

Technical Support Document (TSD)
for the Transport Rule
Docket ID No. EPA-HQ-OAR-2009-0491

**Analysis of NO_x Budget Trading Program Units
Brought into the CAIR NO_x Ozone Season Trading Program**

U.S. Environmental Protection Agency
Office of Air and Radiation
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Background

EPA and states have worked together on regional programs to control long-range transport of ozone for more than 10 years. The Ozone Transport Commission (OTC) NO_x Budget Trading Program, a regional trading program to reduce summertime NO_x in the northeast, was in place from 1999-2002. The OTC program was replaced by the NO_x SIP Call NO_x Budget Trading Program (NBP) which started in 2003 and ran through 2008. Twenty states and the District of Columbia were in the NBP¹. The NBP was part of the NO_x SIP Call which is still in effect and includes requirements to reduce NO_x emissions from large combustion sources.

The combustion sources subject to the NBP included large industrial boilers and turbines with a maximum rated heat input capacity greater than 250 MMBTU/hr (non-electric generating units, or non-EGUs) and electric generating units (EGUs) greater than 25 MW. The NO_x SIP Call states used the NBP to comply with the NO_x SIP Call requirements for these large combustion sources². EPA stopped administering the NBP after the 2008 ozone season control period activities, and states used another mechanism to comply with the NO_x SIP Call requirements.

One mechanism states subject to the NO_x SIP Call used to continue to comply with the NO_x SIP Call was expanding the applicability of the Clean Air Interstate Rule (CAIR) NO_x ozone season trading program to include all units subject to the NBP. Fourteen states chose to expand the CAIR NO_x ozone season applicability in this way, while six states chose not to expand the applicability and instead to meet their NO_x SIP Call obligations in other ways. When a state expanded the applicability of the CAIR NO_x ozone season trading program, the CAIR NO_x ozone season budget in that state was increased to account for these additional sources by the same amount that was allowed under the NBP. NBP budgets for non-EGUs generally reflect a 60 percent reduction of uncontrolled emissions.

In preparing the Transport Rule proposal, EPA analyzed whether the expansion of the CAIR NO_x ozone season trading program applicability to include all NBP units in certain states

¹ The OTC states that are part of the NO_x SIP Call are: Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Rhode Island and the District of Columbia. The additional states that are part of the NO_x SIP Call are: Alabama, Illinois, Indiana, Kentucky, Michigan, Missouri, North Carolina, Ohio, South Carolina, Tennessee, Virginia, and West Virginia.

²In some states, EGUs smaller than 25 MW were also part of the NBP as a carryover from the OTC NO_x Budget Trading Program.

actually resulted in NO_x emission reductions in the ozone season in order to decide whether to propose to allow this option to continue in the Transport Rule.

Analysis

EPA analyzed the effect of having the large non-EGU units in the NBP and the CAIR NO_x ozone season trading program and evaluated whether or not emissions from this group of units were reduced as a result of their inclusion in those trading programs.

The units evaluated began reporting emissions one year prior to their state's entry into the NBP. For states that were part of the OTC NO_x Budget Trading Program, the NBP started in 2003. For all other NBP states except Missouri, the NBP requirements took effect in 2004. Sources in eastern Missouri began complying with the NBP in 2007. For this analysis, emissions from 2004 and 2009 were compared. The unit-specific emissions and operating data for 2004 and 2009 are found in the appendices. The total amount added to state NBP budgets for non-EGUs for the 14 states³ that included these non-EGUs in the CAIR NO_x ozone season trading program is 47,297 tons. This amount of allowances was added to the CAIR NO_x ozone season trading program budget. In 2009, the additional units emitted less than half of the amount of allowances added to the CAIR NO_x ozone season budgets for them. EPA has determined that these units as a group did not reduce emissions as a result of the NBP or through their inclusion in the CAIR NO_x ozone season trading program, and their current emission rates are nearly identical to what they were for the NBP. Moreover, these units as a group had allowances that they did not need for compliance and that were available for trading to other affected units. Table 1 summarizes the overall emissions and emission rates of all of these units. Emissions were lower in 2009 as compared to 2004, but the majority of that reduction is attributable to overall reduced operating hours. The weighted average emission rate in 2009 was almost identical to the weighted average emission rate in 2004 when the NBP started.

³ The 14 states that included the non-EGUs in CAIR are Alabama, Connecticut, Indiana, Kentucky, Massachusetts, Michigan, Missouri, New York, North Carolina, Ohio, South Carolina, Tennessee, Virginia, and West Virginia.

Table 1. Comparison of Overall 2004 and 2009 Ozone Season NO_x Emissions, Emission Rates, and Operating Hours

	Total Emissions (tons)	Average Emission Rates (lb/MMBTU)	Total Operating Hours
2004	24,556	0.344	473,653
2009	20,424	0.343	405,971
Difference	-16.8%	-0.2%	-14.3%

The total NO_x emissions for 2009 were 20,424 tons, which is 43% of the budget amount that was added for them. As shown in Table 2, emissions were less than the additional budget amount in all of the states affected.

Table 2. Comparison of 2009 Ozone Season NO_x Emissions to NBP/CAIR Non-EGU budget Amount by State

State	Allocation (tons)	Emissions (tons)	Emission/Allocation (%)
AL	2,328	810	35%
CT	132	102	78%
IN	9,777	4,755	49%
KY	64	37	58%
MA	363	29	8%
MI	2,209	395	18%
MO	59	0	0%
NC	2,443	1,791	73%
NY	10,459	3,940	38%
OH	4,030	1,611	40%
SC	3,479	1,907	55%
TN	5,666	3,524	62%
VA	4,104	533	13%
WV	2,184	989	45%
Total	47,297	20,424	43%

The 26,873 allowances not used by non-EGUSs for compliance in 2009 are available for the sources to trade to other affected units allowing them to emit. As a group, these large non-EGUs did not reduce their NO_x emissions or their NO_x emission rates as a result of their inclusion in the CAIR NO_x ozone season program.

Summary and Conclusion

The NO_x SIP Call continues to apply and those states must ensure that the state budget is met. The proposed Transport Rule does not include non-EGUs and does not allow states to modify the applicability of the Transport Rule to include them like they could in CAIR. The non-EGUs will continue to monitor and report NO_x emissions in the ozone season as required by the NO_x SIP Call. EPA will evaluate whether additional controls for these are warranted in a future rulemaking.

Appendix A: 2004 Non-EGU Emissions and Operating Data

State	Facility Name	ORIS Code	UNIT ID	Oz Seas NOx Mass (tons)	Oz Seas NOx Rate (lb/MMBTU)	Oz Seas Sum Op Time (hrs)	Oz Seas Heat Input (MMBTU)	Source Category
IN	C. C. Perry K Steam Plant	992	14	15.612	0.181	1372.25	162043.7	Industrial Boiler
IN	C. C. Perry K Steam Plant	992	13	29.603	0.194	1740.25	283501.95	Industrial Boiler
IN	C. C. Perry K Steam Plant	992	15	45.859	0.45	918	204093.563	Industrial Boiler
IN	C. C. Perry K Steam Plant	992	16	52.713	0.463	1054.25	224794.532	Industrial Boiler
IN	C. C. Perry K Steam Plant	992	12	181.372	0.652	2854.25	492532.775	Industrial Boiler
IN	C. C. Perry K Steam Plant	992	11		0.105	2262.5	371048.3	Industrial Boiler
KY	Big Sandy	1353	AUX2	0.379	0.145	8.15	5232.3	Industrial Boiler
MI	Dan E Karn	1702	A	0.267	0.089	610	20102.868	Electric Utility
MI	Dan E Karn	1702	B	0.297	0.087	689.75	27387.919	Electric Utility
SC	Bowater Incorporated	2440	001	24.852	0.269	815	181011.1	Pulp & Paper Mill
NY	Hudson Avenue	2496	BLR082	30.149	0.251	651.5	224527.209	Electric Utility
NY	Hudson Avenue	2496	BLR071	41.074	0.242	1621	325111.6	Electric Utility
NY	Hudson Avenue	2496	BLR072	71.921	0.235	2390.5	565504.724	Electric Utility
NY	Hudson Avenue	2496	BLR081	81.608	0.23	2613.75	652676.364	Electric Utility
OH	Muskingum River	2872	B001	1.601	0.089	72.61	36014.6	Electric Utility
IN	Rockport	6166	AB2	0.035	0.122	0.95	573	Industrial Boiler
IN	Rockport	6166	AB1	0.063	0.121	1.73	1043.3	Industrial Boiler
IN	Alcoa Allowance Management Inc	6705	3	744.89	0.349	2950.96	4266541.614	Industrial Boiler
IN	Alcoa Allowance Management Inc	6705	1	777.544	0.35	2947.53	4443129.76	Industrial Boiler
IN	Alcoa Allowance Management Inc	6705	2	780.123	0.35	2915.65	4461116.138	Industrial Boiler
SC	Cogen South	7737	B004	5.692	0.15	399	75896.7	Industrial Boiler
SC	Cogen South	7737	B002	5.724	0.15	354	76307	Industrial Boiler
SC	Cogen South	7737	B003	7.161	0.15	594	95486.6	Industrial Boiler
SC	Cogen South	7737	B001	628.445	0.315	2749.09	4050297.965	Industrial Boiler
VA	Smurfit-Stone Container Enterprises, Inc	10017	002	239.654	0.358	2820.54	1356956.518	Pulp & Paper Mill
NY	Eastman Kodak - Kodak Park	10025	1E	119.341	0.446	3092.9	532353.055	Industrial Boiler
NY	Eastman Kodak - Kodak Park	10025	1F	134.599	0.448	3355.26	596698.645	Industrial Boiler
NY	Eastman Kodak - Kodak Park	10025	3B	165.28	0.559	1238.72	590166.344	Industrial Boiler
NY	Eastman Kodak - Kodak Park	10025	4B	355.266	0.312	3640.2	2289152.245	Industrial Boiler
NY	Eastman Kodak - Kodak Park	10025	2C	394.726	0.571	3061	1388809	Industrial Boiler
NY	Eastman Kodak - Kodak Park	10025	3A	424.792	0.472	3642.28	1790981.891	Industrial Boiler
NY	Eastman Kodak - Kodak Park	10025	4A	497.708	0.575	2928.76	1732553.336	Industrial Boiler
MA	General Electric Aircraft	10029	5	2.196	0.263	123.48	19983.823	Industrial Turbine
MA	General Electric Aircraft	10029	3	13.425	0.068	2774.6	382351.077	Industrial Boiler
OH	Goodyear Tire & Rubber Company	10114	B102	105.049	0.452	2636.6	446053.828	Industrial Boiler
OH	Goodyear Tire & Rubber Company	10114	B101	134.354	0.52	2627.68	503025.204	Industrial Boiler
OH	P H Glatfelter Company - Chillicothe Fac	10244	B002	176.316	0.348	2905.48	1014461.412	Pulp & Paper Mill

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OH	P H Glatfelter Company - Chillicothe Fac	10244	B003	282.565	0.452	2651.08	1250615.728	Pulp & Paper Mill
TN	Liberty Fibers Corporation	10321	9	112.733	0.744	1857	303344	Industrial Boiler
TN	Liberty Fibers Corporation	10321	8	137.595	0.849	1995.25	322535.775	Industrial Boiler
MI	T B Simon Power Plant	10328	UNIT4	47.091	0.131	2478.75	713929.675	Cogeneration
MI	T B Simon Power Plant	10328	UNIT1	48.362	0.238	1492	407107.2	Cogeneration
MI	T B Simon Power Plant	10328	UNIT2	68.005	0.242	2315.25	555702.1	Cogeneration
MI	T B Simon Power Plant	10328	UNIT3	90.258	0.23	2605.25	784296.8	Cogeneration
NC	Coastal Carolina Clean Power LLC	10381	BLR01B	7.493	0.388	412.65	44446.093	Cogeneration
NC	Coastal Carolina Clean Power LLC	10381	BLR01A	19.186	0.363	952.37	109223.264	Cogeneration
OH	ArcelorMittal Cleveland, Inc.	10398	B001	7.895	0.025	2764.29	816865.986	Iron & Steel
OH	ArcelorMittal Cleveland, Inc.	10398	B007	8.413	0.024	2891.34	849189.998	Iron & Steel
OH	ArcelorMittal Cleveland, Inc.	10398	B003	12.964	0.035	2839.73	961511.782	Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	213	2.172		2867.96		Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	212	2.815		2596.9		Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	211	3.515		2771.52		Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	503	38.915		2881.01		Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	502	39.292		2945.34		Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	501	39.302		2948.04		Iron & Steel
MI	Graphic Packaging International, Inc.	10698	BLR08	79.799	0.29	2952	542153.2	Industrial Boiler
TN	Cargill Corn Milling	10729	8500	7.919	0.064	2925.37	256837.533	Industrial Boiler
WV	Dupont Belle Plant	10788	612	19.787	0.186	2173.62	211747.216	Industrial Boiler
TN	Dupont Old Hickory	10797	OP1	8.461	0.054	1724	543287.7	Industrial Boiler
TN	Dupont Old Hickory	10797	OP3	27.523	0.123	1934	442703.35	Industrial Boiler
MA	Deer Island Treatment	10823	S43	0.143	1.113	6.96	1037.041	Industrial Turbine
MA	Deer Island Treatment	10823	S42	0.154	1.498	3.75	204.96	Industrial Turbine
WV	WV Alloys, Inc.	50012	BLR4	167.114	0.591	1820.8	529904.544	Industrial Boiler
OH	The Ohio State University	50044	B132	6.011	0.026	2391.62	462172.2	Industrial Boiler
WV	UCC South Charleston Plant	50151	B26	2.824	0.051	1034.98	113185.981	Industrial Boiler
WV	UCC South Charleston Plant	50151	B27	13.026	0.074	2838.19	352491.163	Industrial Boiler
WV	UCC South Charleston Plant	50151	B25	136.04	0.437	2192.61	608074.098	Industrial Boiler
NC	Weyerhaeuser - New Bern	50188	105	27.337	0.345	1264.25	152890.85	Pulp & Paper Mill
NC	Weyerhaeuser - New Bern	50188	6	98.837	0.332	2666.5	626551.675	Pulp & Paper Mill
NC	Domtar Paper Company LLC - Plymouth	50189	9	3.555	0.083	626.25	81530.075	Pulp & Paper Mill
NC	Domtar Paper Company LLC - Plymouth	50189	1	475.825	0.892	2560.75	1063026.975	Pulp & Paper Mill
NC	Blue Ridge Paper Products Inc.	50244	BB	130.788	0.621	2104.5	411478.55	Industrial Boiler
NC	Blue Ridge Paper Products Inc.	50244	PG	133.928	0.48	2696	554803.525	Industrial Boiler

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NC	Blue Ridge Paper Products Inc.	50244	B4	152.353	0.303	2513	1007887.075	Industrial Boiler
NC	Blue Ridge Paper Products Inc.	50244	RB	154.371	0.567	2315.75	545406.325	Industrial Boiler
NC	Blue Ridge Paper Products Inc.	50244	RC	190.965	0.499	2687	752383.775	Industrial Boiler
AL	International Paper-Courtland Mill	50245	PBX007	3.445	0.018	2927.36	135309.701	Pulp & Paper Mill
AL	International Paper-Courtland Mill	50245	GTX017	46.907	0.119	2914.48	793674.447	Pulp & Paper Mill
OH	Smart Papers LLC	50247	B010	106.833	0.266	2718	798601.125	Industrial Boiler
NC	KapStone Paper and Packaging Corp	50254	001	348.476	0.561	2931.18	1273162.309	Pulp & Paper Mill
TN	Packaging Corporation of America	50296	017	13.627	0.12	1832.87	204976.954	Industrial Boiler
NY	Covanta Niagara	50472	R1B01	0.092	0.105	4	1760	Industrial Boiler
VA	GP Big Island, LLC	50479	6	5.761	0.022	2922.57	526989.16	Pulp & Paper Mill
VA	GP Big Island, LLC	50479	4	48.764	0.318	2823.27	305489.569	Pulp & Paper Mill
TN	Eastman Chemical Company	50481	325-31	171.967	0.282	1875.61	1202462.4	Industrial Boiler
TN	Eastman Chemical Company	50481	83-24	192.714	0.509	2223.63	760108.394	Industrial Boiler
TN	Eastman Chemical Company	50481	253-29	268.463	0.337	2703.98	1580549.686	Industrial Boiler
TN	Eastman Chemical Company	50481	83-23	269.148	0.551	2728.02	975813.483	Industrial Boiler
TN	Eastman Chemical Company	50481	253-28	282.53	0.341	2767.93	1650859.171	Industrial Boiler
TN	Eastman Chemical Company	50481	253-25	286.188	0.334	2952	1708253.7	Industrial Boiler
TN	Eastman Chemical Company	50481	253-26	294.366	0.367	2952	1595125.3	Industrial Boiler
TN	Eastman Chemical Company	50481	253-27	349.215	0.36	2948.82	1930456.819	Industrial Boiler
TN	Eastman Chemical Company	50481	325-30	373.746	0.337	2952	2223501.8	Industrial Boiler
WV	PPG Industries, Inc - Natrium Plant	50491	002	111.529	0.31	2951	719130.6	Industrial Boiler
WV	PPG Industries, Inc - Natrium Plant	50491	001	201.3	0.334	2893.75	1206311.725	Industrial Boiler
WV	PPG Industries, Inc - Natrium Plant	50491	003	404.923	0.293	2952	2770643.9	Industrial Boiler
AL	US Steel (Fairfield Works)	50730	208	0.336	0.005	1694	135146.2	Industrial Boiler
AL	US Steel (Fairfield Works)	50730	210	18.396	0.029	2929.38	1215646.436	Industrial Boiler
AL	US Steel (Fairfield Works)	50730	209	46.329	0.068	2951.5	1324313.381	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	720B3	8.599	0.016	2952	1095827.1	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	701B5	8.803	0.023	2447.72	773769.698	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	720B1	10.994	0.021	2951.6	1142384.24	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	720B2	12.14	0.022	2952	1177779.6	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	701B6	13.755	0.023	2948.93	1201187.584	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	701B1	28.335	0.057	2950.97	1011977.089	Industrial Boiler

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IN	US Steel Corp - Gary Works	50733	701B2	65.401	0.152	2708.77	871043.215	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	701B3	73.157	0.155	2951.74	927921.782	Industrial Boiler
SC	Smurfit-Stone Container	50806	16	468.697	0.334	2813.91	2855763.226	Cogeneration
VA	MeadWestvaco of Virginia, Covington	50900	011	5.676	0.031	2699.7	378645.353	Industrial Boiler
VA	MeadWestvaco of Virginia, Covington	50900	005	11.849	0.126	1189.65	172890.753	Industrial Boiler
VA	MeadWestvaco of Virginia, Covington	50900	002	120.588	0.333	2725.86	727311.336	Industrial Boiler
VA	MeadWestvaco of Virginia, Covington	50900	003	181.237	0.335	2618.75	1083865.387	Industrial Boiler
VA	MeadWestvaco of Virginia, Covington	50900	001	243.735	0.334	2853.6	1452122.325	Industrial Boiler
VA	MeadWestvaco of Virginia, Covington	50900	004	356.902	0.33	2816.55	2175796.364	Industrial Boiler
VA	Dan River Inc - Schoolfield Complex	50954	17	89.77	0.739	1941.27	222573.763	Industrial Boiler
TN	Bowater Newsprint - Calhoun Operation	50956	11	98.106	0.618	1021.76	291319.288	Industrial Boiler
TN	Bowater Newsprint - Calhoun Operation	50956	12	170.024	0.701	1807.21	470633.918	Industrial Boiler
OH	Sunoco, Inc. (R&M) Toledo Refinery	50965	B044	35.508	0.14	2880.48	507063.675	Petroleum Refinery
VA	Celanese Acetate LLC	52089	BLR008	2.73	0.056	1260	97476.2	Industrial Boiler
VA	Celanese Acetate LLC	52089	BLR007	117.994	0.358	2354.5	651034.6	Industrial Boiler
IN	BP Whiting Business Unit	52130	1SPS15	5.698	0.113	601.55	106286.431	Petroleum Refinery
IN	BP Whiting Business Unit	52130	1SPS17	11.985	0.114	1028.24	228081.349	Petroleum Refinery
IN	BP Whiting Business Unit	52130	1SPS14	13.028	0.117	771.78	224921.719	Petroleum Refinery
IN	BP Whiting Business Unit	52130	1SPS13	19.53	0.109	1086.03	353376.842	Petroleum Refinery
IN	BP Whiting Business Unit	52130	1SPS16	23.512	0.103	1907.03	490288.176	Petroleum Refinery
IN	BP Whiting Business Unit	52130	3SPS36	24.437	0.036	2952	1338118.773	Petroleum Refinery
IN	BP Whiting Business Unit	52130	3SPS33	29.056	0.042	2950.18	1349584.644	Petroleum Refinery
IN	BP Whiting Business Unit	52130	3SPS32	34.186	0.05	2952	1368234.463	Petroleum Refinery
IN	BP Whiting Business Unit	52130	3SPS31	148.205	0.323	2239.8	922643.176	Petroleum Refinery
IN	BP Whiting Business Unit	52130	3SPS34	232.86	0.347	2952	1340290.039	Petroleum Refinery
AL	International Paper-Prattville Mill	52140	Z006	119.839	0.311	2946.73	785956.261	Pulp & Paper Mill
AL	International Paper-Prattville Mill	52140	Z008	337.461	0.446	2929.84	1511380.675	Pulp & Paper Mill
SC	International Paper-Eastover Mill	52151	001	149.966	0.294	2948.43	992648.304	Pulp & Paper Mill
VA	International Paper-Franklin Mill	52152	029	21.378	0.033	2868.9	1279993.01	Industrial Turbine
VA	International Paper-Franklin Mill	52152	003	189.52	0.299	2942.95	1270569.955	Industrial Boiler
AL	International Paper-Riverdale Mill	54096	Z007	5.347	0.086	1273.38	84277.871	Pulp & Paper Mill
AL	International Paper-Riverdale Mill	54096	X026	26.554	0.048	2869.91	1093120.777	Pulp & Paper Mill
OH	WCI Steel	54207	B004	9.032	0.032	2215.07	1379220.208	Industrial Boiler
OH	WCI Steel	54207	B001	148.082	0.243	2951.94	1324979.398	Industrial Boiler

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AL	Bowater Newsprint - Coosa Pines	54216	AOW#3	89.487	0.477	2614.5	526308.95	Industrial Boiler
AL	Bowater Newsprint - Coosa Pines	54216	AOW#2	95.043	0.917	2578	526412.15	Industrial Boiler
AL	Bowater Newsprint - Coosa Pines	54216	AOW#4	95.518	0.588	2655.25	538103.5	Industrial Boiler
AL	Bowater Newsprint - Coosa Pines	54216	AOW#1	111.977	0.363	2863.75	608545.775	Industrial Boiler
CT	Pfizer	54236	8	7.662	0.088	1286	173985.675	Industrial Boiler
CT	Pfizer	54236	5	17.771	0.109	2321	323509.025	Industrial Boiler
NC	University of NC Chapel Hill	54276	ES002	61.631	0.306	2812.25	387028.75	Cogeneration
NC	University of NC Chapel Hill	54276	ES001	81.605	0.267	2905.5	591645.5	Cogeneration
WV	ArcelorMittal Weirton, Inc.	54344	089	10.349	0.069	1037.5	291204.575	Iron & Steel
WV	ArcelorMittal Weirton, Inc.	54344	090	13.495	0.074	1458.5	360847.675	Iron & Steel
WV	ArcelorMittal Weirton, Inc.	54344	092	18.337	0.055	1880.5	683681.726	Iron & Steel
WV	ArcelorMittal Weirton, Inc.	54344	093	24.89	0.054	2526.25	959395.574	Iron & Steel
WV	ArcelorMittal Weirton, Inc.	54344	091	34.493	0.063	2800.5	1119828.425	Iron & Steel
CT	Pratt & Whitney, East Hartford	54605	001	3.517	0.023	1143.12	298230.142	Cogeneration
NC	International Paper-Riegelwood	54656	003	45.77	0.367	1863.02	242239.969	Industrial Boiler
CT	Cascades Boxboard Group-Connecticut LLC	54657	1	156.259	0.407	3405	755125.4	Pulp & Paper Mill
AL	MeadWestvaco Coated Board, Inc.	54802	X022	19.014	0.094	1500.52	445770.533	Pulp & Paper Mill
AL	MeadWestvaco Coated Board, Inc.	54802	Z008	42.432	0.224	2433.15	319741.581	Pulp & Paper Mill
MA	MIT Central Utility Plant	54907	1	34.287	0.069	3613.19	1000895.446	Cogeneration
IN	Portside Energy	55096	BLR1	2.658	0.024	2107.12	217890.813	Cogeneration
IN	Portside Energy	55096	BLR2	2.9	0.029	1644.31	187998.468	Cogeneration
IN	Portside Energy	55096	CT	12.463	0.029	2288.42	872814.858	Cogeneration
KY	Calvert City Cogen	55308	A	9.193	0.081	2952	227487.1	Industrial Boiler
KY	Calvert City Cogen	55308	B	9.283	0.079	2951	234080.2	Industrial Boiler
KY	Calvert City Cogen	55308	C	26.982	0.082	2937.95	659878.295	Cogeneration
MI	Otsego Paper, Inc.	55799	0024	13.994	0.071	2798	404263.65	Cogeneration
MI	Otsego Paper, Inc.	55799	0025	17.649	0.089	2798.75	398714.15	Cogeneration
MA	Kneeland Station	88002 3	K4	12.413	0.176	1059.43	137652.167	Industrial Boiler
MA	Kneeland Station	88002 3	K2	30.563	0.206	2002.78	294246.069	Industrial Boiler
MA	Kneeland Station	88002 3	K1	35.346	0.194	2649.78	367232.784	Industrial Boiler
MA	Kneeland Station	88002 3	K3	39.372	0.18	2911.51	443587.096	Industrial Boiler
NY	Momentive Performance Materials	88002 4	U28006	18.519	0.069	3384.66	537958.395	Industrial Boiler
OH	Procter & Gamble Company - Ivorydale	88002 8	B022	230.692	0.624	2708.25	740055.95	Industrial Boiler
OH	BP Husky Refining LLC	88003 0	B004	29.067	0.141	2341.58	241582.145	Petroleum Refinery
OH	BP Husky Refining LLC	88003 0	B020	113.174	0.397	2865.25	535764.05	Petroleum Refinery
MI	The Dow Chemical Company	88003 1	0402	0.228	0.151	48	3041.1	Industrial Boiler
MI	The Dow Chemical Company	88003 1	0401	0.23	0.175	35	2633.4	Industrial Boiler

State	Facility Name	ORIS Code	UNIT ID	Oz Seas NOx Mass (tons)	Oz Seas NOx Rate (lb/MMBTU)	Oz Seas Sum Op Time (hrs)	Oz Seas Heat Input (MMBTU)	Source Category
OH	Emery Oleochemicals, LLC	880033	B027	258.218	0.467	2714.07	1092862.884	Industrial Boiler
KY	Catlettsburg Refining, LLC	880038	061	24.142	0.082	2952	600213.8	Petroleum Refinery
OH	Cargill Incorporated	880039	B006	0.149	0.124	16	2290.9	Industrial Boiler
OH	Cargill Incorporated	880039	B004	186.609	0.47	2941	789442.5	Industrial Boiler
AL	Ascend (Decatur Plant)	880041	X053	0.048	0.008	129.25	15105.05	Industrial Boiler
AL	Ascend (Decatur Plant)	880041	Z006	76.091	0.498	1729	308159.47	Industrial Boiler
AL	Ascend (Decatur Plant)	880041	Z004	79.438	0.468	1929.5	341026.897	Industrial Boiler
AL	Ascend (Decatur Plant)	880041	Z005	121.363	0.469	2914	520627.145	Industrial Boiler
AL	Ascend (Decatur Plant)	880041	X015	271.993	0.563	2594.5	978345	Industrial Boiler
OH	AK Steel Corporation - Middletown	880042	P012	21.147	0.417	2842.89	84119.114	Iron & Steel
OH	AK Steel Corporation - Middletown	880042	P011	26.797	0.426	2813.49	130106.596	Iron & Steel
OH	AK Steel Corporation - Middletown	880042	P009	27.992	0.326	2368.81	128672.041	Iron & Steel
OH	AK Steel Corporation - Middletown	880042	P010	35.438	0.35	2793.05	167436.22	Iron & Steel
NY	Holcim US Inc	880043	1	1294.354		3140.29		Cement Manufacturing
NY	Lafarge Building Materials, Inc.	880044	41000	2102.786		3452.25		Cement Manufacturing
MI	University of Michigan	880045	260-04	17.751	0.171	1253	200878.525	Industrial Boiler
MI	University of Michigan	880045	260-06	18.936	0.071	2697.25	535790.05	Industrial Boiler
MI	University of Michigan	880045	260-03	34.05	0.222	1775.5	301478.175	Industrial Boiler
NY	Lehigh Northeast Cement Company	880052	01070	239.208		3411		Cement Manufacturing
WV	Bayer Cropscience Institute Plant	880053	090	60.667	0.402	1618.65	317046.202	Industrial Boiler
WV	Bayer Cropscience Institute Plant	880053	070	108.233	0.421	1960.99	510826.987	Industrial Boiler
WV	Bayer Cropscience Institute Plant	880053	080	147.282	0.395	2951.87	758330.58	Industrial Boiler
TN	DOE Oak Ridge Y-12	880055	34	6.104	1.104	175.42	14098.728	Industrial Boiler
TN	DOE Oak Ridge Y-12	880055	31	37.702	0.62	1028.95	165059.668	Industrial Boiler
TN	DOE Oak Ridge Y-12	880055	32	63.401	0.625	1860.36	198585.381	Industrial Boiler
SC	INVISTA S.a.r.l. Camden Plant	880057	04	66.377	0.558	1182.75	240599.895	Industrial Boiler
SC	INVISTA S.a.r.l. Camden Plant	880057	03	101.914	0.581	2115.25	352280.78	Industrial Boiler
KY	Wickliffe Paper Company	880065	02	1.921	0.148	216	25967.4	Pulp & Paper Mill
KY	Wickliffe Paper Company	880065	01	1.995	0.138	240	28914.6	Pulp & Paper Mill
SC	Springs Global US - Grace Facility	880068	04	2.574	0.527	108.75	9553.75	Industrial Boiler
SC	Springs Global US - Grace Facility	880068	03	105.973	0.734	2392.75	307487.7	Industrial Boiler

State	Facility Name	ORIS Code	UNIT ID	Oz Seas NOx Mass (tons)	Oz Seas NOx Rate (lb/MMBTU)	Oz Seas Sum Op Time (hrs)	Oz Seas Heat Input (MMBTU)	Source Category
OH	Sunoco Inc (R&M) Haverhill Plant	880070	2001UF	12.186	0.061	2596.29	393296.448	Industrial Boiler
SC	Marlboro Paper Mill	880074	15	9.16	0.097	621	188784	Pulp & Paper Mill
AL	BP Amoco Chemical Company	880075	AB8301	5.712	0.028	1020	408000	Industrial Boiler
OH	Republic Engineered Products-Lorain	880077	B013	7.477	0.029	2668.25	548356.025	Industrial Boiler
SC	Sonoco Products Company	880078	B04	149.885	0.555	2645.75	545382.25	Pulp & Paper Mill
TN	Tate & Lyle-Loudon	880079	34	102.164	0.385	2795.86	551790.398	Industrial Boiler
TN	Tate & Lyle-Loudon	880079	35	115.284	0.359	2851.22	644380.698	Industrial Boiler
OH	Lima Refinery	880083	B026	15.756	0.06	2952	520425.8	Petroleum Refinery
IN	New Energy Corp	880087	U-4000	210				Industrial Boiler
VA	Honeywell Intl, Inc Hopewell Plant	880093	10C	138.996	0.57	2951.85	538251.062	Industrial Boiler
NY	Ravenswood Steam Plant	880100	BLR001	21.743	0.267	712.5	160952.225	Industrial Boiler
NY	Ravenswood Steam Plant	880100	BLR002	22.447	0.283	692.75	157312.453	Industrial Boiler
NY	Ravenswood Steam Plant	880100	BLR004	22.874	0.276	729.75	164636.897	Industrial Boiler
				24,556	0.344	473,653	142,644,948	
				Total Emissions (tons)	Avg Emission Rate (lb/MMBTU)	Total Oper Hrs	Total HI (MMBTU)	

Appendix B: 2009 Non-EGU Emissions and Operating Data

State	Facility Name	ORIS Code	UNIT ID	Oz Seas NOx Mass (tons)	Oz Seas NOx Rate (lb/MMBTU)	Oz Seas Sum Op Time (hrs)	Oz Seas Heat Input (MMBTU)	Source Category
IN	C. C. Perry K Steam Plant	992	13	4.355	0.264	303.8	35528.77	Industrial Boiler
IN	C. C. Perry K Steam Plant	992	11	10.397	0.127	1009.69	117182.304	Industrial Boiler
IN	C. C. Perry K Steam Plant	992	16	77.023	0.495	1869.92	316798.812	Industrial Boiler
IN	C. C. Perry K Steam Plant	992	12	77.138	0.354	3104.77	441441.547	Industrial Boiler
IN	C. C. Perry K Steam Plant	992	15	109.395	0.471	2479.31	469390.041	Industrial Boiler
KY	Big Sandy	1353	AUX2	8.605	0.149	179.85	115463.5	Industrial Boiler
MA	Somerset	1613	10			RETIRED		Electric Utility
MI	Dan E Karn	1702	B	0.473	0.047	449.62	12327.412	Electric Utility
MI	Dan E Karn	1702	A	0.759	0.057	474.31	22088.088	Electric Utility
SC	Bowater Incorporated	2440	001	17.853	0.253	142	130084.7	Pulp & Paper Mill
NY	Hudson Avenue	2496	BLR0 82	0.228	0.267	10.75	1690.35	Electric Utility
NY	Hudson Avenue	2496	BLR0 72	1.354	0.127	66	21078.85	Electric Utility
NY	Hudson Avenue	2496	BLR0 71	9.251	0.178	349.5	99493.95	Electric Utility
NY	Hudson Avenue	2496	BLR0 81	17.719	0.219	583.25	156008.325	Electric Utility
NY	59th Street	2503	BLR1 16	17.185	0.167	1949.25	196686.2	Electric Utility
NY	59th Street	2503	BLR1 18	17.57	0.168	1893.25	197142.75	Electric Utility
NY	59th Street	2503	BLR1 17	18.031	0.169	1968.25	204503.125	Electric Utility
OH	Cardinal	2828	B010	1.292	0.131	71.87	19433.8	Industrial Boiler
OH	Cardinal	2828	B008	6.65	0.181	147.61	73509.7	Industrial Boiler
OH	J M Stuart	2850	5	0.345	2	1.21	344.9	Electric Utility
OH	Muskingum River	2872	B001	4.299	0.093	186.5	92504	Electric Utility
TN	Cumberland	3399	A1			0		Industrial Boiler
TN	Cumberland	3399	B1			0		Industrial Boiler
OH	W H Zimmer Generating Station	6019	A	2.301	0.097	131.32	46904.449	Electric Utility
OH	W H Zimmer Generating Station	6019	B	3.038	0.097	219.52	61633.544	Electric Utility
IN	Rockport	6166	AB2	0.112	0.112	3.3	1990	Industrial Boiler
IN	Rockport	6166	AB1	0.123	0.112	3.65	2201.1	Industrial Boiler
IN	Alcoa Allowance Management Inc	6705	2	1015.577	0.364	3632.97	5540025.222	Industrial Boiler
IN	Alcoa Allowance Management Inc	6705	3	1084.606	0.368	3616.13	5842706.278	Industrial Boiler
IN	Alcoa Allowance Management Inc	6705	1	1298.439	0.444	3600.08	5751079.853	Industrial Boiler
SC	Cogen South	7737	B003	1.43	0.142	378.86	19067.3	Industrial Boiler
SC	Cogen South	7737	B002	2.298	0.148	378.86	30642.1	Industrial Boiler
SC	Cogen South	7737	B004	3.547	0.149	378.86	47299.4	Industrial Boiler
SC	Cogen South	7737	B001	706.311	0.309	3596.28	4590802.976	Industrial Boiler
OH	Gen J M Gavin	8102	B002	1.039	0.112	30.92	18552	Industrial Boiler
OH	Gen J M Gavin	8102	B001	1.059	0.112	31.51	18906	Industrial Boiler
VA	Smurfit-Stone Container Enterprises, Inc	10017	002	244.487	0.311	3453.18	1587475.822	Pulp & Paper Mill
NY	Eastman Kodak - Kodak Park	10025	3A	193.357	0.579	1463.53	665943.193	Industrial Boiler
NY	Eastman Kodak - Kodak Park	10025	3B	199.329	0.573	1631.15	690206.781	Industrial Boiler
NY	Eastman Kodak - Kodak Park	10025	4B	294.676	0.341	3631.35	1735412.19	Industrial Boiler
NY	Eastman Kodak - Kodak Park	10025	4A	463.144	0.579	3136.92	1596644.679	Industrial Boiler

State	Facility Name	ORIS Code	UNIT ID	Oz Seas NOx Mass (tons)	Oz Seas NOx Rate (lb/MMBTU)	Oz Seas Sum Op Time (hrs)	Oz Seas Heat Input (MMBTU)	Source Category
OH	Goodyear Tire & Rubber Company	10114	B101			RETIRED		Industrial Boiler
OH	Goodyear Tire & Rubber Company	10114	B102			RETIRED		Industrial Boiler
OH	P H Glatfelter Company - Chillicothe Fac	10244	B002	211.758	0.324	3573.43	1309337.06	Pulp & Paper Mill
OH	P H Glatfelter Company - Chillicothe Fac	10244	B003	357.567	0.48	3508.59	1721473.162	Pulp & Paper Mill
OH	P H Glatfelter Company - Chillicothe Fac	10244	B001			RETIRED		Pulp & Paper Mill
MI	T B Simon Power Plant	10328	UNIT 2	55.215	0.246	2134.8	448909.355	Cogeneration
MI	T B Simon Power Plant	10328	UNIT 1	69.022	0.25	2473.76	552755.415	Cogeneration
MI	T B Simon Power Plant	10328	UNIT 4	70.982	0.13	3636.15	1091538.543	Cogeneration
MI	T B Simon Power Plant	10328	UNIT 3	92.498	0.253	2925.07	727070.695	Cogeneration
NC	Coastal Carolina Clean Power LLC	10381	BLR0 1B	131.996	0.33	3486.46	779821.29	Cogeneration
NC	Coastal Carolina Clean Power LLC	10381	BLR0 1A	132.994	0.332	3460.78	772181.297	Cogeneration
OH	ArcelorMittal Cleveland, Inc.	10398	B003	40.679	0.203	2034.51	459828.277	Iron & Steel
OH	ArcelorMittal Cleveland, Inc.	10398	B004	67.876	0.32	1795.76	424938.5	Iron & Steel
OH	ArcelorMittal Cleveland, Inc.	10398	B001			0		Iron & Steel
OH	ArcelorMittal Cleveland, Inc.	10398	B002			0		Iron & Steel
OH	ArcelorMittal Cleveland, Inc.	10398	B007			0		Iron & Steel
MO	Anheuser-Busch, Inc.	10430	6			0		Industrial Boiler
IN	Mittal Steel USA - Indiana Harbor East	10474	213	0.707	0.347	919.87	15543.774	Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	502	78.422	1.211	3527.52	131784.887	Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	501	92.119	1.235	3410.98	148968.059	Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	503	101.682	1.213	3604.7	167120.776	Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	401			RETIRED		Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	402			RETIRED		Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	403			RETIRED		Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	404			RETIRED		Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	405			RETIRED		Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	212			0		Iron & Steel
IN	Mittal Steel USA - Indiana Harbor East	10474	211			0		Iron & Steel
MI	Graphic Packaging International, Inc.	10698	BLR0 8	61.208	0.184	3670.25	636200.275	Industrial Boiler
TN	Cargill Corn Milling	10729	8500	5.186	0.068	2601	181412.6	Industrial Boiler
WV	Dupont Belle Plant	10788	612			0		Industrial Boiler
TN	Dupont Old Hickory	10797	OP3	123.16	0.549	1361.75	487185.4	Industrial Boiler
TN	Dupont Old Hickory	10797	OP1	238.294	0.668	2332	808833.55	Industrial Boiler
MA	Deer Island Treatment	10823	S43	0.203	0.928	7.22	1036.214	Industrial Turbine

State	Facility Name	ORIS Code	UNIT ID	Oz Seas NOx Mass (tons)	Oz Seas NOx Rate (lb/MMBTU)	Oz Seas Sum Op Time (hrs)	Oz Seas Heat Input (MMBTU)	Source Category
MA	Deer Island Treatment	10823	S42	0.276	0.733	15.87	2422.025	Industrial Turbine
OH	The Ohio State University	50044	B132	6.603	0.033	3672	400403.7	Industrial Boiler
WV	UCC South Charleston Plant	50151	B26	0.281	0.078	412.93	7239.488	Industrial Boiler
WV	UCC South Charleston Plant	50151	B27	14.759	0.092	2011.38	320763.808	Industrial Boiler
WV	UCC South Charleston Plant	50151	B25	80.985	0.394	2470.06	358593.363	Industrial Boiler
NC	Weyerhaeuser - New Bern	50188	105	6.797	0.441	248.27	30487.71	Pulp & Paper Mill
NC	Weyerhaeuser - New Bern	50188	6	61.535	0.384	3652.45	334036.612	Pulp & Paper Mill
NC	Domtar Paper Company LLC - Plymouth	50189	9	12.459	0.398	334.5	58289.95	Pulp & Paper Mill
NC	Blue Ridge Paper Products Inc.	50244	BB	152.129	0.527	3080.44	572195.45	Industrial Boiler
NC	Blue Ridge Paper Products Inc.	50244	PG	164.667	0.563	2926.83	572661.469	Industrial Boiler
NC	Blue Ridge Paper Products Inc.	50244	B4	182.521	0.278	3534.13	1314391.683	Industrial Boiler
NC	Blue Ridge Paper Products Inc.	50244	RB	208.713	0.485	3259.3	932848.556	Industrial Boiler
NC	Blue Ridge Paper Products Inc.	50244	RC	210.218	0.542	3406.94	770811.874	Industrial Boiler
AL	International Paper-Courtland Mill	50245	PBX007	4.731	0.055	1024.68	139605.383	Pulp & Paper Mill
AL	International Paper-Courtland Mill	50245	GTX017	66.366	0.093	3273.69	1424880.793	Pulp & Paper Mill
OH	Smart Papers LLC	50247	B010	104.659	0.255	3585.3	808057.604	Industrial Boiler
NC	KapStone Paper and Packaging Corp	50254	001	369.514	0.432	3659.69	1748793.718	Pulp & Paper Mill
TN	Packaging Corporation of America	50296	017	2.323	0.101	211.93	37141.965	Industrial Boiler
NY	Covanta Niagara	50472	R1B01			0		Industrial Boiler
VA	GP Big Island, LLC	50479	4	101.982	0.444	3366.67	423777.643	Pulp & Paper Mill
TN	Eastman Chemical Company	50481	83-24	183.659	0.454	2703.02	801429.973	Industrial Boiler
TN	Eastman Chemical Company	50481	83-23	218.849	0.544	2672.57	797989.07	Industrial Boiler
TN	Eastman Chemical Company	50481	325-31	253.583	0.247	3085.87	2047072.634	Industrial Boiler
TN	Eastman Chemical Company	50481	253-25	283.4	0.362	2935.54	1542830.567	Industrial Boiler
TN	Eastman Chemical Company	50481	253-28	292.665	0.381	3064.19	1527005.604	Industrial Boiler
TN	Eastman Chemical Company	50481	253-29	299.196	0.345	3350.12	1722058.443	Industrial Boiler
TN	Eastman Chemical Company	50481	253-26	314.077	0.367	3249.04	1692924.784	Industrial Boiler
TN	Eastman Chemical Company	50481	253-27	371.995	0.393	3584.68	1869794.762	Industrial Boiler
TN	Eastman Chemical Company	50481	325-30	416.398	0.297	3672	2815979.9	Industrial Boiler
WV	PPG Industries, Inc - Natrium Plant	50491	001	130.616	0.438	2062.25	594008.975	Industrial Boiler
WV	PPG Industries, Inc - Natrium Plant	50491	002	139.119	0.388	3478.75	726480.775	Industrial Boiler
WV	PPG Industries, Inc - Natrium Plant	50491	003	262.6	0.437	2866.75	1218638.625	Industrial Boiler
AL	US Steel (Fairfield Works)	50730	208	6.938	0.09	3082.87	199826.669	Industrial Boiler
AL	US Steel (Fairfield Works)	50730	206	8.869	0.066	1004.59	268712.01	Industrial Boiler

State	Facility Name	ORIS Code	UNIT ID	Oz Seas NOx Mass (tons)	Oz Seas NOx Rate (lb/MMBTU)	Oz Seas Sum Op Time (hrs)	Oz Seas Heat Input (MMBTU)	Source Category
AL	US Steel (Fairfield Works)	50730	210	19.355	0.037	2702.6	1146545.768	Industrial Boiler
AL	US Steel (Fairfield Works)	50730	209	20.854	0.041	2793.14	1032759.394	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	720B 1	4.929	0.02	3115.08	515951.163	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	720B 3	10.59	0.024	3168.24	869418.98	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	720B 2	12.57	0.025	3672	958305.4	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	701B 3	12.928	0.033	3335.81	771575.859	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	701B 5	13.14	0.029	3670.96	891847.613	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	701B 2	14.813	0.052	2158.95	522555.481	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	701B 6	17.414	0.033	3536.57	981940.564	Industrial Boiler
IN	US Steel Corp - Gary Works	50733	701B 1	28.753	0.064	3380.97	834212.026	Industrial Boiler
SC	Smurfit-Stone Container	50806	16	513.585	0.334	3575.63	3130595.324	Cogeneration
TN	Bowater Newsprint - Calhoun Operation	50956	12	43.569	0.563	749.26	150686.434	Industrial Boiler
TN	Bowater Newsprint - Calhoun Operation	50956	11	91.863	0.709	1347.82	260476.211	Industrial Boiler
OH	Sunoco, Inc. (R&M) Toledo Refinery	50965	B044			0		Petroleum Refinery
IN	BP Whiting Business Unit	52130	1SPS 17	18.314	0.132	1396.48	281069.953	Petroleum Refinery
IN	BP Whiting Business Unit	52130	3SPS 34	25.013	0.07	1590	711499.043	Petroleum Refinery
IN	BP Whiting Business Unit	52130	1SPS 16	37.528	0.145	2240.87	514388.725	Petroleum Refinery
IN	BP Whiting Business Unit	52130	1SPS 15	47.626	0.135	3111.64	708955.367	Petroleum Refinery
IN	BP Whiting Business Unit	52130	3SPS 36	56.227	0.078	3489.13	1442950.776	Petroleum Refinery
IN	BP Whiting Business Unit	52130	3SPS 33	70.965	0.139	2463.39	1030398.555	Petroleum Refinery
IN	BP Whiting Business Unit	52130	3SPS 32	90.34	0.117	3672	1536541.5	Petroleum Refinery
IN	BP Whiting Business Unit	52130	3SPS 31	112.627	0.134	3672	1677662.2	Petroleum Refinery
IN	BP Whiting Business Unit	52130	1SPS 13			RETIRED		Petroleum Refinery
IN	BP Whiting Business Unit	52130	1SPS 14			RETIRED		Petroleum Refinery
SC	International Paper-Eastover Mill	52151	001	224.02	0.351	3627.98	1251783.027	Pulp & Paper Mill
VA	International Paper-Franklin Mill	52152	029	10.084	0.024	1660.14	868502.814	Industrial Turbine
VA	International Paper-Franklin Mill	52152	003	176.469	0.269	2982.07	1317416.57	Industrial Boiler
VA	International Paper-Franklin Mill	52152	017			RETIRED		Industrial Boiler
AL	International Paper-Riverdale Mill	54096	Z007	21.592	0.183	2680.6	214877.137	Pulp & Paper Mill
AL	International Paper-Riverdale Mill	54096	X026			0		Pulp & Paper Mill
OH	WCI Steel	54207	B004	3.885	0.032	1068.6	259782.147	Industrial Boiler
OH	WCI Steel	54207	B001			0		Industrial Boiler
OH	WCI Steel	54207	B002			0		Industrial Boiler
AL	Bowater Newsprint - Coosa Pines	54216	AOW #3	50.105	0.466	1494.25	220187.125	Industrial Boiler
AL	Bowater Newsprint - Coosa Pines	54216	AOW #2	54.89	0.396	1851.25	277257.875	Industrial Boiler

State	Facility Name	ORIS Code	UNIT ID	Oz Seas NOx Mass (tons)	Oz Seas NOx Rate (lb/MMBTU)	Oz Seas Sum Op Time (hrs)	Oz Seas Heat Input (MMBTU)	Source Category
AL	Bowater Newsprint - Coosa Pines	54216	AOW #1	70.448	0.387	2579.75	363931.075	Industrial Boiler
AL	Bowater Newsprint - Coosa Pines	54216	AOW #4	139.335	0.388	3497.75	724809.25	Industrial Boiler
CT	Pfizer	54236	5	21.807	0.155	2122.25	275275.125	Industrial Boiler
CT	Pfizer	54236	8			RETIRED		Industrial Boiler
NC	University of NC Chapel Hill	54276	ES00 1	73.576	0.288	2852	487938.65	Cogeneration
NC	University of NC Chapel Hill	54276	ES00 2	83.774	0.297	3201.75	530373.025	Cogeneration
WV	ArcelorMittal Weirton, Inc.	54344	091	12.003	0.189	482.75	137513.325	Iron & Steel
WV	ArcelorMittal Weirton, Inc.	54344	089	41.898	0.246	1576	332559.15	Iron & Steel
WV	ArcelorMittal Weirton, Inc.	54344	090	52.801	0.254	1680	383182.7	Iron & Steel
CT	Pratt & Whitney, East Hartford	54605	001	7.81	0.022	2590.19	694555.049	Cogeneration
NC	International Paper- Riegelwood	54656	004			RETIRED		Electric Utility
CT	Cascades Boxboard Group-Connecticut LLC	54657	1	72.84	0.222	3289.75	639125.8	Pulp & Paper Mill
IN	Portside Energy	55096	BLR1	0.122	0.033	103.19	7674	Cogeneration
IN	Portside Energy	55096	BLR2	4.981	0.034	3617.3	292995.9	Cogeneration
IN	Portside Energy	55096	CT	25.087	0.037	3555.77	1353711.7	Cogeneration
KY	Calvert City Cogen	55308	A	6.874	0.069	3528.86	199036.3	Industrial Boiler
KY	Calvert City Cogen	55308	B	7.584	0.07	3247.62	217894	Industrial Boiler
SC	Columbia Energy Center (SC)	55386	B-3	0.435	0.025	322.52	35743.387	Electric Utility
SC	Columbia Energy Center (SC)	55386	B-2	5.321	0.028	3526.69	375335.49	Electric Utility
SC	Columbia Energy Center (SC)	55386	B-1	5.553	0.033	3351.76	343349.025	Electric Utility
MI	Otsego Paper, Inc.	55799	0025	11.124	0.067	2331.25	340844.675	Cogeneration
MI	Otsego Paper, Inc.	55799	0024			0		Cogeneration
MA	Kneeland Station	880023	K4	0.87	0.066	375.33	25380.863	Industrial Boiler
MA	Kneeland Station	880023	K3	5.089	0.113	1145.36	90920.275	Industrial Boiler
MA	Kneeland Station	880023	K1	9.906	0.095	2620.77	197080.387	Industrial Boiler
MA	Kneeland Station	880023	K2	12.629	0.106	3258.82	235422.051	Industrial Boiler
NY	Momentive Performance Materials	880024	U280 06	21.774	0.083	2777.25	517130.806	Industrial Boiler
OH	Procter & Gamble Company - Ivorydale	880028	B022	168.949	0.515	3169.11	654160.834	Industrial Boiler
OH	BP Husky Refining LLC	880030	B034	5.556	0.029	3409.13	439319.131	Petroleum Refinery
OH	BP Husky Refining LLC	880030	B035	7.392	0.032	3672	535114.7	Petroleum Refinery
OH	BP Husky Refining LLC	880030	B004			RETIRED		Petroleum Refinery
OH	BP Husky Refining LLC	880030	B020			RETIRED		Petroleum Refinery
MI	The Dow Chemical Company	880031	0402	0.091	0.149	36	1217	Industrial Boiler
MI	The Dow Chemical Company	880031	0401	0.599	0.151	114	7980.6	Industrial Boiler
OH	Emery Oleochemicals, LLC	880033	B027	203.308	0.388	3358.99	1017760.48	Industrial Boiler
KY	Catlettsburg Refining, LLC	880038	061	10.275	0.085	1668.83	240655.841	Petroleum Refinery
OH	Cargill Incorporated	880039	B006	10.48	0.202	954.25	104205.1	Industrial Boiler
OH	Cargill Incorporated	880039	B004	133.749	0.284	3082.25	918152.375	Industrial Boiler
AL	Ascend (Decatur Plant)	880041	Z006	17.872	0.613	426.25	59026.7	Industrial Boiler
AL	Ascend (Decatur Plant)	880041	Z005	85.812	0.575	2046	261613.85	Industrial Boiler
AL	Ascend (Decatur Plant)	880041	X015	242.372	0.49	3562.75	970277.625	Industrial Boiler
AL	Ascend (Decatur Plant)	880041	X053			0		Industrial Boiler

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OH	AK Steel Corporation - Middletown	880042	P011	29.302	0.24	2139.13	223965.775	Iron & Steel
OH	AK Steel Corporation - Middletown	880042	P012	42.88	0.576	2602.48	147671.529	Iron & Steel
OH	AK Steel Corporation - Middletown	880042	P010	60.879	0.464	3543.85	252254.993	Iron & Steel
OH	AK Steel Corporation - Middletown	880042	P009	118.571	0.825	3435.54	302249.362	Iron & Steel
NY	Holcim US Inc	880043	1	559.837	0.909	2377.88	1248894.455	Cement Manufacturing
NY	Lafarge Building Materials, Inc.	880044	41000	1442.556		3454		Cement Manufacturing
MI	University of Michigan	880045	260-06	6.498	0.039	2122.5	331053.775	Industrial Boiler
MI	University of Michigan	880045	260-04	12.811	0.117	1884.5	211558.85	Industrial Boiler
MI	University of Michigan	880045	260-03	13.59	0.185	1077.75	142817.6	Industrial Boiler
NY	Lehigh Northeast Cement Company	880052	01070	640.399		2348		Cement Manufacturing
WV	Bayer Cropscience Institute Plant	880053	070	61.818	0.278	1907.76	446336.99	Industrial Boiler
WV	Bayer Cropscience Institute Plant	880053	080	68.058	0.301	2428.45	454460.737	Industrial Boiler
WV	Bayer Cropscience Institute Plant	880053	090	124.115	0.295	3326.15	841702.08	Industrial Boiler
TN	DOE Oak Ridge Y-12	880055	31	48.536	0.744	1310.57	157905.953	Industrial Boiler
TN	DOE Oak Ridge Y-12	880055	32	77.454	0.552	2610.68	274846.518	Industrial Boiler
TN	DOE Oak Ridge Y-12	880055	34			0		Industrial Boiler
SC	INVISTA S.a.r.l. Camden Plant	880057	04	66.833	0.748	1835.63	178551.019	Industrial Boiler
SC	INVISTA S.a.r.l. Camden Plant	880057	03	144.946	0.744	3598.7	392650.66	Industrial Boiler
KY	Wickliffe Paper Company	880065	01	1.437	0.14	191.12	20830.1	Pulp & Paper Mill
KY	Wickliffe Paper Company	880065	02	2.059	0.12	261.7	33473.7	Pulp & Paper Mill
SC	Springs Global US - Grace Facility	880068	03			RETIRED		Industrial Boiler
SC	Springs Global US - Grace Facility	880068	04			RETIRED		Industrial Boiler
OH	Sunoco Inc (R&M) Haverhill Plant	880070	2001 UF			RETIRED		Industrial Boiler
SC	Marlboro Paper Mill	880074	15	8.009	0.097	543	165072	Pulp & Paper Mill
AL	BP Amoco Chemical Company	880075	AB83 01	0.476	0.028	85	34000	Industrial Boiler
AL	BP Amoco Chemical Company	880075	AB43 02			0		Industrial Boiler
SC	Sonoco Products Company	880078	B04	189.304	0.528	3210.25	722701.475	Pulp & Paper Mill
TN	Tate & Lyle-Loudon	880079	34	128.999	0.314	3636.72	818983.118	Industrial Boiler
TN	Tate & Lyle-Loudon	880079	35	130.807	0.332	3629.89	789163.57	Industrial Boiler
OH	Lima Refinery	880083	B026	17.357	0.087	3190.5	393489.888	Petroleum Refinery
IN	New Energy Corp	880087	U-4000	201.283	0.351	3534.58	1146060.112	Industrial Boiler
SC	BP Amoco Chemical Company CR Plant	880092	A	2.652	0.054	888.25	98197.7	Industrial Boiler
SC	BP Amoco Chemical Company CR Plant	880092	B	14.597	0.067	3672	433965	Industrial Boiler
NY	Ravenswood Steam Plant	880100	BLR0 02	5.794	0.208	323.5	48486.9	Industrial Boiler

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NY	Ravenswood Steam Plant	880100	BLR003	9.006	0.255	355.75	68426.65	Industrial Boiler
NY	Ravenswood Steam Plant	880100	BLR004	13.493	0.191	599.5	117874.55	Industrial Boiler
NY	Ravenswood Steam Plant	880100	BLR001	15.562	0.25	521.25	118980.525	Industrial Boiler
				20,424	0.343	405,971	118,926,324	
				Total Emissions (tons)	Avg Emission Rate (lb/MMBU)	Total Oper Hours	Total HI (MMBTU)	