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Office of Air and Radiation
Acid Rain Division (6204J)
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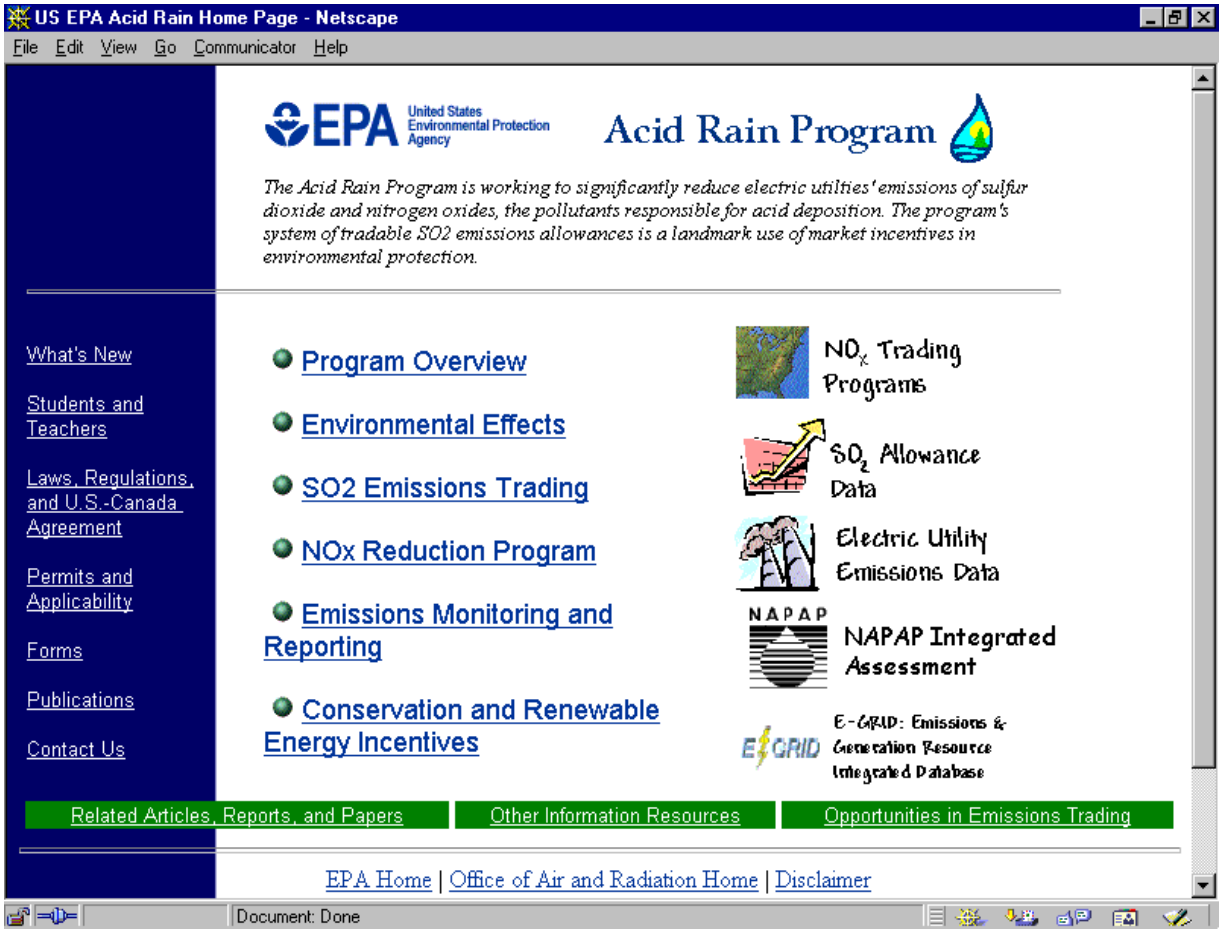
July 1999

1998 Compliance Report
Acid Rain Program



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BACKGROUND

The Acid Rain Program was established under Title IV of the 1990 Clean Air Act Amendments. The program calls for major reductions of sulfur dioxide (SO_2) and nitrogen oxides (NO_x), the pollutants that cause acid rain, while establishing a new approach to environmental protection through the use of market incentives. The program sets a permanent cap on the total amount of SO_2 that may be emitted by electric utilities nationwide at about one half of the amount emitted in 1980, and allows flexibility for individual utility units to select their own methods of compliance. The program also sets NO_x emission limitations (in lb/mmBtu) for electric utilities, representing about a 27 percent reduction from 1990 levels. The Acid Rain Program is being implemented in two phases: Phase I began in 1995 for SO_2 and 1996 for NO_x, and will last until 1999; Phase II for both pollutants begins in 2000 and is expected to involve over 2,000 units. In 1998, there were 408 units affected by the SO_2 provisions of the Acid Rain Program, 235 of which were also affected for NO_x, and an additional 305 utility units affected only by the NO_x provisions.

Acid rain causes acidification of lakes and streams and contributes to the damage of trees at high elevations. In addition, acid rain accelerates the decay of building materials, paints, and cultural artifacts, including irreplaceable buildings, statues, and sculptures. While airborne, SO_2 and NO_x gases and their particulate matter derivatives, sulfates and nitrates, contribute to visibility degradation and impact public health.

The SO_2 component of the Acid Rain Program represents a dramatic departure from traditional command and control regulatory methods that establish source-specific emissions limitations. Instead, the program introduces a trading system for SO_2 that facilitates lowest-cost emissions reductions and an overall emissions cap that ensures the maintenance of the environmental goal. The program features tradable SO_2 emissions allowances, where one allowance is a limited authorization to emit one ton of SO_2. Allowances may be bought, sold, or banked by utilities, brokers, or anyone else interested in holding them. Existing utility units were allocated allowances for each future compliance year and all participants of the program are obliged to surrender to EPA the number of allowances that correspond to their annual emissions starting either in Phase I or Phase II of the program.

The NO_x component of the Acid Rain Program is more traditional, and establishes an emission rate limit for all affected utilities. Flexibility is introduced to this command and control measure, however, through compliance options such as emissions averaging, whereby a utility can meet the standard emission limitations by averaging the emissions rates of two or more boilers. This allows utilities to over-control at units where it is technically easier to control emissions, thereby achieving emissions reductions at a lower cost. Additionally, beginning in 1997, certain Phase II units could elect to become affected for NO_x early. By complying with Phase I limits, these early election units can delay meeting the more stringent Phase II limits until 2008.

At the end of each year, utilities must demonstrate compliance with the provisions of the Acid Rain Program. For the NO_x portion of the program, utilities must achieve an annual emission limitation at or below mandated levels. For SO_2, utilities are granted a 60-day grace period during which additional SO_2 allowances may be purchased, if necessary, to cover each unit's emissions for the year. At the end of the grace period (the Allowance Transfer Deadline), the allowances a unit holds in its Allowance Tracking System (ATS) account must equal or exceed the unit's annual SO_2 emissions. In addition, in 1995-1999 (Phase I of the program), units must have sufficient allowances to cover certain other deductions as well. Any remaining SO_2 allowances may be sold or banked for use in future years.

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TO THE READER:

The Acid Rain Program 1998 Compliance Report summarizes compliance results that, for the fourth consecutive year since the Acid Rain Program began, show100 percent compliance with both sulfur dioxide (SO2) and nitrogen oxide (NOx) requirements. Over the past year there were also a number of significant Program improvements.

First, the allowance transfer deadline, the date by which a unit's allowance account is required to hold enough allowances to account for the previous year's SO2 emissions, was changed from January 30th to March 1 (Feb. 29 for leap years). This allows affected facilities additional time to determine their previous year's SO2 emissions and to ensure the availability of sufficient allowances to account for those emissions.

Second, in order to expedite transfers and reduce transaction costs the Acid Rain Program revised its regulations to allow an authorized account representative to specify allowance accounts to which allowances can be transferred without requiring the buyer's signature on each individual allowance transfer form.

Third, to avoid the imposition of extremely large excess emissions penalties for minor, inadvertent accounting errors, the Acid Rain Program now allows for the transfer of unused allowances from unit accounts at the same source to account for the emissions at a unit that lacks sufficient allowances. This leads to a smaller penalty, more in line with the violation, while still ensuring the environmental objective.

Fourth, the monitoring rule have was revised to enhance flexibility for industry by reducing monitoring requirements for certain units with low mass emissions, creating new monitoring options for some units, reducing certain quality assurance requirements, and increasing fuel sampling flexibility for certain units. The sum of these changes make the rule more efficient and less burdensome for the regulated community, EPA, and the States.

Finally, the Acid Rain Program permits regulation was revised to make new and retired unit exemptions easier for sources to comply with and simpler for the States to administer. These changes provide States with additional flexibility in meeting public notice requirements in the issuance of Acid Rain permits and allow for "direct/final" issuance of draft and proposed Acid Rain permits. The Program also eased public notice requirements related to the appointment of, and changes to, the designated representative and alternate designated representative.

We will continue to look for ways to improve the Acid Rain Program as we prepare for the year 2000 and the beginning of Phase II, and will work with all interested persons in ensuring that the Acid Rain Program meets its environmental goals with minimum cost and burden for affected sources and States.

Brian J. McLean, Director
Acid Rain Program

SUMMARY

100 Percent Compliance with both SO_2 and NO_x Requirements in 1998

All 713 boilers and combustion turbines (referred to as "units") affected by the SO_2 and NO_x regulations of the Acid Rain Program in 1998 successfully met their emissions compliance obligations.

- All 408 units subject to SO_2 requirements in 1998 held sufficient allowances to cover their emissions. Of the 5,300,861 allowances deducted from compliance accounts almost all (5,298,498 or 99.96 percent) were for emissions, but other deductions were also made as required by the Acid Rain Program regulations.

- All 540 units subject to the NO_x requirements in 1998 demonstrated compliance with applicable annual emission limitations. Of these 540 units, 235 were also subject to SO_2 requirements, while 305 units were affected only for NO_x (30 Phase I units and 275 Phase II "early election" units).

1998 SO_2 Emissions of Phase I Units were 24 Percent Below Allowable Level

SO_2 emissions in 1998 were 1.7 million tons (or 24 percent) below the 7 million ton allowable level as determined by 1998 allowance allocations. Since an additional 7.9 million allowances were carried over, or banked, from 1997, the overall number of allowances available in 1998 was 14.9 million, of which affected units consumed only about 35 percent. Actual emissions for the 408 units participating in 1998 were 5.3 million tons, down 180,000 tons from emissions of the 423 units affected in 1997.

1998 Phase I Unit NO_x Emission Rates 41 Percent Below 1990; NO_x Tons 29 Percent Lower Than in 1990

Emission rates for the 265 Phase I utility units dropped by 41 percent below 1990 levels, from an average of 0.70 pounds of NO_x per million Btu of heat input (lb/mmBtu) to an average of 0.41 lbs/mmBtu; this rate is 16 percent below the compliance rate of 0.49 lbs/mmBtu for these units. NO_x emission levels for these units were 390,254 tons (or 29 percent) below 1990 levels.

1998 NO_X Emission Rates of Early Election Units Even Lower Than Rates for Phase I Units

For the 275 Phase II units which elected to meet Phase I NO_x rates early, emission rates dropped from an average of 0.46 lbs/mmBtu in 1990 to 0.38 lbs/mmBtu in 1998, a 17 percent decrease and 19 percent below the compliance rate of 0.47 lbs/mmBtu for these units. Therefore, while utilization of these units increased by 28 percent between 1990 and 1998, NO_x tons increased by only 8 percent.

Monitoring Performance Excellent Once Again

For the fourth year of the Acid Rain Program, the continuous emission monitors used by participants continue to provide some of the most accurate and complete data ever collected by the EPA. Statistics reflect excellent monitor operation of all units affected by both Phase I and Phase II of the program.

Accuracy:	SO_2 monitors achieved a median relative accuracy (i.e., deviation from the reference test method) of 3.0 percent; flow monitors, 3.0 percent; and NO_x monitors, 3.1 percent.
Availability:	SO_2 and flow monitors achieved a median availability of 99.5 and 99.7 percent, respectively, while NO_x monitors achieved a median reliability of 99.2 percent.

SO_2 Market Active; Volume of Allowances Transferred Between Distinct Entities in 1998 Continues to Increase

Activity in the allowance market continued to increase in 1998. The volume of allowances transferred between unrelated parties in economically significant trades increased from 7.9 million in 1997 to 9.5 million in 1998.

AFFECTED POPULATION IN PHASE I

Exhibit 1 provides a summary of the affected population of units under the Acid Rain Program from 1995 through 1999. The table illustrates that although the units listed in Table 1 of the CAAA are consistently affected for both SO_2 and NO_x beginning in 1997, the total universe of affected units varies year to year because of the flexibility offered by the program.

Exhibit 1
Affected Units During Phase I of the Acid Rain Program

		1995	1996	1997	1998	1999
SO_2	Table 1	263	263	263	263	263
	Substitution and Compensating	182	161	153	135	Variable
	Opt-in	0	7	7	10	Variable
	TOTAL	***445***	***431***	***423***	***408***	***Variable***
NO_x	Table 1	NA	144	170	171	171
	Substitution	NA	95	95	94	94
	Early-Election	NA	NA	272	275	Variable
	TOTAL	***NA***	***239***	***537***	***540***	***Variable***

SO_2 PROGRAM

408 Units Underwent Annual Reconciliation for SO_2 in 1998

There were 398 affected utility units and 10 opt-in units that underwent annual reconciliation in 1998 to determine whether sufficient allowances were held to cover emissions. These 408 units are listed in Appendix A and include 263 utility units specifically required to participate during Phase I, 135 utility units not initially required to participate until Phase II, but electing to participate early as part of

multi-unit compliance plans[1], and 10 other units that elected to join as part of the Opt-in Program[2]. There were 8 fewer units undergoing annual reconciliation than in 1997.

1998 SO_2 Emissions Target was 6.97 Million Tons

The number of allowances allocated in a particular year, the amount representing that year's allowable SO_2 emissions level, is the sum of allowance allocations granted to sources under several provisions of the Act. In 1998, the emissions target established by the program for the 408 participating units was 6.97 million tons. However, the total allowable SO_2 emission level in 1998 was actually 14.93 million tons, consisting of the 6.97 million 1998 allowances granted through the program and an additional 7.96 million allowances carried over, or banked, from 1997.

The initial allocation and the allowances for substitution and compensating units represent the basic allowances granted to units that authorize them to emit SO_2 under the Acid Rain Program. Additional allowances for the year 1998 were also made available through the allowance auctions, held annually since 1993. Other allowances issued in 1998 were from special provisions in the Act, which are briefly explained in Exhibit 2 on the following page. In addition, any allowances carried over from previous years (banked allowances) are available for compliance and included in the allowable total.

Beginning in the year 2000 at the onset of Phase II, the volume of allowances allocated annually to the Phase I units will be reduced and the requirement to hold allowances will be extended to smaller, cleaner plants. Nationwide, the cap for all utilities with an output capacity of greater than 25 megawatts will be 9.48 million allowances from 2000-2009. In 2010, the cap will be reduced further to 8.95 million allowances, a level approximating one half of industry-wide emissions in 1980.

SO_2 COMPLIANCE RESULTS

Phase I Units Better 1998 SO_2 Allowable Emissions Level by 24 Percent

The Phase I units affected in 1998 emitted at a level approximately 24 percent below 1998 allocations, as shown in Exhibit 3. This percentage is about the same as in 1997, with both emissions and

[1] During Phase I of the of the Acid Rain Program, a unit not originally affected until Phase II may elect to enter the program early as a substitution unit or a compensating unit to help fulfill the compliance obligations for one of the Table 1 units targeted by Phase I. A unit brought into Phase I as a substitution unit can assist a Table 1 unit in meeting its emissions reductions obligations. Utilities may make cost-effective emissions reductions at the substitution unit instead of at the Table 1 unit, achieving the same overall emissions reductions that would have occurred without the participation of the substitution unit. A Table 1 unit may designate a Phase II unit as a substitution unit only if both units are under the control of the same owner or operator. Additionally, Table 1 units that reduce their utilization below their baseline may designate a compensating unit to provide compensating generation to account for the reduced utilization of the Table 1 unit. (A unit's baseline is defined as its heat input averaged over the years 1985-1987). A Table 1 unit may designate a Phase II unit as a compensating unit if the Phase II compensating unit is in the Table 1 unit's dispatch system or has a contractual agreement with the Table 1 unit, and the emissions rate of the compensating unit has not declined substantially since 1985. See Appendix B-1 for the relationship of these units to their Table 1 counterparts.

[2] The Opt-in Program gives sources not required to participate in the Acid Rain Program the opportunity to enter the program on a voluntary basis, install continuous emission monitoring systems (CEMS), reduce their SO_2 emissions, and receive their own allowances.

allocations registering slight decreases. Appendix B-3 reports the 1998 emission and utilization levels for all Phase I affected units, as well as a comparison to these levels in 1997.

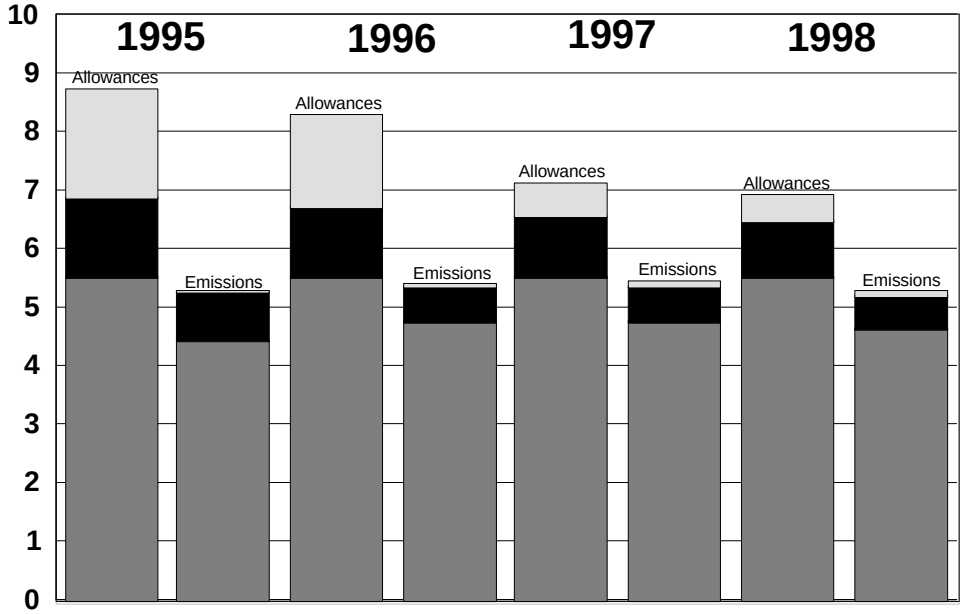
Relative to 1997, the 263 Table 1 units decreased their emissions by about 110,000 tons, or more than two percent in 1998, while increasing their utilization by just over one half of one percent. The 4.7 million tons emitted by these Table 1 units were still substantially below their 1998 allocation of 5.6 million allowable tons.

Exhibit 2
Origin of 1998 Allowable Emissions Level

Type of Allowance Allocation	Number of Allowances	Explanation of Allowance Allocation Type
Initial Allocation	5,550,820	Initial Allocation is the number of allowances granted to units based on their historic utilization, emissions rates specified in the Clean Air Act and other provisions of the Act.
Phase I Extension	178,211	Phase I Extension allowances are given to Phase I units that reduce their emissions by 90 percent or reassign their emissions reduction obligations to units that reduce their emissions by 90 percent.
Allowances for Substitution Units	948,708	Allowances for Substitution Units are the initial allocation granted to Phase II units which entered Phase I as substitution units.
Allowance Auctions	150,000	Allowance Auctions provide allowances to the market that were set aside in a Special Allowance Reserve when the initial allowance allocation was made.
Allowances for Compensating Units	15,838	Allowances for Compensating Units are the initial allocation granted to Phase II units which entered Phase I as compensating units.
Opt-in Allowances	97,932	Opt-in Allowances are provided to units entering the program voluntarily.
Small Diesel Allowances	27,656	Small Diesel Allowances are allocated annually to small diesel refineries that produce and desulfurize diesel fuel during the previous year. These allowances can be earned through 1999.
TOTAL 1998 ALLOCATION	**6,969,165**	
BANKED 1997 ALLOWANCES	7,959,676	Banked Allowances are those held over from 1995 through 1997 which can be used for compliance in 1998 or any future year.
TOTAL 1998 ALLOWABLE	**14,928,841**	

Substitution and compensating units in 1998 expended about the same percentage of their annual allocation as in 1997. In 1998, these 135 units were responsible for emitting approximately 550,000 tons of SO_2, about 58 percent of their 950,000 allocation. In 1997, 153 substitution and compensating

Exhibit 3
Summary of SO2 Emissions versus Allocations
(Millions of Tons)



	'95Allocation	'95Emissions	'96Allocation	'96Emissions	'97Allocation	'97Emissions	'98Allocation	'98Emissions
Table 1 Units	5.55	4.45	5.55	4.77	5.55	4.77	5.55	4.66
S & C Units	1.33	0.85	1.18	0.63	1.04	0.62	0.95	0.55
Other	1.86	0.00	1.57	0.04	0.56	0.08	0.45	0.08
TOTALS	8.74	5.30	8.30	5.44	7.15	5.47	6.95	5.29

units emitted approximately 620,000 tons of SO_2, or 60 percent of their 1.04 million allowable level.

Three new opt-in units joined the program in 1998, raising the total allocation to 98,000 allowances and the emissions level to 80,000 tons. The percentage of emissions to allowances allocated to opt-in units in 1998 increased by approximately 1% compared to 1997.

Deducting Allowances for Compliance

The total number of allowances deducted in 1998 was 5,300,861 which represents approximately 76 percent of all 1998 allowances issued. Almost all (99.95 percent) of the deducted allowances were for emissions. Exhibit 4 displays these allowance deductions, as well as the remaining bank of 1995 through 1998 allowances.

At an individual unit, the number of allowances surrendered was equal to the number of tons emitted at the unit, except where the unit shared a common stack with other units. For the purposes of surrendering allowances for emissions at a common stack, the utility was allowed to choose the proportion of allowances deducted from each unit sharing the stack, as long as enough allowances were

surrendered to cover the total number of tons emitted. If no apportionment was made, EPA deducted allowances equally among the units sharing the stack to cover total emissions reported by the stack. Appendix B-4 reflects the deductions for emissions at each unit after the common stack apportionment was made. Units sharing a common stack are listed directly under the entry for their common stack.

Under the Acid Rain Program, certain units applied for and received approval of Phase I Extension plans during the Phase I permitting process. These units fell into two categories: "control units" which were required to cut their emissions by 90 percent using qualifying technology[3] by 1997, and "transfer units" which reassigned their emissions reduction obligations to a control unit. Both kinds of units received extra SO_2 emissions allowances to cover the SO_2 they emitted beyond their basic Phase I allocations during 1995 and 1996. In addition, the control units were given Phase I extension allowances for 1997, 1998, and 1999. A total of 3.5 million allowances was distributed to all Phase I extension control and transfer units[4].

For 1998, all 19 control units demonstrated meeting the 90 percent reduction requirement and, therefore, did not surrender any 1998 extension allowances. The 1998 tonnage emissions limitation, though, was exceed by five control units and eleven transfer units and resulted in a surrender of a total of 99,240 vintage 1999 allowances. The deduction amounts for each Phase I extension unit are included in Appendix B-2.

SO_2 ALLOWANCE MARKET

The flexibility provided by the Acid Rain Program enabled the 408 units affected in 1998 to pursue a variety of compliance options to meet their SO_2 reduction obligations, including scrubber installation, fuel switching, energy efficiency, and allowance trading. The presence of the allowance market has given some sources the incentive to overcontrol their SO_2 emissions in order to bank their allowances for use in future years. Other sources have been able to postpone and possibly avoid expenditures for control by acquiring allowances from sources that overcontrolled. The flexibility in compliance options is possible because of the accountability provided through strict monitoring requirements for all affected units that ensure one allowance is equivalent to one ton of SO_2. The program's flexibility enabled all 408 sources to be in compliance in 1998 and significantly reduced the cost of achieving these emissions reductions as compared to the cost of a technological mandate.

[3]Qualifying technology is defined in 40 CFR 72.2

[4] Beginning in 1997, each of the 19 units designated as control units was required to show it had reduced its annual emission by at least 90 percent using qualifying control technology. If a unit could not make this demonstration, all or a portion of the extension allowances it received for the year under the Phase I Extension provisions were required to be surrendered. In addition, also beginning in 1997, each of the same 19 control units and each of the 61 other units designated as transfer units was required to meet a tonnage emission limitation approved in its permit. A unit that exceeded its limitation was required to surrender allowances for the following year.

Exhibit 4
SO_2 Allowance Reconciliation Summary

Total Allowances Held in Accounts as of 3/1/99 (1995 through 1998 Vintages)*	**14,928,841**
Table 1 Unit Accounts	8,585,043
Substitution & Compensating Unit Accounts	1,306,220
Opt-in Accounts	83,962
Other Accounts**	4,953,616
1998 Allowances Deducted for Emissions	**5,298,498**
Table 1 Unit Accounts	4,664,898
Substitution & Compensating Unit Accounts	553,349
Opt-in Unit Accounts	80,251
1998 Allowances Deducted Under Special Phase I Provisions***	**2,363**
Table 1 Unit Accounts	65
Substitution & Compensating Unit Accounts	1,755
Opt-in Unit Accounts	543
Banked Allowances	**9,627,980**
Table 1 Unit Accounts	3,920,080
Substitution & Compensating Unit Accounts	751,116
Opt-in Unit Accounts	3,168
Other Accounts**	4,953,616

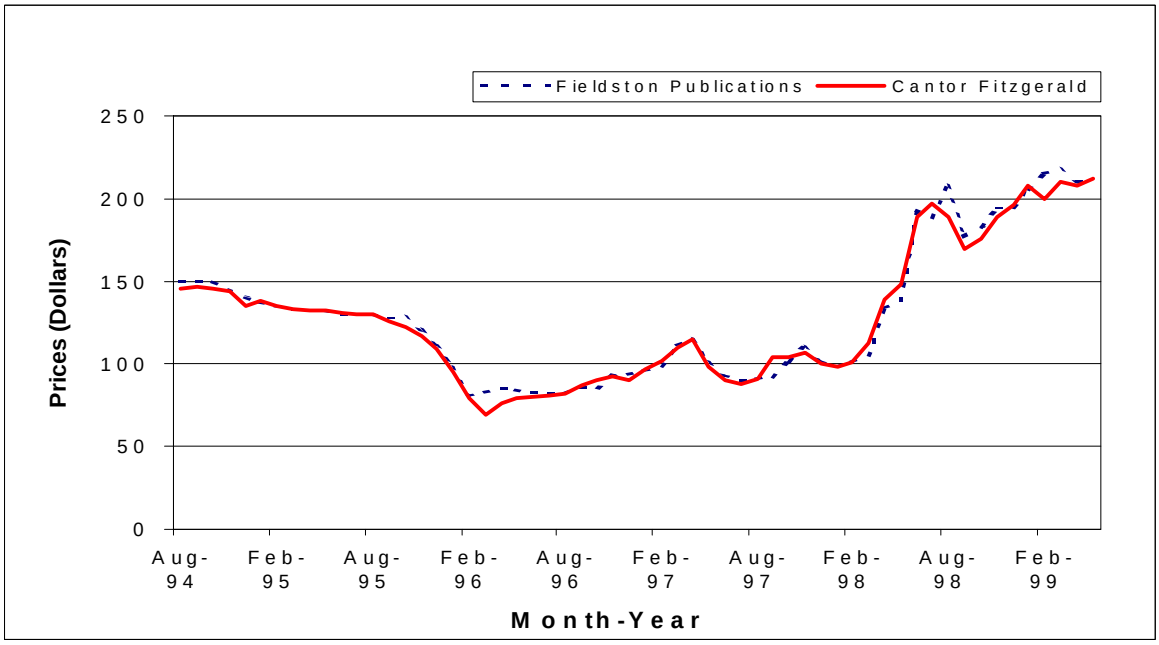
* The number of allowances held in the Allowance Tracking System (ATS) accounts equals the number of 1998 allowances allocated (see Exhibit 2) plus the number of 1997 banked allowances. March 1, 1999 represents the Allowance Transfer Deadline, the point in time at which the 1998 Phase I affected unit accounts are frozen and after which no transfers of 1995 through 1998 allowances will be recorded. The freeze on these accounts is removed when annual reconciliation is complete.

** Other accounts refers to general accounts within the ATS that can be held by any utility, individual or other organization, and unit accounts for units not affected in Phase I.

***Allowances were deducted for both underutilization and state cap provisions in 1998 (see Appendix B-4 for a thorough explanation).

The marginal cost of reducing a ton of SO_2 from the utility sector should be reflected in the price of an allowance. The cost of reductions continues to be lower than anticipated when the Clean Air Act Amendments were enacted, and the price of allowances reflects this. The cost of compliance was initially estimated at $400-1000/ton, but was $207/ton at the 1999 allowance auction. Prices have remained in the $205 to $215 range since January of 1999. Some market observers believe lower than expected allowance prices during the first several years of the program were due primarily to lower than expected compliance costs and larger than expected emission reductions, which have increased the supply of allowances and put downward pressure on prices. Exhibit 5 displays the price trend since mid-1994, based on monthly price reports from Cantor Fitzgerald Environmental Brokerage Services, and a market survey conducted by Fieldston Publications.

Exhibit 5
SO_2 Allowance Prices

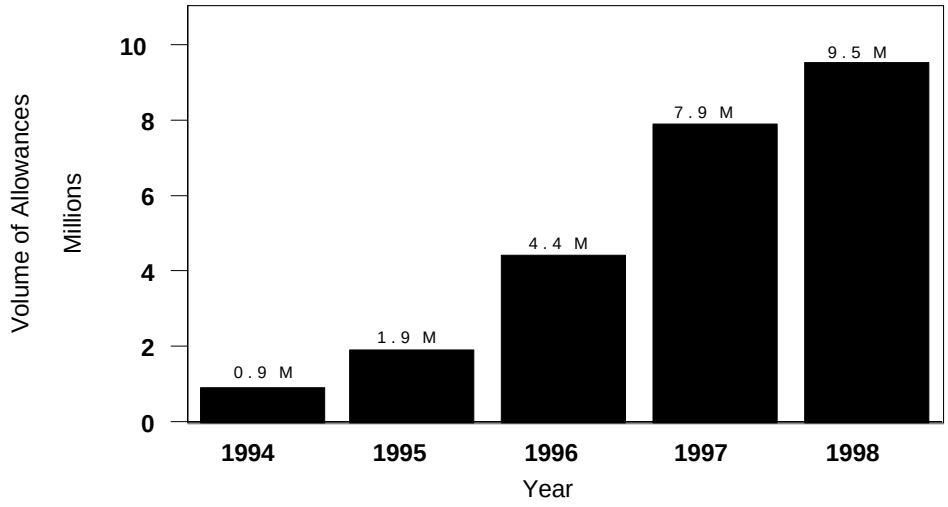


Activity in the allowance market created under the Acid Rain Program remained strong in 1998, with 1,584 transactions moving about 13.5 million allowances in the Allowance Tracking System (ATS), the accounting system developed to track holdings of allowances. In terms of economically significant transfers, or those between unrelated parties, the volume of allowances transferred rose from 7.9 million in 1997 to 9.5 million in 1998. A record 70 percent of annual activity consisted of allowances transferred between economically distinct organizations, with more than half representing allowances directly acquired by utilities.

The most active market segment in 1998 in terms of allowance volume was composed of exchanges between brokers/traders and utilities, accounting for 6.3 million allowances. The next most active was the reallocation category, which covered an additional 3.2 million allowances. The category of transfers between unrelated utilities increased to 1.9 million allowances.

All transactions, along with data on account balances and ownership, are posted on the Acid Rain Division's Internet site (www.epa.gov/acidrain) on a daily basis in order to better inform trading participants. Also available are cumulative market statistics and analysis.

Exhibit 6
Volume of SO_2 Allowances in Economically Significant Transfers



NO_X PROGRAM

Instead of using allowance trading to facilitate emissions reductions, the Title IV NO_x program establishes standard emission limitations for affected units. Title IV of the 1990 Clean Air Act Amendments required EPA to establish NO_x annual average emission limits (in pounds of NO_x per million British thermal units of fuel consumed (lb/mmBtu)) for coal-fired electric utility units in two phases.

In April 1995, EPA promulgated 40 CFR Part 76 which established NO_x emission limits beginning on January 1, 1996 for Group 1 boilers that were also part of the Phase I SO_2 program. (Group 1 boilers are dry bottom, wall-fired boilers and tangentially-fired boilers.) Phase I dry bottom wall-fired boilers are subject to a NO_x emission limit of 0.50 lb/mmBtu; Phase I tangentially-fired boilers are subject to a NO_x emission limit of 0.45 lb/mmBtu.

In addition, the April 1995 regulations allowed Phase II Group 1 units to use an “Early Election” Compliance Option. Under this regulatory provision, Group 1, Phase II NOx affected units can demonstrate compliance with the higher Phase I limits for their boiler type from 1997 through 2007 and not meet the more stringent Phase II limits until 2008. If the utility fails to meet this annual limit for the boiler during any year, the unit is subject to the more stringent Phase II limit for Group 1 boilers beginning in 2000, or the year following the exceedance, whichever is later.

In December 1996, EPA revised the NO_x emission limits for Phase II, Group 1 boilers (0.46 lb/mmBtu for dry bottom wall-fired boilers and 0.40 lb/mmBtu for tangentially-fired boilers) and established emission limits for cell burner, cyclones, wet bottom and vertically-fired boilers (referred to as "Group 2 boilers") effective on January 1, 2000. As a result of the April 1995 and December 1996 rulemakings,

NO_x reductions were projected to be approximately 400,000 tons per year in 1996 through 1999 (Phase I), and 2,060,000 tons per year in 2000 and subsequent years (Phase II).

PHASE I NO_X UNITS

265 Phase I Units Were Subject to Emission Limitations in 1998

In 1998, 265 coal-fired utility units were subject to the Title IV Phase I emission limitations for NO_x.[5] The 265 Phase I NO_x affected units include 171 Table 1 units and 94 substitution units whose owners chose to participate in Phase I as part of an SO_2 compliance strategy. This group of units is subject to the Phase I emission limitations throughout Phase I and Phase II. Exhibit 7 shows the number of Phase I NO_x affected units by boiler type.

Exhibit 7
Phase I NO_x Units by Boiler Type

Boiler Type	Standard Emission Limit	Table 1 Units	Substitution Units	All Units
Tangentially-fired Boilers	0.45	94	41	135
Dry Bottom Wall-fired Boilers	0.50	77	53	130

Phase I NO_x Compliance Options

For each Phase I NO_x affected unit, a utility can comply with the applicable standard emission limitation, or may qualify for one of two additional compliance options which add flexibility to the rate-based compliance requirements:

- **Emissions Averaging**. A utility can meet the standard emission limitation by averaging the heat-input weighted annual emission rates of two or more units.

- **Alternative Emission Limitation (AEL)**. A utility can petition for a less stringent alternative emission limitation if it uses properly installed and operated low NO_x burner technology (LNBT) designed to meet the standard limit, but is unable to achieve that limit. EPA determines whether an AEL is warranted based on analyses of emissions data and information about the NO_x control equipment.

Exhibit 8 summarizes the compliance options chosen by Phase I affected NO_x units for 1998. As in 1996 and 1997, averaging was the most widely chosen compliance option. For 1998, there were 24 averaging plans involving 204 Phase I NO_x units. See Appendix C-1: List of Averaging Plans and

[5] Compared with 1997, the universe of units remained the same, except that Mt. Storm Unit 2 (WV) was added because its compliance extension expired and Gadsby Unit 3 (UT) was deleted because it was mistakenly identified in previous years as a coal-fired utility unit.

Results in 1998.

Exhibit 8
Compliance Options Chosen in 1998

Compliance Option	Number of Units
Compliance with Standard Emission Limitation	51
Emissions Averaging	204
Alternative Emission Limitation	10
TOTAL	265

PHASE I NOX COMPLIANCE RESULTS

For 1998, EPA has determined that all 265 Phase I NO_x units met the required emission limit through compliance with either the standard emission limitation, emissions averaging, or an alternative emission limitation. See Appendix C-2: Compliance Results for the 265 NO_x Affected Units. For a more detailed description of EPA's methodology for determining compliance with Phase I NO_x limits, see Appendix C-4 in the Acid Rain Program 1996 Compliance Report.

NO_x Emission Rate Reduction

From 1990[6] to 1998, the average NO_x emission rate of the 265 Phase I units declined by 41% (from 0.70 lb/mmBtu to 0.41 lb/mmBtu). As shown in Exhibit 9, on average, both Table 1 and substitution units were below the average Phase I emission limit of 0.49 lb/mmBtu (the heat input weighted average of the applicable limits).

NO_x Mass Emissions Reduction

Exhibit 10 illustrates the change in NO_x mass emissions since 1990 for Table 1 and substitution units. For the 265 units, total NO_x mass emissions in 1998 were 29 percent lower than in 1990, but 3 percent higher than in 1997. While this is the second year total NO_x mass emissions have increased, the ascent can be attributed in part to greater electrical production, as evidenced by an increase in heat input in 1997 and 1998 of 3 percent and 6 percent, respectively, compared to 1996. Without further reductions in emissions rates, NO_x emissions would be expected to rise with increased utilization.

[6] For a more detailed description of the 1990 baseline refer to the Acid Rain Program 1996 Compliance Report.

Exhibit 9
Average NO_x Emission Rates for 265 Phase 1 Units

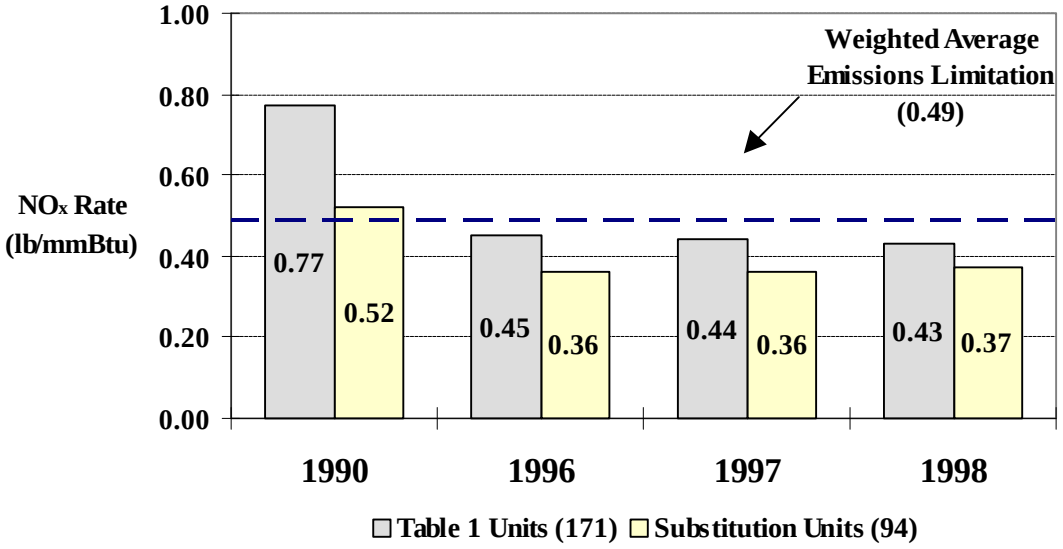
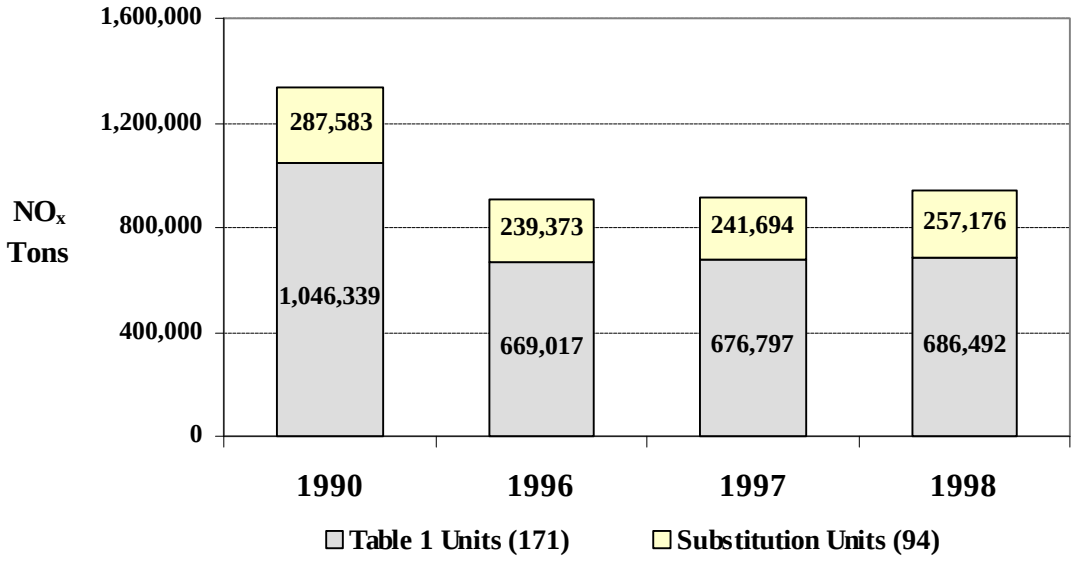


Exhibit 10
NO_x Mass Emissions for 265 Phase I Units



PHASE II EARLY ELECTION UNITS

275 Units Were Subject to Early Election Requirements in 1998

Nineteen ninety-eight was the second year in which early election utility units were required to meet the

Phase I NO_x limit[7]. Exhibit 11 shows the number of Early Election units by boiler type and their corresponding emission limit.

Exhibit 11
Distribution of 1998 Early Election Units by Boiler Type

Boiler Type	Standard Emission Limit	Operating Group 1, Phase 2 Units	Early Election Units	Percent of Units Electing
Tangentially-fired	0.45	300	171	57%
Dry Bottom Wall-fired	0.50	314	104	33%
Total		614	275	45%

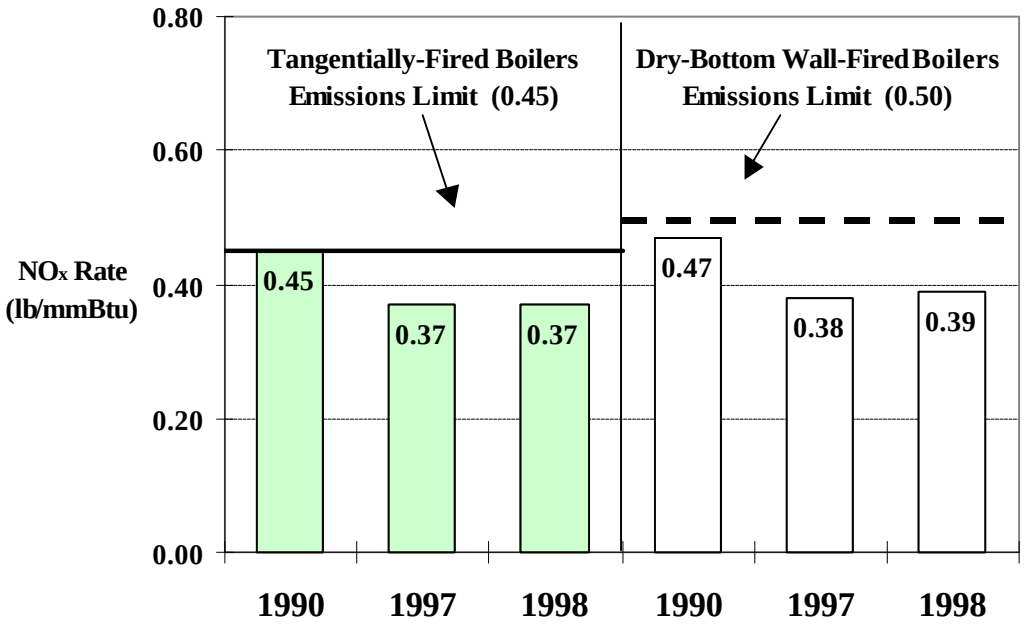
EARLY ELECTION COMPLIANCE RESULTS

For 1998, EPA determined that all 275 units complied with the Phase I, Group 1 emission limitations and have continued eligibility for Early Election in 1999 through 2007. See Appendix C-3: Compliance Results for the 275 Early Election Units in 1998.

Average NO_x emission rates for Early Election units have declined by 17%, from 0.46 lb/mmBtu in 1990 to 0.38 lb/mmBtu in 1998. This decline is less dramatic than the decline at Phase I NO_x units because 51% of the Early Election units are newer units already subject to the New Source Performance Standards (NSPS) NO_x emission limits. The overall NO_x emission rate for these units is comparable to the average rate of 0.41 lb/mmBtu for all Phase I NO_x units. Exhibit 12 summarizes the NO_x emission rate reductions from 1990 to 1998 by boiler type for the 265 Early Election units that were operating in 1990.

[7] Compared with 1997, the universe of early election units remained the same, except for W C Dale Units 3 and 4 (KY) and H L Spurlock Unit 2 (KY), which were added after being inadvertently omitted in 1997.

Exhibit 12
Average NO_x Emission Rate for 265 Early Election Units (Operating in 1990)

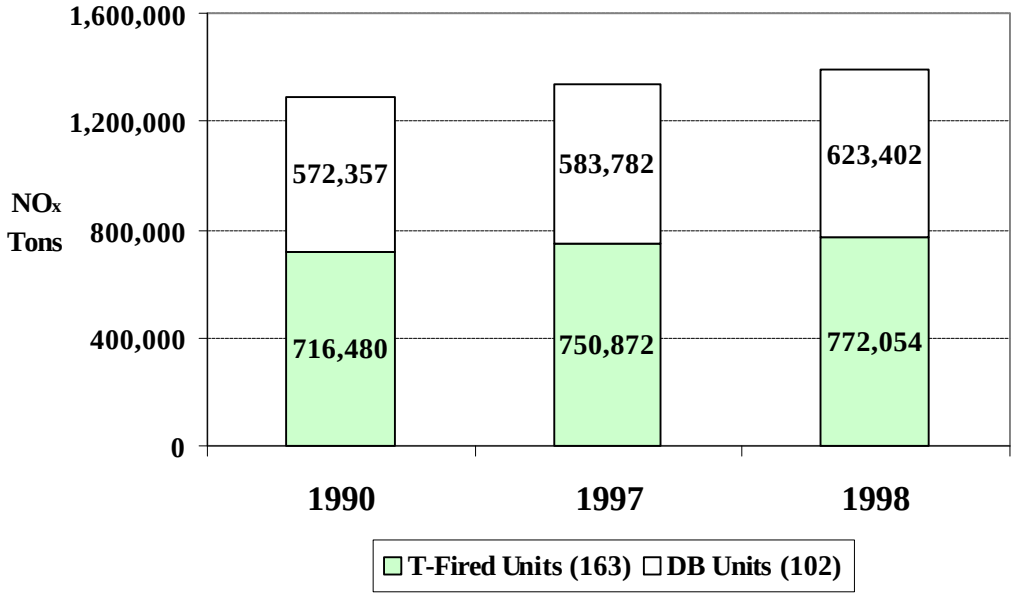


NO_x Mass Emissions Reduction

The total NO_x mass emissions from the operating Early Election units increased by 106,619 tons (or 8 percent) from 1990[8] to 1998, reflecting an increase in utilization (see Exhibit 13). For the 265 Early Election units operating in 1990, heat input increased during the eight year period by approximately 28%.

[8] The 1990 NO_x mass emissions value differs slightly from the value in the 1997 NO_x Compliance report due to corrected estimates of heat input for ten units.

Exhibit 13
NO_x Mass Emissions for 265 Early Election Units (Operating in 1990)



SO_2 AND NO_x MONITORING IN 1998

In order to verify the reductions of SO_2 and NO_x emissions mandated under the Clean Air Act and to support the SO_2 allowance trading program, a fundamental objective of the Acid Rain Program is to ensure accurate accounting of pollutant emissions from affected boilers and turbines. To implement this objective, concentrations of emitted SO_2 and NO_x from each affected unit (boiler or turbine) are measured and recorded using Continuous Emissions Monitoring Systems (CEMS) (or an approved alternate measurement method) certified by EPA to meet the high accuracy standards of the Acid Rain Program.

CEMS are used to determine SO_2 mass emissions and NO_x emission rates. SO_2 mass emissions are determined using CEMS to measure SO_2 concentration and stack flow rate. NO_x emission rates, on the other hand, are determined with NO_x and diluent gas (CO_2 or O_2) concentration monitors. These monitors are required to meet strict initial and on-going performance standards to demonstrate the accuracy, precision, and timeliness of their measurement capability.

One measure of the accuracy of a CEMS is the relative accuracy test audit (RATA), which is required for initial certification of a CEMS and for on-going quality assurance. The relative accuracy test audit ensures that the installed monitor measures the "true" value of the pollutant by comparing the monitor to a reference method which simultaneously measures the stack gas pollutant. Thus, the lower the relative accuracy resulting from the test audit, the more accurate the monitor. All monitoring systems must meet a certain relative accuracy standard in order to be qualified to report emissions to the Acid Rain Program; 10 percent for SO_2 and NO_x, and 15 percent for flow (beginning January 1, 2000, the flow standard will also be 10 percent). As a further incentive for high quality maintenance, CEMS that achieve a superior accuracy result, less than or equal to 7.5 percent for SO_2 and NO_x and less than or

equal to 10 percent for flow (beginning January 1, 2000, the flow standard for superior accuracy will also be 7.5 percent), are granted a reduced frequency annual RATA requirement in place of the semiannual requirement. Because the RATA determines relative accuracy as an absolute value, it does not detect whether the difference between the reference method values and the readings from the CEMS being tested is due to random error or to systematic bias. Therefore, an additional test is required to ensure that emissions are not underestimated: the bias test. This test determines if the CEMS is systematically biased low compared to the reference method and if so, a bias adjustment factor is calculated and applied to all reported data from that monitoring system to ensure there is no systematic underreporting. Exhibit 16 highlights the relative accuracy results achieved by Acid Rain CEMS in 1998.

Exhibit 14
1998 Relative Accuracy Test Audit (RATA) Results

	SO_2 Concentration	Volumetric Flow Rate	NO_x Rate
Mean Relative Accuracy	4.2%	3.7%	4.1%
Median Relative Accuracy	3.0%	3.0%	3.1%
Percent Meeting Relative Accuracy Standard	95%	97%	91%

Another metric used to determine the effectiveness of a CEMS is the percentage of hours that a monitoring system is operating properly and meeting all performance standards and therefore, able to record and report an emissions value. This metric is defined as the percent monitor availability (PMA). Exhibit 17 shows the monitor availabilities reported in 1998 and indicates that the CEMS used to determine SO_2 mass emissions and NO_x emission rates are well maintained and fulfilling the high performance standards required by the Acid Rain Program.

Exhibit 15
1998 CEMS Availability

Parameter	Median % Availability at End of 1998	
	Coal-Fired Units	Oil and Gas Units
SO_2	99.5	98.5
Flow	99.7	98.8
NO_x	99.2	98.0

CONCLUSION

1998 proved to be another successful year for both the Acid Rain Program's rate-based approach to NO_x reduction and cap-and-trade approach to SO_2 reduction. In 1998, all Phase I affected utility units not only met their compliance goals, but exceeded them, achieving an overall reduction of 390,254 tons

of NO_x from 1990 levels, and maintaining the extraordinary reductions of more than 5 million tons of SO_2 from 1980 levels, first achieved in 1995. Additionally, the 275 Phase II NO_x early election units had increased emissions of eight percent since 1990, while their utilization increased by 28 percent during the same period.

Exceedance of compliance goals translates into additional environmental and health benefits. For example, the greater and earlier reductions of SO_2 have resulted in a 10 - 25 percent drop in rainfall acidity in the Northeast in 1995[9].

One factor mitigating the benefit of the overcompliance in the SO_2 program, of course, is the ability to use banked allowances in the future. The 40 percent of 1995 allowances, 35 percent of 1996 allowances, 23 percent of 1997 allowances, and 24 percent of 1998 allowances that were not retired for compliance purposes can be used to cover emissions in a later year. However, immediate health and environmental benefits are arguably more valuable than a benefit several years from now.

The NO_x program, based on the more traditional rate-based approach, offers less flexibility and displays a lesser degree of overcompliance. It requires each unit to achieve reductions or, at a minimum, for a group of units to achieve an average emission rate equal to or lower than their individual limits. This approach does not allow emission reductions in one year to be used in another year, and as a result, the incentive to overcomply is diminished.

The pattern and certainty of emissions reductions over time will also differ between the two programs. After the year 2000 when both programs are in full implementation, SO_2 emissions are expected to decline steadily to the emissions cap level of 8.95 million tons, whereas NO_x emissions, in the absence of an emissions cap, are expected to rise as existing sources are utilized more and new sources, which are not required to offset their emissions, are built and operated.

Despite these differences, both the SO_2 and NO_x components of the Acid Rain Program are continuing the success in 1998. The significant progress evident at this stage of the program is encouraging. Through the continued efforts of Phase I participants and by additional reductions from Phase II units beginning in 2000, the long term goals of the Acid Rain Program -- a 10 million ton reduction of SO_2 emissions and two million ton reduction of NO_x emissions -- will be achieved.

[9] U.S. Geological Survey, Trends in Precipitation Chemistry in the United States, 1983-94 - An Analysis of the Effects in 1995 of Phase I of the CAAA of 1990, Title IV, USGS 96-0346, Washington, DC, June 1996.

Appendices A to C-3 were created using a variety of tools. They are not available in PDF; please download them at:
http://www.epa.gov/acidrain/cmprpt98/appendix.zip

APPENDIX A: PHASE I AFFECTED (X) AND EARLY ELECTION (E) UNITS IN 1998

ST	Plant Name	Unit ID	SO2	NOx
AL	Charles R Lowman	2		E
		3		E
AL	Colbert	1	X	X
		2	X	X
		3	X	X
		4	X	X
		5	X	X
AL	E C Gaston	1	X	X
		2	X	X
		3	X	X
		4	X	X
		5	X	X
AL	Gadsden	1	X	X
		2	X	X
AR	Flint Creek	1		E
AR	Independence	1		E
		2		E
AR	White Bluff	1		E
		2		E
AZ	Apache	2		E
		3		E
AZ	Cholla	1		E
		2		E
		3		E
		4		E
AZ	Coronado	U1B		E
		U2B		E
AZ	Navajo	1		E
		2		E
		3		E
AZ	Springerville	1		E
		2		E
CO	Craig	C1		E
		C2		E
		C3		E
CO	Comanche	1		E
		2		E
GA	Hammond	1	X	X
CO	Cherokee	3		E
		4		E
CO	Pawnee	1		E
CO	Rawhide	101		E
CO	Ray D Nixon	1		E
CO	Valmont	5		E
CT	Bridgeport Harbor	BHB3		E
FL	Big Bend	BB01	X	
		BB02	X	
		BB03	X	
		BB04	X	X
FL	C D McIntosh	3		E
FL	Crist	4	X	X
		5	X	X
		6	X	X
		7	X	X
FL	Crystal River	2		E
		4		E
		5		E
FL	Deerhaven	B2		E
FL	St Johns River	1		E
		2		E
FL	Scholz	1	X	X
		2	X	X
FL	Seminole	1		E
		2		E
GA	Arkwright	1	X	X
		2	X	X
		3	X	X
		4	X	X
GA	Bowen	1BLR	X	X
		2BLR	X	X
		3BLR	X	X
		4BLR	X	X
IA	George Neal South	4		E

APPENDIX A: PHASE I AFFECTED (X) AND EARLY ELECTION (E) UNITS IN 1998

ST	Plant Name	Unit ID	SO2	NOx	ST	Plant Name	Unit ID	SO2	NOx
		2	X	X					
		3	X	X	IA	Lansing	4		E
		4	X	X					
					IA	Louisa	101		E
GA	Harllee Branch	1	X						
		2	X	X	IA	Milton L Kapp	2	X	X
		3	X						
		4	X		IA	Ottumwa	1		E
GA	Jack McDonough	MB1	X	X	IA	Prairie Creek	4	X	X
		MB2	X	X					
					IA	Riverside	9	X	X
GA	Kraft	1	X	X					
		2	X	X	IL	Baldwin	1	X	
		3	X	X			2	X	
							3	X	X
GA	Mcintosh	1	X	X					
					IL	Coffeen	1	X	
GA	Mitchell	3	X	X			2	X	
GA	Scherer	3		X	IL	Crawford	7		E
		4		E			8		E
GA	Wansley	1	X	X	IL	Dallman	33		E
		2	X	X					
					IL	Fisk	19		E
GA	Yates	Y1BR	X	X					
		Y2BR	X	X	IL	Grand Tower	7		X
		Y3BR	X	X			8		X
		Y4BR	X	X			9	X	X
		Y5BR	X	X					
		Y6BR	X	X	IL	Havana	1	X	
		Y7BR	X	X			2	X	
							3	X	
IA	Ames	7		E			4	X	
		8		E			5	X	
							6	X	
IA	Burlington	1	X	X			7	X	
							8	X	
IA	Council Bluffs	1		E					
		2		E	IL	Hennepin	1	X	
		3		E			2	X	X
IA	Des Moines	11	X		IL	Hutsonville	5	X	X
							6	X	X
IA	George Neal North	1	X						
		2		E					
		3		E					
IL	Joppa Steam	1	X	X	IN	Dean H Mitchell	4		E

APPENDIX A: PHASE I AFFECTED (X) AND EARLY ELECTION (E) UNITS IN 1998

ST	Plant Name	Unit ID	SO2	NOx	ST	Plant Name	Unit ID	SO2	NOx
		2	X	X			5		E
		3	X	X			6		E
		4	X	X			11		E
		5	X	X					
		6	X	X	IN	Elmer W Stout	50	X	X
							60	X	X
IL	Kincaid	1	X				70	X	X
		2	X						
					IN	F B Culley	2	X	X
IL	Meredosia	01		X			3	X	X
		02		X					
		03		X	IN	Frank E Ratts	1SG1	X	X
		04		X			2SG1	X	X
		05	X	X					
					IN	Gibson	1	X	X
IL	Newton	1	X	X			2	X	X
		2	X	X			3	X	X
							4	X	X
IL	Vermilion	1	X	X					
		2	X	X	IN	H T Pritchard	3		X
							4		X
IL	Waukegan	7		E			5	X	X
		8		E			6	X	X
IL	Will County	3		E	IN	Merom	1SG1		E
		4		E			2SG1		E
IL	Wood River	1	X		IN	Michigan City	12	X	
IN	A B Brown	1		E	IN	Petersburg	1	X	X
		2		E			2	X	X
							3		X
IN	Bailly	7	X				4		X
		8	X						
					IN	R M Schahfer	15		E
IN	Breed	1	X				17		E
							18		E
IN	Cayuga	1	X	X					
		2	X	X	IN	R Gallagher	1	X	X
							2	X	X
IN	Clifty Creek	1	X				3	X	X
		2	X				4	X	X
		3	X						
		4	X		IN	Rockport	MB1		E
		5	X				MB2		E
		6	X						
					IN	State Line	3		E
					IN	Tanners Creek	U4	X	
IN	Wabash River	1	X	X	KY	H L Spurlock	1	X	X

APPENDIX A: PHASE I AFFECTED (X) AND EARLY ELECTION (E) UNITS IN 1998

ST	Plant Name	Unit ID	SO2	NOx
		2	X	X
		3	X	X
		5	X	X
		6	X	X
IN	Warrick	1	X	
		2	X	
		3	X	
		4	X	
IN	Whitewater Valley	1		E
		2		E
KS	La Cygne	1	X	
		2		X
KS	Nearman Creek	1		E
KS	Quindaro	2	X	X
KS	Riverton	39		E
		40		E
KY	Cane Run	4		E
		5		E
		6		E
KY	Coleman	C1	X	X
		C2	X	X
		C3	X	X
KY	Cooper	1	X	X
		2	X	X
KY	D B Wilson	W1		E
KY	E W Brown	1	X	X
		2	X	X
		3	X	X
KY	East Bend	2	X	X
KY	Elmer Smith	1	X	
		2	X	X
KY	Ghent	1	X	X
KY	Green River	5	X	X
MI	B C Cobb	4		E
		2		E
KY	Hmp&L Station 2	H1	X	X
		H2	X	X
KY l	Mill Creek	1		E
		2		E
		3		E
		4		E
KY	Paradise	3	X	
KY	R D Green	G1	X	X
		G2	X	X
KY	Shawnee	10	X	
KY	Trimble County	1		E
KY	W C Dale	3		E
		4		E
LA	Big Cajun 2	2B1		E
		2B2		E
		2B3		E
LA	Dolet Hills	1		E
LA	R S Nelson	6		E
LA	Rodemacher	2		E
MA	Brayton Point	2	X	
MA	Mount Tom		X	
MD	C P Crane	1	X	
		2	X	
MD	Chalk Point	1	X	X
		2	X	X
		3	X	
MD	Morgantown	1	X	X
		2	X	X
MD	R P Smith	9	X	X
		11	X	X
MO	Montrose	1	X	X

APPENDIX A: PHASE I AFFECTED (X) AND EARLY ELECTION (E) UNITS IN 1998

ST	Plant Name	Unit ID	SO2	NOx
		5		E
MI	Dan E Karn	2	X	
MI	J B Sims	3		E
MI	J C Weadock	7		E
		8		E
MI	J H Campbell	1	X	X
		2	X	
MI	J R Whiting	1		E
		3	X	E
MI	Presque Isle	7		E
		8		E
		9		E
MN	Clay Boswell	3		E
MN	High Bridge	3	X	X
		4	X	X
		5	X	X
		6	X	X
MN	Hoot Lake	2		E
MN	Sherburne County	1	X	X
		2	X	X
MO	Asbury	1	X	
MO	Hawthorn	5	X	X
MO	Iatan	1		X
MO	James River	3	X	X
		4	X	X
		5	X	X
MO	Labadie	1	X	X
		2	X	X
		3	X	X
		4	X	X
MO	Meramec	1	X	X
		2	X	X
		3	X	X
		4		X
NC	Cliffside	1		E
		2	X	X
		3	X	X
MO	New Madrid	1	X	
		2	X	
MO	Rush Island	1	X	X
		2	X	X
MO	Sibley	1	X	
		2	X	
		3	X	
MO	Sioux	1	X	
		2	X	
MO	Sikeston	1		E
MO	Southwest	1	X	X
MO	Thomas Hill	MB1	X	
		MB2	X	
		MB3	X	X
MS	Jack Watson	4	X	X
		5	X	X
MS	R D Morrow	1	X	X
		2	X	X
MS	Victor J Daniel Jr	1	X	X
		2		X
MT	Colstrip	1		E
		2		E
		3		E
		4		E
MT	Lewis & Clark	B1		E
NC	Buck	5		E
		6		E
		7		E
		8		E
		9		E
NV	Mohave	1		E

APPENDIX A: PHASE I AFFECTED (X) AND EARLY ELECTION (E) UNITS IN 1998

ST	Plant Name	Unit ID	SO2	NOx	ST	Plant Name	Unit ID	SO2	NOx
		2		E			2		E
		3		E					
		4		E	NV	North Valmy	1		E
		5		E			2		E
NC	Dan River	1		E	NV	Reid Gardner	4		E
		2		E					
		3		E	NY	C R Huntley	67		E
							68		E
NC	G G Allen	1		E					
		2		E	NY	Dunkirk	1		E
		3		E			2		E
		4		E			3	X	X
		5		E			4	X	X
NC	Marshall	1		E	NY	Greenidge	6	X	X
		2		E					
		3		E	NY	Kintigh	1		E
		4		E					
					NY	Milliken	1	X	X
NC	Riverbend	7		E			2	X	X
		8		E					
		9		E	NY	Northport	1	X	
		10		E			2	X	
							3	X	
ND	Antelope Valley	B1		E			4	X	
		B2		E					
					NY	Oswego	4	X	
ND	Leland Olds	1		E			5	X	
							6	X	
ND	Stanton	10		E					
					NY	Port Jefferson	3	X	
NE	Gerald Gentleman	1		E			4	X	
		2		E					
					NY	Rosetom	1	X	
NE	Gerald Whelan	1		E			2	X	
NE	Nebraska City	1		E	NY	S A Carlson	9		E
							10		E
NE	North Omaha	4		E			11		E
							12		E
NE	Platte	1		E					
					OH	Acme	13	X	
NH	Merrimack	1	X				14	X	
		2	X				15	X	
							16	X	
NJ	B L England	1	X				91	X	
		2	X				92	X	
NM	Escalante	1		E					
OH	Ashatabula	7	X	X	OH	Kyger Creek	1	X	

APPENDIX A: PHASE I AFFECTED (X) AND EARLY ELECTION (E) UNITS IN 1998

ST	Plant Name	Unit ID	SO2	NOx	ST	Plant Name	Unit ID	SO2	NOx
		8	X				2	X	
		9	X				3	X	
		10	X				4	X	
		11	X				5	X	
OH	Avon Lake	9	X		OH	Lake Shore	18	X	
		10	X				91	X	
		11	X				92	X	
		12	X				93	X	
							94	X	
OH	Bay Shore	1	X						
		2	X		OH	Miami Fort	5-1	X	
		3	X				5-2	X	
		4	X				6	X	X
							7	X	
OH	Cardinal	1	X						
		2	X		OH	Muskingum River	1	X	
							2	X	
OH	Conesville	1	X				3	X	
		2	X				4	X	
		3	X	X			5	X	
		4	X	X					
		5		E	OH	Niles	1	X	
		6		E			2	X	
OH	Eastlake	1	X	X	OH	Picway	9	X	X
		2	X	X					
		3	X	X	OH	Poston	1	X	
		4	X	X			2	X	
		5	X				3	X	
OH	Edgewater	11	X		OH	R E Burger	1	X	
		12	X				2	X	
		13	X	X			3	X	
							4	X	
OH	Gen J M Gavin	1	X				5	X	
		2	X				6	X	
							7	X	X
OH	Gorge	25	X	X			8	X	X
		26	X	X					
					OH	Toronto	9	X	
OH	J M Stuart	1	X				10	X	X
		2	X				11	X	X
		3	X						
		4	X		OH	W H Sammis	5	X	X
							6	X	X
							7	X	
					OH	W H Zimmer	1		E
OH	Walter C Beckjord	5	X	X	PA	Mitchell	33	X	X

APPENDIX A: PHASE I AFFECTED (X) AND EARLY ELECTION (E) UNITS IN 1998

ST	Plant Name	Unit ID	SO2	NOx	ST	Plant Name	Unit ID	SO2	NOx
		6	X	X					
					PA	Montour	1		E
OK	Muskogee	4		E			2		E
		5		E					
		6		E	PA	New Castle	1	X	X
							2	X	X
OK	Northeastern	3313		E			3		E
		3314		E			4		E
							5		E
OK	Sooner	1		E					
		2		E	PA	Portland	1	X	X
							2	X	X
OR	Boardman	1SG		E					
					PA	Shawville	1	X	X
PA	Armstrong	1	X	X			2	X	X
		2	X	X			3	X	X
							4	X	X
PA	Bruce Mansfield	1	X	X					
		2	X	X	PA	Sunbury	3	X	X
		3		E			4	X	X
PA	Brunner Island	1	X	X	PA	Titus	1		E
		2	X	X			2		E
		3	X	X			3		E
PA	Cheswick	1	X	X	SC	Cross	1		E
							2		E
PA	Conemaugh	1	X	X					
		2	X	X	SC	W S Lee	1		E
							2		E
PA	Cromby	1		E			3		E
PA	Eddystone	1		E	TN	Allen	1	X	
		2		E			2	X	
							3	X	
PA	Hatfield's Ferry	1	X						
		2	X		TN	Cumberland	1	X	
		3	X				2	X	
PA	Homer City	1		E	TN	DuPont	JVD1	X	
		2		E		Johnsonville	JVD2	X	
		3		E			JVD3	X	
							JVD4	X	
PA	Keystone	1		E					
		2		E	TN	Gallatin	1	X	X
							2	X	X
PA	Martins Creek	1	X	X			3	X	X
		2	X	X			4	X	X
		3	X						
		4	X						
TN	John Sevier	1		E	TX	San Miguel	SM-1		E

APPENDIX A: PHASE I AFFECTED (X) AND EARLY ELECTION (E) UNITS IN 1998

ST	Plant Name	Unit ID	SO2	NOx	ST	Plant Name	Unit ID	SO2	NOx
		2		E					
		3		E	TX	Sandow	4		E
		4		E					
					TX	Tolk	171B		E
TN	Johnsonville	1	X	X			172B		E
		2	X	X					
		3	X	X	TX	W A Parish	WAP5		E
		4	X	X			WAP6		E
		5	X	X			WAP7		E
		6	X	X			WAP8		E
		7	X	X					
		8	X	X	TX	Welsh	1		E
		9	X	X			2		E
		10	X	X			3		E
TX	Big Brown	1		E	UT	Bonanza	1-1		E
		2		E					
					UT	Carbon	1		E
TX	Coleto Creek	1		E			2		E
TX	Gibbons Creek	1		E	UT	Hunter	1		E
							2		E
TX	Harrington	061B		E					
		062B		E	UT	Huntington	1		E
		063B		E					
					UT	Intermountain	1SGA		E
TX	J K Spruce	BLR1		E			2SGA		E
TX	J T Deely	1		E	VA	Chesapeake	1		E
		2		E			2		E
							4		E
TX	Limestone	LIM1		E					
		LIM2		E	VA	Chesterfield	3		E
							4		E
TX	Martin Lake	1		E					
		2		E	VA	Glen Lyn	51		E
		3		E			52		E
TX	Monticello	1		E	VA	Possum Point	3		E
		2		E					
		3		E	VA	Potomac River	1		E
							2		E
TX	Oklaunion	1		E			3		E
							4		E
TX	Pirkey	1		E			5		E
TX	Sam Seymour	1		E	VA	Yorktown	1		E
		2		E			2		E
		3		E					
WA	Centralia	BW21		E	WI	Valley	1		X

APPENDIX A: PHASE I AFFECTED (X) AND EARLY ELECTION (E) UNITS IN 1998

ST	Plant Name	Unit ID	SO2	NOx	ST	Plant Name	Unit ID	SO2	NOx
		BW22		E			2		X
							3		X
WI	Alma	B1	X				4		X
		B2	X						
		B3	X		WI	Weston	1	X	X
		B4	X	X			2	X	X
		B5	X	X			3		X
WI	Blount Street	8		E	WV	Albright	1	X	X
		9		E					
WI	Columbia	1		E					
		2		E			2	X	X
							3	X	X
WI	Edgewater	3	X						
		4	X		WV	Fort Martin	1	X	X
		5		E			2	X	
WI	Genoa	1	X	X	WV	Harrison	1	X	X
							2	X	X
WI	J P Madgett	B1	X	X			3	X	X
WI	Nelson Dewey	1	X		WV	Kammer	1	X	
		2	X				2	X	
							3	X	
WI	North Oak Creek	1	X						
		2	X		WV	Mitchell	1	X	X
		3	X				2	X	X
		4	X						
					WV	Mountaineer	1		E
WI	Port Washington	1		X					
		2		X	WV	Mt Storm	1	X	X
		3		X			2	X	X
		4		X			3	X	X
		5		X					
					WV	Pleasants	1		X
WI	Pulliam	5	X				2		X
		6	X						
		7	X	X	WV	Rivesville	7	X	
		8	X	X			8	X	
WI	Rock River	1	X		WV	Willow Island	2	X	
		2	X						
					WY	Dave Johnston	BW41		E
WI	South Oak Creek	5	X	X			BW42		E
		6	X	X					
		7	X	X	WY	Jim Bridger	BW71		X
		8	X	X			BW72		X
							BW73		X
							BW74		E
WY	Laramie River	1		E					

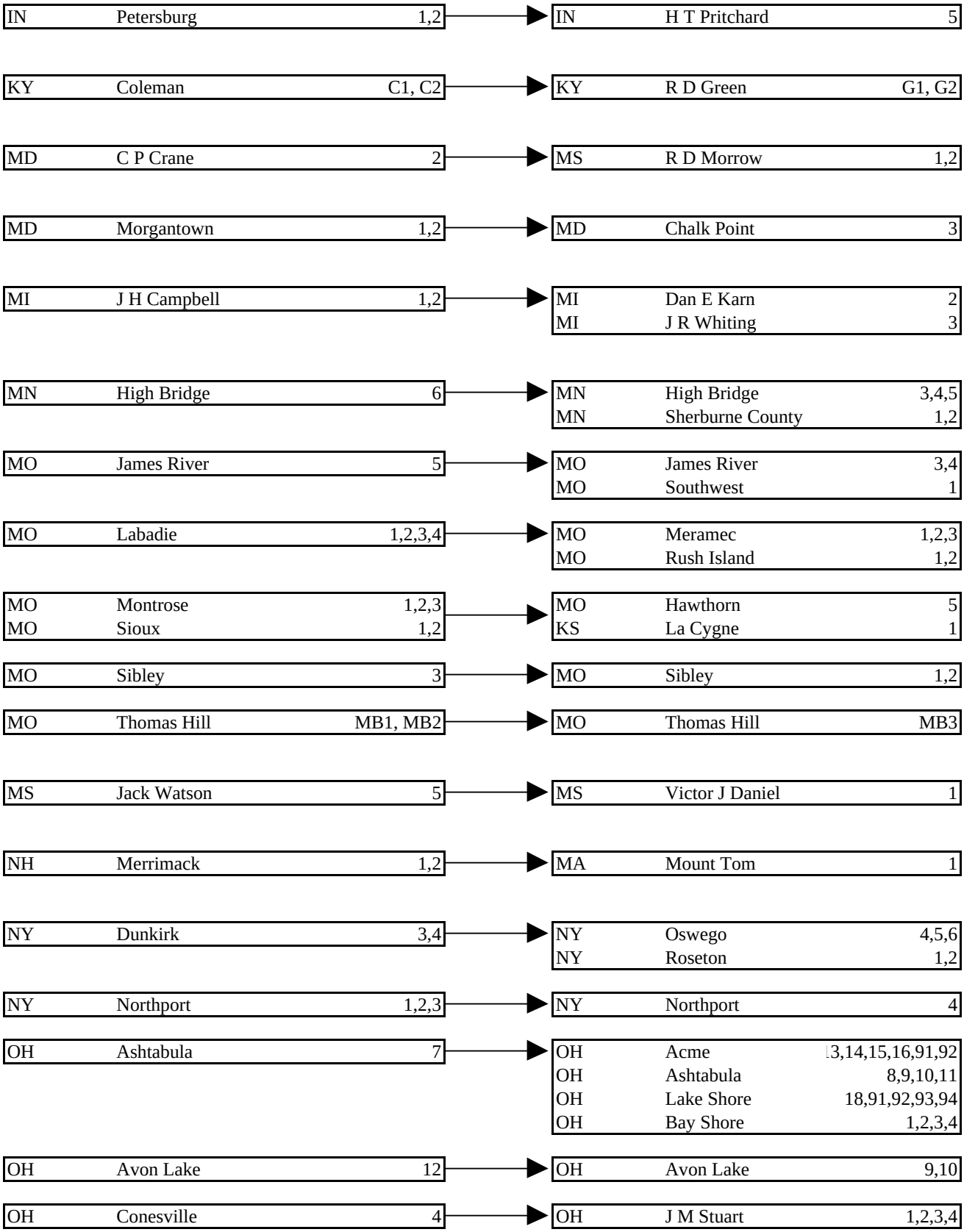
APPENDIX A: PHASE I AFFECTED (X) AND EARLY ELECTION (E) UNITS IN 1998

ST	Plant Name	Unit ID	SO2	NOx	ST	Plant Name	Unit ID	SO2	NOx
		2		E					
		3		E					
WY	Wyodak	BW91		X					

APPENDIX B-1:
Table 1 Units Designating Substitution and Compensating Units - 1998

Substitution Units

Table 1 Units			Substitution Units		
State	**Plant Name**	**Units**	**State**	**Plant Name**	**Units**
AL	EC Gaston	5	AL	Gadsden	1,2
FL	Big Bend	BB01, BB02, BB03	FL	Big Bend	BB04
FL	Crist	7	FL	Crist	4,5
			FL	Scholz	1,2
GA	Bowen	1BLR	GA	Harllee Branch	1
GA	Bowen	2BLR	GA	Harllee Branch	2
GA	Bowen	3BLR	GA	Harllee Branch	3
GA	Bowen	4BLR	GA	Harllee Branch	4
GA	Hammond	1	GA	Arkwright	1
GA	Hammond	2	GA	Arkwright	2
GA	Hammond	3	GA	Arkwright	3
GA	Hammond	4	GA	Arkwright	4
GA	Jack Mcdonough	MB2	GA	Mitchell	3
GA	Yates	Y2BR	GA	Kraft	1
GA	Yates	Y3BR	GA	Kraft	2
GA	Yates	Y4BR	GA	Kraft	3
GA	Yates	Y5BR	GA	McIntosh	1
IL	Baldwin	3	IL	Havana	1,2,3,4,5,6,7,8
			IL	Wood River	1
IL	Hennepin	2	IL	Hennepin	1
IL	Meredosia	5	IL	Hutonsville	5,6
			IL	Newton	1,2
IL	Vermilion	2	IL	Vermilion	1


IN Petersburg 1,2
IN H T Pritchard 5
KY Coleman C1, C2
KY R D Green G1, G2
MD C P Crane 2
MS R D Morrow 1,2
MD Morgantown 1,2
MD Chalk Point 3
MI J H Campbell 1,2
MI Dan E Karn 2
MI J R Whiting 3
MN High Bridge 6
MN High Bridge 3,4,5
MN Sherburne County 1,2
MO James River 5
MO James River 3,4
MO Southwest 1
MO Labadie 1,2,3,4
MO Meramec 1,2,3
MO Rush Island 1,2
MO Montrose 1,2,3
MO Sioux 1,2
MO Hawthorn 5
KS La Cygne 1
MO Sibley 3
MO Sibley 1,2
MO Thomas Hill MB1, MB2
MO Thomas Hill MB3
MS Jack Watson 5
MS Victor J Daniel 1
NH Merrimack 1,2
MA Mount Tom 1
NY Dunkirk 3,4
NY Oswego 4,5,6
NY Roseton 1,2
NY Northport 1,2,3
NY Northport 4
OH Ashtabula 7
OH Acme 13,14,15,16,91,92
OH Ashtabula 8,9,10,11
OH Lake Shore 18,91,92,93,94
OH Bay Shore 1,2,3,4
OH Avon Lake 12
OH Avon Lake 9,10
OH Conesville 4
OH J M Stuart 1,2,3,4

OH	Edgewater	13	→	OH	Edgewater	11,12
OH	Niles	1,2		OH	R E Burger	1,2,3,4
OH	R E Burger	5,6,7,8		OH	Gorge	25, 26
OH	W H Sammis	5,6,7		OH	Toronto	9,10,11
				PA	Bruce Mansfield	1,2
				PA	New Castle	1,2
OH	Miami Fort	7	→	KY	East Bend	2
OH	Picway	9	→	OH	Poston	1,2,3
PA	Armstrong	1	→	WV	Albright	1
PA	Armstrong	2	→	WV	Albright	2
PA	Hatfield's Ferry	3	→	PA	Mitchell	33
PA	Martin's Creek	1,2	→	PA	Martin's Creek	3,4
WI	Edgewater	4	→	WI	Edgewater	3
WI	Genoa	1	→	WI	Alma	B4, B5
				WI	J P Madgett	B1
WI	Nelson Dewey	1,2	→	WI	Rock River	1,2
WI	Pulliam	8	→	WI	Pulliam	5,6,7
				WI	Weston	1,2
WV	Albright	3	→	MD	R P Smith	9
WV	Fort Martin	2	→	MD	R P Smith	11
WV	Harrison	1	→	WV	Rivesville	7,8
WV	Harrison	3	→	WV	Willow Island	2

Compensating Units

Table 1 Units				Compensating Units		
State	**Plant Name**	**Units**		**State**	**Plant Name**	**Units**
OH	Edgewater	13	→	MA	Brayton Point	2

APPENDIX B-2: 1999 DEDUCTION FOR EXCEEDING 1998 PHASE I EXTENSION PROJECTED EMISSIONS LIMITATION

State	Plant Name	Unit ID	Ph I Ext Type	1999 Allowance Deduction
AL	Colbert	5	TRANSFER	0
FL	Crist	7	TRANSFER	0
GA	Jack Mcdonough	MB1	TRANSFER	0
GA	Wansley	2	TRANSFER	0
GA	Yates	Y1BR	CONTROL	0
GA	Yates	Y6BR	TRANSFER	0
GA	Yates	Y7BR	TRANSFER	0
IN	Bailly	7	CONTROL	0
IN	Bailly	8	CONTROL	0
IN	Cayuga	1	TRANSFER	0
IN	Cayuga	2	TRANSFER	0
IN	Gibson	4	CONTROL	7214
IN	Michigan City	12	TRANSFER	5317
IN	R Gallagher	1	TRANSFER	0
IN	R Gallagher	2	TRANSFER	0
IN	R Gallagher	3	TRANSFER	0
IN	R Gallagher	4	TRANSFER	0
IN	Wabash River	1	CONTROL	0
IN	Wabash River	2	TRANSFER	0
IN	Wabash River	5	TRANSFER	0
IN	Wabash River	6	TRANSFER	0
KY	Coleman	C1	TRANSFER	0
KY	Coleman	C2	TRANSFER	0
KY	Coleman	C3	TRANSFER	0
KY	E W Brown	2	TRANSFER	0
KY	E W Brown	3	TRANSFER	0
KY	Ghent	1	CONTROL	0
KY	Green River	5	TRANSFER	0
KY	Hmp&L Station 2	H1	CONTROL	918
KY	Hmp&L Station 2	H2	CONTROL	622
KY	Paradise	3	TRANSFER	0
MD	C P Crane	1	TRANSFER	0
MD	Chalk Point	1	TRANSFER	1197
MD	Morgantown	1	TRANSFER	0
MD	Morgantown	2	TRANSFER	0
NJ	B L England	1	TRANSFER	0
NJ	B L England	2	CONTROL	0
OH	Cardinal	1	TRANSFER	21315
OH	Conesville	1	TRANSFER	1116
OH	Conesville	3	TRANSFER	5937
OH	Eastlake	5	TRANSFER	0
OH	Gen J M Gavin	1	CONTROL	3610
OH	Gen J M Gavin	2	CONTROL	6808
OH	Muskingum River	1	TRANSFER	6522
OH	Muskingum River	2	TRANSFER	5965
OH	Muskingum River	3	TRANSFER	11823
OH	Muskingum River	4	TRANSFER	10856
OH	Niles	1	TRANSFER	0
OH	Niles	2	TRANSFER	0
OH	Picway	9	TRANSFER	3760
OH	R E Burger	5	TRANSFER	0
OH	R E Burger	6	TRANSFER	0
OH	R E Burger	7	TRANSFER	0
OH	R E Burger	8	TRANSFER	0
PA	Armstrong	1	TRANSFER	0
PA	Brunner Island	2	TRANSFER	0
PA	Brunner Island	3	TRANSFER	0
PA	Conemaugh	1	CONTROL	0
PA	Conemaugh	2	CONTROL	0
PA	Hatfield's Ferry	1	TRANSFER	0
PA	Hatfield's Ferry	2	TRANSFER	0

APPENDIX B-2: 1999 DEDUCTION FOR EXCEEDING 1998 PHASE I EXTENSION PROJECTED EMISSIONS LIMITATION

State	Plant Name	Unit ID	Ph I Ext Type	1999 Allowance Deduction
PA	Hatfield's Ferry	3	TRANSFER	0
PA	Portland	1	TRANSFER	0
PA	Portland	2	TRANSFER	0
PA	Sunbury	3	TRANSFER	0
PA	Sunbury	4	TRANSFER	0
TN	Cumberland	1	CONTROL	0
TN	Cumberland	2	CONTROL	0
TN	Gallatin	1	TRANSFER	0
TN	Gallatin	2	TRANSFER	0
TN	Gallatin	3	TRANSFER	0
TN	Gallatin	4	TRANSFER	0
WV	Fort Martin	1	TRANSFER	0
WV	Fort Martin	2	TRANSFER	0
WV	Harrison	1	CONTROL	0
WV	Harrison	2	CONTROL	0
WV	Harrison	3	CONTROL	0
WV	Mt Storm	1	TRANSFER	0
WV	Mt Storm	2	TRANSFER	0
WV	Mt Storm	3	CONTROL	0

APPENDIX B-3: EMISSIONS AND UTILIZATION OF PHASE 1 UNITS, 1997 AND 1998

				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
AL	Colbert	CSCO14 (1, 2, 3, 4)		27,220		26,653		-2.08%	
AL	Colbert	1	Table 1		10,745,711		13,688,471		27.39%
AL	Colbert	2	Table 1		12,048,491		11,842,057		-1.71%
AL	Colbert	3	Table 1		9,359,699		11,608,467		24.03%
AL	Colbert	4	Table 1		11,770,490		10,521,841		-10.61%
AL	Colbert	5	Table 1	50,803	27,875,666	47,608	27,619,312	-6.29%	-0.92%
AL	E C Gaston	CS0CAN (1, 2)		24,949		25,864		3.67%	
AL	E C Gaston	1	Table 1		14,950,877		16,687,420		11.61%
AL	E C Gaston	2	Table 1		16,144,807		16,356,089		1.31%
AL	E C Gaston	CS0CBN (3, 4)		26,165		25,669		-1.90%	
AL	E C Gaston	3	Table 1		17,580,910		18,250,153		3.81%
AL	E C Gaston	4	Table 1		16,180,310		16,100,133		-0.50%
AL	E C Gaston	5	Table 1	36,094	46,377,835	41,489	55,502,484	14.95%	19.67%
AL	Gadsden	1	Substitution	4,716	3,257,292	4,751	3,411,299	0.74%	4.73%
AL	Gadsden	2	Substitution	4,876	3,258,590	4,463	3,271,925	-8.47%	0.41%
FL	Big Bend	CS001 (BB01, BB02)		82,191		90,881		10.57%	
FL	Big Bend	BB01	Table 1		25,060,591		26,361,877		5.19%
FL	Big Bend	BB02	Table 1		30,800,835		25,476,465		-17.29%
FL	Big Bend	XS23 (BB03, BB04)		20,303		16,544		-18.51%	
FL	Big Bend	BB03	Table 1		26,885,523		26,111,060		-2.88%
FL	Big Bend	BB04	Substitution		37,274,636		36,267,261		-2.70%
FL	Crist	4	Substitution	2,563	3,014,961	3,255	4,108,663	27.00%	36.28%
FL	Crist	5	Substitution	4,354	5,324,877	3,872	5,008,436	-11.07%	-5.94%
FL	Crist	6	Table 1	10,243	12,828,682	14,461	18,656,237	41.18%	45.43%
FL	Crist	7	Table 1	19,563	23,238,171	29,005	35,964,652	48.26%	54.77%
FL	Scholz	1	Substitution	1,280	840,579	1,877	1,583,869	46.64%	88.43%
FL	Scholz	2	Substitution	2,112	1,337,456	2,877	2,415,353	36.22%	80.59%
GA	Arkwright	CS001 (1, 2, 3, 4)		3,431		4,272		24.51%	
GA	Arkwright	1	Substitution		595,763		1,138,948		91.17%
GA	Arkwright	2	Substitution		884,920		1,048,245		18.46%
GA	Arkwright	3	Substitution		919,471		1,220,110		32.70%
GA	Arkwright	4	Substitution		701,745		797,426		13.63%
GA	Bowen	1BLR	Table 1	37,241	49,977,072	34,016	46,331,230	-8.66%	-7.30%
GA	Bowen	2BLR	Table 1	33,675	45,321,466	28,130	37,829,783	-16.47%	-16.53%
GA	Bowen	3BLR	Table 1	40,828	54,811,544	47,897	63,956,453	17.31%	16.68%
GA	Bowen	4BLR	Table 1	42,319	57,170,903	35,108	47,544,565	-17.04%	-16.84%
GA	Hammond	CS001 (1, 2, 3)		8,609		9,842		14.32%	
GA	Hammond	1	Table 1		3,940,166		4,057,785		2.99%
GA	Hammond	2	Table 1		3,355,443		5,257,052		56.67%

APPENDIX B-3: EMISSIONS AND UTILIZATION OF PHASE 1 UNITS, 1997 AND 1998

				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
GA	Hammond	3	Table 1		4,809,927		4,656,394		-3.19%
GA	Hammond	4	Table 1	16,571	23,714,698	13,217	18,223,752	-20.24%	-23.15%
GA	Harllee Branch	CS001 (1, 2)		29,845		32,342		8.37%	
GA	Harllee Branch	1	Substitution		13,643,892		13,350,533		-2.15%
GA	Harllee Branch	2	Substitution		13,727,469		16,451,112		19.84%
GA	Harllee Branch	CS002 (3, 4)		53,136		56,643		6.60%	
GA	Harllee Branch	3	Substitution		25,801,742		24,716,035		-4.21%
GA	Harllee Branch	4	Substitution		25,840,817		28,122,964		8.83%
GA	Jack Mcdonough	CS001 (MB1, MB2)		28,284		28,516		0.82%	
GA	Jack Mcdonough	MB1	Table 1		17,391,180		16,039,404		-7.77%
GA	Jack Mcdonough	MB2	Table 1		18,039,198		19,355,611		7.30%
GA	Kraft	XS123 (1, 2, 3)		7,267		5,906		-18.73%	
GA	Kraft	1	Substitution		1,485,281		2,430,615		63.65%
GA	Kraft	2	Substitution		1,775,138		1,960,136		10.42%
GA	Kraft	3	Substitution		4,273,319		4,977,302		16.47%
GA	Mcintosh	1	Substitution	6,175	7,719,743	6,716	7,791,088	8.76%	0.92%
GA	Mitchell	3	Substitution	3,892	4,404,128	4,621	4,595,267	18.73%	4.34%
GA	Wansley	1	Table 1	34,105	45,956,580	44,760	49,668,355	31.24%	8.08%
GA	Wansley	2	Table 1	32,258	45,215,913	42,489	48,149,781	31.72%	6.49%
GA	Yates	Y1BR	Table 1	130	2,562,462	131	3,531,547	0.77%	37.82%
GA	Yates	CS001 (Y2BR, Y3BR)		6,412		6,865		7.06%	
GA	Yates	Y2BR	Table 1		3,568,288		4,503,564		26.21%
GA	Yates	Y3BR	Table 1		3,782,679		3,787,505		0.13%
GA	Yates	CS002 (Y4BR, Y5BR)		8,923		9,136		2.39%	
GA	Yates	Y4BR	Table 1		5,505,970		6,401,735		16.27%
GA	Yates	Y5BR	Table 1		4,525,391		4,344,893		-3.99%
GA	Yates	Y6BR	Table 1	9,393	12,553,519	11,192	13,969,410	19.15%	11.28%
GA	Yates	Y7BR	Table 1	9,702	12,915,696	12,150	15,552,726	25.23%	20.42%
IA	Burlington	1	Table 1	6,352	10,287,375	5,847	11,743,015	-7.95%	14.15%
IA	Des Moines	11	Table 1	0	0	0	0	0.00%	0.00%
IA	George Neal North	1	Table 1	4,040	9,719,336	3,974	9,767,070	-1.63%	0.49%
IA	Milton L Kapp	2	Table 1	4,839	10,867,684	5,282	12,293,176	9.15%	13.12%
IA	Prairie Creek	4	Table 1	2,985	8,488,312	4,035	10,102,922	35.18%	19.02%
IA	Riverside	9	Table 1	2,545	6,955,832	1,435	6,283,598	-43.61%	-9.66%
IL	Baldwin	1	Table 1	88,439	34,346,752	71,396	27,377,162	-19.27%	-20.29%
IL	Baldwin	2	Table 1	92,284	35,355,084	92,968	35,735,840	0.74%	1.08%
IL	Baldwin	3	Table 1	95,312	37,180,092	120,253	46,260,316	26.17%	24.42%
IL	Coffeen	CS0001 (1, 2)		47,756		49,413		3.47%	
IL	Coffeen	1	Table 1		13,363,732		12,847,399		-3.86%

APPENDIX B-3: EMISSIONS AND UTILIZATION OF PHASE 1 UNITS, 1997 AND 1998

				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
IL	Coffeen	2	Table 1		31,126,083		28,483,817		-8.49%
IL	Grand Tower	9	Table 1	18,586	7,209,130	9,188	3,949,534	-50.56%	-45.21%
IL	Havana	1	Substitution	0	0	0	0	0.00%	0.00%
IL	Havana	2	Substitution	0	0	5	10,635	NA	NA
IL	Havana	3	Substitution	0	0	9	19,243	NA	NA
IL	Havana	4	Substitution	0	0	39	83,760	NA	NA
IL	Havana	5	Substitution	0	0	41	86,786	NA	NA
IL	Havana	6	Substitution	0	0	29	61,257	NA	NA
IL	Havana	7	Substitution	0	0	24	51,653	NA	NA
IL	Havana	8	Substitution	0	0	30	64,432	NA	NA
IL	Hennepin	CS3 (1, 2)		47,346		46,809		-1.13%	
IL	Hennepin	1	Substitution		6,127,376		3,345,169		-45.41%
IL	Hennepin	2	Table 1		14,943,169		15,865,737		6.17%
IL	Hutsonville	5	Substitution	8,640	3,962,435	5,238	2,449,651	-39.38%	-38.18%
IL	Hutsonville	6	Substitution	10,982	4,920,046	5,666	2,476,690	-48.41%	-49.66%
IL	Joppa Steam	CS1 (1, 2)		7,731		8,280		7.10%	
IL	Joppa Steam	1	Table 1		15,784,056		16,642,916		5.44%
IL	Joppa Steam	2	Table 1		13,883,968		16,895,957		21.69%
IL	Joppa Steam	CS2 (3, 4)		7,998		7,937		-0.76%	
IL	Joppa Steam	3	Table 1		14,698,413		16,246,827		10.53%
IL	Joppa Steam	4	Table 1		15,562,767		15,657,774		0.61%
IL	Joppa Steam	CS3 (5, 6)		8,472		7,636		-9.87%	
IL	Joppa Steam	5	Table 1		16,251,487		16,131,320		-0.74%
IL	Joppa Steam	6	Table 1		15,991,784		14,904,104		-6.80%
IL	Kincaid	CS0102 (1, 2)		41,096		46,417		12.95%	
IL	Kincaid	1	Table 1		18,383,480		18,743,889		1.96%
IL	Kincaid	2	Table 1		22,185,732		30,554,552		37.72%
IL	Meredosia	5	Table 1	15,950	10,034,553	10,941	8,114,710	-31.40%	-19.13%
IL	Newton	1	Substitution	16,698	8,356,418	7,508	30,901,900	-55.04%	269.80%
IL	Newton	2	Substitution	13,619	30,265,558	14,298	31,776,832	4.99%	4.99%
IL	Vermilion	CS3 (1, 2)		6,208		12,220		96.84%	
IL	Vermilion	1	Substitution		1,488,706		3,484,888		134.09%
IL	Vermilion	2	Table 1		2,826,121		5,717,555		102.31%
IL	Wood River	1	Substitution	0	513,068	1	475,387	NA	-7.34%
IN	Bailly	XS12 (7, 8)		4,736		4,334		-8.49%	
IN	Bailly	7	Table 1		12,242,636		10,663,125		-12.90%
IN	Bailly	8	Table 1		19,485,943		21,683,417		11.28%
IN	Breed	1	Table 1	0	0	0	0	0.00%	0.00%
IN	Cayuga	1	Table 1	56,992	36,475,622	51,345	36,106,576	-9.91%	-1.01%

APPENDIX B-3: EMISSIONS AND UTILIZATION OF PHASE 1 UNITS, 1997 AND 1998

				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
IN	Cayuga	2	Table 1	51,796	33,321,734	37,593	24,672,500	-27.42%	-25.96%
IN	Clifty Creek	CS001 (1, 2, 3)		44,612		46,294		3.77%	
IN	Clifty Creek	1	Table 1		15,465,093		15,187,611		-1.79%
IN	Clifty Creek	2	Table 1		13,905,955		15,722,352		13.06%
IN	Clifty Creek	3	Table 1		15,588,922		16,620,156		6.62%
IN	Clifty Creek	CS002 (4, 5, 6)		48,844		42,899		-12.17%	
IN	Clifty Creek	4	Table 1		15,077,344		15,129,975		0.35%
IN	Clifty Creek	5	Table 1		14,905,050		15,465,474		3.76%
IN	Clifty Creek	6	Table 1		14,827,092		11,649,523		-21.43%
IN	Elmer W Stout	50	Table 1	7,444	6,831,371	6,638	6,373,331	-10.83%	-6.70%
IN	Elmer W Stout	60	Table 1	6,561	5,794,145	7,392	6,765,079	12.67%	16.76%
IN	Elmer W Stout	70	Table 1	22,717	20,926,892	25,931	24,602,220	14.15%	17.56%
IN	F B Culley	XS23 (2, 3)		5,152		7,687		49.20%	
IN	F B Culley	2	Table 1		6,571,635		7,665,616		16.65%
IN	F B Culley	3	Table 1		19,032,117		24,969,662		31.20%
IN	Frank E Ratts	1SG1	Table 1	8,566	7,431,668	9,236	8,756,973	7.82%	17.83%
IN	Frank E Ratts	2SG1	Table 1	7,989	6,728,905	9,393	8,486,975	17.57%	26.13%
IN	Gibson	CS0003 (1, 2)		79,183		94,431		19.26%	
IN	Gibson	1	Table 1		34,509,324		42,521,424		23.22%
IN	Gibson	2	Table 1		36,456,884		39,961,024		9.61%
IN	Gibson	XS34 (3, 4)		49,170		51,189		4.11%	
IN	Gibson	3	Table 1		35,455,094		35,238,356		-0.61%
IN	Gibson	4	Table 1		47,452,516		48,852,984		2.95%
IN	H T Pritchard	CS596 (5, 6)		8,909		7,512		-15.68%	
IN	H T Pritchard	5	Substitution		2,270,877		2,725,130		20.00%
IN	H T Pritchard	6	Table 1		6,791,206		5,325,128		-21.59%
IN	Michigan City	12	Table 1	15,262	25,071,593	16,672	28,722,177	9.24%	14.56%
IN	Petersburg	1	Table 1	2,893	17,617,335	2,247	16,853,716	-22.33%	-4.33%
IN	Petersburg	2	Table 1	4,162	32,198,117	4,136	32,849,989	-0.62%	2.02%
IN	R Gallagher	CS0001 (1, 2)		25,662		22,954		-10.55%	
IN	R Gallagher	1	Table 1		7,671,999		6,484,783		-15.47%
IN	R Gallagher	2	Table 1		8,015,384		8,078,498		0.79%
IN	R Gallagher	CS0002 (3, 4)		21,183		27,642		30.49%	
IN	R Gallagher	3	Table 1		6,067,619		9,757,824		60.82%
IN	R Gallagher	4	Table 1		5,817,989		8,730,732		50.06%
IN	Tanners Creek	U4	Table 1	61,344	31,794,760	32,017	21,095,772	-47.81%	-33.65%
IN	Wabash River	1	Table 1	1,051	7,893,969	851	10,195,928	-19.03%	29.16%
IN	Wabash River	XS2356 (2, 3, 5, 6)		37,577		48,580		29.28%	
IN	Wabash River	2	Table 1		4,391,103		5,345,939		21.74%

APPENDIX B-3: EMISSIONS AND UTILIZATION OF PHASE 1 UNITS, 1997 AND 1998

				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
IN	Wabash River	3	Table 1		3,873,572		5,574,897		43.92%
IN	Wabash River	5	Table 1		4,755,001		6,735,426		41.65%
IN	Wabash River	6	Table 1		17,074,386		18,378,868		7.64%
IN	Warrick	XS123 (1, 2, 3)		79,037		78,964		-0.09%	
IN	Warrick	1	Opt In		11,713,016		12,261,983		4.69%
IN	Warrick	2	Opt In		12,777,383		12,265,399		-4.01%
IN	Warrick	3	Opt In		12,080,812		12,241,810		1.33%
IN	Warrick	4	Table 1	39,864	22,244,140	34,078	18,411,332	-14.51%	-17.23%
KS	La Cygne	1	Substitution	6,927	43,169,137	6,319	34,557,496	-8.78%	-19.95%
KS	Quindaro	2	Table 1	4,052	7,372,206	2,985	6,966,804	-26.33%	-5.50%
KY	Coleman	C1	Table 1	15,985	10,496,532	13,908	10,837,598	-12.99%	3.25%
KY	Coleman	C2	Table 1	18,600	12,638,043	9,677	7,993,759	-47.97%	-36.75%
KY	Coleman	C3	Table 1	16,037	11,091,506	14,568	11,281,190	-9.16%	1.71%
KY	Cooper	CS1 (1, 2)		15,818		17,613		11.35%	
KY	Cooper	1	Table 1		6,128,337		6,162,103		0.55%
KY	Cooper	2	Table 1		11,663,764		12,814,633		9.87%
KY	E W Brown	1	Table 1	5,869	5,534,775	6,762	6,033,395	15.22%	9.01%
KY	E W Brown	CS003 (2, 3)		30,538		35,473		16.16%	
KY	E W Brown	2	Table 1		10,048,618		10,629,369		5.78%
KY	E W Brown	3	Table 1		20,628,855		22,188,450		7.56%
KY	East Bend	2	Substitution	13,083	50,645,676	13,064	41,851,087	-0.15%	-17.36%
KY	Elmer Smith	XS12 (1, 2)		7,688		7,011		-8.81%	
KY	Elmer Smith	1	Table 1		11,998,464		10,447,080		-12.93%
KY	Elmer Smith	2	Table 1		20,955,232		21,192,016		1.13%
KY	Ghent	1	Table 1	7,399	38,733,307	7,396	39,524,506	-0.04%	2.04%
KY	Green River	5	Table 1	12,409	5,782,136	14,438	6,883,122	16.35%	19.04%
KY	H L Spurlock	1	Table 1	15,669	23,080,348	14,941	21,451,848	-4.65%	-7.06%
KY	Hmp&L Station 2	H1	Table 1	2,142	11,602,514	2,397	12,326,347	11.90%	6.24%
KY	Hmp&L Station 2	H2	Table 1	2,482	12,675,842	2,130	12,467,753	-14.18%	-1.64%
KY	Paradise	3	Table 1	173,285	72,721,248	126,946	59,456,328	-26.74%	-18.24%
KY	R D Green	G1	Substitution	1,004	15,541,123	1,828	19,256,597	82.07%	23.91%
KY	R D Green	G2	Substitution	1,323	18,062,324	2,136	16,646,528	61.45%	-7.84%
KY	Shawnee	10	Table 1	2,204	8,930,212	1,560	7,598,398	-29.22%	-14.91%
MA	Brayton Point	2	Compensating	10,646	18,916,857	9,744	18,403,534	-8.47%	-2.71%
MA	Mount Tom	1	Substitution	9,742	11,867,279	8,417	10,400,402	-13.60%	-12.36%
MD	C P Crane	1	Table 1	12,740	9,725,873	15,224	12,220,342	19.50%	25.65%
MD	C P Crane	2	Table 1	17,050	13,359,231	13,636	10,972,712	-20.02%	-17.86%
MD	Chalk Point	CSE12 (1, 2)		39,789		44,721		12.40%	
MD	Chalk Point	1	Table 1		17,952,950		23,306,258		29.82%

APPENDIX B-3: EMISSIONS AND UTILIZATION OF PHASE 1 UNITS, 1997 AND 1998

				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
MD	Chalk Point	2	Table 1		21,531,764		21,586,648		0.25%
MD	Chalk Point	3	Substitution	2,716	7,631,900	7,732	17,351,546	184.68%	127.36%
MD	Morgantown	1	Table 1	39,650	38,101,385	34,953	33,077,778	-11.85%	-13.18%
MD	Morgantown	2	Table 1	33,341	31,834,220	44,953	43,364,798	34.83%	36.22%
MD	R P Smith	9	Substitution	71	92,709	117	152,062	64.79%	64.02%
MD	R P Smith	11	Substitution	2,264	2,986,412	2,262	2,977,734	-0.09%	-0.29%
MI	Dan E Karn	2	Substitution	9,694	16,458,054	8,426	13,176,629	-13.08%	-19.94%
MI	J H Campbell	CS0009 (1, 2)		21,219		22,693		6.95%	
MI	J H Campbell	1	Table 1		15,183,312		13,474,893		-11.25%
MI	J H Campbell	2	Table 1		19,817,269		24,729,551		24.79%
MI	J R Whiting	3	Substitution	4,801	7,534,265	4,755	7,786,674	-0.96%	3.35%
MN	High Bridge	CS0001 (3, 4, 5, 6)		3,848		4,044		5.09%	
MN	High Bridge	3	Substitution		1,150,622		1,553,609		35.02%
MN	High Bridge	4	Substitution		1,616,997		1,543,292		-4.56%
MN	High Bridge	5	Substitution		3,694,447		7,083,980		91.75%
MN	High Bridge	6	Table 1		10,898,522		10,753,526		-1.33%
MN	Sherburne County	CS1 (1, 2)		9,132		8,958		-1.91%	
MN	Sherburne County	1	Substitution		50,979,544		43,745,696		-14.19%
MN	Sherburne County	2	Substitution		44,659,663		50,587,266		13.27%
MO	Asbury	1	Table 1	9,236	14,205,505	8,212	12,859,011	-11.09%	-9.48%
MO	Hawthorn	5	Substitution	9,297	25,785,864	7,106	20,633,908	-23.57%	-19.98%
MO	James River	3	Substitution	1,164	2,276,282	1,409	3,121,544	21.05%	37.13%
MO	James River	4	Substitution	1,780	3,692,173	1,708	3,737,611	-4.04%	1.23%
MO	James River	5	Table 1	3,633	6,726,246	2,810	5,934,107	-22.65%	-11.78%
MO	Labadie	1	Table 1	12,452	30,729,514	15,654	42,347,449	25.71%	37.81%
MO	Labadie	2	Table 1	15,063	35,276,040	12,987	34,534,886	-13.78%	-2.10%
MO	Labadie	3	Table 1	12,635	36,859,037	14,602	40,580,655	15.57%	10.10%
MO	Labadie	4	Table 1	13,777	38,871,905	14,354	39,516,498	4.19%	1.66%
MO	Meramec	1	Substitution	3,147	4,756,769	1,670	4,991,896	-46.93%	4.94%
MO	Meramec	2	Substitution	3,388	5,293,610	1,541	4,792,250	-54.52%	-9.47%
MO	Meramec	3	Substitution	3,364	4,832,568	3,706	6,900,132	10.17%	42.78%
MO	Montrose	1	Table 1	2,705	10,856,432	4,072	11,013,403	50.54%	1.45%
MO	Montrose	CS023 (2, 3)		6,684		8,875		32.78%	
MO	Montrose	2	Table 1		11,916,991		10,380,984		-12.89%
MO	Montrose	3	Table 1		12,520,698		11,783,069		-5.89%
MO	New Madrid	1	Table 1	8,924	37,657,244	8,735	42,006,552	-2.12%	11.55%
MO	New Madrid	2	Table 1	10,474	48,200,332	9,018	46,640,504	-13.90%	-3.24%
MO	Rush Island	1	Substitution	13,484	39,221,199	13,485	40,512,757	0.01%	3.29%
MO	Rush Island	2	Substitution	11,659	33,936,175	13,924	42,312,616	19.43%	24.68%

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				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
MO	Sibley	CS0001 (1, 2, 3)		19,839		27,056		36.38%	
MO	Sibley	1	Substitution		3,298,131		3,195,388		-3.12%
MO	Sibley	2	Substitution		3,238,192		3,125,667		-3.47%
MO	Sibley	3	Table 1		23,606,317		26,076,510		10.46%
MO	Sioux	1	Table 1	30,140	26,885,257	18,885	24,814,785	-37.34%	-7.70%
MO	Sioux	2	Table 1	24,968	23,482,964	23,062	30,562,053	-7.63%	30.15%
MO	Southwest	1	Substitution	3,785	14,063,350	6,837	16,707,842	80.63%	18.80%
MO	Thomas Hill	MB1	Table 1	3,382	14,948,531	3,080	15,127,247	-8.93%	1.20%
MO	Thomas Hill	MB2	Table 1	4,978	22,396,264	4,722	23,711,214	-5.14%	5.87%
MO	Thomas Hill	MB3	Substitution	11,224	48,569,132	9,916	47,129,420	-11.65%	-2.96%
MS	Jack Watson	4	Table 1	11,749	13,197,197	18,528	18,271,530	57.70%	38.45%
MS	Jack Watson	5	Table 1	30,551	33,634,910	32,033	32,387,107	4.85%	-3.71%
MS	R D Morrow	1	Substitution	5,072	14,735,176	4,267	14,398,624	-15.87%	-2.28%
MS	R D Morrow	2	Substitution	4,255	13,281,477	4,383	15,094,507	3.01%	13.65%
MS	Victor J Daniel Jr	1	Substitution	11,632	33,717,920	8,109	23,039,448	-30.29%	-31.67%
NH	Merrimack	1	Table 1	13,509	10,134,559	12,126	9,625,002	-10.24%	-5.03%
NH	Merrimack	2	Table 1	26,144	24,340,602	22,794	21,653,842	-12.81%	-11.04%
NJ	B L England	1	Table 1	15,485	7,573,153	15,694	7,658,545	1.35%	1.13%
NJ	B L England	2	Table 1	1,787	9,896,490	1,084	6,770,210	-39.34%	-31.59%
NY	Dunkirk	CS0003 (3, 4)		34,072		37,527		10.14%	
NY	Dunkirk	3	Table 1		10,571,064		12,014,610		13.66%
NY	Dunkirk	4	Table 1		11,521,991		14,506,026		25.90%
NY	Greenidge	6	Table 1	8,126	7,315,437	9,027	8,538,897	11.09%	16.72%
NY	Milliken	XS12 (1, 2)		5,620		8,572		52.53%	
NY	Milliken	1	Table 1		10,772,403		12,085,829		12.19%
NY	Milliken	2	Table 1		11,167,395		12,008,990		7.54%
NY	Northport	1	Table 1	4,868	8,862,375	2,764	12,065,492	-43.22%	36.14%
NY	Northport	2	Table 1	2,661	20,781,446	4,866	17,255,806	82.86%	-16.97%
NY	Northport	3	Table 1	4,279	7,753,803	10,502	19,356,322	145.43%	149.64%
NY	Northport	4	Substitution	822	20,283,682	1,136	12,918,579	38.20%	-36.31%
NY	Oswego	4	Substitution	0	0	0	0	0.00%	0.00%
NY	Oswego	5	Substitution	0	0	3,982	8,095,710	NA	NA
NY	Oswego	6	Substitution	1,080	5,955,023	1,121	5,315,851	3.80%	-10.73%
NY	Port Jefferson	3	Table 1	1,890	10,691,389	4,185	9,726,121	121.43%	-9.03%
NY	Port Jefferson	4	Table 1	1,602	7,149,114	3,171	11,039,434	97.94%	54.42%
NY	Roseton	1	Substitution	4,380	9,526,581	10,538	19,694,318	140.59%	106.73%
NY	Roseton	2	Substitution	7,132	16,206,427	14,192	26,363,992	98.99%	62.68%
OH	Acme	13	Substitution	0	0	0	0	0.00%	0.00%
OH	Acme	14	Substitution	0	0	0	0	0.00%	0.00%

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				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
OH	Acme	15	Substitution	0	0	0	0	0.00%	0.00%
OH	Acme	16	Substitution	0	0	0	0	0.00%	0.00%
OH	Acme	91	Substitution	0	0	0	0	0.00%	0.00%
OH	Acme	92	Substitution	0	0	0	0	0.00%	0.00%
OH	Ashtabula	7	Table 1	39,662	12,618,530	26,164	9,268,567	-34.03%	-26.55%
OH	Ashtabula	CS1 (8, 9, 10, 11)		6,942		2,048		-70.50%	
OH	Ashtabula	8	Substitution		0		0		0.00%
OH	Ashtabula	9	Substitution		0		0		0.00%
OH	Ashtabula	10	Substitution		191,965		287,495		49.76%
OH	Ashtabula	11	Substitution		2,020,623		530,174		-73.76%
OH	Avon Lake	9	Substitution	483	597,938	0	0	-100.00%	-100.00%
OH	Avon Lake	10	Substitution	4,274	4,816,566	1,222	1,437,105	-71.41%	-70.16%
OH	Avon Lake	11	Table 1	0	0	0	0	0.00%	0.00%
OH	Avon Lake	12	Table 1	28,037	32,607,684	27,714	36,413,732	-1.15%	11.67%
OH	Bay Shore	CS5 (1, 2, 3, 4)		13,874		11,472		-17.31%	
OH	Bay Shore	1	Substitution		6,545,978		6,462,382		-1.28%
OH	Bay Shore	2	Substitution		7,024,540		6,807,479		-3.09%
OH	Bay Shore	3	Substitution		7,316,921		7,261,342		-0.76%
OH	Bay Shore	4	Substitution		10,813,196		9,238,904		-14.56%
OH	Cardinal	1	Table 1	84,875	30,461,782	95,520	32,017,382	12.54%	5.11%
OH	Cardinal	2	Table 1	58,818	36,443,680	33,017	34,846,000	-43.87%	-4.38%
OH	Conesville	CS012 (1, 2)		31,975		30,089		-5.90%	
OH	Conesville	1	Table 1		7,169,706		6,163,071		-14.04%
OH	Conesville	2	Table 1		7,275,241		6,974,286		-4.14%
OH	Conesville	3	Table 1	16,424	7,352,729	17,937	7,761,567	9.21%	5.56%
OH	Conesville	4	Table 1	83,428	37,503,728	72,035	32,772,680	-13.66%	-12.61%
OH	Eastlake	1	Table 1	16,379	7,958,930	11,186	6,311,370	-31.71%	-20.70%
OH	Eastlake	2	Table 1	15,487	7,503,532	11,992	6,852,009	-22.57%	-8.68%
OH	Eastlake	3	Table 1	16,084	8,015,486	12,985	8,079,638	-19.27%	0.80%
OH	Eastlake	4	Table 1	26,322	13,078,361	18,497	10,573,149	-29.73%	-19.16%
OH	Eastlake	5	Table 1	53,952	27,418,308	56,011	36,867,392	3.82%	34.46%
OH	Edgewater	11	Substitution	0	0	0	0	0.00%	0.00%
OH	Edgewater	12	Substitution	0	0	0	0	0.00%	0.00%
OH	Edgewater	13	Table 1	3	190,520	7	1,228,962	133.33%	545.06%
OH	Gen J M Gavin	1	Table 1	16,854	86,726,768	15,085	78,819,640	-10.50%	-9.12%
OH	Gen J M Gavin	2	Table 1	16,812	74,801,544	18,718	94,637,496	11.34%	26.52%
OH	Gorge	25	Substitution	0	0	0	0	0.00%	0.00%
OH	Gorge	26	Substitution	0	0	0	0	0.00%	0.00%
OH	J M Stuart	1	Substitution	23,885	33,042,560	27,024	37,286,928	13.14%	12.85%

APPENDIX B-3: EMISSIONS AND UTILIZATION OF PHASE 1 UNITS, 1997 AND 1998

				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
OH	J M Stuart	2	Substitution	28,883	40,245,244	29,520	40,858,280	2.21%	1.52%
OH	J M Stuart	3	Substitution	25,127	35,157,140	23,211	32,223,074	-7.63%	-8.35%
OH	J M Stuart	4	Substitution	26,949	37,297,652	23,603	33,318,570	-12.42%	-10.67%
OH	Kyger Creek	CS001 (1, 2, 3, 4, 5)		111,419		119,171		6.96%	
OH	Kyger Creek	1	Table 1		14,525,068		14,334,231		-1.31%
OH	Kyger Creek	2	Table 1		15,156,232		15,054,039		-0.67%
OH	Kyger Creek	3	Table 1		15,150,482		14,714,973		-2.87%
OH	Kyger Creek	4	Table 1		14,638,612		16,147,978		10.31%
OH	Kyger Creek	5	Table 1		14,960,636		14,395,578		-3.78%
OH	Lake Shore	18	Substitution	497	1,692,121	1,811	3,627,698	264.39%	114.39%
OH	Lake Shore	91	Substitution	0	0	0	0	0.00%	0.00%
OH	Lake Shore	92	Substitution	0	0	0	0	0.00%	0.00%
OH	Lake Shore	93	Substitution	0	0	0	0	0.00%	0.00%
OH	Lake Shore	94	Substitution	0	0	0	0	0.00%	0.00%
OH	Miami Fort	CS056 (5-1, 5-2, 6)		10,087		19,614		94.45%	
OH	Miami Fort	5-1	Table 1		876,111		1,373,320		56.75%
OH	Miami Fort	5-2	Table 1		876,111		1,374,643		56.90%
OH	Miami Fort	6	Table 1		7,661,698		13,624,571		77.83%
OH	Miami Fort	7	Table 1	38,666	36,213,342	36,473	29,030,836	-5.67%	-19.83%
OH	Muskingum River	CS014 (1, 2, 3, 4)		161,924		152,316		-5.93%	
OH	Muskingum River	1	Table 1		12,198,445		9,969,079		-18.28%
OH	Muskingum River	2	Table 1		9,313,687		10,138,733		8.86%
OH	Muskingum River	3	Table 1		11,202,854		11,271,723		0.61%
OH	Muskingum River	4	Table 1		11,861,307		10,897,014		-8.13%
OH	Muskingum River	5	Table 1	21,872	37,710,912	15,307	27,975,016	-30.02%	-25.82%
OH	Niles	XS12 (1, 2)		13,340		21,636		62.19%	
OH	Niles	1	Table 1		7,712,996		7,625,299		-1.14%
OH	Niles	2	Table 1		3,337,159		5,534,045		65.83%
OH	Picway	9	Table 1	16,843	5,797,157	13,385	4,802,830	-20.53%	-17.15%
OH	Poston	1	Substitution	0	0	0	0	0.00%	0.00%
OH	Poston	2	Substitution	0	0	0	0	0.00%	0.00%
OH	Poston	3	Substitution	0	0	0	0	0.00%	0.00%
OH	R E Burger	CS0001 (1, 2, 3, 4, 5, 6, 7, 8)		46,842		38,543		-17.72%	
OH	R E Burger	1	Substitution		0		0		0.00%
OH	R E Burger	2	Substitution		0		0		0.00%
OH	R E Burger	3	Substitution		0		0		0.00%
OH	R E Burger	4	Substitution		0		0		0.00%
OH	R E Burger	5	Table 1		754,982		23		-100.00%
OH	R E Burger	6	Table 1		648,775		22,906		-96.47%

APPENDIX B-3: EMISSIONS AND UTILIZATION OF PHASE 1 UNITS, 1997 AND 1998

				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
OH	R E Burger	7	Table 1		10,903,432		10,366,887		-4.92%
OH	R E Burger	8	Table 1		10,116,964		9,213,604		-8.93%
OH	Toronto	10	Substitution	0	0	0	0	0.00%	0.00%
OH	Toronto	11	Substitution	0	0	0	0	0.00%	0.00%
OH	Toronto	9	Substitution	0	0	0	0	0.00%	0.00%
OH	W H Sammis	5	Table 1	16,619	20,677,232	16,812	19,236,457	1.16%	-6.97%
OH	W H Sammis	6	Table 1	33,154	38,089,788	20,352	29,506,312	-38.61%	-22.53%
OH	W H Sammis	7	Table 1	30,208	34,854,765	45,828	44,358,048	51.71%	27.27%
OH	Walter C Beckjord	5	Table 1	14,542	12,225,260	20,329	15,957,426	39.80%	30.53%
OH	Walter C Beckjord	6	Table 1	33,099	27,984,274	39,455	29,796,457	19.20%	6.48%
PA	Armstrong	1	Table 1	16,282	10,871,651	18,227	11,997,280	11.95%	10.35%
PA	Armstrong	2	Table 1	16,847	11,549,498	17,658	11,802,474	4.81%	2.19%
PA	Bruce Mansfield	1	Substitution	6,555	50,690,148	7,527	52,609,590	14.83%	3.79%
PA	Bruce Mansfield	2	Substitution	7,123	43,678,116	6,765	42,620,088	-5.03%	-2.42%
PA	Brunner Island	CS102 (1, 2)		44,391		48,020		8.18%	
PA	Brunner Island	1	Table 1		16,560,069		17,977,978		8.56%
PA	Brunner Island	2	Table 1		21,563,393		21,591,769		0.13%
PA	Brunner Island	3	Table 1	52,349	45,583,894	47,679	38,668,683	-8.92%	-15.17%
PA	Cheswick	1	Table 1	47,510	37,412,616	32,177	25,447,980	-32.27%	-31.98%
PA	Conemaugh	1	Table 1	3,754	66,299,762	3,874	64,682,996	3.20%	-2.44%
PA	Conemaugh	2	Table 1	3,502	61,034,531	4,347	72,193,913	24.13%	18.28%
PA	Hatfield's Ferry	XS123 (1, 2, 3)		138,630		150,868		8.83%	
PA	Hatfield's Ferry	1	Table 1		24,642,421		33,536,438		36.09%
PA	Hatfield's Ferry	2	Table 1		29,327,176		29,112,948		-0.73%
PA	Hatfield's Ferry	3	Table 1		35,212,528		29,387,244		-16.54%
PA	Martins Creek	CS102 (1, 2)		23,661		15,834		-33.08%	
PA	Martins Creek	1	Table 1		9,668,016		6,486,775		-32.90%
PA	Martins Creek	2	Table 1		9,896,340		6,021,584		-39.15%
PA	Martins Creek	3	Substitution	2,082	6,918,551	4,742	11,288,576	127.76%	63.16%
PA	Martins Creek	4	Substitution	1,938	5,638,557	4,347	10,631,226	124.30%	88.55%
PA	Mitchell	33	Substitution	1,080	16,667,369	1,050	16,084,774	-2.78%	-3.50%
PA	New Castle	1	Substitution	0	0	0	0	0.00%	0.00%
PA	New Castle	2	Substitution	0	0	0	0	0.00%	0.00%
PA	Portland	1	Table 1	11,574	7,648,014	9,772	8,564,817	-15.57%	11.99%
PA	Portland	2	Table 1	17,463	11,972,331	12,126	10,950,567	-30.56%	-8.53%
PA	Shawville	1	Table 1	15,230	9,672,852	12,864	8,432,824	-15.54%	-12.82%
PA	Shawville	2	Table 1	15,609	9,861,149	12,365	8,234,692	-20.78%	-16.49%
PA	Shawville	CS1 (3, 4)		33,064		33,535		1.42%	
PA	Shawville	3	Table 1		10,382,892		12,435,105		19.77%

APPENDIX B-3: EMISSIONS AND UTILIZATION OF PHASE 1 UNITS, 1997 AND 1998

				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
PA	Shawville	4	Table 1		12,363,361		12,289,735		-0.60%
PA	Sunbury	3	Table 1	11,343	8,209,041	10,307	8,357,434	-9.13%	1.81%
PA	Sunbury	4	Table 1	11,326	8,102,198	11,970	9,405,060	5.69%	16.08%
TN	Allen	1	Table1	6,754	14,847,074	5,671	13,314,521	-16.03%	-10.32%
TN	Allen	2	Table1	7,134	16,492,487	7,378	17,881,872	3.42%	8.42%
TN	Allen	3	Table1	7,436	17,656,804	7,162	18,246,196	-3.68%	3.34%
TN	Cumberland	1	Table 1	9,846	111,236,832	10,610	93,425,640	7.76%	-16.01%
TN	Cumberland	2	Table 1	11,122	118,698,432	9,891	77,445,408	-11.07%	-34.75%
TN	DuPont Johnsonville	JVD1	Opt In	0	0	0	0	0.00%	0.00%
TN	DuPont Johnsonville	JVD2	Opt In	0	0	0	0	0.00%	0.00%
TN	DuPont Johnsonville	JVD3	Opt In	0	0	0	0	0.00%	0.00%
TN	DuPont Johnsonville	JVD4	Opt In	0	0	0	0	0.00%	0.00%
TN	Gallatin	CSGA12 (1, 2)		50,974		40,664		-20.23%	
TN	Gallatin	1	Table 1		14,146,293		16,675,013		17.88%
TN	Gallatin	2	Table 1		13,928,512		13,358,894		-4.09%
TN	Gallatin	CSGA34 (3, 4)		66,129		45,551		-31.12%	
TN	Gallatin	3	Table 1		17,014,207		18,006,243		5.83%
TN	Gallatin	4	Table 1		18,173,564		14,508,353		-20.17%
TN	Johnsonville	CSJO10 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)		115,938		114,588		-1.16%	
TN	Johnsonville	1	Table 1		6,385,030		8,391,787		31.43%
TN	Johnsonville	2	Table 1		8,774,006		6,454,090		-26.44%
TN	Johnsonville	3	Table 1		8,605,129		5,676,977		-34.03%
TN	Johnsonville	4	Table 1		8,448,481		7,806,189		-7.60%
TN	Johnsonville	5	Table 1		7,847,835		6,805,978		-13.28%
TN	Johnsonville	6	Table 1		6,274,393		7,370,703		17.47%
TN	Johnsonville	7	Table 1		8,278,704		7,852,052		-5.15%
TN	Johnsonville	8	Table 1		9,340,449		8,457,149		-9.46%
TN	Johnsonville	9	Table 1		9,054,961		9,737,698		7.54%
TN	Johnsonville	10	Table 1		6,274,673		8,049,553		28.29%
WI	Alma	CS1 (B1, B2, B3, B4, B5)		5,608		6,517		16.21%	
WI	Alma	B1	Opt In		NA		663,744		NA
WI	Alma	B2	Opt In		NA		602,030		NA
WI	Alma	B3	Opt In		NA		565,438		NA
WI	Alma	B4	Substitution		2,637,034		3,122,034		18.39%
WI	Alma	B5	Substitution		3,645,037		4,318,051		18.46%
WI	Edgewater	3	Substitution	1,620	4,010,042	1,973	5,011,080	21.79%	24.96%
WI	Edgewater	4	Table 1	7,968	19,448,932	8,391	20,197,100	5.31%	3.85%
WI	Genoa	1	Table 1	12,750	23,336,894	9,031	16,559,515	-29.17%	-29.04%
WI	J P Madgett	B1	Substitution	4,946	21,777,568	5,223	25,231,992	5.60%	15.86%

APPENDIX B-3: EMISSIONS AND UTILIZATION OF PHASE 1 UNITS, 1997 AND 1998

				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
WI	Nelson Dewey	CS1 (1, 2)		6,092		10,861		78.28%	
WI	Nelson Dewey	1	Table 1		8,239,503		6,172,813		-25.08%
WI	Nelson Dewey	2	Table 1		8,457,749		7,216,679		-14.67%
WI	North Oak Creek	1	Table 1	0	0	0	0	0.00%	0.00%
WI	North Oak Creek	2	Table 1	0	0	0	0	0.00%	0.00%
WI	North Oak Creek	3	Table 1	0	0	0	0	0.00%	0.00%
WI	North Oak Creek	4	Table 1	0	0	0	0	0.00%	0.00%
WI	Pulliam	CS56 (5, 6)		2,141		1,884		-12.00%	
WI	Pulliam	5	Substitution		3,268,887		3,766,998		15.24%
WI	Pulliam	6	Substitution		5,354,200		5,003,476		-6.55%
WI	Pulliam	7	Substitution	1,540	6,492,200	1,569	7,422,811	1.88%	14.33%
WI	Pulliam	8	Table 1	2,264	9,850,126	2,283	11,212,789	0.84%	13.83%
WI	Rock River	1	Substitution	1,560	4,227,957	1,532	4,083,241	-1.79%	-3.42%
WI	Rock River	2	Substitution	1,776	4,871,904	1,898	4,957,022	6.87%	1.75%
WI	South Oak Creek	CS3 (5, 6)		15,452		16,781		8.60%	
WI	South Oak Creek	5	Table 1		15,182,914		10,136,963		-33.23%
WI	South Oak Creek	6	Table 1		9,504,521		16,111,857		69.52%
WI	South Oak Creek	CS4 (7, 8)		25,934		26,529		2.29%	
WI	South Oak Creek	7	Table 1		22,009,580		20,272,864		-7.89%
WI	South Oak Creek	8	Table 1		19,063,307		18,324,182		-3.88%
WI	Weston	1	Substitution	1,318	4,399,791	1,111	3,956,520	-15.71%	-10.07%
WI	Weston	2	Substitution	1,678	5,695,054	1,922	6,830,073	14.54%	19.93%
WV	Albright	1	Substitution	1,578	1,269,279	2,202	1,843,436	39.54%	45.23%
WV	Albright	2	Substitution	1,682	1,333,070	1,929	1,623,422	14.68%	21.78%
WV	Albright	3	Table1	9,380	7,411,488	7,228	6,078,740	-22.94%	-17.98%
WV	Fort Martin	1	Table 1	42,733	36,022,017	41,641	34,726,484	-2.56%	-3.60%
WV	Fort Martin	2	Table 1	44,413	37,187,816	37,663	30,423,447	-15.20%	-18.19%
WV	Harrison	XS123 (1, 2, 3)		6,298		6,934		10.10%	
WV	Harrison	1	Table 1		48,646,367		46,082,925		-5.27%
WV	Harrison	2	Table 1		48,426,987		51,433,080		6.21%
WV	Harrison	3	Table 1		45,939,810		55,241,467		20.25%
WV	Kammer	CS013 (1, 2, 3)		126,273		108,618		-13.98%	
WV	Kammer	1	Table 1		13,727,107		13,479,546		-1.80%
WV	Kammer	2	Table 1		15,078,749		12,639,201		-16.18%
WV	Kammer	3	Table 1		17,379,095		13,391,834		-22.94%
WV	Mitchell	CS012 (1, 2)		57,239		59,330		3.65%	
WV	Mitchell	1	Table 1		40,025,964		44,346,849		10.80%
WV	Mitchell	2	Table 1		50,581,435		48,141,367		-4.82%
WV	Mt Storm	CS0 (1, 2)		92,716		106,759		15.15%	

APPENDIX B-3: EMISSIONS AND UTILIZATION OF PHASE 1 UNITS, 1997 AND 1998

				1997		1998		Percent Change, 1997-1998	
State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)	SO2 Emissions	Utilization (mmBtu)
WV	Mt Storm	1	Table 1		35,476,403		41,523,871		17.05%
WV	Mt Storm	2	Table 1		36,446,948		39,716,905		8.97%
WV	Mt Storm	3	Table 1	4,052	45,013,972	4,576	47,191,480	12.93%	4.84%
WV	Rivesville	7	Substitution	235	299,093	624	819,610	165.53%	174.03%
WV	Rivesville	8	Substitution	1,234	1,531,972	1,995	2,531,623	61.67%	65.25%
WV	Willow Island	2	Substitution	8,067	8,554,928	7,870	8,015,622	-2.44%	-6.30%

NOTES: (a) Identifies the affected unit as listed in Table 1, as a subsitution or compensating unit, or as an opt-in unit.

APPENDIX B-4: EMISSIONS AND ALLOWANCE HOLDINGS OF PHASE 1 UNITS

State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions 1997 (b)	SO2 Emissions 1998(b)	1998 Allowances Allocated (c)	Held in Unit Accounts as of 3/1/99	Allowances Deducted for Emissions (d)	Deducted Under Special Phase I Provisions (e)	Allowances Carried Over to 1999
AL	Colbert	CSCO14 (1, 2, 3, 4)		27,220	26,653					
AL	Colbert	1	Table 1			13,213	21,577	7,679	0	13,898
AL	Colbert	2	Table 1			14,907	28,046	6,719	0	21,327
AL	Colbert	3	Table 1			14,995	28,275	6,460	0	21,815
AL	Colbert	4	Table 1			15,005	28,493	5,795	0	22,698
AL	Colbert	5	Table 1	50,803	47,608	36,202	48,561	47,608	0	953
AL	E C Gaston	CS0CAN (1, 2)		24,949	25,864					
AL	E C Gaston	1	Table 1			17,624	14,332	13,062	0	1,270
AL	E C Gaston	2	Table 1			18,052	14,082	12,802	0	1,280
AL	E C Gaston	CS0CBN (3, 4)		26,165	25,669					
AL	E C Gaston	3	Table 1			17,828	15,002	13,638	0	1,364
AL	E C Gaston	4	Table 1			18,773	14,000	12,031	0	1,969
AL	E C Gaston	5	Table 1	36,094	41,489	58,265	45,632	41,489	0	4,143
AL	Gadsden	1	Substitution	4,716	4,751	5,158	5,226	4,751	0	475
AL	Gadsden	2	Substitution	4,876	4,463	5,374	4,909	4,463	0	446
FL	Big Bend	CS001 (BB01, BB02)		82,191	90,881					
FL	Big Bend	BB01	Table 1			27,662	49,712	46,712	0	3,000
FL	Big Bend	BB02	Table 1			26,387	47,169	44,169	0	3,000
FL	Big Bend	XS23 (BB03, BB04)		20,303	16,544					
FL	Big Bend	BB03	Table 1			26,036	15,759	12,173	0	3,586
FL	Big Bend	BB04	Substitution			6,400	7,797	4,371	0	3,426
FL	Crist	4	Substitution	2,563	3,255	9,953	30,887	3,255	0	27,632
FL	Crist	5	Substitution	4,354	3,872	9,374	27,505	3,872	0	23,633
FL	Crist	6	Table 1	10,243	14,461	18,695	38,097	14,461	0	23,636
FL	Crist	7	Table 1	19,563	29,005	30,846	64,922	29,005	0	35,917
FL	Scholz	1	Substitution	1,280	1,877	8,282	27,026	1,877	0	25,149
FL	Scholz	2	Substitution	2,112	2,877	8,572	26,429	2,877	0	23,552
GA	Arkwright	CS001 (1, 2, 3, 4)		3,431	4,272					
GA	Arkwright	1	Substitution			2,437	4,016	1,068	0	2,948
GA	Arkwright	2	Substitution			2,240	3,622	1,068	0	2,554
GA	Arkwright	3	Substitution			3,944	7,030	1,068	0	5,962
GA	Arkwright	4	Substitution			3,159	5,461	1,068	0	4,393
GA	Bowen	1BLR	Table 1	37,241	34,016	54,838	123,284	34,016	0	89,268
GA	Bowen	2BLR	Table 1	33,675	28,130	53,329	85,123	28,130	0	56,993
GA	Bowen	3BLR	Table 1	40,828	47,897	69,862	116,493	47,897	0	68,596
GA	Bowen	4BLR	Table 1	42,319	35,108	69,852	116,905	35,108	0	81,797
GA	Hammond	CS001 (1, 2, 3)		8,609	9,842					
GA	Hammond	1	Table 1			8,549	14,228	3,281	0	10,947
GA	Hammond	2	Table 1			8,977	15,084	3,281	0	11,803

APPENDIX B-4: EMISSIONS AND ALLOWANCE HOLDINGS OF PHASE 1 UNITS

State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions 1997 (b)	SO2 Emissions 1998(b)	1998 Allowances Allocated (c)	Held in Unit Accounts as of 3/1/99	Allowances Deducted for Emissions (d)	Deducted Under Special Phase I Provisions (e)	Allowances Carried Over to 1999
GA	Hammond	3	Table 1			8,676	14,483	3,280	0	11,203
GA	Hammond	4	Table 1	16,571	13,217	36,650	81,025	13,217	0	67,808
GA	Harllee Branch	CS001 (1, 2)		29,845	32,342					
GA	Harllee Branch	1	Substitution			19,221	34,938	16,171	0	18,767
GA	Harllee Branch	2	Substitution			22,735	48,995	16,171	0	32,824
GA	Harllee Branch	CS002 (3, 4)		53,136	56,643					
GA	Harllee Branch	3	Substitution			31,280	51,834	28,322	0	23,512
GA	Harllee Branch	4	Substitution			31,042	50,880	28,321	0	22,559
GA	Jack Mcdonough	MB1	Table 1			19,386	44,016	14,258	0	29,758
GA	Jack Mcdonough	CS001 (MB1, MB2)		28,284	28,516					
GA	Jack Mcdonough	MB2	Table 1			20,058	46,032	14,258	0	31,774
GA	Kraft	XS123 (1, 2, 3)		7,267	5,906					
GA	Kraft	1	Substitution			2,265	5,125	1,532	0	3,593
GA	Kraft	2	Substitution			2,137	4,794	1,236	0	3,558
GA	Kraft	3	Substitution			4,121	7,304	3,138	0	4,166
GA	Mcintosh	1	Substitution	6,175	6,716	7,146	11,232	6,716	0	4,516
GA	Mitchell	3	Substitution	3,892	4,621	10,792	28,484	4,621	0	23,863
GA	Wansley	1	Table 1	34,105	44,760	68,908	109,452	44,760	0	64,692
GA	Wansley	2	Table 1	32,258	42,489	63,708	100,342	42,489	0	57,853
GA	Yates	Y1BR	Table 1	130	131	9,533	23,227	131	0	23,096
GA	Yates	Y2BR	Table 1			6,855	17,359	3,433	0	13,926
GA	Yates	CS001 (Y2BR, Y3BR)		6,412	6,865					
GA	Yates	Y3BR	Table 1			6,767	17,095	3,432	0	13,663
GA	Yates	Y4BR	Table 1			8,676	21,566	4,568	0	16,998
GA	Yates	CS002 (Y4BR, Y5BR)		8,923	9,136					
GA	Yates	Y5BR	Table 1			9,162	23,025	4,568	0	18,457
GA	Yates	Y6BR	Table 1	9,393	11,192	24,108	62,931	11,192	0	51,739
GA	Yates	Y7BR	Table 1	9,702	12,150	20,915	53,043	12,150	0	40,893
IA	Burlington	1	Table 1	6,352	5,847	10,428	19,736	5,847	0	13,889
IA	Des Moines	11	Table 1	0	0	2,259	0	0	0	0
IA	George Neal North	1	Table 1	4,040	3,974	2,571	9,598	3,974	0	5,624
IA	Milton L Kapp	2	Table 1	4,839	5,282	13,437	35,269	5,282	0	29,987
IA	Prairie Creek	4	Table 1	2,985	4,035	7,965	20,558	4,035	0	16,523
IA	Riverside	9	Table 1	2,545	1,435	3,885	8,882	1,435	0	7,447
IL	Baldwin	1	Table 1	88,439	71,396	46,052	74,791	71,396	0	3,395
IL	Baldwin	2	Table 1	92,284	92,968	48,695	97,625	92,968	0	4,657
IL	Baldwin	3	Table 1	95,312	120,253	46,644	127,677	120,253	0	7,424
IL	Coffeen	CS0001 (1, 2)		47,756	49,413					
IL	Coffeen	1	Table 1			12,925	15,570	15,473	0	97

APPENDIX B-4: EMISSIONS AND ALLOWANCE HOLDINGS OF PHASE 1 UNITS

State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions 1997 (b)	SO2 Emissions 1998(b)	1998 Allowances Allocated (c)	Held in Unit Accounts as of 3/1/99	Allowances Deducted for Emissions (d)	Deducted Under Special Phase I Provisions (e)	Allowances Carried Over to 1999
IL	Coffeen	2	Table 1			39,102	34,070	33,940	0	130
IL	Grand Tower	9	Table 1	18,586	9,188	6,479	9,245	9,188	0	57
IL	Havana	1	Substitution	0	0	34	11	0	0	11
IL	Havana	2	Substitution	0	5	43	63	5	0	58
IL	Havana	3	Substitution	0	9	34	61	9	0	52
IL	Havana	4	Substitution	0	39	34	61	39	0	22
IL	Havana	5	Substitution	0	41	34	61	41	0	20
IL	Havana	6	Substitution	0	29	34	61	29	0	32
IL	Havana	7	Substitution	0	24	34	61	24	0	37
IL	Havana	8	Substitution	0	30	34	61	30	0	31
IL	Hennepin	CS3 (1, 2)		47,346	46,809					
IL	Hennepin	1	Substitution			9,847	7,847	6,101	0	1,746
IL	Hennepin	2	Table 1			20,182	47,246	40,708	0	6,538
IL	Hutsonville	5	Substitution	8,640	5,238	9,661	5,442	5,238	0	204
IL	Hutsonville	6	Substitution	10,982	5,666	9,837	5,917	5,666	0	251
IL	Joppa Steam	CS1 (1, 2)		7,731	8,280					
IL	Joppa Steam	1	Table 1			12,259	36,840	4,140	0	32,700
IL	Joppa Steam	2	Table 1			10,487	29,751	4,140	0	25,611
IL	Joppa Steam	CS2 (3, 4)		7,998	7,937					
IL	Joppa Steam	3	Table 1			11,947	35,908	3,969	0	31,939
IL	Joppa Steam	4	Table 1			11,061	32,363	3,968	0	28,395
IL	Joppa Steam	CS3 (5, 6)		8,472	7,636					
IL	Joppa Steam	5	Table 1			11,119	29,835	3,818	0	26,017
IL	Joppa Steam	6	Table 1			10,341	26,723	3,818	0	22,905
IL	Kincaid	CS0102 (1, 2)		41,096	46,417					
IL	Kincaid	1	Table 1			34,564	25,556	23,208	0	2,348
IL	Kincaid	2	Table 1			37,063	24,527	23,209	0	1,318
IL	Meredosia	5	Table 1	15,950	10,941	15,227	11,105	10,941	0	164
IL	Newton	1	Substitution	16,698	7,508	14,599	7,629	7,508	0	121
IL	Newton	2	Substitution	13,619	14,298	6,346	14,422	14,298	0	124
IL	Vermilion	CS3 (1, 2)		6,208	12,220					
IL	Vermilion	1	Substitution			12,972	6,659	4,631	0	2,028
IL	Vermilion	2	Table 1			9,735	8,340	7,589	0	751
IL	Wood River	1	Substitution	0	1	0	12	1	0	11
IN	Bailly	XS12 (7, 8)		4,736	4,334					
IN	Bailly	7	Table 1			15,826	7,687	1,417	0	6,270
IN	Bailly	8	Table 1			21,590	21,946	2,917	0	19,029
IN	Breed	1	Table 1	0	0	20,280	30,362	0	0	30,362
IN	Cayuga	1	Table 1	56,992	51,345	36,581	62,163	51,345	0	10,818

APPENDIX B-4: EMISSIONS AND ALLOWANCE HOLDINGS OF PHASE 1 UNITS

State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions 1997 (b)	SO2 Emissions 1998(b)	1998 Allowances Allocated (c)	Held in Unit Accounts as of 3/1/99	Allowances Deducted for Emissions (d)	Deducted Under Special Phase I Provisions (e)	Allowances Carried Over to 1999
IN	Cayuga	2	Table 1	51,796	37,593	37,415	57,450	37,593	0	19,857
IN	Clifty Creek	CS001 (1, 2, 3)		44,612	46,294					
IN	Clifty Creek	1	Table 1			19,620	22,036	15,432	0	6,604
IN	Clifty Creek	2	Table 1			19,289	17,908	15,431	0	2,477
IN	Clifty Creek	3	Table 1			19,873	18,492	15,431	0	3,061
IN	Clifty Creek	CS002 (4, 5, 6)		48,844	42,899					
IN	Clifty Creek	4	Table 1			19,552	18,414	14,299	0	4,115
IN	Clifty Creek	5	Table 1			18,851	16,400	14,300	0	2,100
IN	Clifty Creek	6	Table 1			19,844	29,074	14,300	0	14,774
IN	Elmer W Stout	50	Table 1	7,444	6,638	4,253	6,900	6,638	0	262
IN	Elmer W Stout	60	Table 1	6,561	7,392	5,229	7,756	7,392	0	364
IN	Elmer W Stout	70	Table 1	22,717	25,931	25,883	26,723	25,931	0	792
IN	F B Culley	XS23 (2, 3)		5,152	7,687					
IN	F B Culley	2	Table 1			4,703	8,331	7,687	0	644
IN	F B Culley	3	Table 1			18,603	19,603	0	0	19,603
IN	Frank E Ratts	1SG1	Table 1	8,566	9,236	9,131	14,363	9,236	0	5,127
IN	Frank E Ratts	2SG1	Table 1	7,989	9,393	9,296	12,015	9,393	0	2,622
IN	Gibson	CS0003 (1, 2)		79,183	94,431					
IN	Gibson	1	Table 1			44,288	60,782	48,712	0	12,070
IN	Gibson	2	Table 1			44,956	57,182	45,719	0	11,463
IN	Gibson	XS34 (3, 4)		49,170	51,189					
IN	Gibson	3	Table 1			45,033	59,533	50,854	0	8,679
IN	Gibson	4	Table 1			44,200	90,808	335	0	90,473
IN	H T Pritchard	CS596 (5, 6)		8,909	7,512					
IN	H T Pritchard	5	Substitution			1,458	2,699	2,479	0	220
IN	H T Pritchard	6	Table 1			6,325	5,463	5,033	0	430
IN	Michigan City	12	Table 1	15,262	16,672	25,553	78,549	16,672	0	61,877
IN	Petersburg	1	Table 1	2,893	2,247	18,011	2,384	2,247	0	137
IN	Petersburg	2	Table 1	4,162	4,136	35,496	4,368	4,136	0	232
IN	R Gallagher	CS0001 (1, 2)		25,662	22,954					
IN	R Gallagher	1	Table 1			7,115	12,378	10,208	0	2,170
IN	R Gallagher	2	Table 1			7,980	15,442	12,746	0	2,696
IN	R Gallagher	CS0002 (3, 4)		21,183	27,642					
IN	R Gallagher	3	Table 1			7,159	17,676	14,599	0	3,077
IN	R Gallagher	4	Table 1			8,386	15,800	13,043	0	2,757
IN	Tanners Creek	U4	Table 1	61,344	32,017	27,209	116,844	32,017	0	84,827
IN	Wabash River	1	Table 1	1,051	851	5,379	7,716	851	0	6,865
IN	Wabash River	XS2356 (2, 3, 5, 6)		37,577	48,580					
IN	Wabash River	2	Table 1			3,135	10,380	7,324	0	3,056

APPENDIX B-4: EMISSIONS AND ALLOWANCE HOLDINGS OF PHASE 1 UNITS

State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions 1997 (b)	SO2 Emissions 1998(b)	1998 Allowances Allocated (c)	Held in Unit Accounts as of 3/1/99	Allowances Deducted for Emissions (d)	Deducted Under Special Phase I Provisions (e)	Allowances Carried Over to 1999
IN	Wabash River	3	Table 1			4,111	12,615	7,600	0	5,015
IN	Wabash River	5	Table 1			4,023	11,132	9,187	0	1,945
IN	Wabash River	6	Table 1			13,462	38,820	24,469	0	14,351
IN	Warrick	XS123 (1, 2, 3)		79,037	78,964					
IN	Warrick	1	Opt In			30,372	26,927	26,689	0	238
IN	Warrick	2	Opt In			30,732	28,645	26,233	543	1,869
IN	Warrick	3	Opt In			27,668	26,880	26,042	0	838
IN	Warrick	4	Table 1	39,864	34,078	29,577	36,643	34,078	0	2,565
KS	La Cygne	1	Substitution	6,927	6,319	23,489	12,025	6,319	0	5,706
KS	Quindaro	2	Table 1	4,052	2,985	4,109	6,694	2,985	0	3,709
KY	Coleman	C1	Table 1	15,985	13,908	10,954	15,386	13,908	0	1,478
KY	Coleman	C2	Table 1	18,600	9,677	12,502	11,672	9,677	0	1,995
KY	Coleman	C3	Table 1	16,037	14,568	12,015	16,120	14,568	0	1,552
KY	Cooper	CS1 (1, 2)		15,818	17,613					
KY	Cooper	1	Table 1			7,254	12,233	5,812	0	6,421
KY	Cooper	2	Table 1			14,917	25,592	11,801	0	13,791
KY	E W Brown	1	Table 1	5,869	6,762	6,923	22,811	6,762	0	16,049
KY	E W Brown	CS003 (2, 3)		30,538	35,473					
KY	E W Brown	2	Table 1			10,623	34,716	11,701	0	23,015
KY	E W Brown	3	Table 1			25,413	86,062	23,772	0	62,290
KY	East Bend	2	Substitution	13,083	13,064	17,447	17,643	13,064	0	4,579
KY	Elmer Smith	XS12 (1, 2)		7,688	7,011					
KY	Elmer Smith	1	Table 1			6,348	2,204	2,103	0	101
KY	Elmer Smith	2	Table 1			14,031	5,007	4,908	0	99
KY	Ghent	1	Table 1	7,399	7,396	33,701	110,586	7,396	0	103,190
KY	Green River	5	Table 1	12,409	14,438	7,614	21,803	14,438	0	7,365
KY	H L Spurlock	1	Table 1	15,669	14,941	22,181	46,364	14,941	0	31,423
KY	Hmp&L Station 2	H1	Table 1	2,142	2,397	17,920	9,804	2,397	0	7,407
KY	Hmp&L Station 2	H2	Table 1	2,482	2,130	17,085	7,808	2,130	0	5,678
KY	Paradise	3	Table 1	173,285	126,946	57,613	216,485	126,946	0	89,539
KY	R D Green	G1	Substitution	1,004	1,828	5,041	9,195	1,828	0	7,367
KY	R D Green	G2	Substitution	1,323	2,136	5,827	10,674	2,136	0	8,538
KY	Shawnee	10	Table 1	2,204	1,560	9,902	18,052	1,560	0	16,492
MA	Brayton Point	2	Compensating	10,646	9,744	15,838	29,975	9,744	0	20,231
MA	Mount Tom	1	Substitution	9,742	8,417	10,708	14,921	8,417	1,636	4,868
MD	C P Crane	1	Table 1	12,740	15,224	10,058	64,309	15,224	0	49,085
MD	C P Crane	2	Table 1	17,050	13,636	8,987	17,202	13,636	0	3,566
MD	Chalk Point	CSE12 (1, 2)		39,789	44,721					
MD	Chalk Point	1	Table 1			21,333	27,900	23,068	0	4,832

APPENDIX B-4: EMISSIONS AND ALLOWANCE HOLDINGS OF PHASE 1 UNITS

State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions 1997 (b)	SO2 Emissions 1998(b)	1998 Allowances Allocated (c)	Held in Unit Accounts as of 3/1/99	Allowances Deducted for Emissions (d)	Deducted Under Special Phase I Provisions (e)	Allowances Carried Over to 1999
MD	Chalk Point	2	Table 1			23,690	28,253	21,653	0	6,600
MD	Chalk Point	3	Substitution	2,716	7,732	9,000	19,000	7,732	0	11,268
MD	Morgantown	1	Table 1	39,650	34,953	34,332	45,499	34,953	0	10,546
MD	Morgantown	2	Table 1	33,341	44,953	37,467	56,019	44,953	0	11,066
MD	R P Smith	9	Substitution	71	117	386	673	117	0	556
MD	R P Smith	11	Substitution	2,264	2,262	3,128	4,408	2,262	0	2,146
MI	Dan E Karn	2	Substitution	9,694	8,426	10,984	11,276	8,426	0	2,850
MI	J H Campbell	CS0009 (1, 2)		21,219	22,693					
MI	J H Campbell	1	Table 1			18,773	8,804	8,004	0	800
MI	J H Campbell	2	Table 1			22,453	16,158	14,689	0	1,469
MI	J R Whiting	3	Substitution	4,801	4,755	5,498	5,673	4,755	0	918
MN	High Bridge	CS0001 (3, 4, 5, 6)		3,848	4,044					
MN	High Bridge	3	Substitution			299	3,349	251	0	3,098
MN	High Bridge	4	Substitution			242	1,946	251	0	1,695
MN	High Bridge	5	Substitution			410	2,891	1,279	0	1,612
MN	High Bridge	6	Table 1			4,158	10,788	2,263	0	8,525
MN	Sherburne County	CS1 (1, 2)		9,132	8,958					
MN	Sherburne County	1	Substitution			4,681	15,649	4,216	0	11,433
MN	Sherburne County	2	Substitution			4,727	16,242	4,742	0	11,500
MO	Asbury	1	Table 1	9,236	8,212	15,764	37,704	8,212	65	29,427
MO	Hawthorn	5	Substitution	9,297	7,106	6,927	7,461	7,106	0	355
MO	James River	3	Substitution	1,164	1,409	2,536	3,910	1,409	0	2,501
MO	James River	4	Substitution	1,780	1,708	4,304	5,144	1,708	0	3,436
MO	James River	5	Table 1	3,633	2,810	4,722	3,488	2,810	0	678
MO	Labadie	1	Table 1	12,452	15,654	39,055	16,711	15,654	0	1,057
MO	Labadie	2	Table 1	15,063	12,987	36,718	14,237	12,987	0	1,250
MO	Labadie	3	Table 1	12,635	14,602	39,249	15,801	14,602	0	1,199
MO	Labadie	4	Table 1	13,777	14,354	34,994	15,392	14,354	0	1,038
MO	Meramec	1	Substitution	3,147	1,670	1,816	2,871	1,670	0	1,201
MO	Meramec	2	Substitution	3,388	1,541	1,948	2,873	1,541	0	1,332
MO	Meramec	3	Substitution	3,364	3,706	4,166	5,516	3,706	0	1,810
MO	Montrose	1	Table 1	2,705	4,072	7,196	4,276	4,072	0	204
MO	Montrose	CS023 (2, 3)		6,684	8,875					
MO	Montrose	2	Table 1			7,984	4,362	4,153	0	209
MO	Montrose	3	Table 1			9,824	4,974	4,722	0	252
MO	New Madrid	1	Table 1	8,924	8,735	27,497	13,202	8,735	0	4,467
MO	New Madrid	2	Table 1	10,474	9,018	31,625	33,276	9,018	0	24,258
MO	Rush Island	1	Substitution	13,484	13,485	26,935	14,684	13,485	0	1,199
MO	Rush Island	2	Substitution	11,659	13,924	30,146	15,026	13,924	0	1,102

APPENDIX B-4: EMISSIONS AND ALLOWANCE HOLDINGS OF PHASE 1 UNITS

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MO	Sibley	CS0001 (1, 2, 3)		19,839	27,056					
MO	Sibley	1	Substitution			2,782	5,521	2,705	0	2,816
MO	Sibley	2	Substitution			3,332	7,700	2,706	0	4,994
MO	Sibley	3	Table 1			15,170	22,127	21,645	0	482
MO	Sioux	1	Table 1	30,140	18,885	21,976	20,106	18,885	0	1,221
MO	Sioux	2	Table 1	24,968	23,062	23,067	24,083	23,062	0	1,021
MO	Southwest	1	Substitution	3,785	6,837	3,906	7,161	6,837	0	324
MO	Thomas Hill	MB1	Table 1	3,382	3,080	9,980	11,078	3,080	0	7,998
MO	Thomas Hill	MB2	Table 1	4,978	4,722	18,880	28,282	4,722	0	23,560
MO	Thomas Hill	MB3	Substitution	11,224	9,916	14,011	16,798	9,916	0	6,882
MS	Jack Watson	4	Table 1	11,749	18,528	17,439	25,577	18,528	0	7,049
MS	Jack Watson	5	Table 1	30,551	32,033	35,734	44,344	32,033	0	12,311
MS	R D Morrow	1	Substitution	5,072	4,267	4,571	5,087	4,267	0	820
MS	R D Morrow	2	Substitution	4,255	4,383	5,002	7,152	4,383	0	2,769
MS	Victor J Daniel Jr	1	Substitution	11,632	8,109	9,427	10,937	8,109	0	2,828
NH	Merrimack	1	Table 1	13,509	12,126	9,922	12,457	12,126	0	331
NH	Merrimack	2	Table 1	26,144	22,794	21,421	23,047	22,794	0	253
NJ	B L England	1	Table 1	15,485	15,694	8,822	18,159	15,694	0	2,465
NJ	B L England	2	Table 1	1,787	1,084	14,886	2,254	1,084	0	1,170
NY	Dunkirk	CS0003 (3, 4)		34,072	37,527					
NY	Dunkirk	3	Table 1			12,268	34,855	20,640	0	14,215
NY	Dunkirk	4	Table 1			13,690	18,292	16,887	0	1,405
NY	Greenidge	6	Table 1	8,126	9,027	7,342	17,274	9,027	0	8,247
NY	Milliken	XS12 (1, 2)		5,620	8,572					
NY	Milliken	1	Table 1			10,876	73,288	4,073	0	69,215
NY	Milliken	2	Table 1			12,083	26,732	4,499	0	22,233
NY	Northport	1	Table 1	4,868	2,764	19,289	29,053	2,764	0	26,289
NY	Northport	2	Table 1	2,661	4,866	23,476	18,693	4,866	0	13,827
NY	Northport	3	Table 1	4,279	10,502	25,783	24,616	10,502	0	14,114
NY	Northport	4	Substitution	822	1,136	5,516	14,797	1,136	119	13,542
NY	Oswego	4	Substitution	0	0	371	1,492	0	0	1,492
NY	Oswego	5	Substitution	0	3,982	12,365	36,993	3,982	0	33,011
NY	Oswego	6	Substitution	1,080	1,121	4,499	12,773	1,121	0	11,652
NY	Port Jefferson	3	Table 1	1,890	4,185	10,194	14,406	4,185	0	10,221
NY	Port Jefferson	4	Table 1	1,602	3,171	12,006	18,011	3,171	0	14,840
NY	Roseton	1	Substitution	4,380	10,538	19,147	19,147	10,538	0	8,609
NY	Roseton	2	Substitution	7,132	14,192	16,872	16,872	14,192	0	2,680
OH	Acme	13	Substitution	0	0	0	0	0	0	0
OH	Acme	14	Substitution	0	0	12	0	0	0	0

APPENDIX B-4: EMISSIONS AND ALLOWANCE HOLDINGS OF PHASE 1 UNITS

State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions 1997 (b)	SO2 Emissions 1998(b)	1998 Allowances Allocated (c)	Held in Unit Accounts as of 3/1/99	Allowances Deducted for Emissions (d)	Deducted Under Special Phase I Provisions (e)	Allowances Carried Over to 1999
OH	Acme	15	Substitution	0	0	16	0	0	0	0
OH	Acme	16	Substitution	0	0	1,930	0	0	0	0
OH	Acme	91	Substitution	0	0	740	0	0	0	0
OH	Acme	92	Substitution	0	0	662	0	0	0	0
OH	Ashtabula	7	Table 1	39,662	26,164	18,351	28,835	26,164	0	2,671
OH	Ashtabula	CS1 (8, 9, 10, 11)		6,942	2,048					
OH	Ashtabula	8	Substitution			7,487	0	0	0	0
OH	Ashtabula	9	Substitution			7,016	7,016	0	0	7,016
OH	Ashtabula	10	Substitution			6,155	812	637	0	175
OH	Ashtabula	11	Substitution			6,452	1,745	1,411	0	334
OH	Avon Lake	9	Substitution	483	0	8,763	64	0	0	64
OH	Avon Lake	10	Substitution	4,274	1,222	7,879	1,527	1,222	0	305
OH	Avon Lake	11	Table 1	0	0	12,771	0	0	0	0
OH	Avon Lake	12	Table 1	28,037	27,714	33,413	40,913	27,714	0	13,199
OH	Bay Shore	CS5 (1, 2, 3, 4)		13,874	11,472					
OH	Bay Shore	1	Substitution			7,414	7,629	2,490	0	5,139
OH	Bay Shore	2	Substitution			6,957	7,248	2,627	0	4,621
OH	Bay Shore	3	Substitution			7,585	7,876	2,799	0	5,077
OH	Bay Shore	4	Substitution			12,481	12,986	3,556	0	9,430
OH	Cardinal	1	Table 1	84,875	95,520	37,568	100,301	95,520	0	4,781
OH	Cardinal	2	Table 1	58,818	33,017	42,008	52,486	33,017	0	19,469
OH	Conesville	CS012 (1, 2)		31,975	30,089					
OH	Conesville	1	Table 1			4,615	14,778	14,074	0	704
OH	Conesville	2	Table 1			5,360	16,816	16,015	0	801
OH	Conesville	3	Table 1	16,424	17,937	6,029	18,834	17,937	0	897
OH	Conesville	4	Table 1	83,428	72,035	53,463	73,920	72,035	0	1,885
OH	Eastlake	1	Table 1	16,379	11,186	8,551	13,392	11,186	0	2,206
OH	Eastlake	2	Table 1	15,487	11,992	9,471	14,120	11,992	0	2,128
OH	Eastlake	3	Table 1	16,084	12,985	10,984	14,599	12,985	0	1,614
OH	Eastlake	4	Table 1	26,322	18,497	15,906	21,962	18,497	0	3,465
OH	Eastlake	5	Table 1	53,952	56,011	37,349	67,970	56,011	0	11,959
OH	Edgewater	11	Substitution	0	0	1,062	0	0	0	0
OH	Edgewater	12	Substitution	0	0	1,145	645	0	0	645
OH	Edgewater	13	Table 1	3	7	5,536	33	7	0	26
OH	Gen J M Gavin	1	Table 1	16,854	15,085	113,172	15,839	15,085	0	754
OH	Gen J M Gavin	2	Table 1	16,812	18,718	115,070	19,653	18,718	0	935
OH	Gorge	25	Substitution	0	0	2,503	2,503	0	0	2,503
OH	Gorge	26	Substitution	0	0	2,791	2,791	0	0	2,791
OH	J M Stuart	1	Substitution	23,885	27,024	41,189	42,720	27,024	0	15,696

APPENDIX B-4: EMISSIONS AND ALLOWANCE HOLDINGS OF PHASE 1 UNITS

State	Plant Name	Stack/Unit ID	Unit Type (a)	SO2 Emissions 1997 (b)	SO2 Emissions 1998(b)	1998 Allowances Allocated (c)	Held in Unit Accounts as of 3/1/99	Allowances Deducted for Emissions (d)	Deducted Under Special Phase I Provisions (e)	Allowances Carried Over to 1999
OH	J M Stuart	2	Substitution	28,883	29,520	39,041	38,961	29,520	0	9,441
OH	J M Stuart	3	Substitution	25,127	23,211	38,712	37,597	23,211	0	14,386
OH	J M Stuart	4	Substitution	26,949	23,603	40,925	38,323	23,603	0	14,720
OH	Kyger Creek	CS001 (1, 2, 3, 4, 5)		111,419	119,171					
OH	Kyger Creek	1	Table 1			18,773	24,335	23,835	0	500
OH	Kyger Creek	2	Table 1			18,072	24,335	23,834	0	501
OH	Kyger Creek	3	Table 1			17,439	24,335	23,834	0	501
OH	Kyger Creek	4	Table 1			18,218	24,335	23,834	0	501
OH	Kyger Creek	5	Table 1			18,247	24,335	23,834	0	501
OH	Lake Shore	18	Substitution	497	1,811	4,508	3,709	1,811	0	1,898
OH	Lake Shore	91	Substitution	0	0	44	0	0	0	0
OH	Lake Shore	92	Substitution	0	0	80	0	0	0	0
OH	Lake Shore	93	Substitution	0	0	62	0	0	0	0
OH	Lake Shore	94	Substitution	0	0	102	0	0	0	0
OH	Miami Fort	6	Table 1			12,475	24,491	16,306	0	8,185
OH	Miami Fort	7	Table 1	38,666	36,473	42,216	50,633	36,473	0	14,160
OH	Miami Fort	CS056 (5-1, 5-2, 6)		10,087	19,614					
OH	Miami Fort	5-1	Table 1			417	2,513	1,654	0	859
OH	Miami Fort	5-2	Table 1			417	2,513	1,654	0	859
OH	Muskingum River	CS014 (1, 2, 3, 4)		161,924	152,316					
OH	Muskingum River	1	Table 1			16,312	37,786	35,987	0	1,799
OH	Muskingum River	2	Table 1			15,533	38,320	36,495	0	1,825
OH	Muskingum River	3	Table 1			15,293	42,607	40,578	0	2,029
OH	Muskingum River	4	Table 1			12,914	41,219	39,256	0	1,963
OH	Muskingum River	5	Table 1	21,872	15,307	44,364	114,045	15,307	0	98,738
OH	Niles	XS12 (1, 2)		13,340	21,636					
OH	Niles	1	Table 1			7,608	9,801	6,878	0	2,923
OH	Niles	2	Table 1			9,975	16,325	14,758	0	1,567
OH	Picway	9	Table 1	16,843	13,385	5,404	14,221	13,385	0	836
OH	Poston	1	Substitution	0	0	0	0	0	0	0
OH	Poston	2	Substitution	0	0	0	0	0	0	0
OH	Poston	3	Substitution	0	0	0	0	0	0	0
OH	R E Burger	CS0001 (1, 2, 3, 4, 5, 6, 7, 8)		46,842	38,543					
OH	R E Burger	1	Substitution			2,820	0	0	0	0
OH	R E Burger	2	Substitution			2,751	0	0	0	0
OH	R E Burger	3	Substitution			2,891	1	0	0	1
OH	R E Burger	4	Substitution			2,956	2,956	0	0	2,956
OH	R E Burger	5	Table 1			3,371	4,389	0	0	4,389
OH	R E Burger	6	Table 1			3,371	2,854	39	0	2,815

APPENDIX B-4: EMISSIONS AND ALLOWANCE HOLDINGS OF PHASE 1 UNITS

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OH	R E Burger	7	Table 1			11,818	22,782	20,389	0	2,393
OH	R E Burger	8	Table 1			13,626	20,697	18,115	0	2,582
OH	Toronto	9	Substitution	0	0	5,315	5,315	0	0	5,315
OH	Toronto	10	Substitution	0	0	9,505	9,505	0	0	9,505
OH	Toronto	11	Substitution	0	0	10,274	274	0	0	274
OH	W H Sammis	5	Table 1	16,619	16,812	26,496	31,377	16,812	0	14,565
OH	W H Sammis	6	Table 1	33,154	20,352	43,773	48,619	20,352	0	28,267
OH	W H Sammis	7	Table 1	30,208	45,828	47,380	87,696	45,828	0	41,868
OH	Walter C Beckjord	5	Table 1	14,542	20,329	9,811	30,526	20,329	0	10,197
OH	Walter C Beckjord	6	Table 1	33,099	39,455	25,235	48,925	39,455	0	9,470
PA	Armstrong	1	Table 1	16,282	18,227	14,031	32,747	18,227	0	14,520
PA	Armstrong	2	Table 1	16,847	17,658	15,024	33,350	17,658	0	15,692
PA	Bruce Mansfield	1	Substitution	6,555	7,527	10,510	20,720	7,527	0	13,193
PA	Bruce Mansfield	2	Substitution	7,123	6,765	11,537	22,827	6,765	0	16,062
PA	Brunner Island	CS102 (1, 2)		44,391	48,020					
PA	Brunner Island	1	Table 1			27,030	53,949	21,817	0	32,132
PA	Brunner Island	2	Table 1			30,282	57,671	26,203	0	31,468
PA	Brunner Island	3	Table 1	52,349	47,679	52,404	115,628	47,679	0	67,949
PA	Cheswick	1	Table 1	47,510	32,177	38,139	43,171	32,177	0	10,994
PA	Conemaugh	1	Table 1	3,754	3,874	82,006	14,930	3,874	0	11,056
PA	Conemaugh	2	Table 1	3,502	4,347	90,904	15,136	4,347	0	10,789
PA	Hatfield's Ferry	XS123 (1, 2, 3)		138,630	150,868					
PA	Hatfield's Ferry	1	Table 1			36,835	55,009	55,009	0	0
PA	Hatfield's Ferry	2	Table 1			36,338	47,719	47,719	0	0
PA	Hatfield's Ferry	3	Table 1			39,210	48,140	48,140	0	0
PA	Martins Creek	CS102 (1, 2)		23,661	15,834					
PA	Martins Creek	1	Table 1			12,327	36,073	8,211	0	27,862
PA	Martins Creek	2	Table 1			12,483	34,780	7,623	0	27,157
PA	Martins Creek	3	Substitution	2,082	4,742	12,553	33,135	4,742	0	28,393
PA	Martins Creek	4	Substitution	1,938	4,347	11,548	29,690	4,347	0	25,343
PA	Mitchell	33	Substitution	1,080	1,050	1,101	2,322	1,050	0	1,272
PA	New Castle	1	Substitution	0	0	1,367	1,367	0	0	1,367
PA	New Castle	2	Substitution	0	0	1,520	1,520	0	0	1,520
PA	Portland	1	Table 1	11,574	9,772	5,784	51,498	9,772	0	41,726
PA	Portland	2	Table 1	17,463	12,126	9,961	14,405	12,126	0	2,279
PA	Shawville	1	Table 1	15,230	12,864	10,048	14,698	12,864	0	1,834
PA	Shawville	2	Table 1	15,609	12,365	10,048	13,823	12,365	0	1,458
PA	Shawville	CS1 (3, 4)		33,064	33,535					
PA	Shawville	3	Table 1			13,846	17,695	16,855	0	840

APPENDIX B-4: EMISSIONS AND ALLOWANCE HOLDINGS OF PHASE 1 UNITS

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PA	Shawville	4	Table 1			13,700	17,430	16,680	0	750
PA	Sunbury	3	Table 1	11,343	10,307	8,530	22,698	10,307	0	12,391
PA	Sunbury	4	Table 1	11,326	11,970	11,149	24,147	11,970	0	12,177
TN	Allen	1	Table1	6,754	5,671	14,917	25,192	5,671	0	19,521
TN	Allen	2	Table1	7,134	7,378	16,329	27,605	7,378	0	20,227
TN	Allen	3	Table1	7,436	7,162	15,258	29,340	7,162	0	22,178
TN	Cumberland	1	Table 1	9,846	10,610	114,325	215,879	10,610	0	205,269
TN	Cumberland	2	Table 1	11,122	9,891	126,157	218,813	9,891	0	208,922
TN	DuPont Johnsonville	JVD1	Opt In	0	0	1,778	0	0	0	0
TN	DuPont Johnsonville	JVD2	Opt In	0	0	1,778	0	0	0	0
TN	DuPont Johnsonville	JVD3	Opt In	0	0	1,777	0	0	0	0
TN	DuPont Johnsonville	JVD4	Opt In	0	0	1,777	0	0	0	0
TN	Gallatin	CSGA12 (1, 2)		50,974	40,664					
TN	Gallatin	1	Table 1			17,400	22,769	22,320	0	449
TN	Gallatin	2	Table 1			16,855	19,398	18,344	0	1,054
TN	Gallatin	CSGA34 (3, 4)		66,129	45,551					
TN	Gallatin	3	Table 1			19,493	25,693	25,188	0	505
TN	Gallatin	4	Table 1			20,701	24,089	20,363	0	3,726
TN	Johnsonville	CSJO10 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)		115,938	114,588					
TN	Johnsonville	1	Table 1			7,585	17,267	12,567	0	4,700
TN	Johnsonville	2	Table 1			7,828	13,527	9,679	0	3,848
TN	Johnsonville	3	Table 1			8,189	13,891	8,448	0	5,443
TN	Johnsonville	4	Table 1			7,780	15,471	11,680	0	3,791
TN	Johnsonville	5	Table 1			8,023	10,386	10,179	0	207
TN	Johnsonville	6	Table 1			7,682	11,248	11,024	0	224
TN	Johnsonville	7	Table 1			8,744	11,955	11,718	0	237
TN	Johnsonville	8	Table 1			8,471	12,916	12,659	0	257
TN	Johnsonville	9	Table 1			6,894	14,890	14,594	0	296
TN	Johnsonville	10	Table 1			7,351	12,493	12,040	0	453
WI	Alma	CS1 (B1, B2, B3, B4, B5)		5,608	6,517					
WI	Alma	B1	Opt In			537	537	466	0	71
WI	Alma	B2	Opt In			518	518	424	0	94
WI	Alma	B3	Opt In			455	455	397	0	58
WI	Alma	B4	Substitution			2,207	8,702	2,195	0	6,507
WI	Alma	B5	Substitution			3,624	17,637	3,035	0	14,602
WI	Edgewater	3	Substitution	1,620	1,973	4,493	13,704	1,973	0	11,731
WI	Edgewater	4	Table 1	7,968	8,391	24,099	25,802	8,391	0	17,411
WI	Genoa	1	Table 1	12,750	9,031	22,103	31,624	9,031	0	22,593
WI	J P Madgett	B1	Substitution	4,946	5,223	6,407	11,701	5,223	0	6,478

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WI	Nelson Dewey	CS1 (1, 2)		6,092	10,861					
WI	Nelson Dewey	1	Table 1			5,852	11,590	5,195	0	6,395
WI	Nelson Dewey	2	Table 1			6,504	13,779	5,666	0	8,113
WI	North Oak Creek	1	Table 1	0	0	5,083	0	0	0	0
WI	North Oak Creek	2	Table 1	0	0	5,005	0	0	0	0
WI	North Oak Creek	3	Table 1	0	0	5,229	0	0	0	0
WI	North Oak Creek	4	Table 1	0	0	6,154	0	0	0	0
WI	Pulliam	CS56 (5, 6)		2,141	1,884					
WI	Pulliam	5	Substitution			2,097	970	810	0	160
WI	Pulliam	6	Substitution			2,844	1,290	1,074	0	216
WI	Pulliam	7	Substitution	1,540	1,569	7,317	1,900	1,569	0	331
WI	Pulliam	8	Table 1	2,264	2,283	7,312	2,700	2,283	0	417
WI	Rock River	1	Substitution	1,560	1,532	5,398	17,058	1,532	0	15,526
WI	Rock River	2	Substitution	1,776	1,898	4,034	11,537	1,898	0	9,639
WI	South Oak Creek	CS3 (5, 6)		15,452	16,781					
WI	South Oak Creek	5	Table 1			9,416	7,128	6,480	0	648
WI	South Oak Creek	6	Table 1			11,723	11,331	10,301	0	1,030
WI	South Oak Creek	CS4 (7, 8)		25,934	26,529					
WI	South Oak Creek	7	Table 1			15,754	15,327	13,934	0	1,393
WI	South Oak Creek	8	Table 1			15,375	13,854	12,595	0	1,259
WI	Weston	1	Substitution	1,318	1,111	1,579	1,300	1,111	0	189
WI	Weston	2	Substitution	1,678	1,922	3,580	2,300	1,922	0	378
WV	Albright	1	Substitution	1,578	2,202	4,831	5,836	2,202	0	3,634
WV	Albright	2	Substitution	1,682	1,929	5,024	4,970	1,929	0	3,041
WV	Albright	3	Table1	9,380	7,228	11,684	20,618	7,228	0	13,390
WV	Fort Martin	1	Table 1	42,733	41,641	40,496	64,608	41,641	0	22,967
WV	Fort Martin	2	Table 1	44,413	37,663	40,116	85,160	37,663	0	47,497
WV	Harrison	XS123 (1, 2, 3)		6,298	6,934					
WV	Harrison	1	Table 1			68,078	4,149	2,177	0	1,972
WV	Harrison	2	Table 1			64,488	4,197	2,403	0	1,794
WV	Harrison	3	Table 1			57,730	4,317	2,354	0	1,963
WV	Kammer	CS013 (1, 2, 3)		126,273	108,618					
WV	Kammer	1	Table 1			18,247	38,749	36,904	0	1,845
WV	Kammer	2	Table 1			18,948	36,653	34,908	0	1,745
WV	Kammer	3	Table 1			16,932	38,646	36,806	0	1,840
WV	Mitchell	CS012 (1, 2)		57,239	59,330					
WV	Mitchell	1	Table 1			42,823	29,811	28,392	0	1,419
WV	Mitchell	2	Table 1			44,312	32,485	30,938	0	1,547
WV	Mt Storm	CS0 (1, 2)		92,716	106,759					
WV	Mt Storm	1	Table 1			42,570	114,600	53,380	0	61,220

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WV	Mt Storm	2	Table 1			34,644	96,588	53,379	0	43,209
WV	Mt Storm	3	Table 1	4,052	4,576	56,589	59,130	4,576	0	54,554
WV	Rivesville	7	Substitution	235	624	1,009	1,690	624	0	1,066
WV	Rivesville	8	Substitution	1,234	1,995	3,059	4,635	1,995	0	2,640
WV	Willow Island	2	Substitution	8,067	7,870	7,765	17,190	7,870	0	9,320

NOTES:

(a) Identifies the affected unit as listed in Table 1, or as a substitution, compensating, or opt-in unit.

(b) Both 1997 and 1998 emissions appear as reported by CEMS under the Acid Rain Program.

(c) This column lists allowances allocated under the following provisions: Initial Allocation (to Table 1 units), allowances for substitution and compensating units, Phase I Extension Allowances, Early Reduction Credits, and Conservation allowances.

(d) This column displays the 1998 emissions for units that are not connected to a common stack. For units sharing a common stack, an apportionment was made either by the unit or by EPA to divide up the stack's emissions among the units sharing the stack.

(e) This column displays the sum of allowance deductions made for underutilization and state cap provisions.

Appendix C-1: List of Averaging Plans and Results in 1998

Company	ORIS Code	Plant Name, State and Units	Plant Limit	Plan Rate
Allegheny Power System	3942	Albright WV 1-3	0.49	0.44
	3178	Armstrong PA 1, 2		
	3944	Harrison WV 1-3		
	3943	Fort Martin WV 1		
	3181	Mitchell PA 33		
	6004	Pleasants PA 1, 2		
	1570	R P Smith PA 9, 11		
Ameren Services	862	Grand Tower IL 07-09	0.45	0.36
	863	Hutsonville IL 05, 06		
	864	Meredosia IL 01-05		
	6017	Newton IL 1, 2		
Ameren Services	2103	Labadie MO 1-4	0.45	0.22
	2104	Meramec MO 1-4		
	6155	Rush Island MO 1, 2		
Cinergy Corp.	1001	Cayuga IN 1, 2	0.48	0.43
	6018	East Bend 2		
	6113	Gibson IN 1-4		
	2832	Miami Fort OH 6		
	1008	R Gallagher IN 1-4		
	1010	Wabash River IN 2, 3, 5, 6		
	2830	Walter C Beckjord 5, 6		
Dairyland Power Cooperative	4140	Alma WI B4, B5	0.48	0.45
	4143	Genoa WI 1		
	4271	J P Madgett WI B1		

Appendix C-1: List of Averaging Plans and Results in 1998

Company	ORIS Code	Plant Name, State and Units	Plant Limit	Plan Rate
East Kentucky Power Cooperative	1384	Cooper KY 1, 2	0.50	0.42
FirstEnergy	6094	Bruce Mansfield PA 1, 2	0.50	0.46
	2857	Edgewater OH 13		
	2858	Gorge OH 25, 26		
	3138	New Castle PA 1, 2		
	2867	Toronto OH 10, 11		
	2864	R E Burger OH 7, 8		
	2866	W H Sammis OH 5, 6		
GPU Generation, Inc.	3113	Portland PA 1, 2	0.45	0.31
Hoosier Energy Rec., Inc.	1043	Frank E Ratts IN 1SG1, 2SG1	0.50	0.49
Illinois Power Company	889	Baldwin IL 3	0.45	0.40
	892	Hennepin IL 2		
	897	Vermilion IL 1, 2		
Indianapolis Power & Light	990	Elmer W Stout IN 50, 60, 70	0.45	0.37
	991	H T Pritchard IN 3-6		
	994	Petersburg IN 1-4		
LG&E Energy Corporation	1355	E W Brown KY 1-3	0.46	0.42
	1356	Ghent KY 1		
	1357	Green River KY 5		

Appendix C-1: List of Averaging Plans and Results in 1998

Company	ORIS Code	Plant Name, State and Units	Plant Limit	Plan Rate
NGE Generation, Inc.	2527 2535	Greenidge NY 6 Milliken NY 1, 2	0.45	0.34
Northern States Power Company	1912 6090	High Bridge MN 3-6 Sherburne County MN 1, 2	0.46	0.34
PP&L	3140 3148 3152	Brunner Island PA 1-3 Martins Creek PA 1, 2 Sunbury PA 3, 4	0.46	0.39
South Mississippi Elec. Power Assoc.	6061	R D Morrow MS 1, 2	0.50	0.47
Southern Company	26 7	E C Gaston AL 1-5 Gadsden AL 1-2	0.48	0.46
Southern Company	699 703 708 709 710 733 6124 727 6257 6052 728	Arkwright GA 1-4 Bowen GA 1BLR - 4BLR Hammond GA 1-4 Harllee Branch GA 2 Jack McDonough GA MB1, MB2 Kraft GA 1-3 McIntosh GA 1 Mitchell GA 3 Scherer GA 3 Wansley GA 1, 2 Yates GA Y1BR - Y7BR	0.46	0.44

Appendix C-1: List of Averaging Plans and Results in 1998

Company	ORIS Code	Plant Name, State and Units	Plant Limit	Plan Rate
Southern Company	641	Crist FL 4-7	0.48	0.45
	2049	Jack Watson MS 4, 5		
	642	Scholz FL1, 2		
	6073	Victor J Daniel Jr MS 1, 2		
Springfield (MO), City Utilities of	2161	James River MO 3-5	0.50	0.48
	6195	Southwest MO 1		
TVA	47	Colbert AL 1-5	0.48	0.42
	3403	Gallatin TN 1-4		
	3406	Johnsonville TN 1-10		
Wisconsin Electric Power Company	4040	Port Washington WI 1-4	0.48	0.36
	4041	South Oak Creek WI 5-8		
	4042	Valley WI 1-4		
Wisconsin Power & Light Company	1104	Burlington IA 1	0.47	0.28
	1073	Prairie Creek IA 4		
Wisconsin Public Service Corp.	4072	Pulliam WI 7, 8	0.48	0.37
	4078	Weston WI 1-3		

Appendix C-2: Compliance Results for the 265 Phase I NO_x Affected Units in 1998

						1998					
ST	Plant Name	Operating Utility	ORIS Code	Boiler	Compliance Approach	Emission Limit	Actual Emission Rate	AEL or Avg. Plan Limit	Actual Avg. Plan Rate	1990 Emission Rate	Change from 1990 to 1998
AL	Colbert	TVA	47	1	Averaging Plan	0.50	0.45	0.48	0.42	0.80	-44%
AL	Colbert	TVA	47	2	Averaging Plan	0.50	0.45	0.48	0.42	0.67	-33%
AL	Colbert	TVA	47	3	Averaging Plan	0.50	0.45	0.48	0.42	0.83	-46%
AL	Colbert	TVA	47	4	Averaging Plan	0.50	0.45	0.48	0.42	0.86	-48%
AL	Colbert	TVA	47	5	Averaging Plan	0.50	0.38	0.48	0.42	0.78	-51%
AL	E C Gaston	Alabama Power Co	26	1	Averaging Plan	0.50	0.43	0.48	0.46	0.90	-52%
AL	E C Gaston	Alabama Power Co	26	2	Averaging Plan	0.50	0.43	0.48	0.46	0.78	-45%
AL	E C Gaston	Alabama Power Co	26	3	Averaging Plan	0.50	0.45	0.48	0.46	0.80	-44%
AL	E C Gaston	Alabama Power Co	26	4	Averaging Plan	0.50	0.45	0.48	0.46	0.80	-44%
AL	E C Gaston	Alabama Power Co	26	5	Averaging Plan	0.45	0.47	0.48	0.46	0.78	-40%
AL	Gadsden	Alabama Power Co	7	1	Averaging Plan	0.45	0.64	0.48	0.46	0.51	25%
AL	Gadsden	Alabama Power Co	7	2	Averaging Plan	0.45	0.64	0.48	0.46	0.56	14%
FL	Big Bend	Tampa Electric Co	645	BB04	Standard Limitation	0.45	0.40			0.46	-14%
FL	Crist	Gulf Power Co	641	4	Averaging Plan	0.45	0.43	0.48	0.45	0.43	0%
FL	Crist	Gulf Power Co	641	5	Averaging Plan	0.45	0.55	0.48	0.45	0.49	12%
FL	Crist	Gulf Power Co	641	6	Averaging Plan	0.50	0.46	0.48	0.45	1.04	-56%
FL	Crist	Gulf Power Co	641	7	Averaging Plan	0.50	0.49	0.48	0.45	1.16	-58%
FL	Scholz	Gulf Power Co	642	1	Averaging Plan	0.50	0.70	0.48	0.45	0.69	2%
FL	Scholz	Gulf Power Co	642	2	Averaging Plan	0.50	0.71	0.48	0.45	0.80	-11%
GA	Arkwright	Georgia Power Co	699	1	Averaging Plan	0.45	0.72	0.46	0.44	0.90	-20%
GA	Arkwright	Georgia Power Co	699	2	Averaging Plan	0.45	0.72	0.46	0.44	0.90	-20%
GA	Arkwright	Georgia Power Co	699	3	Averaging Plan	0.50	0.72	0.46	0.44	0.90	-20%
GA	Arkwright	Georgia Power Co	699	4	Averaging Plan	0.50	0.72	0.46	0.44	0.90	-20%
GA	Bowen	Georgia Power Co	703	1BLR	Averaging Plan	0.45	0.42	0.46	0.44	0.67	-37%
GA	Bowen	Georgia Power Co	703	2BLR	Averaging Plan	0.45	0.44	0.46	0.44	0.65	-32%
GA	Bowen	Georgia Power Co	703	3BLR	Averaging Plan	0.45	0.42	0.46	0.44	0.56	-25%
GA	Bowen	Georgia Power Co	703	4BLR	Averaging Plan	0.45	0.43	0.46	0.44	0.58	-26%
GA	Hammond	Georgia Power Co	708	1	Averaging Plan	0.50	0.83	0.46	0.44	0.84	-1%
GA	Hammond	Georgia Power Co	708	2	Averaging Plan	0.50	0.83	0.46	0.44	0.84	-1%
GA	Hammond	Georgia Power Co	708	3	Averaging Plan	0.50	0.83	0.46	0.44	0.84	-1%
GA	Hammond	Georgia Power Co	708	4	Averaging Plan	0.50	0.44	0.46	0.44	1.20	-63%
GA	Harllee Branch	Georgia Power Co	709	2	Averaging Plan	0.50	0.71	0.46	0.44	0.99	-28%

Appendix C-2: Compliance Results for the 265 Phase I NO_x Affected Units in 1998

						1998					
ST	Plant Name	Operating Utility	ORIS Code	Boiler	Compliance Approach	Emission Limit	Actual Emission Rate	AEL or Avg. Plan Limit	Actual Avg. Plan Rate	1990 Emission Rate	Change from 1990 to 1998
GA	Jack McDonough	Georgia Power Co	710	MB1	Averaging Plan	0.45	0.41	0.46	0.44	0.66	-38%
GA	Jack McDonough	Georgia Power Co	710	MB2	Averaging Plan	0.45	0.41	0.46	0.44	0.60	-32%
GA	Kraft	Savannah Electric & Power	733	1	Averaging Plan	0.45	0.62	0.46	0.44	0.40	56%
GA	Kraft	Savannah Electric & Power	733	2	Averaging Plan	0.45	0.62	0.46	0.44	0.40	56%
GA	Kraft	Savannah Electric & Power	733	3	Averaging Plan	0.45	0.62	0.46	0.44	0.40	56%
GA	Mcintosh	Savannah Electric & Power	6124	1	Averaging Plan	0.50	0.95	0.46	0.44	0.83	14%
GA	Mitchell	Georgia Power Co	727	3	Averaging Plan	0.45	0.56	0.46	0.44	0.61	-8%
GA	Scherer	Georgia Power Co	6257	3	Averaging Plan	0.45	0.29	0.46	0.44	0.20	44%
GA	Wansley	Georgia Power Co	6052	1	Averaging Plan	0.45	0.39	0.46	0.44	0.73	-47%
GA	Wansley	Georgia Power Co	6052	2	Averaging Plan	0.45	0.40	0.46	0.44	0.67	-40%
GA	Yates	Georgia Power Co	728	Y1BR	Averaging Plan	0.45	0.47	0.46	0.44	0.56	-16%
GA	Yates	Georgia Power Co	728	Y2BR	Averaging Plan	0.45	0.50	0.46	0.44	0.62	-19%
GA	Yates	Georgia Power Co	728	Y3BR	Averaging Plan	0.45	0.50	0.46	0.44	0.62	-19%
GA	Yates	Georgia Power Co	728	Y4BR	Averaging Plan	0.45	0.39	0.46	0.44	0.56	-30%
GA	Yates	Georgia Power Co	728	Y5BR	Averaging Plan	0.45	0.39	0.46	0.44	0.65	-40%
GA	Yates	Georgia Power Co	728	Y6BR	Averaging Plan	0.45	0.33	0.46	0.44	0.67	-51%
GA	Yates	Georgia Power Co	728	Y7BR	Averaging Plan	0.45	0.32	0.46	0.44	0.61	-48%
IA	Burlington	IES Utilities, Inc.	1104	1	Averaging Plan	0.45	0.23	0.47	0.28	0.63	-63%
IA	Milton L Kapp	Interstate Power Co	1048	2	Standard Limitation	0.45	0.36			0.80	-55%
IA	Prairie Creek	IES Utilities, Inc.	1073	4	Averaging Plan	0.50	0.33	0.47	0.28	1.05	-69%
IA	Riverside	MidAmerican Energy Company	1081	9	Standard Limitation	0.45	0.36			0.82	-56%
IL	Baldwin	Illinois Power Co	889	3	Averaging Plan	0.45	0.35	0.45	0.40	0.67	-48%
IL	Grand Tower	CIPSCO	862	7	Averaging Plan	0.50	0.70	0.45	0.36	0.78	-10%
IL	Grand Tower	CIPSCO	862	8	Averaging Plan	0.50	0.72	0.45	0.36	0.96	-25%
IL	Grand Tower	CIPSCO	862	9	Averaging Plan	0.50	0.56	0.45	0.36	0.64	-13%
IL	Hennepin	Illinois Power Co	892	2	Averaging Plan	0.45	0.54	0.45	0.40	0.59	-8%
IL	Hutsonville	CIPSCO	863	5	Averaging Plan	0.45	0.53	0.45	0.36	0.70	-24%
IL	Hutsonville	CIPSCO	863	6	Averaging Plan	0.45	0.49	0.45	0.36	0.67	-27%
IL	Joppa Steam	Electric Energy Inc	887	1	Standard Limitation	0.45	0.20			0.56	-64%
IL	Joppa Steam	Electric Energy Inc	887	2	Standard Limitation	0.45	0.20			0.56	-64%
IL	Joppa Steam	Electric Energy Inc	887	3	Standard Limitation	0.45	0.20			0.56	-64%
IL	Joppa Steam	Electric Energy Inc	887	4	Standard Limitation	0.45	0.20			0.56	-64%

Appendix C-2: Compliance Results for the 265 Phase I NO_x Affected Units in 1998

						1998					
ST	Plant Name	Operating Utility	ORIS Code	Boiler	Compliance Approach	Emission Limit	Actual Emission Rate	AEL or Avg. Plan Limit	Actual Avg. Plan Rate	1990 Emission Rate	Change from 1990 to 1998
IL	Joppa Steam	Electric Energy Inc	887	5	Standard Limitation	0.45	0.20			0.56	-64%
IL	Joppa Steam	Electric Energy Inc	887	6	Standard Limitation	0.45	0.20			0.56	-64%
IL	Meredosia	CIPSCO	864	1	Averaging Plan	0.45	0.47	0.45	0.36	0.50	-7%
IL	Meredosia	CIPSCO	864	2	Averaging Plan	0.45	0.47	0.45	0.36	0.50	-7%
IL	Meredosia	CIPSCO	864	3	Averaging Plan	0.45	0.47	0.45	0.36	0.50	-7%
IL	Meredosia	CIPSCO	864	4	Averaging Plan	0.45	0.47	0.45	0.36	0.50	-7%
IL	Meredosia	CIPSCO	864	5	Averaging Plan	0.45	0.52	0.45	0.36	0.67	-22%
IL	Newton	CIPSCO	6017	1	Averaging Plan	0.45	0.21	0.45	0.36	0.47	-55%
IL	Newton	CIPSCO	6017	2	Averaging Plan	0.45	0.36	0.45	0.36	0.39	-8%
IL	Vermilion	Illinois Power Co	897	1	Averaging Plan	0.45	0.44	0.45	0.40	0.94	-53%
IL	Vermilion	Illinois Power Co	897	2	Averaging Plan	0.45	0.44	0.45	0.40	0.74	-41%
IN	Cayuga	PSI Energy, Inc.	1001	1	Averaging Plan	0.45	0.32	0.48	0.43	0.42	-24%
IN	Cayuga	PSI Energy, Inc.	1001	2	Averaging Plan	0.45	0.33	0.48	0.43	0.47	-30%
IN	Elmer W Stout	Indianapolis Power & Light	990	50	Averaging Plan	0.45	0.35	0.45	0.37	0.63	-44%
IN	Elmer W Stout	Indianapolis Power & Light	990	60	Averaging Plan	0.45	0.38	0.45	0.37	0.65	-42%
IN	Elmer W Stout	Indianapolis Power & Light	990	70	Averaging Plan	0.45	0.34	0.45	0.34	0.71	-52%
IN	F B Culley	Southern Indiana Gas & Elec	1012	2	Standard Limitation	0.50	0.46			1.05	-56%
IN	F B Culley	Southern Indiana Gas & Elec	1012	3	Standard Limitation	0.50	0.46			1.23	-63%
IN	Frank E Ratts	Hoosier Energy Rec, Inc.	1043	1SG1	Averaging Plan	0.50	0.49	0.50	0.49	1.08	-55%
IN	Frank E Ratts	Hoosier Energy Rec, Inc.	1043	2SG1	Averaging Plan	0.50	0.49	0.50	0.49	1.09	-55%
IN	Gibson	PSI Energy, Inc.	6113	1	Averaging Plan	0.50	0.50	0.48	0.43	1.03	-51%
IN	Gibson	PSI Energy, Inc.	6113	2	Averaging Plan	0.50	0.50	0.48	0.43	1.12	-55%
IN	Gibson	PSI Energy, Inc.	6113	3	Averaging Plan	0.50	0.41	0.48	0.43	0.52	-21%
IN	Gibson	PSI Energy, Inc.	6113	4	Averaging Plan	0.50	0.42	0.48	0.43	0.66	-36%
IN	H T Pritchard	Indianapolis Power & Light	991	3	Averaging Plan	0.45	0.71	0.45	0.37	0.74	-4%
IN	H T Pritchard	Indianapolis Power & Light	991	4	Averaging Plan	0.45	0.71	0.45	0.37	0.74	-4%
IN	H T Pritchard	Indianapolis Power & Light	991	5	Averaging Plan	0.45	0.40	0.45	0.37	0.67	-40%
IN	H T Pritchard	Indianapolis Power & Light	991	6	Averaging Plan	0.45	0.40	0.45	0.37	0.47	-15%
IN	Petersburg	Indianapolis Power & Light	994	1	Averaging Plan	0.45	0.30	0.45	0.37	0.56	-46%
IN	Petersburg	Indianapolis Power & Light	994	2	Averaging Plan	0.45	0.36	0.45	0.37	0.63	-43%
IN	Petersburg	Indianapolis Power & Light	994	3	Averaging Plan	0.45	0.39	0.45	0.37	0.37	5%
IN	Petersburg	Indianapolis Power & Light	994	4	Averaging Plan	0.45	0.33	0.45	0.37	0.37	-11%

Appendix C-2: Compliance Results for the 265 Phase I NO_x Affected Units in 1998

						1998					
ST	Plant Name	Operating Utility	ORIS Code	Boiler	Compliance Approach	Emission Limit	Actual Emission Rate	AEL or Avg. Plan Limit	Actual Avg. Plan Rate	1990 Emission Rate	Change from 1990 to 1998
IN	R Gallagher	PSI Energy, Inc.	1008	1	Averaging Plan	0.50	0.46	0.48	0.43	0.74	-38%
IN	R Gallagher	PSI Energy, Inc.	1008	2	Averaging Plan	0.50	0.46	0.48	0.43	0.95	-52%
IN	R Gallagher	PSI Energy, Inc.	1008	3	Averaging Plan	0.50	0.43	0.48	0.43	0.95	-55%
IN	R Gallagher	PSI Energy, Inc.	1008	4	Averaging Plan	0.50	0.43	0.48	0.43	0.95	-55%
IN	Wabash River	PSI Energy, Inc.	1010	1	Standard Limitation	0.50	0.14			0.52	-73%
IN	Wabash River	PSI Energy, Inc.	1010	2	Averaging Plan	0.50	0.50	0.48	0.43	0.95	-47%
IN	Wabash River	PSI Energy, Inc.	1010	3	Averaging Plan	0.50	0.55	0.48	0.43	0.92	-40%
IN	Wabash River	PSI Energy, Inc.	1010	5	Averaging Plan	0.50	0.53	0.48	0.43	0.85	-38%
IN	Wabash River	PSI Energy, Inc.	1010	6	Averaging Plan	0.45	0.33	0.48	0.43	0.37	-12%
KS	La Cygne	Kansas City Power & Light	1241	2	Standard Limitation	0.50	0.31			0.29	7%
KS	Quindaro	Board of Public Util, KS City	1295	2	Standard Limitation	0.50	0.33			0.64	-48%
KY	Coleman	Big Rivers Electric	1381	C1	Standard Limitation	0.50	0.45			1.41	-68%
KY	Coleman	Big Rivers Electric	1381	C2	Standard Limitation	0.50	0.43			1.29	-67%
KY	Coleman	Big Rivers Electric	1381	C3	Standard Limitation	0.50	0.47			1.14	-59%
KY	Cooper	East Kentucky Power Coop	1384	1	Averaging Plan	0.50	0.42	0.50	0.42	0.90	-53%
KY	Cooper	East Kentucky Power Coop	1384	2	Averaging Plan	0.50	0.42	0.50	0.42	0.90	-53%
KY	E W Brown	Kentucky Utilities Co	1355	1	Averaging Plan	0.50	0.52	0.46	0.42	1.00	-48%
KY	E W Brown	Kentucky Utilities Co	1355	2	Averaging Plan	0.45	0.42	0.46	0.42	0.59	-29%
KY	E W Brown	Kentucky Utilities Co	1355	3	Averaging Plan	0.45	0.42	0.46	0.42	0.57	-26%
KY	East Bend	Cincinnati Gas & Electric Co	6018	2	Averaging Plan	0.50	0.36	0.48	0.43	0.31	16%
KY	Elmer Smith	Owensboro City of	1374	2	Standard Limitation	0.45	0.42			0.86	-51%
KY	Ghent	Kentucky Utilities Co	1356	1	Averaging Plan	0.45	0.40	0.46	0.42	0.56	-29%
KY	Green River	Kentucky Utilities Co	1357	5	Averaging Plan	0.50	0.40	0.46	0.42	0.84	-52%
KY	H L Spurlock	East Kentucky Power Coop	6041	1	Standard Limitation	0.50	0.42			0.90	-53%
KY	HMP&L Station 2	Big Rivers Electric	1382	H1	Standard Limitation	0.50	0.48			1.34	-64%
KY	HMP&L Station 2	Big Rivers Electric	1382	H2	Standard Limitation	0.50	0.48			1.34	-64%
KY	R D Green	Big Rivers Electric	6639	G1	Standard Limitation	0.50	0.42			0.41	2%
KY	R D Green	Big Rivers Electric	6639	G2	Standard Limitation	0.50	0.44			0.45	-2%
MD	Chalk Point	Pepco	1571	1	AEL Demonstration	0.50	0.66	0.86		1.35	-51%
MD	Chalk Point	Pepco	1571	2	AEL Demonstration	0.50	0.70	1.20		1.35	-48%
MD	Morgantown	Pepco	1573	1	AEL Demonstration	0.45	0.61	0.70		0.95	-36%
MD	Morgantown	Pepco	1573	2	AEL Demonstration	0.45	0.62	0.70		0.95	-35%

Appendix C-2: Compliance Results for the 265 Phase I NO_x Affected Units in 1998

						1998					
ST	Plant Name	Operating Utility	ORIS Code	Boiler	Compliance Approach	Emission Limit	Actual Emission Rate	AEL or Avg. Plan Limit	Actual Avg. Plan Rate	1990 Emission Rate	Change from 1990 to 1998
MD	R P Smith	Potomac Edison Co	1570	9	Averaging Plan	0.50	0.51	0.49	0.44	0.87	-41%
MD	R P Smith	Potomac Edison Co	1570	11	Averaging Plan	0.45	0.44	0.49	0.44	0.78	-44%
MI	J H Campbell	Consumers Energy Co	1710	1	AEL Demonstration	0.45	0.48	0.55		0.69	-30%
MN	High Bridge	Northern States Power Co	1912	3	Averaging Plan	0.50	0.60	0.46	0.34	0.48	26%
MN	High Bridge	Northern States Power Co	1912	4	Averaging Plan	0.50	0.60	0.46	0.34	0.48	26%
MN	High Bridge	Northern States Power Co	1912	5	Averaging Plan	0.50	0.60	0.46	0.34	0.48	26%
MN	High Bridge	Northern States Power Co	1912	6	Averaging Plan	0.50	0.60	0.46	0.34	0.48	26%
MN	Sherburne County	Northern States Power Co	6090	1	Averaging Plan	0.45	0.28	0.46	0.34	0.45	-38%
MN	Sherburne County	Northern States Power Co	6090	2	Averaging Plan	0.45	0.28	0.46	0.34	0.45	-38%
MO	Hawthorn	Kansas City Power & Light	2079	5	Standard Limitation	0.45	0.38			0.36	6%
MO	Iatan	Kansas City Power & Light	6065	1	Standard Limitation	0.50	0.30			0.31	-3%
MO	James River	Springfield City of (MO)	2161	3	Averaging Plan	0.50	0.64	0.50	0.48	1.02	-37%
MO	James River	Springfield City of (MO)	2161	4	Averaging Plan	0.50	0.66	0.50	0.48	0.87	-24%
MO	James River	Springfield City of (MO)	2161	5	Averaging Plan	0.50	0.63	0.50	0.48	0.93	-32%
MO	Labadie	Union Electric Co	2103	1	Averaging Plan	0.45	0.18	0.45	0.22	0.62	-71%
MO	Labadie	Union Electric Co	2103	2	Averaging Plan	0.45	0.23	0.45	0.22	0.62	-63%
MO	Labadie	Union Electric Co	2103	3	Averaging Plan	0.45	0.17	0.45	0.22	0.62	-73%
MO	Labadie	Union Electric Co	2103	4	Averaging Plan	0.45	0.20	0.45	0.22	0.62	-68%
MO	Meramec	Union Electric Co	2104	1	Averaging Plan	0.45	0.61	0.45	0.22	0.82	-26%
MO	Meramec	Union Electric Co	2104	2	Averaging Plan	0.45	0.47	0.45	0.22	0.63	-25%
MO	Meramec	Union Electric Co	2104	3	Averaging Plan	0.50	0.67	0.45	0.22	0.96	-30%
MO	Meramec	Union Electric Co	2104	4	Averaging Plan	0.50	0.34	0.45	0.22	1.17	-71%
MO	Montrose	Kansas City Power & Light	2080	1	Standard Limitation	0.45	0.35			0.32	8%
MO	Montrose	Kansas City Power & Light	2080	2	Standard Limitation	0.45	0.39			0.34	14%
MO	Montrose	Kansas City Power & Light	2080	3	Standard Limitation	0.45	0.39			0.34	14%
MO	Rush Island	Union Electric Co	6155	1	Averaging Plan	0.45	0.17	0.45	0.22	0.63	-73%
MO	Rush Island	Union Electric Co	6155	2	Averaging Plan	0.45	0.18	0.45	0.22	0.63	-71%
MO	Southwest	Springfield City of (MO)	6195	1	Averaging Plan	0.50	0.35	0.50	0.48	0.47	-26%
MO	Thomas Hill	Associated Electric Coop Inc	2168	MB3	Standard Limitation	0.50	0.31			0.31	0%
MS	Jack Watson	Mississippi Power Co	2049	4	Averaging Plan	0.50	0.48	0.48	0.45	1.10	-56%
MS	Jack Watson	Mississippi Power Co	2049	5	Averaging Plan	0.50	0.68	0.48	0.45	1.22	-44%
MS	R D Morrow	South Mississippi El Pwr	6061	1	Averaging Plan	0.50	0.42	0.50	0.47	0.42	0%

Appendix C-2: Compliance Results for the 265 Phase I NO_x Affected Units in 1998

						1998					
ST	Plant Name	Operating Utility	ORIS Code	Boiler	Compliance Approach	Emission Limit	Actual Emission Rate	AEL or Avg. Plan Limit	Actual Avg. Plan Rate	1990 Emission Rate	Change from 1990 to 1998
MS	R D Morrow	South Mississippi El Pwr	6061	2	Averaging Plan	0.50	0.52	0.50	0.47	0.43	21%
MS	Victor J Daniel Jr	Mississippi Power Co	6073	1	Averaging Plan	0.45	0.27	0.48	0.45	0.27	2%
MS	Victor J Daniel Jr	Mississippi Power Co	6073	2	Averaging Plan	0.45	0.21	0.48	0.45	0.28	-26%
NY	Dunkirk	Niagara Mohawk Power Corp	2554	3	Standard Limitation	0.45	0.33			0.48	-32%
NY	Dunkirk	Niagara Mohawk Power Corp	2554	4	Standard Limitation	0.45	0.33			0.48	-32%
NY	Greenidge	NYSEG	2527	6	Averaging Plan	0.45	0.38	0.45	0.34	0.55	-31%
NY	Milliken	NYSEG	2535	1	Averaging Plan	0.45	0.32	0.45	0.34	0.66	-52%
NY	Milliken	NYSEG	2535	2	Averaging Plan	0.45	0.32	0.45	0.34	0.59	-46%
OH	Ashtabula	Cleveland Electric Illum	2835	7	Standard Limitation	0.45	0.39			0.61	-36%
OH	Conesville	Columbus Southern Power	2840	3	Standard Limitation	0.50	0.44			0.93	-53%
OH	Conesville	Columbus Southern Power	2840	4	Standard Limitation	0.45	0.42			0.55	-24%
OH	Eastlake	Cleveland Electric Illum	2837	1	Standard Limitation	0.45	0.40			0.49	-18%
OH	Eastlake	Cleveland Electric Illum	2837	2	Standard Limitation	0.45	0.39			0.68	-43%
OH	Eastlake	Cleveland Electric Illum	2837	3	Standard Limitation	0.45	0.40			0.54	-26%
OH	Eastlake	Cleveland Electric Illum	2837	4	Standard Limitation	0.45	0.37			0.51	-27%
OH	Edgewater	Ohio Edison Co	2857	13	Averaging Plan	0.50	0.22	0.50	0.46	0.87	-75%
OH	Gorge	Ohio Edison Co	2858	25	Averaging Plan	0.50	Not Oper.	0.50	0.46	0.00	
OH	Gorge	Ohio Edison Co	2858	26	Averaging Plan	0.50	Not Oper.	0.50	0.46	0.00	
OH	Miami Fort	Cincinnati Gas & Electric Co	2832	6	Averaging Plan	0.45	0.56	0.48	0.43	0.73	-23%
OH	Picway	Columbus Southern Power	2843	9	Standard Limitation	0.50	0.36			0.87	-58%
OH	R E Burger	Ohio Edison Co	2864	7	Averaging Plan	0.50	0.69	0.50	0.46	0.66	5%
OH	R E Burger	Ohio Edison Co	2864	8	Averaging Plan	0.50	0.71	0.50	0.46	0.72	-2%
OH	Toronto	Ohio Edison Co	2867	10	Averaging Plan	0.50	Not Oper.	0.50	0.46	0.00	
OH	Toronto	Ohio Edison Co	2867	11	Averaging Plan	0.50	Not Oper.	0.50	0.46	0.00	
OH	W H Sammis	Ohio Edison Co	2866	5	Averaging Plan	0.50	0.51	0.50	0.46	0.52	-3%
OH	W H Sammis	Ohio Edison Co	2866	6	Averaging Plan	0.50	0.49	0.50	0.46	1.10	-55%
OH	Walter C Beckjord	Cincinnati Gas & Electric Co	2830	5	Averaging Plan	0.45	0.47	0.48	0.43	0.72	-35%
OH	Walter C Beckjord	Cincinnati Gas & Electric Co	2830	6	Averaging Plan	0.45	0.43	0.48	0.43	0.71	-39%
PA	Armstrong	West Penn Power Co	3178	1	Averaging Plan	0.50	0.37	0.49	0.44	0.90	-59%
PA	Armstrong	West Penn Power Co	3178	2	Averaging Plan	0.50	0.36	0.49	0.44	1.04	-65%
PA	Bruce Mansfield	Ohio Edison Co	6094	1	Averaging Plan	0.50	0.41	0.50	0.46	0.98	-58%
PA	Bruce Mansfield	Ohio Edison Co	6094	2	Averaging Plan	0.50	0.39	0.50	0.46	1.13	-65%

Appendix C-2: Compliance Results for the 265 Phase I NO_x Affected Units in 1998

						1998					
ST	Plant Name	Operating Utility	ORIS Code	Boiler	Compliance Approach	Emission Limit	Actual Emission Rate	AEL or Avg. Plan Limit	Actual Avg. Plan Rate	1990 Emission Rate	Change from 1990 to 1998
PA	Brunner Island	PP&L	3140	1	Averaging Plan	0.45	0.41	0.46	0.39	0.65	-37%
PA	Brunner Island	PP&L	3140	2	Averaging Plan	0.45	0.41	0.46	0.39	0.71	-42%
PA	Brunner Island	PP&L	3140	3	Averaging Plan	0.45	0.34	0.46	0.39	0.83	-59%
PA	Cheswick	Duquesne Light Co	8226	1	Standard Limitation	0.45	0.37			0.71	-48%
PA	Conemaugh	GPU	3118	1	Standard Limitation	0.45	0.36			0.65	-44%
PA	Conemaugh	GPU	3118	2	Standard Limitation	0.45	0.34			0.71	-52%
PA	Martins Creek	PP&L	3148	1	Averaging Plan	0.50	0.44	0.46	0.39	1.03	-57%
PA	Martins Creek	PP&L	3148	2	Averaging Plan	0.50	0.44	0.46	0.39	0.93	-53%
PA	Mitchell	West Penn Power Co	3181	33	Averaging Plan	0.45	0.39	0.49	0.44	0.68	-43%
PA	New Castle	Ohio Edison Co	3138	1	Averaging Plan	0.50	Not Oper.	0.50	0.46	0.00	
PA	New Castle	Ohio Edison Co	3138	2	Averaging Plan	0.50	Not Oper.	0.50	0.46	0.00	
PA	Portland	GPU	3113	1	Averaging Plan	0.45	0.28	0.45	0.31	0.46	-39%
PA	Portland	GPU	3113	2	Averaging Plan	0.45	0.34	0.45	0.31	0.66	-48%
PA	Shawville	GPU	3131	1	Standard Limitation	0.50	0.47			0.99	-53%
PA	Shawville	GPU	3131	2	Standard Limitation	0.50	0.47			1.02	-54%
PA	Shawville	GPU	3131	3	Standard Limitation	0.45	0.42			0.83	-49%
PA	Shawville	GPU	3131	4	Standard Limitation	0.45	0.42			0.82	-48%
PA	Sunbury	PP&L	3152	3	Averaging Plan	0.50	0.42	0.46	0.39	0.93	-55%
PA	Sunbury	PP&L	3152	4	Averaging Plan	0.50	0.43	0.46	0.39	1.29	-67%
TN	Gallatin	TVA	3403	1	Averaging Plan	0.45	0.36	0.48	0.42	0.59	-39%
TN	Gallatin	TVA	3403	2	Averaging Plan	0.45	0.36	0.48	0.42	0.63	-43%
TN	Gallatin	TVA	3403	3	Averaging Plan	0.45	0.37	0.48	0.42	0.59	-37%
TN	Gallatin	TVA	3403	4	Averaging Plan	0.45	0.37	0.48	0.42	0.55	-33%
TN	Johnsonville	TVA	3406	1	Averaging Plan	0.45	0.47	0.48	0.42	0.45	4%
TN	Johnsonville	TVA	3406	2	Averaging Plan	0.45	0.47	0.48	0.42	0.48	-2%
TN	Johnsonville	TVA	3406	3	Averaging Plan	0.45	0.47	0.48	0.42	0.46	2%
TN	Johnsonville	TVA	3406	4	Averaging Plan	0.45	0.47	0.48	0.42	0.54	-13%
TN	Johnsonville	TVA	3406	5	Averaging Plan	0.45	0.47	0.48	0.42	0.45	4%
TN	Johnsonville	TVA	3406	6	Averaging Plan	0.45	0.47	0.48	0.42	0.50	-6%
TN	Johnsonville	TVA	3406	7	Averaging Plan	0.50	0.47	0.48	0.42	1.00	-53%
TN	Johnsonville	TVA	3406	8	Averaging Plan	0.50	0.47	0.48	0.42	0.97	-52%
TN	Johnsonville	TVA	3406	9	Averaging Plan	0.50	0.47	0.48	0.42	1.10	-57%

Appendix C-2: Compliance Results for the 265 Phase I NO_x Affected Units in 1998

						1998				
ST	Plant Name	Operating Utility	ORIS Code	Boiler	Compliance Approach	Emission Limit	Actual Emission Rate	AEL or Avg. Plan Limit	Actual Avg. Plan Rate	1990 Emission Rate	Change from 1990 to 1998
TN	Johnsonville	TVA	3406	10	Averaging Plan	0.50	0.47	0.48	0.42	1.07	-56%
WI	Alma	Dairyland Power Coop	4140	B4	Averaging Plan	0.50	0.71	0.48	0.45	0.85	-16%
WI	Alma	Dairyland Power Coop	4140	B5	Averaging Plan	0.50	0.71	0.48	0.45	0.85	-16%
WI	Genoa	Dairyland Power Coop	4143	1	Averaging Plan	0.45	0.41	0.48	0.45	0.75	-45%
WI	J P Madgett	Dairyland Power Coop	4271	B1	Averaging Plan	0.50	0.39	0.48	0.45	0.30	31%
WI	Port Washington	Wisconsin Electric Power Co	4040	1	Averaging Plan	0.50	0.31	0.48	0.36	0.32	-3%
WI	Port Washington	Wisconsin Electric Power Co	4040	2	Averaging Plan	0.50	0.31	0.48	0.36	0.32	-3%
WI	Port Washington	Wisconsin Electric Power Co	4040	3	Averaging Plan	0.50	0.31	0.48	0.36	0.32	-3%
WI	Port Washington	Wisconsin Electric Power Co	4040	4	Averaging Plan	0.50	0.30	0.48	0.36	0.37	-19%
WI	Port Washington	Wisconsin Electric Power Co	4040	5	Standard Limitation	0.50	Not Oper.			0.00	
WI	Pulliam	Wisconsin Public Service	4072	7	Averaging Plan	0.50	0.36	0.48	0.37	0.69	-48%
WI	Pulliam	Wisconsin Public Service	4072	8	Averaging Plan	0.50	0.36	0.48	0.37	0.57	-37%
WI	South Oak Creek	Wisconsin Electric Power Co	4041	5	Averaging Plan	0.50	0.29	0.48	0.36	0.28	5%
WI	South Oak Creek	Wisconsin Electric Power Co	4041	6	Averaging Plan	0.50	0.29	0.48	0.36	0.28	5%
WI	South Oak Creek	Wisconsin Electric Power Co	4041	7	Averaging Plan	0.45	0.38	0.48	0.36	0.66	-43%
WI	South Oak Creek	Wisconsin Electric Power Co	4041	8	Averaging Plan	0.45	0.38	0.48	0.36	0.67	-43%
WI	Valley	Wisconsin Electric Power Co	4042	1	Averaging Plan	0.50	0.43	0.48	0.36	1.10	-61%
WI	Valley	Wisconsin Electric Power Co	4042	2	Averaging Plan	0.50	0.43	0.48	0.36	1.10	-61%
WI	Valley	Wisconsin Electric Power Co	4042	3	Averaging Plan	0.50	0.51	0.48	0.36	1.05	-51%
WI	Valley	Wisconsin Electric Power Co	4042	4	Averaging Plan	0.50	0.51	0.48	0.36	0.93	-45%
WI	Weston	Wisconsin Public Service	4078	1	Averaging Plan	0.50	0.86	0.48	0.37	0.90	-4%
WI	Weston	Wisconsin Public Service	4078	2	Averaging Plan	0.50	0.85	0.48	0.37	1.08	-21%
WI	Weston	Wisconsin Public Service	4078	3	Averaging Plan	0.45	0.20	0.48	0.37	0.26	-22%
WV	Albright	Monongahela Power Co	3942	1	Averaging Plan	0.50	0.62	0.49	0.44	1.10	-44%
WV	Albright	Monongahela Power Co	3942	2	Averaging Plan	0.50	0.68	0.49	0.44	1.10	-38%
WV	Albright	Monongahela Power Co	3942	3	Averaging Plan	0.45	0.39	0.49	0.44	0.71	-45%
WV	Fort Martin	Monongahela Power Co	3943	1	Averaging Plan	0.45	0.57	0.49	0.44	0.62	-8%
WV	Harrison	Monongahela Power Co	3944	1	Averaging Plan	0.50	0.46	0.49	0.44	0.99	-54%
WV	Harrison	Monongahela Power Co	3944	2	Averaging Plan	0.50	0.46	0.49	0.44	1.13	-59%
WV	Harrison	Monongahela Power Co	3944	3	Averaging Plan	0.50	0.46	0.49	0.44	1.06	-57%
WV	Mitchell	Ohio Power Co	3948	1	AEL Demonstration	0.50	0.55	0.56		0.77	-28%
WV	Mitchell	Ohio Power Co	3948	2	AEL Demonstration	0.50	0.55	0.56		0.77	-28%

Appendix C-2: Compliance Results for the 265 Phase I NO_x Affected Units in 1998

						1998					
ST	Plant Name	Operating Utility	ORIS Code	Boiler	Compliance Approach	Emission Limit	Actual Emission Rate	AEL or Avg. Plan Limit	Actual Avg. Plan Rate	1990 Emission Rate	Change from 1990 to 1998
WV	Mt Storm	Vepco	3954	1	AEL Demonstration	0.45	0.69	0.76		0.88	-22%
WV	Mt Storm	Vepco	3954	2	AEL Demonstration	0.45	0.64	0.69		0.76	-16%
WV	Mt Storm	Vepco	3954	3	AEL Demonstration	0.45	0.72	0.74		1.27	-43%
WV	Pleasants	Monongahela Power Co	6004	1	Averaging Plan	0.50	0.39	0.49	0.45	0.52	-25%
WV	Pleasants	Monongahela Power Co	6004	2	Averaging Plan	0.50	0.34	0.49	0.45	0.35	-3%
WY	Jim Bridger	Pacificorp	8066	BW71	Standard Limitation	0.45	0.40			0.63	-37%
WY	Jim Bridger	Pacificorp	8066	BW72	Standard Limitation	0.45	0.38			0.51	-26%
WY	Jim Bridger	Pacificorp	8066	BW73	Standard Limitation	0.45	0.38			0.42	-10%
WY	Wyodak	Pacificorp	6101	BW91	Standard Limitation	0.50	0.31			0.37	-16%

Appendix C-3:Compliance Results for the 275 Early Election Units in 1998

ST	Plant Name	Operating Utility	ORIS Code	Boiler	NSPS[1]	Emission Limit	Actual 1998 Emission Rate	1990 Emission Rate	Change from 1990 to 1998
AL	Charles R Lowman	Alabama Electric Coop	56	2	D	0.50	0.49	0.62	-21%
AL	Charles R Lowman	Alabama Electric Coop	56	3	D	0.50	0.49	0.66	-26%
AR	Flint Creek	Southwestern Electric Power	6138	1	D	0.50	0.31	0.31	1%
AR	Independence	Arkansas Power & Light Co	6641	1	D	0.45	0.26	0.34	-24%
AR	Independence	Arkansas Power & Light Co	6641	2	D	0.45	0.24	0.35	-31%
AR	White Bluff	Arkansas Power & Light Co	6009	1	D	0.45	0.39	0.29	34%
AR	White Bluff	Arkansas Power & Light Co	6009	2	D	0.45	0.37	0.34	10%
AZ	Apache Station	Arizona Electric Pwr Coop	160	2	D	0.50	0.46	0.58	-21%
AZ	Apache Station	Arizona Electric Pwr Coop	160	3	D	0.50	0.41	0.58	-29%
AZ	Cholla	Arizona Public Service	113	1		0.45	0.42	0.46	-9%
AZ	Cholla	Arizona Public Service	113	2	D	0.45	0.33	0.42	-21%
AZ	Cholla	Arizona Public Service	113	3	D	0.45	0.36	0.36	1%
AZ	Cholla	Arizona Public Service	113	4	D	0.45	0.27	0.38	-28%
AZ	Coronado	Salt River Project	6177	U1B	D	0.50	0.42	0.51	-18%
AZ	Coronado	Salt River Project	6177	U2B	D	0.50	0.43	0.51	-16%
AZ	Navajo	Salt River Project	4941	1		0.45	0.39	0.41	-5%
AZ	Navajo	Salt River Project	4941	2		0.45	0.37	0.41	-11%
AZ	Navajo	Salt River Project	4941	3		0.45	0.40	0.37	8%
AZ	Springerville	Tucson Electric Power Co	8223	1	D	0.45	0.38	0.34	12%
AZ	Springerville	Tucson Electric Power Co	8223	2	D	0.45	0.38	0.33	14%
CO	Cherokee	Public Service Co of CO	469	3		0.50	0.40	0.73	-45%
CO	Cherokee	Public Service Co of CO	469	4		0.45	0.33	0.51	-35%
CO	Comanche	Public Service Co of CO	470	1		0.45	0.26	0.24	10%
CO	Comanche	Public Service Co of CO	470	2	D	0.50	0.28	0.31	-10%
CO	Craig	Tri-state G&T Association	6021	C1	D	0.50	0.31	0.39	-21%
CO	Craig	Tri-state G&T Association	6021	C2	D	0.50	0.38	0.40	-5%
CO	Craig	Tri-state G&T Association	6021	C3	Da	0.50	0.36	0.28	28%
CO	Pawnee	Public Service Co of CO	6248	1	D	0.50	0.21	0.62	-66%
CO	Rawhide	Platte River Power	6761	101	Da	0.45	0.35	0.43	-19%
CO	Ray D Nixon	Colorado Springs Utilities	8219	1	D	0.50	0.39	0.54	-28%
CO	Valmont	Public Service Co of CO	477	5		0.45	0.31	0.17	82%
CT	Bridgeport Harbor	United Illuminating Co	568	BHB3		0.45	0.26	0.56	-54%
FL	C D McIntosh Jr	City of Lakeland	676	3	D	0.50	0.46	0.46	-1%

[1] New Source Performance Standard subpart

Appendix C-3:Compliance Results for the 275 Early Election Units in 1998

ST	Plant Name	Operating Utility	ORIS Code	Boiler	NSPS[1]	Emission Limit	Actual 1998 Emission Rate	1990 Emission Rate	Change from 1990 to 1998
FL	Crystal River	Florida Power Corporation	628	2		0.45	0.44	0.38	17%
FL	Crystal River	Florida Power Corporation	628	4	D	0.50	0.49	0.50	-3%
FL	Crystal River	Florida Power Corporation	628	5	D	0.50	0.48	0.47	2%
FL	Deerhaven	Gainesville Regional Util	663	B2	D	0.50	0.48	0.53	-10%
FL	Seminole	Seminole Electric Coop Inc	136	1	Da	0.50	0.46	0.43	7%
FL	Seminole	Seminole Electric Coop Inc	136	2	Da	0.50	0.43	0.36	20%
FL	St Johns River Power	Jacksonville Electric Auth	207	1	Da	0.50	0.49	0.50	-3%
FL	St Johns River Power	Jacksonville Electric Auth	207	2	Da	0.50	0.48	0.59	-19%
GA	Scherer	Georgia Power Co	6257	4	D	0.45	0.35	0.21	68%
IA	Ames	City of Ames	1122	7		0.45	0.38	0.60	-36%
IA	Ames	City of Ames	1122	8	D	0.50	0.43	0.55	-21%
IA	Council Bluffs	Midamerican Energy Company	1082	1		0.50	0.47	0.56	-17%
IA	Council Bluffs	Midamerican Energy Company	1082	2		0.45	0.38	0.33	14%
IA	Council Bluffs	Midamerican Energy Company	1082	3	D	0.50	0.43	0.37	15%
IA	George Neal North	Midamerican Energy Company	1091	2		0.50	0.45	1.06	-57%
IA	George Neal North	Midamerican Energy Company	1091	3	D	0.50	0.47	0.39	20%
IA	George Neal South	Midamerican Energy Company	7343	4	D	0.50	0.39	0.64	-39%
IA	Lansing	Interstate Power Co	1047	4	D	0.50	0.42	0.50	-15%
IA	Louisa	Midamerican Energy Company	6664	101	D	0.50	0.26	0.25	2%
IA	Ottumwa	IES Utilities, Inc.	6254	1	D	0.45	0.33	0.69	-52%
IL	Crawford	Commonwealth Edison Co	867	7		0.45	0.31	0.33	-7%
IL	Crawford	Commonwealth Edison Co	867	8		0.45	0.38	0.48	-21%
IL	Dallman	City of Springfield, IL	963	33	D	0.45	0.39	0.55	-29%
IL	Fisk	Commonwealth Edison Co	886	19		0.45	0.33	0.39	-15%
IL	Waukegan	Commonwealth Edison Co	883	7		0.45	0.28	0.26	8%
IL	Waukegan	Commonwealth Edison Co	883	8		0.45	0.40	0.41	-1%
IL	Will County	Commonwealth Edison Co	884	3		0.45	0.40	0.39	4%
IL	Will County	Commonwealth Edison Co	884	4		0.45	0.33	0.31	8%
IN	A B Brown	Southern Indiana Gas & Elec	6137	1	D	0.50	0.42	0.61	-31%
IN	A B Brown	Southern Indiana Gas & Elec	6137	2	Da	0.50	0.45	0.39	14%
IN	Dean H Mitchell	Northern Indiana Pub Serv	996	4		0.45	0.33	0.43	-24%
IN	Dean H Mitchell	Northern Indiana Pub Serv	996	5		0.45	0.33	0.43	-24%
IN	Dean H Mitchell	Northern Indiana Pub Serv	996	6		0.45	0.32	0.58	-45%

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Appendix C-3:Compliance Results for the 275 Early Election Units in 1998

ST	Plant Name	Operating Utility	ORIS Code	Boiler	NSPS[1]	Emission Limit	Actual 1998 Emission Rate	1990 Emission Rate	Change from 1990 to 1998
IN	Dean H Mitchell	Northern Indiana Pub Serv	996	11		0.50	0.32	0.58	-45%
IN	Merom	Hoosier Energy	6213	1SG1	D	0.50	0.39	0.23	70%
IN	Merom	Hoosier Energy	6213	2SG1	D	0.50	0.39	0.63	-38%
IN	R M Schahfer	Northern Indiana Pub Serv	6085	15	D	0.50	0.23	0.42	-45%
IN	R M Schahfer	Northern Indiana Pub Serv	6085	17	Da	0.45	0.35	0.46	-24%
IN	R M Schahfer	Northern Indiana Pub Serv	6085	18	Da	0.45	0.32	0.44	-27%
IN	Rockport	Indiana Michigan Power Co	6166	MB1	D	0.50	0.36	0.32	13%
IN	Rockport	Indiana Michigan Power Co	6166	MB2	D	0.50	0.36	0.32	13%
IN	State Line	Commonwealth Edison Co	981	3		0.45	0.21	0.32	-35%
IN	Whitewater Valley	City of Richmond, IN	1040	1		0.50	0.42	0.71	-41%
IN	Whitewater Valley	City of Richmond, IN	1040	2		0.45	0.42	0.71	-41%
KS	Nearman Creek	Board of Public Util, KS City	6064	N1	D	0.50	0.45	0.46	-2%
KS	Riverton	Empire District Electric	1239	39		0.50	0.41	0.83	-50%
KS	Riverton	Empire District Electric	1239	40		0.45	0.42	0.55	-24%
KY	Cane Run	Louisville Gas & Electric	1363	4		0.50	0.41	0.84	-51%
KY	Cane Run	Louisville Gas & Electric	1363	5		0.50	0.48	1.15	-58%
KY	Cane Run	Louisville Gas & Electric	1363	6		0.45	0.40	1.02	-61%
KY	D B Wilson	Big Rivers Electric	6823	W1	Da	0.50	0.50	0.56	-11%
KY	Dale	East Kentucky Power Coop Inc	1385	3		0.50	0.41	0.73	-44%
KY	Dale	East Kentucky Power Coop Inc	1385	4		0.50	0.41	0.73	-44%
KY	H L Spurlock	East Kentucky Power Coop Inc	6041	2	D	0.45	0.41	0.47	-13%
KY	Mill Creek	Louisville Gas & Electric	1364	1		0.45	0.45	0.76	-41%
KY	Mill Creek	Louisville Gas & Electric	1364	2		0.45	0.40	0.79	-49%
KY	Mill Creek	Louisville Gas & Electric	1364	3	D	0.50	0.49	0.62	-21%
KY	Mill Creek	Louisville Gas & Electric	1364	4	D	0.50	0.49	0.57	-14%
KY	Trimble County	Louisville Gas & Electric	6071	1	D	0.45	0.41	0.62	-34%
LA	Big Cajun 2	Cajun Electric Power	6055	2B1	D	0.50	0.31	0.28	10%
LA	Big Cajun 2	Cajun Electric Power	6055	2B2	D	0.50	0.30	0.25	20%
LA	Big Cajun 2	Cajun Electric Power	6055	2B3	D	0.50	0.26	0.24	7%
LA	Dolet Hills	Central Louisiana Elec Co	51	1	D	0.50	0.41	0.62	-34%
LA	R S Nelson	Gulf States Utilities	1393	6	D	0.45	0.40	0.20	102%
LA	Rodemacher	Central Louisiana Elec Co	6190	2	D	0.50	0.43	0.38	13%
MI	B C Cobb	Consumers Energy Co	1695	4		0.45	0.40	0.38	4%

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Appendix C-3:Compliance Results for the 275 Early Election Units in 1998

ST	Plant Name	Operating Utility	ORIS Code	Boiler	NSPS[1]	Emission Limit	Actual 1998 Emission Rate	1990 Emission Rate	Change from 1990 to 1998
MI	B C Cobb	Consumers Energy Co	1695	5		0.45	0.39	0.36	9%
MI	J B Sims	City of Grand Haven	1825	3	Da	0.50	0.40	0.51	-21%
MI	J C Weadock	Consumers Energy Co	1720	7		0.45	0.36	0.44	-19%
MI	J C Weadock	Consumers Energy Co	1720	8		0.45	0.36	0.44	-19%
MI	J R Whiting	Consumers Energy Co	1723	1		0.50	0.38	0.82	-54%
MI	J R Whiting	Consumers Energy Co	1723	3		0.50	0.38	1.04	-63%
MI	Presque Isle	Upper Peninsula Power Co	1769	7	D	0.50	0.44	0.49	-10%
MI	Presque Isle	Upper Peninsula Power Co	1769	8	D	0.50	0.44	0.53	-16%
MI	Presque Isle	Upper Peninsula Power Co	1769	9	D	0.50	0.46	0.66	-30%
MN	Clay Boswell	Minnesota Power & Light Co	1893	3		0.45	0.36	0.42	-14%
MN	Hoot Lake	Otter Tail Power Co	1943	2		0.45	0.38	0.58	-34%
MO	Sikeston	Sikeston Board of Mun Util	6768	1	D	0.50	0.24	0.51	-53%
MT	Colstrip	Montana Power Company	6076	1	D	0.45	0.39	0.42	-7%
MT	Colstrip	Montana Power Company	6076	2	D	0.45	0.43	0.43	0%
MT	Colstrip	Montana Power Company	6076	3	Da	0.45	0.43	0.34	27%
MT	Colstrip	Montana Power Company	6076	4	Da	0.45	0.43	0.35	24%
MT	Lewis & Clark	Montana-Dakota Utilities Co	6089	B1		0.45	0.35	0.57	-38%
NC	Buck	Duke Energy Corporation	2720	5		0.45	0.41	0.59	-30%
NC	Buck	Duke Energy Corporation	2720	6		0.45	0.43	0.54	-21%
NC	Buck	Duke Energy Corporation	2720	7		0.45	0.45	0.57	-21%
NC	Buck	Duke Energy Corporation	2720	8		0.45	0.43	0.45	-4%
NC	Buck	Duke Energy Corporation	2720	9		0.45	0.44	0.51	-13%
NC	Cliffside	Duke Energy Corporation	2721	1		0.45	0.41	Not Oper.	
NC	Cliffside	Duke Energy Corporation	2721	2		0.45	0.44	Not Oper.	
NC	Cliffside	Duke Energy Corporation	2721	3		0.45	0.40	Not Oper.	
NC	Cliffside	Duke Energy Corporation	2721	4		0.45	0.43	Not Oper.	
NC	Cliffside	Duke Energy Corporation	2721	5		0.45	0.44	0.51	-13%
NC	Dan River	Duke Energy Corporation	2723	1		0.45	0.42	0.52	-18%
NC	Dan River	Duke Energy Corporation	2723	2		0.45	0.42	0.55	-23%
NC	Dan River	Duke Energy Corporation	2723	3		0.45	0.44	0.56	-22%
NC	G G Allen	Duke Energy Corporation	2718	1		0.45	0.44	0.65	-32%
NC	G G Allen	Duke Energy Corporation	2718	2		0.45	0.42	0.61	-31%
NC	G G Allen	Duke Energy Corporation	2718	3		0.45	0.44	0.64	-31%

[1] New Source Performance Standard subpart

Appendix C-3:Compliance Results for the 275 Early Election Units in 1998

ST	Plant Name	Operating Utility	ORIS Code	Boiler	NSPS[1]	Emission Limit	Actual 1998 Emission Rate	1990 Emission Rate	Change from 1990 to 1998
NC	G G Allen	Duke Energy Corporation	2718	4		0.45	0.42	0.68	-38%
NC	G G Allen	Duke Energy Corporation	2718	5		0.45	0.42	0.68	-38%
NC	Marshall	Duke Energy Corporation	2727	1		0.45	0.43	0.48	-11%
NC	Marshall	Duke Energy Corporation	2727	2		0.45	0.45	0.61	-26%
NC	Marshall	Duke Energy Corporation	2727	3		0.45	0.44	0.52	-15%
NC	Marshall	Duke Energy Corporation	2727	4		0.45	0.42	0.70	-40%
NC	Riverbend	Duke Energy Corporation	2732	7		0.45	0.42	0.58	-28%
NC	Riverbend	Duke Energy Corporation	2732	8		0.45	0.38	0.64	-41%
NC	Riverbend	Duke Energy Corporation	2732	9		0.45	0.40	Not Oper.	
NC	Riverbend	Duke Energy Corporation	2732	10		0.45	0.38	Not Oper.	
ND	Antelope Valley	Basin Electric Power	6469	B1	D	0.45	0.39	0.43	-8%
ND	Antelope Valley	Basin Electric Power	6469	B2	D	0.45	0.30	0.27	10%
ND	Leland Olds	Basin Electric Power	2817	1		0.50	0.25	0.74	-66%
ND	Stanton	United Power Assn	2824	10	Da	0.45	0.38	0.47	-19%
NE	Gerald Gentleman Sta	Nebraska Public Power Dist	6077	1	D	0.50	0.45	0.40	13%
NE	Gerald Gentleman Sta	Nebraska Public Power Dist	6077	2	D	0.50	0.32	0.35	-8%
NE	Gerald Whelan Energy	City of Hastings	60	1	D	0.45	0.24	0.30	-21%
NE	Nebraska City	Omaha Public Power Dist	6096	1	D	0.50	0.46	0.48	-4%
NE	North Omaha	Omaha Public Power Dist	2291	4		0.45	0.31	0.38	-18%
NE	Platte	City of Grand Island	59	1	D	0.45	0.39	0.48	-18%
NM	Escalante	Plains Electric Gen & Trans	87	1	Da	0.45	0.39	0.35	12%
NV	Mohave	Southern California Edison	2341	1		0.45	0.41	0.38	7%
NV	Mohave	Southern California Edison	2341	2		0.45	0.40	0.46	-13%
NV	North Valmy	Sierra Pacific Power Co	8224	1	D	0.50	0.39	0.51	-24%
NV	North Valmy	Sierra Pacific Power Co	8224	2	Da	0.50	0.37	0.40	-8%
NV	Reid Gardner	Nevada Power Company	2324	4	Da	0.50	0.28	0.38	-25%
NY	C R Huntley	Niagara Mohawk Power Corp	2549	67		0.45	0.31	0.64	-52%
NY	C R Huntley	Niagara Mohawk Power Corp	2549	68		0.45	0.31	0.64	-52%
NY	Dunkirk	Niagara Mohawk Power Corp	2554	1		0.45	0.34	0.48	-29%
NY	Dunkirk	Niagara Mohawk Power Corp	2554	2		0.45	0.35	0.48	-27%
NY	Kintigh	NYSEG	6082	1	Da	0.50	0.41	0.62	-34%
NY	S A Carlson	City of Jamestown	2682	9		0.50	0.43	0.90	-52%
NY	S A Carlson	City of Jamestown	2682	10		0.50	0.46	1.05	-56%

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ST	Plant Name	Operating Utility	ORIS Code	Boiler	NSPS[1]	Emission Limit	Actual 1998 Emission Rate	1990 Emission Rate	Change from 1990 to 1998
NY	S A Carlson	City of Jamestown	2682	11		0.50	0.46	0.83	-44%
NY	S A Carlson	City of Jamestown	2682	12		0.50	0.43	0.90	-52%
OH	Conesville	Columbus Southern Power	2840	5	D	0.45	0.41	0.44	-6%
OH	Conesville	Columbus Southern Power	2840	6	D	0.45	0.41	0.44	-6%
OH	W H Zimmer	Cincinnati Gas & Electric Co	6019	1	Da	0.50	0.44	Not Oper.	
OK	Muskogee	Oklahoma Gas & Electric Co	2952	4	D	0.45	0.37	0.44	-15%
OK	Muskogee	Oklahoma Gas & Electric Co	2952	5	D	0.45	0.35	0.41	-15%
OK	Muskogee	Oklahoma Gas & Electric Co	2952	6	D	0.45	0.38	0.44	-13%
OK	Northeastern	Public Service Co of OK	2963	3313	D	0.45	0.35	0.53	-34%
OK	Northeastern	Public Service Co of OK	2963	3314	D	0.45	0.35	0.53	-34%
OK	Sooner	Oklahoma Gas & Electric Co	6095	1	D	0.45	0.36	0.33	8%
OK	Sooner	Oklahoma Gas & Electric Co	6095	2	D	0.45	0.36	0.42	-14%
OR	Boardman	Portland General Electric	6106	1SG	D	0.50	0.40	0.40	0%
PA	Bruce Mansfield	Ohio Edison Co	6094	3	D	0.50	0.42	0.57	-26%
PA	Cromby	Peco Energy Company	3159	1		0.50	0.43	0.60	-28%
PA	Eddystone	Peco Energy Company	3161	1		0.45	0.32	0.42	-24%
PA	Eddystone	Peco Energy Company	3161	2		0.45	0.30	0.50	-40%
PA	Homer City	GPU	3122	1		0.50	0.45	1.09	-59%
PA	Homer City	GPU	3122	2		0.50	0.43	1.04	-59%
PA	Homer City	GPU	3122	3	D	0.50	0.43	0.62	-31%
PA	Keystone	GPU	3136	1		0.45	0.36	0.79	-55%
PA	Keystone	GPU	3136	2		0.45	0.37	0.79	-53%
PA	Montour	PP&L	3149	1		0.45	0.44	0.95	-53%
PA	Montour	PP&L	3149	2		0.45	0.40	0.46	-13%
PA	New Castle	Ohio Edison Co	3138	3		0.50	0.39	0.63	-38%
PA	New Castle	Ohio Edison Co	3138	4		0.50	0.36	0.57	-37%
PA	New Castle	Ohio Edison Co	3138	5		0.50	0.44	0.73	-40%
PA	Titus	GPU	3115	1		0.45	0.39	0.73	-46%
PA	Titus	GPU	3115	2		0.45	0.40	0.68	-41%
PA	Titus	GPU	3115	3		0.45	0.38	0.77	-51%
SC	Cross	South Carolina Pub Serv	130	1	Da	0.50	0.32	Not Oper.	
SC	Cross	South Carolina Pub Serv	130	2	Da	0.45	0.39	0.46	-16%
SC	W S Lee	Duke Energy Corporation	3264	1		0.45	0.43	0.64	-32%

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ST	Plant Name	Operating Utility	ORIS Code	Boiler	NSPS[1]	Emission Limit	Actual 1998 Emission Rate	1990 Emission Rate	Change from 1990 to 1998
SC	W S Lee	Duke Energy Corporation	3264	2		0.45	0.44	0.61	-28%
SC	W S Lee	Duke Energy Corporation	3264	3		0.45	0.44	0.50	-13%
TN	John Sevier	TVA	3405	1		0.45	0.41	0.62	-34%
TN	John Sevier	TVA	3405	2		0.45	0.41	0.62	-34%
TN	John Sevier	TVA	3405	3		0.45	0.42	0.64	-34%
TN	John Sevier	TVA	3405	4		0.45	0.42	0.64	-34%
TX	Big Brown	Texas Utilities Electric Co	3497	1		0.45	0.34	0.40	-14%
TX	Big Brown	Texas Utilities Electric Co	3497	2		0.45	0.35	0.34	2%
TX	Coleto Creek	Central Power & Light Co	6178	1	D	0.45	0.28	0.38	-27%
TX	Gibbons Creek	Texas Municipal Power Agency	6136	1	D	0.45	0.34	0.47	-28%
TX	Harrington Station	Southwestern Public Service	6193	061B	D	0.45	0.36	0.27	36%
TX	Harrington Station	Southwestern Public Service	6193	062B	D	0.45	0.29	0.36	-19%
TX	Harrington Station	Southwestern Public Service	6193	063B	D	0.45	0.26	0.36	-27%
TX	J K Spruce	City of San Antonio	7097	**1	Da	0.45	0.38	Not Oper.	
TX	J T Deely	City of San Antonio	6181	1	D	0.45	0.32	0.31	5%
TX	J T Deely	City of San Antonio	6181	2	D	0.45	0.32	0.31	5%
TX	Limestone	Houston Lighting & Power	298	LIM1	Da	0.45	0.41	0.50	-18%
TX	Limestone	Houston Lighting & Power	298	LIM2	Da	0.45	0.41	0.48	-15%
TX	Martin Lake	Texas Utilities Electric Co	6146	1	D	0.45	0.34	0.36	-4%
TX	Martin Lake	Texas Utilities Electric Co	6146	2	D	0.45	0.32	0.35	-7%
TX	Martin Lake	Texas Utilities Electric Co	6146	3	D	0.45	0.35	0.42	-17%
TX	Monticello	Texas Utilities Electric Co	6147	1		0.45	0.29	0.31	-5%
TX	Monticello	Texas Utilities Electric Co	6147	2		0.45	0.32	0.40	-20%
TX	Monticello	Texas Utilities Electric Co	6147	3	D	0.50	0.23	0.21	11%
TX	Oklaunion	West Texas Utilities Co	127	1	Da	0.50	0.46	0.54	-14%
TX	Pirkey	Southwestern Electric Power	7902	1	D	0.50	0.36	0.34	5%
TX	Sam Seymour	Lower Colorado River Auth	6179	1	D	0.45	0.34	0.34	0%
TX	Sam Seymour	Lower Colorado River Auth	6179	2	D	0.45	0.33	0.29	13%
TX	Sam Seymour	Lower Colorado River Auth	6179	3	Da	0.45	0.30	0.25	22%
TX	San Miguel	San Miguel Electric Coop	6183	SM-1	D	0.50	0.40	0.41	-2%
TX	Sandow	Texas Utilities Electric Co	6648	4	D	0.45	0.35	0.43	-19%
TX	Tolk Station	Southwestern Public Service	6194	171B	D	0.45	0.33	0.38	-14%
TX	Tolk Station	Southwestern Public Service	6194	172B	D	0.45	0.29	0.24	22%

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ST	Plant Name	Operating Utility	ORIS Code	Boiler	NSPS[1]	Emission Limit	Actual 1998 Emission Rate	1990 Emission Rate	Change from 1990 to 1998
TX	W A Parish	Houston Lighting & Power	3470	WAP5	D	0.50	0.33	0.47	-30%
TX	W A Parish	Houston Lighting & Power	3470	WAP6	D	0.50	0.32	0.53	-39%
TX	W A Parish	Houston Lighting & Power	3470	WAP7	D	0.45	0.41	0.35	17%
TX	W A Parish	Houston Lighting & Power	3470	WAP8	Da	0.45	0.37	0.31	18%
TX	Welsh	Southwestern Electric Power	6139	1	D	0.50	0.33	0.27	24%
TX	Welsh	Southwestern Electric Power	6139	2	D	0.50	0.34	0.36	-5%
TX	Welsh	Southwestern Electric Power	6139	3	D	0.50	0.36	0.37	-2%
UT	Bonanza	Deseret Generation & Tran	7790	1-1	Da	0.50	0.36	0.42	-15%
UT	Carbon	Pacificorp	3644	1		0.45	0.40	0.50	-20%
UT	Carbon	Pacificorp	3644	2		0.45	0.42	0.58	-27%
UT	Hunter (Emery)	Pacificorp	6165	1	D	0.45	0.40	0.50	-19%
UT	Hunter (Emery)	Pacificorp	6165	2	D	0.45	0.41	0.55	-25%
UT	Huntington	Pacificorp	8069	1	D	0.45	0.40	0.52	-23%
UT	Intermountain	Intermountain Power Agency	6481	1SGA	Da	0.50	0.42	0.45	-7%
UT	Intermountain	Intermountain Power Agency	6481	2SGA	Da	0.50	0.40	0.38	6%
VA	Chesapeake	VEPCO	3803	1		0.45	0.44	0.42	4%
VA	Chesapeake	VEPCO	3803	2		0.45	0.44	0.48	-9%
VA	Chesapeake	VEPCO	3803	4		0.45	0.45	0.54	-17%
VA	Chesterfield	VEPCO	3797	3		0.45	0.42	0.52	-19%
VA	Chesterfield	VEPCO	3797	4		0.45	0.42	0.49	-14%
VA	Glen Lyn	Appalachian Power Co	3776	51		0.45	0.40	0.46	-13%
VA	Glen Lyn	Appalachian Power Co	3776	52		0.45	0.36	Not Oper.	
VA	Possum Point	VEPCO	3804	3		0.45	0.44	0.60	-27%
VA	Potomac River	PEPCO	3788	1		0.45	0.42	0.51	-18%
VA	Potomac River	PEPCO	3788	2		0.45	0.39	0.44	-11%
VA	Potomac River	PEPCO	3788	3		0.45	0.43	0.64	-33%
VA	Potomac River	PEPCO	3788	4		0.45	0.40	0.46	-13%
VA	Potomac River	PEPCO	3788	5		0.45	0.44	0.72	-39%
VA	Yorktown	VEPCO	3809	1		0.45	0.44	0.57	-23%
VA	Yorktown	VEPCO	3809	2		0.45	0.44	0.57	-23%
WA	Centralia	Pacificorp	3845	BW21		0.45	0.39	0.40	-3%
WA	Centralia	Pacificorp	3845	BW22		0.45	0.43	0.45	-5%
WI	Blount Street	Madison Gas & Electric Co	3992	8		0.50	0.38	0.71	-46%

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ST	Plant Name	Operating Utility	ORIS Code	Boiler	NSPS[1]	Emission Limit	Actual 1998 Emission Rate	1990 Emission Rate	Change from 1990 to 1998
WI	Blount Street	Madison Gas & Electric Co	3992	9		0.50	0.40	0.61	-35%
WI	Columbia	Wisconsin Power & Light	8023	1		0.45	0.40	0.46	-13%
WI	Columbia	Wisconsin Power & Light	8023	2	D	0.45	0.37	0.49	-24%
WI	Edgewater	Wisconsin Power & Light	4050	5	D	0.50	0.23	0.21	10%
WV	Mountaineer (1301)	Appalachian Power Co	6264	1	D	0.50	0.50	0.47	6%
WY	Dave Johnston	Pacificorp	4158	BW41		0.50	0.39	0.48	-19%
WY	Dave Johnston	Pacificorp	4158	BW42		0.50	0.40	0.54	-26%
WY	Jim Bridger	Pacificorp	8066	BW74	D	0.45	0.39	0.41	-4%
WY	Laramie River	Basin Electric Power	6204	1	D	0.50	0.25	0.35	-28%
WY	Laramie River	Basin Electric Power	6204	2	D	0.50	0.26	0.32	-19%
WY	Laramie River	Basin Electric Power	6204	3	D	0.50	0.27	0.42	-36%

[1] New Source Performance Standard subpart