (3) units that have not achieved the applicable emission limitation.

2. AVERAGE CAPITAL COST FOR LOW NO\textsubscript{X} BURNER TECHNOLOGY APPLIED TO GROUP 1 BOILERS

The Administrator will use the procedures, methods, and data specified in this section to estimate the average capital cost (in $/kW) of installed low NO\textsubscript{X} burner technology applied to Group 1 boilers.

2.1 Using cost data submitted pursuant to the reporting requirements in section 4 below, boiler-specific actual or estimated actual capital costs will be determined for each unit in the population specified in section 1 above for assessing the costs of installed low NO\textsubscript{X} burner technology. The scope of installed low NO\textsubscript{X} burner technology costs will include the following capital costs for retrofit application: (1) For the burner portion—burners or air and coal nozzles, burner throat and waterwall modifications, and windbox modifications; and, where applicable, (2) for the combustion air staging portion—waterwall modifications or panels, windbox modifications, and ductwork, and (3) scope adders or supplemental equipment such as replacement or additional fans, dampers, or igniters necessary for the proper operation of the low NO\textsubscript{X} burner technology. Capital costs associated with boiler restoration or refurbishment such as replacement of air heaters, asbestos abatement, and rerusting will not be included in the cost basis for installed low NO\textsubscript{X} burner technology. The scope of installed low NO\textsubscript{X} burner technology retrofit capital costs will include materials, construction and installation labor, engineering, and overhead costs.

2.2 Using gross nameplate capacity (in MW) for each unit as reported in the National Allowance Data Base (NADB), boiler-specific capital costs will be converted to a $/kW basis.

2.3 Capital cost curves ($/kW versus boiler size in MW) or equations for installed low NO\textsubscript{X} burner technology retrofit costs will be developed for: (1) Dry bottom wall fired boilers (excluding units applying cell burner technology) and (2) tangentially fired boilers.

3. [RESERVED]

4. REPORTING REQUIREMENTS

4.1 The following information is to be submitted by each designated representative of a Phase I affected unit subject to the reporting requirements of §76.14(c):

4.1.1 Schedule and dates for baseline testing, installation, and performance testing of low NO\textsubscript{X} burner technology.

4.1.2 Estimates of the annual average baseline NO\textsubscript{X} emission rate, as specified in section 3.1.1, and the annual average controlled NO\textsubscript{X} emission rate, as specified in section 3.1.2, including the supporting continuous emission monitoring or other test data.

4.1.3 Copies of pre-retrofit and post-retrofit performance test reports.

4.1.4 Detailed estimates of the capital costs based on actual contract bids for each component of the installed low NO\textsubscript{X} burner technology including the items listed in section 2.1. Indicate number of bids solicited.


Environmental Protection Agency

§ 77.3 Offset plans for excess emissions of sulfur dioxide.

(a) Applicability. The owners and operators of any affected source that has excess emissions of sulfur dioxide in any calendar year shall be liable to offset the amount of such excess emissions by an equal amount of allowances from the source’s compliance account.

(b) Deadline. Not later than 60 days after the end of any calendar year during which an affected source had excess emissions of sulfur dioxide (except for any increase in excess emissions under §72.91(b) of this chapter), the designated representative for the source shall submit to the Administrator a complete proposed offset plan to offset those emissions. Each day after the 60-day deadline that the designated representative fails to submit a complete

penalty requirements under section 411 of the Clean Air Act, 42 U.S.C. 7401, et seq., as amended by Public Law 101–549 (November 15, 1990). These requirements shall apply to the owners and operators and, to the extent applicable, the designated representative of each affected unit and affected source under the Acid Rain Program.

(b) Nothing in this part shall limit or otherwise affect the application of sections 112(r)(9), 113, 114, 120, 303, 304, or 306 of the Act, as amended. Any allowance deduction, excess emission penalty, or interest required under this part shall not affect the liability of the affected unit’s and affected source’s owners and operators for any additional fine, penalty, or assessment, or their obligation to comply with any other remedy, for the same violation, as ordered under the Act.

§ 77.2 General.

Part 72 of this chapter, including §§72.2 (definitions), 72.3 (measurements, abbreviations, and acronyms), 72.4 (Federal authority), 72.5 (State authority), 72.6 (applicability), 72.7 (new units exemption), 72.8 (retired units exemption), 72.9 (standard requirements), 72.10 (availability of information), and 72.11 (computation of time), shall apply to this part. The procedures for appeals of decisions of the Administrator under this part are contained in part 78 of this chapter.

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