

US EPA ARCHIVE DOCUMENT

APPENDIX G

Compliance Cost Tables for MACT Compliance Requirement Options that are No Longer Under Consideration

LIST OF TABLES

- G-1 Summary of the Incremental Compliance Costs of the MACT Regulation (April 24th version)
- G-2 Detailed Incremental Compliance Costs of the MACT Regulation (April 24th Version)

TABLE G-1. SUMMARY OF INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION April 24th Version)

Line Item Description	CK-S Annualized Cost	CK-L Annualized Cost	LWAK Annualized Cost	INC-S Annualized Cost	INC-M Annualized Cost	INC-L Annualized Cost
Option 1: Baseline CEM System (CO & HC Only)						
A. CEMS Installation	\$1,108	\$1,108	\$3,325	\$2,218	\$2,218	\$2,218
B. Comprehensive Performance Test	\$78,761	\$113,988	\$62,748	\$39,349	\$43,143	\$50,984
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)	\$4,655	\$4,655	\$4,655	\$4,655	\$4,655	\$4,655
D. Confirmatory Performance Assessment	\$51,495	\$51,495	\$51,495	\$58,953	\$57,589	\$55,103
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)	\$3,025	\$3,025	\$3,025	\$3,025	\$3,025	\$3,025
F. Inspections, Calibrations, and Equipment Maintenance	\$2,009	\$2,009	\$6,033	\$4,024	\$4,024	\$4,024
G. Compliance Cost Savings	(\$63,528)	(\$95,829)	(\$46,350)	(\$31,860)	(\$33,105)	(\$35,846)
TOTAL ANNUALIZED COST - OPTION 1	\$77,526	\$80,452	\$84,932	\$80,364	\$81,548	\$84,163
Option 1a: PM CEM Incremental - Total Annualized Cost (Above Option 1)	\$7,571	\$7,571	\$7,571	\$7,139	\$7,296	\$7,582
Option 1b: Hg CEM Incremental - Total Annualized Cost (Above Option 1)	\$40,412	\$40,412	\$40,412	\$39,526	\$39,675	\$39,947
Option 2: Baseline CEM System with PM and Hg CEMs						
A. CEMS Installation	\$23,718	\$23,718	\$25,935	\$24,828	\$24,828	\$24,828
B. Comprehensive Performance Test	\$82,454	\$117,681	\$66,441	\$42,386	\$46,374	\$54,571
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)	\$4,655	\$4,655	\$4,655	\$4,655	\$4,655	\$4,655
D. Confirmatory Performance Assessment	\$47,343	\$47,343	\$47,343	\$54,139	\$52,886	\$50,603
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)	\$3,025	\$3,025	\$3,025	\$3,025	\$3,025	\$3,025
F. Inspections, Calibrations, and Equipment Maintenance	\$27,841	\$27,841	\$31,866	\$29,857	\$29,857	\$29,857
G. Compliance Cost Savings	(\$63,528)	(\$95,829)	(\$46,350)	(\$31,860)	(\$33,105)	(\$35,846)
TOTAL ANNUALIZED COST - OPTION 2	\$125,509	\$128,435	\$132,914	\$127,029	\$128,520	\$131,693
Option 2c: PIC & Cl2 CEM Incremental Cost - Total Annualized Cost (Above Option 2)	\$47,735	\$47,735	\$45,518	\$46,024	\$46,222	\$46,583
Option 2d: HCl CEM Incremental - Total Annualized Cost (Above Option 2)	\$14,543	\$14,543	\$14,543	\$14,767	\$14,823	\$14,925
Option 3: Full CEM System (CO, PM, HCl, Cl2, PIC, Hg)						
A. CEMS Installation	\$56,525	\$56,525	\$56,525	\$56,525	\$56,525	\$56,525
B. Comprehensive Performance Test	\$78,212	\$113,439	\$62,199	\$38,952	\$42,720	\$50,514
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)	\$4,655	\$4,655	\$4,655	\$4,655	\$4,655	\$4,655
D. Confirmatory Performance Assessment	\$38,644	\$38,644	\$38,644	\$44,054	\$43,035	\$41,177
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)	\$2,723	\$2,723	\$2,723	\$2,723	\$2,723	\$2,723
F. Inspections, Calibrations, and Equipment Maintenance	\$74,294	\$74,294	\$74,294	\$74,294	\$74,294	\$74,294
G. Compliance Cost Savings	(\$67,552)	(\$99,853)	(\$46,350)	(\$33,869)	(\$35,114)	(\$37,855)
TOTAL ANNUALIZED COST - OPTION 3	\$187,501	\$190,427	\$192,690	\$187,334	\$188,837	\$192,034

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

Line Item Description	Fraction of CK-S Sources	CK-S Cost	Fraction of CK-L Sources	CK-L Cost	Fraction of LWAK Sources	LWAK Cost	Fraction of INC-S Sources	INC-S Cost
OPTION 1: BASELINE CEM SYSTEM (HC, CO Only)								
A. CEMS Installation								
CEMS Monitor Costs								
HC CEM	33.3%	\$8,333	33.3%	\$8,333	100.0%	\$25,000	66.7%	\$16,675
Total Cost (A)		\$8,333		\$8,333		\$25,000		\$16,675
Total Annualized Cost (A)	13.3%	\$1,108	13.3%	\$1,108	13.3%	\$3,325	13.3%	\$2,218
B. Comprehensive Performance Test								
Prepare Test Plan, QA/QC Plan, & Negotiations								
Continuous Monitoring System Performance Evaluation								
Operating Parameter Monitor Evaluation								
CEMS Relative Accuracy Test (RATA)								
Baseline CEMS RATA including O2, CO, HC								
Conduct Performance Test								
Performance Test Management								
Metals and POHC Spiking								
Sample/Analysis of all Feeds and Effluents								
Record Key Operating Parameters								
Mobilization/Travel Expense								
Emissions Measurements (2 condition)								
Monitor Source's CEMS								
Manual Stack Measurements (7 runs, each 3 hours)								
Metals (incl. Hg) - Method 29								
Dioxins - Method 23								
PM - Method 5								
HCl/Cl2 - Method 26								
PICs - Method 0030								
Data Analysis and Reporting								
Prepare Compliance Certifications								
Total Cost (B)		\$215,193		\$311,443		\$171,443		\$148,488
Total Annualized Cost (B)	36.6%	\$78,761	36.6%	\$113,988	36.6%	\$62,748	26.5%	\$39,349
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)								
Prepare Test Plan, QA/QC Plan, & Negotiations								
Data Analysis and Reporting								
Total Cost (C)		\$22,500		\$22,500		\$22,500		\$22,500
Total Annualized Cost (C)	13.3%	\$4,655	13.3%	\$4,655	13.3%	\$4,655	13.3%	\$4,655
D. Confirmatory Performance Assessment								
Prepare Test Plan, QA/QC Plan, & Negotiations								
Continuous Monitoring System Performance Evaluation								
CEMS Audit								
Operating Parameter Monitor Evaluation								
Conduct Performance Test								
Record Key Operating Parameters								
Mobilization/Travel Expense								
Emissions Measurements (1 condition)								
Monitor Source's CEMS								
Manual Stack Measurements (3 runs (+1 QA/QC), each 3 hours)								
Total Cost (D)		\$5,000		\$5,000		\$5,000		\$5,000
Total Annualized Cost (D)	100.0%	\$0	100.0%	\$0	100.0%	\$0	100.0%	\$0
Total Annualized Cost (Total)	100.0%	\$2,500	100.0%	\$2,500	100.0%	\$2,500	100.0%	\$2,500
Total Annualized Cost (Total)	100.0%	\$5,000	100.0%	\$5,000	100.0%	\$5,000	100.0%	\$5,000

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

Line Item Description	Fraction of CK-S Sources	CK-S Cost	Fraction of CK-L Sources	CK-L Cost	Fraction of LWAK Sources	LWAK Cost	Fraction of INC-S Sources	INC-S Cost
Metals (incl. Hg) - Method 29	100.0%	\$10,150	100.0%	\$10,150	100.0%	\$10,150	90.0%	\$9,135
Dioxins - Method 23	100.0%	\$9,550	100.0%	\$9,550	100.0%	\$9,550	100.0%	\$9,550
PM - Method 5	100.0%	\$4,550	100.0%	\$4,550	100.0%	\$4,550	100.0%	\$4,550
HCl/Cl2 - Method 26	100.0%	\$4,670	100.0%	\$4,670	100.0%	\$4,670	100.0%	\$4,670
Organics - Method 0030	100.0%	\$7,050	100.0%	\$7,050	100.0%	\$7,050	100.0%	\$7,050
Data Analysis and Reporting	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000
Prepare Compliance Certifications	100.0%	\$5,753	100.0%	\$5,753	100.0%	\$5,753	100.0%	\$5,753
Total Cost (D)		\$81,223		\$81,223		\$81,223		\$80,208
Total Annualized Cost (D)	63.4%	\$51,495	63.4%	\$51,495	63.4%	\$51,495	73.5%	\$58,953
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)								
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000
Data Analysis and Reporting	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000
Total Cost (E)		\$25,000		\$25,000		\$25,000		\$25,000
Total Annualized Cost (E)	12.1%	\$3,025	12.1%	\$3,025	12.1%	\$3,025	12.1%	\$3,025
F. Inspections, Calibrations, and Equipment Maintenance								
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits	33.3%	\$2,009	33.3%	\$2,009	100.0%	\$6,033	66.7%	\$4,024
HC CEM								
Total Cost (F)		\$2,009		\$2,009		\$6,033		\$4,024
Total Annualized Cost (F)	100.0%	\$2,009	100.0%	\$2,009	100.0%	\$6,033	100.0%	\$4,024
G. Compliance Cost Savings								
G-1. Avoided Recertification Trial Burns								
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$35,000	100.0%	\$35,000	100.0%	\$35,000	100.0%	\$35,000
Conduct Compliance Test								
Trial Burn Management	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000
Metals and POHCs Spiking	100.0%	\$106,000	100.0%	\$260,000	100.0%	\$36,000	90.0%	\$2,160
Sample/Analysis of all Feeds and Effluents	100.0%	\$20,000	100.0%	\$20,000	100.0%	\$20,000	100.0%	\$20,000
Record Key Operating Parameters	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000
Mobilization/Travel Expense	100.0%	\$21,000	100.0%	\$21,000	100.0%	\$21,000	100.0%	\$21,000
Emissions Measurements (2 conditions)								
Continuous Emission Monitoring (3, three hour HRA periods per cond, 6 total)	100.0%	\$4,000	100.0%	\$4,000	100.0%	\$4,000	100.0%	\$4,000
Manual Stack Measurements (3 runs (+1 QA/QC) per cond, 8 runs total, each)								
PM - Method 5	100.0%	\$6,850	100.0%	\$6,850	100.0%	\$6,850	100.0%	\$6,850
HCl & Cl2 - Method 26A	100.0%	\$7,090	100.0%	\$7,090	100.0%	\$7,090	100.0%	\$7,090
Metals (incl. Hg) - Method 29	100.0%	\$18,050	100.0%	\$18,050	100.0%	\$18,050	90.0%	\$16,245
Dioxins - Method 23	66.7%	\$11,239	66.7%	\$11,239	0.0%	\$0	25.0%	\$4,213
Organics, SW846 Method 0030	100.0%	\$11,850	100.0%	\$11,850	100.0%	\$11,850	100.0%	\$11,850
Data Analysis and Reporting	100.0%	\$25,000	100.0%	\$25,000	100.0%	\$25,000	100.0%	\$25,000
Prepare Compliance Certifications	100.0%	\$5,753	100.0%	\$5,753	100.0%	\$5,753	100.0%	\$5,753
Total Cost (G-1)		\$296,832		\$450,832		\$215,593		\$184,161
Total Annualized Cost (G-1)	17.3%	\$51,352	17.3%	\$77,994	17.3%	\$37,298	17.3%	\$31,860
G-2. Avoided Interim Status Trial Burns								
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$30,000	100.0%	\$30,000	100.0%	\$30,000	0.0%	\$0
Conduct Compliance Test								
Trial Burn Management	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000	0.0%	\$0
Metals Spiking	100.0%	\$79,500	100.0%	\$195,000	100.0%	\$27,000	0.0%	\$0

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

<i>Line Item Description</i>	<i>Fraction of CK-S Sources</i>	<i>CK-S Cost</i>	<i>Fraction of CK-L Sources</i>	<i>CK-L Cost</i>	<i>Fraction of LWAK Sources</i>	<i>LWAK Cost</i>	<i>Fraction of INC-S Sources</i>	<i>INC-S Cost</i>
Emissions Measurements (1 condition) Manual Stack Measurements (4 runs, each 3 hours) PM - Method 5	100.0%	(\$4,550)	100.0%	(\$4,550)	100.0%	(\$4,550)	100.0%	(\$4,550)
Total Cost (D)		(\$7,300)		(\$7,300)		(\$7,300)		(\$7,300)
Total Annualized Cost (D)	63.4%	(\$4,628)	63.4%	(\$4,628)	63.4%	(\$4,628)	73.5%	(\$5,366)
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)								
Total Annualized Cost (E)	12.1%	\$0	12.1%	\$0	12.1%	\$0	12.1%	\$0
F. Inspections, Calibrations, and Equipment Maintenance								
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits	100.0%	\$6,033	100.0%	\$6,033	100.0%	\$6,033	100.0%	\$6,033
PM In-Situ CEM	100.0%	\$1,633	100.0%	\$1,633	100.0%	\$1,633	100.0%	\$1,633
Ancillary Equipment								
Total Cost (F)		\$7,666		\$7,666		\$7,666		\$7,666
Total Annualized Cost (F)	100.0%	\$7,666	100.0%	\$7,666	100.0%	\$7,666	100.0%	\$7,666
G. Compliance Cost Savings								
Total Annualized Cost (G)	100.0%	\$0	100.0%	\$0	100.0%	\$0	100.0%	\$0
TOTAL ANNUALIZED COST - OPTION 2a		\$7,571		\$7,571		\$7,571		\$7,139
OPTION 2b: Hg CEM INCREMENTAL COST								
A. CEMS Installation								
CEMS Monitor Costs	100.0%	\$130,000	100.0%	\$130,000	100.0%	\$130,000	100.0%	\$130,000
Hg (total) Extractive CEM								
Ancillary CEM Equipment Costs	100.0%	\$7,500	100.0%	\$7,500	100.0%	\$7,500	100.0%	\$7,500
PLC, Data Acquisition, and Reporting Hardware and Software								
Total Cost (A)		\$137,500		\$137,500		\$137,500		\$137,500
Total Annualized Cost (A)	13.3%	\$18,288	13.3%	\$18,288	13.3%	\$18,288	13.3%	\$18,288
B. Comprehensive Performance Test								
Continuous Monitoring System Performance Evaluation	100.0%	\$9,515	100.0%	\$9,515	100.0%	\$9,515	100.0%	\$9,515
CEMS Relative Accuracy Test (RATA)								
Hg by Manual Method 29								
Total Cost (B)		\$9,515		\$9,515		\$9,515		\$9,515
Total Annualized Cost (B)	36.6%	\$3,482	36.6%	\$3,482	36.6%	\$3,482	26.5%	\$2,521
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)								
Total Cost (C)		\$0		\$0		\$0		\$0
Total Annualized Cost (C)	13.3%	\$0	13.3%	\$0	13.3%	\$0	13.3%	\$0
D. Confirmatory Performance Assessment								
Continuous Monitoring System Performance Evaluation	100.0%	\$750	100.0%	\$750	100.0%	\$750	100.0%	\$750
CEMS Accuracy Audit								
Total Cost (D)		\$750		\$750		\$750		\$750
Total Annualized Cost (D)	63.4%	\$476	63.4%	\$476	63.4%	\$476	73.5%	\$551
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)								
Total Annualized Cost (E)	12.1%	\$0	12.1%	\$0	12.1%	\$0	12.1%	\$0
F. Inspections, Calibrations, and Equipment Maintenance								
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits	100.0%	\$6,033	100.0%	\$6,033	100.0%	\$6,033	100.0%	\$6,033
PM In-Situ CEM	100.0%	\$1,633	100.0%	\$1,633	100.0%	\$1,633	100.0%	\$1,633
Ancillary Equipment								
Total Cost (F)		\$7,666		\$7,666		\$7,666		\$7,666
Total Annualized Cost (F)	100.0%	\$7,666	100.0%	\$7,666	100.0%	\$7,666	100.0%	\$7,666

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

Line Item Description	Fraction of CK-S Sources	CK-S Cost	Fraction of CK-L Sources	CK-L Cost	Fraction of LWAK Sources	LWAK Cost	Fraction of INC-S Sources	INC-S Cost
PIC & CI2 CEM	100.0%	\$34,130	100.0%	\$34,130	100.0%	\$34,130	100.0%	\$34,130
HC CEM	33.3%	(\$2,009)	33.3%	(\$2,009)	100.0%	(\$6,033)	66.7%	(\$4,024)
Ancillary Equipment	100.0%	\$1,633	100.0%	\$1,633	100.0%	\$1,633	100.0%	\$1,633
Total Cost (F)	100.0%	\$33,754	100.0%	\$33,754	100.0%	\$29,730	100.0%	\$31,739
Total Annualized Cost (F)	100.0%	\$33,754	100.0%	\$33,754	100.0%	\$29,730	100.0%	\$31,739
G. Compliance Cost Savings								
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits								
HC CEM	66.7%	(\$4,024)	66.7%	(\$4,024)	0.0%	\$0	33.3%	(\$2,009)
Total Cost (F)		(\$4,024)		(\$4,024)		\$0		(\$2,009)
Total Annualized Cost (G)	100.0%	(\$4,024)	100.0%	(\$4,024)	100.0%	\$0	100.0%	(\$2,009)
TOTAL ANNUALIZED COST - OPTION 2c		\$47,735		\$47,735		\$45,518		\$46,024
OPTION 2d: HCl CEM INCREMENTAL COST								
A. CEMS Installation								
CEMS Monitor Costs	100.0%	\$40,000	100.0%	\$40,000	100.0%	\$40,000	100.0%	\$40,000
HCl Extractive CEM								
Ancillary CEM Equipment Costs	100.0%	\$7,500	100.0%	\$7,500	100.0%	\$7,500	100.0%	\$7,500
PLC, Data Acquisition, and Reporting Hardware and Software								
Total Cost (A)	100.0%	\$47,500	100.0%	\$47,500	100.0%	\$47,500	100.0%	\$47,500
Total Annualized Cost (A)	13.3%	\$6,318	13.3%	\$6,318	13.3%	\$6,318	13.3%	\$6,318
B. Comprehensive Performance Test								
Continuous Monitoring System Performance Evaluation								
CEMS Relative Accuracy Test (RATA)								
HCl by Cylinder Gas Audit	100.0%	\$1,500	100.0%	\$1,500	100.0%	\$1,500	100.0%	\$1,500
Conduct Performance Test	100.0%	(\$500)	100.0%	(\$500)	100.0%	(\$500)	100.0%	(\$500)
Emissions Measurements (1 condition)								
Manual Stack Measurements (3 runs (+1 QA/QC), each 3 hours)								
HCl - Method 26	100.0%	(\$3,545)	100.0%	(\$3,545)	100.0%	(\$3,545)	80.0%	(\$2,836)
Total Cost (B)	36.6%	(\$2,545)	36.6%	(\$2,545)	36.6%	(\$2,545)	26.5%	(\$1,836)
Total Annualized Cost (B)	36.6%	(\$931)	36.6%	(\$931)	36.6%	(\$931)	26.5%	(\$487)
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)								
Total Cost (C)	13.3%	\$0	13.3%	\$0	13.3%	\$0	13.3%	\$0
Total Annualized Cost (C)	13.3%	\$0	13.3%	\$0	13.3%	\$0	13.3%	\$0
D. Confirmatory Performance Assessment								
Continuous Monitoring System Performance Evaluation								
CEMS Accuracy Audit	100.0%	\$750	100.0%	\$750	100.0%	\$750	100.0%	\$750
Conduct Performance Test	100.0%	(\$4,000)	100.0%	(\$4,000)	100.0%	(\$4,000)	100.0%	(\$4,000)
Emissions Measurements (1 condition)								
Manual Stack Measurements (3 runs (+1 QA/QC), each 3 hours)								
HCl - Method 26	100.0%	(\$2,335)	100.0%	(\$2,335)	100.0%	(\$2,335)	80.0%	(\$1,868)
Total Cost (D)	63.4%	(\$5,585)	63.4%	(\$5,585)	63.4%	(\$5,585)	73.5%	(\$5,118)
Total Annualized Cost (D)	63.4%	(\$3,541)	63.4%	(\$3,541)	63.4%	(\$3,541)	73.5%	(\$3,762)
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)								
Total Annualized Cost (E)	12.1%	\$0	12.1%	\$0	12.1%	\$0	12.1%	\$0

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

Line Item Description	Fraction of CK-S Sources	CK-S Cost	Fraction of CK-L Sources	CK-L Cost	Fraction of LWAK Sources	LWAK Cost	Fraction of INC-S Sources	INC-S Cost
F. Inspections, Calibrations, and Equipment Maintenance								
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits								
HCl extractive CEM	100.0%	\$11,065	100.0%	\$11,065	100.0%	\$11,065	100.0%	\$11,065
Ancillary Equipment	100.0%	\$1,633	100.0%	\$1,633	100.0%	\$1,633	100.0%	\$1,633
Total Cost (F)		\$12,698		\$12,698		\$12,698		\$12,698
Total Annualized Cost (F)	100.0%	\$12,698	100.0%	\$12,698	100.0%	\$12,698	100.0%	\$12,698
G. Compliance Cost Savings								
Total Annualized Cost (G)	100.0%	\$0	100.0%	\$0	100.0%	\$0	100.0%	\$0
TOTAL ANNUALIZED COST - OPTION 2d		\$14,543		\$14,543		\$14,543		\$14,767
OPTION 3: FULL CEM SYSTEM (CO, HC, PM, HCl, Cl2, PIC, Hg)								
A. CEMS Installation								
CEMS Monitor Costs								
PIC & Cl2 CEM	100.0%	\$200,000	100.0%	\$200,000	100.0%	\$200,000	100.0%	\$200,000
PM In-situ CEM	100.0%	\$25,000	100.0%	\$25,000	100.0%	\$25,000	100.0%	\$25,000
HCl Extractive CEM	100.0%	\$40,000	100.0%	\$40,000	100.0%	\$40,000	100.0%	\$40,000
Hg (total) Extractive CEM	100.0%	\$130,000	100.0%	\$130,000	100.0%	\$130,000	100.0%	\$130,000
Ancillary CEM Equipment Costs								
PLC, Data Acquisition, and Reporting Hardware and Software	100.0%	\$30,000	100.0%	\$30,000	100.0%	\$30,000	100.0%	\$30,000
Total Cost (A)		\$425,000		\$425,000		\$425,000		\$425,000
Total Annualized Cost (A)	13.3%	\$56,525	13.3%	\$56,525	13.3%	\$56,525	13.3%	\$56,525
B. Comprehensive Performance Test								
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$7,500	100.0%	\$7,500	100.0%	\$7,500	100.0%	\$7,500
Continuous Monitoring System Performance Evaluation	100.0%	\$2,500	100.0%	\$2,500	100.0%	\$2,500	100.0%	\$2,500
Operating Parameter Monitor Evaluation								
CEMS Relative Accuracy Test (RATA)	100.0%	\$0	100.0%	\$0	100.0%	\$0	100.0%	\$0
Baseline CEMS RATA including O2, CO, HC	100.0%	\$1,000	100.0%	\$1,000	100.0%	\$1,000	100.0%	\$1,000
Incremental RATA Planning/Reporting	100.0%	\$1,000	100.0%	\$1,000	100.0%	\$1,000	100.0%	\$1,000
Incremental Travel Allowance								
Additional for New CEMS								
PIC & Cl2 CEM by Cylinder Gas Audit	100.0%	\$1,000	100.0%	\$1,000	100.0%	\$1,000	100.0%	\$1,000
HCl CEM by Cylinder Gas Audit	100.0%	\$1,000	100.0%	\$1,000	100.0%	\$1,000	100.0%	\$1,000
Hg(total) CEM by Manual Method 29	100.0%	\$9,015	100.0%	\$9,015	100.0%	\$9,015	100.0%	\$9,015
PM CEM by Manual Method 5	100.0%	\$6,925	100.0%	\$6,925	100.0%	\$6,925	100.0%	\$6,925
Conduct Performance Test								
Performance Test Management	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000
Metals and POHC Spiking	100.0%	\$66,250	100.0%	\$66,250	100.0%	\$66,250	90.0%	\$1,350
Sample/Analysis of all Feeds and Effluents	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000
Record Key Operating Parameters	100.0%	\$7,500	100.0%	\$7,500	100.0%	\$7,500	100.0%	\$7,500
Mobilization/Travel Expense	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000
Emissions Measurements (2 condition)								
Monitor Source's CEMS	100.0%	\$5,000	100.0%	\$5,000	100.0%	\$5,000	100.0%	\$5,000
Manual Stack Measurements (7 runs, each 3 hours)								
Metals (incl. Hg) - Method 29	100.0%	\$18,050	100.0%	\$18,050	100.0%	\$18,050	90.0%	\$16,245
Dioxins - Method 23	100.0%	\$16,850	100.0%	\$16,850	100.0%	\$16,850	100.0%	\$16,850
Organics (DRE), SW846 Method 0030	100.0%	\$11,850	100.0%	\$11,850	100.0%	\$11,850	100.0%	\$11,850

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

Line Item Description	Fraction of CK-S Sources	CK-S Cost	Fraction of CK-L Sources	CK-L Cost	Fraction of LWAK Sources	LWAK Cost	Fraction of INC-S Sources	INC-S Cost
Data Analysis and Reporting	100.0%	\$12,500	100.0%	\$12,500	100.0%	\$12,500	100.0%	\$12,500
Prepare Compliance Certifications	100.0%	\$5,753	100.0%	\$5,753	100.0%	\$5,753	100.0%	\$5,753
Total Cost (B)		\$213,693		\$309,943		\$169,943		\$146,988
Total Annualized Cost (B)	36.6%	\$78,212	36.6%	\$113,439	36.6%	\$62,199	26.5%	\$38,952
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)								
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$22,500	100.0%	\$22,500	100.0%	\$22,500	100.0%	\$22,500
Data Analysis and Reporting	100.0%	\$12,500	100.0%	\$12,500	100.0%	\$12,500	100.0%	\$12,500
Total Cost (C)		\$35,000		\$35,000		\$35,000		\$35,000
Total Annualized Cost (C)	13.3%	\$4,655	13.3%	\$4,655	13.3%	\$4,655	13.3%	\$4,655
D. Confirmatory Performance Assessment								
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$5,000	100.0%	\$5,000	100.0%	\$5,000	100.0%	\$5,000
Continuous Monitoring System Performance Evaluation	100.0%	\$3,000	100.0%	\$3,000	100.0%	\$3,000	100.0%	\$3,000
CEMS Audit	100.0%	\$2,500	100.0%	\$2,500	100.0%	\$2,500	100.0%	\$2,500
Operating Parameter Monitor Evaluation	100.0%	\$2,500	100.0%	\$2,500	100.0%	\$2,500	100.0%	\$2,500
Conduct Performance Test	100.0%	\$2,500	100.0%	\$2,500	100.0%	\$2,500	100.0%	\$2,500
Record Key Operating Parameters	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000
Mobilization/Travel Expense	100.0%	\$5,000	100.0%	\$5,000	100.0%	\$5,000	100.0%	\$5,000
Emissions Measurements (1 condition)	100.0%	\$5,000	100.0%	\$5,000	100.0%	\$5,000	100.0%	\$5,000
Monitor Source's CEMS	100.0%	\$10,150	100.0%	\$10,150	100.0%	\$10,150	100.0%	\$10,150
Manual Stack Measurements (3 runs (+1 QA/QC), each 3 hours)	100.0%	\$9,550	100.0%	\$9,550	100.0%	\$9,550	100.0%	\$9,550
Metals (incl. Hg) - Method 29	100.0%	\$7,500	100.0%	\$7,500	100.0%	\$7,500	100.0%	\$7,500
Dioxins - Method 23	100.0%	\$5,753	100.0%	\$5,753	100.0%	\$5,753	100.0%	\$5,753
Data Analysis and Reporting	100.0%	\$60,953	100.0%	\$60,953	100.0%	\$60,953	100.0%	\$60,953
Prepare Compliance Certifications	100.0%	\$38,644	100.0%	\$38,644	100.0%	\$38,644	100.0%	\$38,644
Total Cost (D)	63.4%	\$60,953	63.4%	\$60,953	63.4%	\$60,953	73.5%	\$59,938
Total Annualized Cost (D)		\$38,644		\$38,644		\$38,644		\$44,054
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)								
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000
Data Analysis and Reporting	100.0%	\$7,500	100.0%	\$7,500	100.0%	\$7,500	100.0%	\$7,500
Total Cost (E)		\$22,500		\$22,500		\$22,500		\$22,500
Total Annualized Cost (E)	12.1%	\$2,723	12.1%	\$2,723	12.1%	\$2,723	12.1%	\$2,723
F. Inspections, Calibrations, and Equipment Maintenance								
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits	100.0%	\$6,033	100.0%	\$6,033	100.0%	\$6,033	100.0%	\$6,033
PM In-Situ CEM	100.0%	\$11,065	100.0%	\$11,065	100.0%	\$11,065	100.0%	\$11,065
HCl extractive CEM	100.0%	\$16,533	100.0%	\$16,533	100.0%	\$16,533	100.0%	\$16,533
Hg (total) CEM	100.0%	\$34,130	100.0%	\$34,130	100.0%	\$34,130	100.0%	\$34,130
PIC & Cl2 CEM	100.0%	\$6,533	100.0%	\$6,533	100.0%	\$6,533	100.0%	\$6,533
Ancillary Equipment	100.0%	\$74,294	100.0%	\$74,294	100.0%	\$74,294	100.0%	\$74,294
Total Cost (F)	100.0%	\$74,294	100.0%	\$74,294	100.0%	\$74,294	100.0%	\$74,294
Total Annualized Cost (F)		\$74,294		\$74,294		\$74,294		\$74,294
G. Compliance Cost Savings								
G-1. Avoided Recertification Trial Burns								
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$35,000	100.0%	\$35,000	100.0%	\$35,000	100.0%	\$35,000
Conduct Compliance Test	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000
Trial Burn Management	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

Line Item Description	Fraction of CK-S		Fraction of CK-L		Fraction of LWAK		Fraction of INC-S	
	Sources	Cost	Sources	Cost	Sources	Cost	Sources	Cost
Metals and POHCs Spiking	100.0%	\$106,000	100.0%	\$260,000	100.0%	\$36,000	90.0%	\$2,160
Sample/Analysis of all Feeds and Effluents	100.0%	\$20,000	100.0%	\$20,000	100.0%	\$20,000	100.0%	\$20,000
Record Key Operating Parameters	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000
Mobilization/Travel Expense	100.0%	\$21,000	100.0%	\$21,000	100.0%	\$21,000	100.0%	\$21,000
Emissions Measurements (2 conditions)								
Continuous Emission Monitoring (3, three hour HRA periods per cond, 6 total runs (+1 QA/QC) per cond, 8 runs total, each run 5 minutes)	100.0%	\$4,000	100.0%	\$4,000	100.0%	\$4,000	100.0%	\$4,000
Manual Stack Measurements (3 runs (+1 QA/QC) per cond, 8 runs total, each run 5 minutes)	100.0%	\$6,850	100.0%	\$6,850	100.0%	\$6,850	100.0%	\$6,850
HCl & Cl2 - Method 26A	100.0%	\$7,090	100.0%	\$7,090	100.0%	\$7,090	100.0%	\$7,090
Metals (incl. Hg) - Method 29	100.0%	\$18,050	100.0%	\$18,050	100.0%	\$18,050	90.0%	\$16,245
Dioxins - Method 23	66.7%	\$11,239	66.7%	\$11,239	0.0%	\$0	25.0%	\$4,213
Organics, SW846 Method 0030	100.0%	\$11,850	100.0%	\$11,850	100.0%	\$11,850	100.0%	\$11,850
Data Analysis and Reporting	100.0%	\$25,000	100.0%	\$25,000	100.0%	\$25,000	100.0%	\$25,000
Prepare Compliance Certifications	100.0%	\$5,753	100.0%	\$5,753	100.0%	\$5,753	100.0%	\$5,753
Total Cost (G-1)		\$296,832		\$450,832		\$215,593		\$184,161
Total Annualized Cost (G-1)	17.3%	(\$51,352)	17.3%	(\$77,994)	17.3%	(\$37,298)	17.3%	(\$31,860)
G-2. Avoided Interim Status Trial Burns								
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$30,000	100.0%	\$30,000	100.0%	\$30,000	0.0%	\$0
Conduct Compliance Test								
Trial Burn Management	100.0%	\$15,000	100.0%	\$15,000	100.0%	\$15,000	0.0%	\$0
Metals Spiking	100.0%	\$79,500	100.0%	\$195,000	100.0%	\$27,000	0.0%	\$0
Sample/Analysis of all Feeds and Effluents	100.0%	\$20,000	100.0%	\$20,000	100.0%	\$20,000	0.0%	\$0
Record Key Operating Parameters	100.0%	\$10,000	100.0%	\$10,000	100.0%	\$10,000	0.0%	\$0
Mobilization/Travel Expense	100.0%	\$21,000	100.0%	\$21,000	100.0%	\$21,000	0.0%	\$0
Emissions Measurements (2 conditions)								
Continuous Emission Monitoring (3, three hour HRA periods per cond, 6 total runs (+1 QA/QC) per cond, 8 runs total, each run 5 minutes)	100.0%	\$4,000	100.0%	\$4,000	100.0%	\$4,000	0.0%	\$0
Manual Stack Measurements (3 runs (+1 QA/QC) per cond, 8 runs total, each run 5 minutes)	100.0%	\$6,850	100.0%	\$6,850	100.0%	\$6,850	0.0%	\$0
HCl & Cl2 - Method 26A	100.0%	\$7,090	100.0%	\$7,090	100.0%	\$7,090	0.0%	\$0
Metals (incl. Hg) - Method 29	100.0%	\$18,050	100.0%	\$18,050	100.0%	\$18,050	0.0%	\$0
Dioxins - Method 23	66.7%	\$11,239	66.7%	\$11,239	0.0%	\$0	0.0%	\$0
Data Analysis and Reporting	100.0%	\$20,000	100.0%	\$20,000	100.0%	\$20,000	0.0%	\$0
Prepare Compliance Certifications	100.0%	\$5,753	100.0%	\$5,753	100.0%	\$5,753	0.0%	\$0
Total Cost (G-2)		\$248,482		\$363,982		\$184,743		\$0
Total Annualized Cost (G-2)	4.9%	(\$12,176)	4.9%	(\$17,835)	4.9%	(\$9,052)	0.0%	\$0
G-3. Avoided Inspections, Calibrations, Equipment Maintenance								
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits	66.7%	\$4,024	66.7%	\$4,024	0.0%	\$0	33.3%	\$2,009
HC CEM								
Total Cost (G-3)		\$4,024		\$4,024		\$0		\$2,009
Total Annualized Cost (G-3)	100.0%	(\$4,024)	100.0%	(\$4,024)	100.0%	\$0	100.0%	(\$2,009)
Total Annualized Cost (G)	100.0%	(\$67,552)	100.0%	(\$99,853)	100.0%	(\$46,350)	100.0%	(\$33,869)
TOTAL ANNUALIZED COST - OPTION 3		\$187,501		\$190,427		\$192,690		\$187,334

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

Line Item Description	Fraction of INC-M Sources	INC-M Cost	Fraction of INC-L Sources	INC-L Cost
OPTION 1: BASELINE CEM SYSTEM (HC, CO Only)				
A. CEMS Installation				
CEMS Monitor Costs				
HC CEM	66.7%	\$16,675	66.7%	\$16,675
Total Cost (A)	13.3%	\$16,675	13.3%	\$16,675
Total Annualized Cost (A)		\$2,218		\$2,218
B. Comprehensive Performance Test				
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$7,500	100.0%	\$7,500
Continuous Monitoring System Performance Evaluation				
Operating Parameter Monitor Evaluation	100.0%	\$2,500	100.0%	\$2,500
CEMS Relative Accuracy Test (RATA)				
Baseline CEMS RATA including O ₂ , CO, HC	100.0%	\$0	100.0%	\$0
Conduct Performance Test				
Performance Test Management	100.0%	\$15,000	100.0%	\$15,000
Metals and POHC Spiking	90.0%	\$5,850	90.0%	\$15,750
Sample/Analysis of all Feeds and Effluents	100.0%	\$12,000	100.0%	\$12,000
Record Key Operating Parameters	100.0%	\$10,000	100.0%	\$10,000
Mobilization/Travel Expense	100.0%	\$18,000	100.0%	\$18,000
Emissions Measurements (2 condition)				
Monitor Source's CEMS	100.0%	\$5,000	100.0%	\$5,000
Manual Stack Measurements (7 runs, each 3 hours)				
Metals (incl. Hg) - Method 29	90.0%	\$16,245	90.0%	\$16,245
Dioxins - Method 23	100.0%	\$16,850	100.0%	\$16,850
PM - Method 5	100.0%	\$6,850	100.0%	\$6,850
HCl/Cl ₂ - Method 26	100.0%	\$7,090	100.0%	\$7,090
PICs - Method 0030	100.0%	\$11,850	100.0%	\$11,850
Data Analysis and Reporting	100.0%	\$12,500	100.0%	\$12,500
Prepare Compliance Certifications	100.0%	\$5,753	100.0%	\$5,753
Total Cost (B)	28.2%	\$152,988	31.3%	\$162,888
Total Annualized Cost (B)		\$43,143		\$50,984
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)				
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$22,500	100.0%	\$22,500
Data Analysis and Reporting	100.0%	\$12,500	100.0%	\$12,500
Total Cost (C)	13.3%	\$35,000	13.3%	\$35,000
Total Annualized Cost (C)		\$4,655		\$4,655
D. Confirmatory Performance Assessment				
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$5,000	100.0%	\$5,000
Continuous Monitoring System Performance Evaluation				
CEMS Audit	100.0%	\$0	100.0%	\$0
Operating Parameter Monitor Evaluation	100.0%	\$2,500	100.0%	\$2,500
Conduct Performance Test				
Record Key Operating Parameters	100.0%	\$5,000	100.0%	\$5,000
Mobilization/Travel Expense	100.0%	\$12,000	100.0%	\$12,000
Emissions Measurements (1 condition)				
Monitor Source's CEMS	100.0%	\$5,000	100.0%	\$5,000
Manual Stack Measurements (3 runs (+1 QA/QC), each 3 hours)				

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

<i>Line Item Description</i>	<i>Fraction of INC-M Sources</i>	<i>INC-M Cost</i>	<i>Fraction of INC-L Sources</i>	<i>INC-L Cost</i>
Metals (incl. Hg) - Method 29	90.0%	\$9,135	90.0%	\$9,135
Dioxins - Method 23	100.0%	\$9,550	100.0%	\$9,550
PM - Method 5	100.0%	\$4,550	100.0%	\$4,550
HCl/Cl2 - Method 26	100.0%	\$4,670	100.0%	\$4,670
Organics - Method 0030	100.0%	\$7,050	100.0%	\$7,050
Data Analysis and Reporting	100.0%	\$10,000	100.0%	\$10,000
Prepare Compliance Certifications	100.0%	\$5,753	100.0%	\$5,753
Total Cost (D)		\$80,208		\$80,208
Total Annualized Cost (D)	71.8%	\$57,589	68.7%	\$55,103
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)				
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$15,000	100.0%	\$15,000
Data Analysis and Reporting	100.0%	\$10,000	100.0%	\$10,000
Total Cost (E)		\$25,000		\$25,000
Total Annualized Cost (E)	12.1%	\$3,025	12.1%	\$3,025
F. Inspections, Calibrations, and Equipment Maintenance				
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits	66.7%	\$4,024	66.7%	\$4,024
HC CEM				
Total Cost (F)		\$4,024		\$4,024
Total Annualized Cost (F)	100.0%	\$4,024	100.0%	\$4,024
G. Compliance Cost Savings				
G-1. Avoided Recertification Trial Burns				
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$35,000	100.0%	\$35,000
Conduct Compliance Test				
Trial Burn Management	100.0%	\$15,000	100.0%	\$15,000
Metals and POHCs Spiking	90.0%	\$9,360	90.0%	\$25,200
Sample/Analysis of all Feeds and Effluents	100.0%	\$20,000	100.0%	\$20,000
Record Key Operating Parameters	100.0%	\$10,000	100.0%	\$10,000
Mobilization/Travel Expense	100.0%	\$21,000	100.0%	\$21,000
Emissions Measurements (2 conditions)				
Continuous Emission Monitoring (3, three hour HRA, periods per cond, 6 tot)	100.0%	\$4,000	100.0%	\$4,000
Manual Stack Measurements (3 runs (+1 QA/QC) per cond, 8 runs total, each				
PM - Method 5	100.0%	\$6,850	100.0%	\$6,850
HCl & Cl2 - Method 26A	100.0%	\$7,090	100.0%	\$7,090
Metals (incl. Hg) - Method 29	90.0%	\$16,245	90.0%	\$16,245
Dioxins - Method 23	25.0%	\$4,213	25.0%	\$4,213
Organics, SW846 Method 0030	100.0%	\$11,850	100.0%	\$11,850
Data Analysis and Reporting	100.0%	\$25,000	100.0%	\$25,000
Prepare Compliance Certifications	100.0%	\$5,753	100.0%	\$5,753
Total Cost (G-1)		\$191,361		\$207,201
Total Annualized Cost (G-1)	17.3%	(\$33,105)	17.3%	(\$35,846)
G-2. Avoided Interim Status Trial Burns				
Prepare Test Plan, QA/QC Plan, & Negotiations	0.0%	\$0	0.0%	\$0
Conduct Compliance Test				
Trial Burn Management	0.0%	\$0	0.0%	\$0
Metals Spiking	0.0%	\$0	0.0%	\$0

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

<i>Line Item Description</i>	<i>Fraction of INC-M Sources</i>	<i>INC-M Cost</i>	<i>Fraction of INC-L Sources</i>	<i>INC-L Cost</i>
Sample/Analysis of all Feeds and Effluents	0.0%	\$0	0.0%	\$0
Record Key Operating Parameters	0.0%	\$0	0.0%	\$0
Mobilization/Travel Expense	0.0%	\$0	0.0%	\$0
Emissions Measurements (2 conditions)				
Continuous Emission Monitoring (3, three hour HRA periods per cond, 6 tot)	0.0%	\$0	0.0%	\$0
Manual Stack Measurements (3 runs (+1 QA/QC) per cond, 8 runs total, each PM - Method 5)				
HCl & Cl2 - Method 26A	0.0%	\$0	0.0%	\$0
Metals (incl. Hg) - Method 29	0.0%	\$0	0.0%	\$0
Dioxins - Method 23	0.0%	\$0	0.0%	\$0
Data Analysis and Reporting	0.0%	\$0	0.0%	\$0
Prepare Compliance Certifications	0.0%	\$0	0.0%	\$0
Total Cost (G-2)	0.0%	\$0	0.0%	\$0
Total Annualized Cost (G-2)	0.0%	\$0	0.0%	\$0
G-3. Avoided Inspections, Calibrations, Equipment Maintenance				
Total Cost (G-3)	100.0%	\$0	100.0%	\$0
Total Annualized Cost (G-3)	100.0%	(\$33,105)	100.0%	(\$35,846)
Total Annualized Cost (G)				
TOTAL ANNUALIZED COST - OPTION 1		\$81,548		\$84,163
OPTION 2a: PM CEM INCREMENTAL COST				
A. CEMS Installation				
CEMS Monitor Costs	100.0%	\$25,000	100.0%	\$25,000
PM In-situ CEM				
Ancillary CEM Equipment Costs	100.0%	\$7,500	100.0%	\$7,500
PLC, Data Acquisition, and Reporting Hardware and Software				
Total Cost (A)	13.3%	\$32,500	13.3%	\$32,500
Total Annualized Cost (A)		\$4,323		\$4,323
B. Comprehensive Performance Test				
Continuous Monitoring System Performance Evaluation				
CEMS Relative Accuracy Test (RATA)	100.0%	\$7,425	100.0%	\$7,425
PM by Manual Method 5	100.0%	\$0	100.0%	\$0
Conduct Performance Test				
Emissions Measurements (1 condition)				
Manual Stack Measurements (3 runs (+1 QA/QC), each 3 hours)				
PM - Method 5	80.0%	(\$5,480)	80.0%	(\$5,480)
Total Cost (B)	28.2%	\$1,945	31.3%	\$1,945
Total Annualized Cost (B)		\$548		\$609
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)				
Total Cost (C)	13.3%	\$0	13.3%	\$0
Total Annualized Cost (C)		\$0		\$0
D. Confirmatory Performance Assessment				
Continuous Monitoring System Performance Evaluation	100.0%	\$750	100.0%	\$750
CEMS Accuracy Audit	100.0%	(\$3,500)	100.0%	(\$3,500)
Conduct Performance Test				

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

<i>Line Item Description</i>	<i>Fraction of INC-M Sources</i>	<i>INC-M Cost</i>	<i>Fraction of INC-L Sources</i>	<i>INC-L Cost</i>
Emissions Measurements (1 condition) Manual Stack Measurements (4 runs, each 3 hours) PM - Method 5	100.0%	(\$4,550)	100.0%	(\$4,550)
Total Cost (D)		(\$7,300)		(\$7,300)
Total Annualized Cost (D)	71.8%	(\$5,241)	68.7%	(\$5,015)
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)				
Total Annualized Cost (E)	12.1%	\$0	12.1%	\$0
F. Inspections, Calibrations, and Equipment Maintenance				
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits	100.0%	\$6,033	100.0%	\$6,033
PM In-Situ CEM	100.0%	\$1,633	100.0%	\$1,633
Ancillary Equipment				
Total Cost (F)		\$7,666		\$7,666
Total Annualized Cost (F)	100.0%	\$7,666	100.0%	\$7,666
G. Compliance Cost Savings				
Total Annualized Cost (G)	100.0%	\$0	100.0%	\$0
TOTAL ANNUALIZED COST - OPTION 2a		\$7,296		\$7,582
OPTION 2b: Hg CEM INCREMENTAL COST				
A. CEMS Installation				
CEMS Monitor Costs	100.0%	\$130,000	100.0%	\$130,000
Hg (total) Extractive CEM				
Ancillary CEM Equipment Costs	100.0%	\$7,500	100.0%	\$7,500
PLC, Data Acquisition, and Reporting Hardware and Software				
Total Cost (A)		\$137,500		\$137,500
Total Annualized Cost (A)	13.3%	\$18,288	13.3%	\$18,288
B. Comprehensive Performance Test				
Continuous Monitoring System Performance Evaluation				
CEMS Relative Accuracy Test (RATA)				
Hg by Manual Method 29	100.0%	\$9,515	100.0%	\$9,515
Total Cost (B)		\$9,515		\$9,515
Total Annualized Cost (B)	28.2%	\$2,683	31.3%	\$2,978
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)				
Total Cost (C)		\$0		\$0
Total Annualized Cost (C)	13.3%	\$0	13.3%	\$0
D. Confirmatory Performance Assessment				
Continuous Monitoring System Performance Evaluation				
CEMS Accuracy Audit	100.0%	\$750	100.0%	\$750
Total Cost (D)		\$750		\$750
Total Annualized Cost (D)	71.8%	\$539	68.7%	\$515
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)				
Total Annualized Cost (E)	12.1%	\$0	12.1%	\$0
F. Inspections, Calibrations, and Equipment Maintenance				
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits				

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

<i>Line Item Description</i>	<i>Fraction of INC-M Sources</i>	<i>INC-M Cost</i>	<i>Fraction of INC-L Sources</i>	<i>INC-L Cost</i>
Hg (total) CEM	100.0%	\$16,533	100.0%	\$16,533
Ancillary Equipment	100.0%	\$1,633	100.0%	\$1,633
Total Cost (F)	100.0%	\$18,166	100.0%	\$18,166
Total Annualized Cost (F)	100.0%	\$18,166	100.0%	\$18,166
G. Compliance Cost Savings				
Total Annualized Cost (G)	100.0%	\$0	100.0%	\$0
TOTAL ANNUALIZED COST - OPTION 2b		\$39,675		\$39,947
OPTION 2c: PIC & CI2 CEM INCREMENTAL COST				
A. CEMS Installation				
CEMS Monitor Costs				
PIC & CI2 CEM	100.0%	\$200,000	100.0%	\$200,000
HC CEM	66.7%	(\$16,675)	66.7%	(\$16,675)
Ancillary CEM Equipment Costs				
PLC, Data Acquisition, and Reporting Hardware and Software				
Total Cost (A)	100.0%	\$7,500	100.0%	\$7,500
Total Annualized Cost (A)	13.3%	\$190,825	13.3%	\$190,825
		\$25,380		\$25,380
B. Comprehensive Performance Test				
Continuous Monitoring System Performance Evaluation				
CEMS Relative Accuracy Test (RATA)				
PIC & CI2 CEM by Cylinder Gas Audit	100.0%	\$2,500	100.0%	\$2,500
Conduct Performance Test	100.0%	\$0	100.0%	\$0
Emissions Measurements (1 condition)				
Manual Stack Measurements (3 runs (+1 QA/QC), each 3 hours)				
CI2 - Method 26	80.0%	(\$3,036)	80.0%	(\$3,036)
Total Cost (B)		(\$536)		(\$536)
Total Annualized Cost (B)	28.2%	(\$151)	31.3%	(\$168)
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)				
Total Cost (C)		\$0		\$0
Total Annualized Cost (C)	13.3%	\$0	13.3%	\$0
D. Confirmatory Performance Assessment				
Continuous Monitoring System Performance Evaluation				
CEMS Accuracy Audit	100.0%	\$750	100.0%	\$750
Conduct Performance Test	100.0%	(\$4,000)	100.0%	(\$4,000)
Emissions Measurements (1 condition)				
Manual Stack Measurements (3 runs (+1 QA/QC), each 3 hours)				
CI2 - Method 26	80.0%	(\$1,868)	80.0%	(\$1,868)
PICs - Method 0030	100.0%	(\$7,050)	100.0%	(\$7,050)
Total Cost (D)		(\$12,168)		(\$12,168)
Total Annualized Cost (D)	71.8%	(\$8,737)	68.7%	(\$8,359)
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)				
Total Annualized Cost (E)	12.1%	\$0	12.1%	\$0
F. Inspections, Calibrations, and Equipment Maintenance				
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits				

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

<i>Line Item Description</i>	<i>Fraction of INC-M Sources</i>	<i>INC-M Cost</i>	<i>Fraction of INC-L Sources</i>	<i>INC-L Cost</i>
PIC & C12 CEM	100.0%	\$34,130	100.0%	\$34,130
HC CEM	66.7%	(\$4,024)	66.7%	(\$4,024)
Ancillary Equipment	100.0%	\$1,633	100.0%	\$1,633
Total Cost (F)		\$31,739		\$31,739
Total Annualized Cost (F)	100.0%	\$31,739	100.0%	\$31,739
G. Compliance Cost Savings				
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits				
HC CEM	33.3%	(\$2,009)	33.3%	(\$2,009)
Total Cost (F)		(\$2,009)		(\$2,009)
Total Annualized Cost (G)	100.0%	(\$2,009)	100.0%	(\$2,009)
TOTAL ANNUALIZED COST - OPTION 2c		\$46,222		\$46,583
OPTION 2d: HCl CEM INCREMENTAL COST				
A. CEMS Installation				
CEMS Monitor Costs				
HCl Extractive CEM	100.0%	\$40,000	100.0%	\$40,000
Ancillary CEM Equipment Costs				
PLC, Data Acquisition, and Reporting Hardware and Software	100.0%	\$7,500	100.0%	\$7,500
Total Cost (A)		\$47,500		\$47,500
Total Annualized Cost (A)	13.3%	\$6,318	13.3%	\$6,318
B. Comprehensive Performance Test				
Continuous Monitoring System Performance Evaluation				
CEMS Relative Accuracy Test (RATA)				
HCl by Cylinder Gas Audit	100.0%	\$1,500	100.0%	\$1,500
Conduct Performance Test	100.0%	(\$500)	100.0%	(\$500)
Emissions Measurements (1 condition)				
Manual Stack Measurements (3 runs (+1 QA/QC), each 3 hours)				
HCl - Method 26	80.0%	(\$2,836)	80.0%	(\$2,836)
Total Cost (B)		(\$1,836)		(\$1,836)
Total Annualized Cost (B)	28.2%	(\$518)	31.3%	(\$575)
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)				
Total Cost (C)		\$0		\$0
Total Annualized Cost (C)	13.3%	\$0	13.3%	\$0
D. Confirmatory Performance Assessment				
Continuous Monitoring System Performance Evaluation				
CEMS Accuracy Audit	100.0%	\$750	100.0%	\$750
Conduct Performance Test	100.0%	(\$4,000)	100.0%	(\$4,000)
Emissions Measurements (1 condition)				
Manual Stack Measurements (3 runs (+1 QA/QC), each 3 hours)				
HCl - Method 26	80.0%	(\$1,868)	80.0%	(\$1,868)
Total Cost (D)		(\$5,118)		(\$5,118)
Total Annualized Cost (D)	71.8%	(\$3,675)	68.7%	(\$3,516)
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)				
Total Annualized Cost (E)	12.1%	\$0	12.1%	\$0

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

<i>Line Item Description</i>	<i>Fraction of INC-M Sources</i>	<i>INC-M Cost</i>	<i>Fraction of INC-L Sources</i>	<i>INC-L Cost</i>
F. Inspections, Calibrations, and Equipment Maintenance				
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits				
HCl extractive CEM	100.0%	\$11,065	100.0%	\$11,065
Ancillary Equipment	100.0%	\$1,633	100.0%	\$1,633
Total Annualized Cost (F)	100.0%	\$12,698	100.0%	\$12,698
Total Annualized Cost (F)	100.0%	\$12,698	100.0%	\$12,698
G. Compliance Cost Savings				
Total Annualized Cost (G)	100.0%	\$0	100.0%	\$0
TOTAL ANNUALIZED COST - OPTION 2d		\$14,823		\$14,925
OPTION 3: FULL CEM SYSTEM (CO, HC, PM, HCl, Cl2, PIC, Hg)				
A. CEMS Installation				
CEMS Monitor Costs				
PIC & Cl2 CEM	100.0%	\$200,000	100.0%	\$200,000
PM In-situ CEM	100.0%	\$25,000	100.0%	\$25,000
HCl Extractive CEM	100.0%	\$40,000	100.0%	\$40,000
Hg (total) Extractive CEM	100.0%	\$130,000	100.0%	\$130,000
Ancillary CEM Equipment Costs				
PLC, Data Acquisition, and Reporting Hardware and Software	100.0%	\$30,000	100.0%	\$30,000
Total Cost (A)	100.0%	\$425,000	100.0%	\$425,000
Total Annualized Cost (A)	13.3%	\$56,525	13.3%	\$56,525
B. Comprehensive Performance Test				
Prepare Test Plan, QA/QC Plan, & Negotiations				
Continuous Monitoring System Performance Evaluation	100.0%	\$7,500	100.0%	\$7,500
Operating Parameter Monitor Evaluation	100.0%	\$2,500	100.0%	\$2,500
CEMS Relative Accuracy Test (RATA)				
Baseline CEMS RATA including O2, CO, HC	100.0%	\$0	100.0%	\$0
Incremental RATA Planning/Reporting	100.0%	\$1,000	100.0%	\$1,000
Incremental Travel Allowance	100.0%	\$1,000	100.0%	\$1,000
Additional for New CEMS				
PIC & Cl2 CEM by Cylinder Gas Audit	100.0%	\$1,000	100.0%	\$1,000
HCl CEM by Cylinder Gas Audit	100.0%	\$1,000	100.0%	\$1,000
Hg(total) CEM by Manual Method 29	100.0%	\$9,015	100.0%	\$9,015
PM CEM by Manual Method 5	100.0%	\$6,925	100.0%	\$6,925
Conduct Performance Test				
Performance Test Management	100.0%	\$15,000	100.0%	\$15,000
Metals and POHC Spiking	90.0%	\$5,850	90.0%	\$15,750
Sample/Analysis of all Feeds and Effluents	100.0%	\$10,000	100.0%	\$10,000
Record Key Operating Parameters	100.0%	\$7,500	100.0%	\$7,500
Mobilization/Travel Expense	100.0%	\$15,000	100.0%	\$15,000
Emissions Measurements (2 condition)				
Monitor Source's CEMS	100.0%	\$5,000	100.0%	\$5,000
Manual Stack Measurements (7 runs, each 3 hours)				
Metals (incl. Hg) - Method 29	90.0%	\$16,245	90.0%	\$16,245
Dioxins - Method 23	100.0%	\$16,850	100.0%	\$16,850
Organics (DRE), SW846 Method 0030	100.0%	\$11,850	100.0%	\$11,850

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

<i>Line Item Description</i>	<i>Fraction of INC-M Sources</i>	<i>INC-M Cost</i>	<i>Fraction of INC-L Sources</i>	<i>INC-L Cost</i>
Data Analysis and Reporting	100.0%	\$12,500	100.0%	\$12,500
Prepare Compliance Certifications	100.0%	\$5,753	100.0%	\$5,753
Total Cost (B)		\$15,488		\$16,388
Total Annualized Cost (B)	28.2%	\$42,720	31.3%	\$50,514
C. Comp Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)				
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$22,500	100.0%	\$22,500
Data Analysis and Reporting	100.0%	\$12,500	100.0%	\$12,500
Total Cost (C)		\$35,000		\$35,000
Total Annualized Cost (C)	13.3%	\$4,655	13.3%	\$4,655
D. Confirmatory Performance Assessment				
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$5,000	100.0%	\$5,000
Continuous Monitoring System Performance Evaluation				
CEMS Audit	100.0%	\$3,000	100.0%	\$3,000
Operating Parameter Monitor Evaluation	100.0%	\$2,500	100.0%	\$2,500
Conduct Performance Test				
Record Key Operating Parameters	100.0%	\$2,500	100.0%	\$2,500
Mobilization/Travel Expense	100.0%	\$10,000	100.0%	\$10,000
Emissions Measurements (1 condition)				
Monitor Source's CEMS	100.0%	\$5,000	100.0%	\$5,000
Manual Stack Measurements (3 runs (+1 QA/QC), each 3 hours)				
Metals (incl. Hg) - Method 29				
Dioxins - Method 23	90.0%	\$9,135	90.0%	\$9,135
Data Analysis and Reporting	100.0%	\$9,550	100.0%	\$9,550
Prepare Compliance Certifications	100.0%	\$7,500	100.0%	\$7,500
Total Cost (D)		\$59,938		\$59,938
Total Annualized Cost (D)	71.8%	\$43,035	68.7%	\$41,177
E. Conf Perf Test (One-time Test Plan, QA/QC Plan, Reporting Development)				
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$15,000	100.0%	\$15,000
Data Analysis and Reporting	100.0%	\$7,500	100.0%	\$7,500
Total Cost (E)		\$22,500		\$22,500
Total Annualized Cost (E)	12.1%	\$2,723	12.1%	\$2,723
F. Inspections, Calibrations, and Equipment Maintenance				
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits				
PM In-Situ CEM	100.0%	\$6,033	100.0%	\$6,033
HCl extractive CEM	100.0%	\$11,065	100.0%	\$11,065
Hg (total) CEM	100.0%	\$16,533	100.0%	\$16,533
PIC & Cl2 CEM	100.0%	\$34,130	100.0%	\$34,130
Ancillary Equipment	100.0%	\$6,533	100.0%	\$6,533
Total Cost (F)		\$74,294		\$74,294
Total Annualized Cost (F)	100.0%	\$74,294	100.0%	\$74,294
G. Compliance Cost Savings				
G-1. Avoided Recertification Trial Burns				
Prepare Test Plan, QA/QC Plan, & Negotiations	100.0%	\$35,000	100.0%	\$35,000
Conduct Compliance Test				
Trial Burn Management	100.0%	\$15,000	100.0%	\$15,000

TABLE G-2. DETAILED INCREMENTAL COMPLIANCE COSTS OF THE MACT REGULATION (April 24th Version)

<i>Line Item Description</i>	<i>Fraction of INC-M Sources</i>	<i>INC-M Cost</i>	<i>Fraction of INC-L Sources</i>	<i>INC-L Cost</i>
Metals and POHCs Spiking	90.0%	\$9,360	90.0%	\$25,200
Sample/Analysis of all Feeds and Effluents	100.0%	\$20,000	100.0%	\$20,000
Record Key Operating Parameters	100.0%	\$10,000	100.0%	\$10,000
Mobilization/Travel Expense	100.0%	\$21,000	100.0%	\$21,000
Emissions Measurements (2 conditions)				
Continuous Emission Monitoring (3, three hour HRA periods per cond, 6 tot)	100.0%	\$4,000	100.0%	\$4,000
Manual Stack Measurements (3 runs (+1 QA/QC) per cond, 8 runs total, each PM - Method 5	100.0%	\$6,850	100.0%	\$6,850
HCl & Cl2 - Method 26A	100.0%	\$7,090	100.0%	\$7,090
Metals (incl. Hg) - Method 29	90.0%	\$16,245	90.0%	\$16,245
Dioxins - Method 23	25.0%	\$4,213	25.0%	\$4,213
Organics, SW846 Method 0030	100.0%	\$11,850	100.0%	\$11,850
Data Analysis and Reporting	100.0%	\$25,000	100.0%	\$25,000
Prepare Compliance Certifications	100.0%	\$5,753	100.0%	\$5,753
Total Cost (G-1)		\$191,361		\$207,201
Total Annualized Cost (G-1)	17.3%	(\$33,105)	17.3%	(\$35,846)
G-2. Avoided Interim Status Trial Burns				
Prepare Test Plan, QA/QC Plan, & Negotiations	0.0%	\$0	0.0%	\$0
Conduct Compliance Test				
Trial Burn Management	0.0%	\$0	0.0%	\$0
Metals Spiking	0.0%	\$0	0.0%	\$0
Sample/Analysis of all Feeds and Effluents	0.0%	\$0	0.0%	\$0
Record Key Operating Parameters	0.0%	\$0	0.0%	\$0
Mobilization/Travel Expense	0.0%	\$0	0.0%	\$0
Emissions Measurements (2 conditions)				
Continuous Emission Monitoring (3, three hour HRA periods per cond, 6 tot)	0.0%	\$0	0.0%	\$0
Manual Stack Measurements (3 runs (+1 QA/QC) per cond, 8 runs total, each PM - Method 5	0.0%	\$0	0.0%	\$0
HCl & Cl2 - Method 26A	0.0%	\$0	0.0%	\$0
Metals (incl. Hg) - Method 29	0.0%	\$0	0.0%	\$0
Dioxins - Method 23	0.0%	\$0	0.0%	\$0
Data Analysis and Reporting	0.0%	\$0	0.0%	\$0
Prepare Compliance Certifications	0.0%	\$0	0.0%	\$0
Total Cost (G-2)		\$0		\$0
Total Annualized Cost (G-2)	0.0%	\$0	0.0%	\$0
G-3. Avoided Inspections, Calibrations, Equipment Maintenance				
CEMS Calibration, Maintenance, and Quarterly Accuracy Audits				
HC CEM	33.3%	\$2,009	33.3%	\$2,009
Total Cost (G-3)		\$2,009		\$2,009
Total Annualized Cost (G-3)	100.0%	(\$2,009)	100.0%	(\$2,009)
Total Annualized Cost (G)	100.0%	(\$35,114)	100.0%	(\$37,855)
TOTAL ANNUALIZED COST - OPTION 3		\$188,837		\$192,034

APPENDIX H

ENGINEERING COSTS FOR MACT NEW SOURCES FOR OPTIONS 1 - 3

TABLE OF CONTENTS

- H.1 Approach
- H.2 New Sources Baseline System
- H.3 New Source Option 1 - Basic Option
- H.4 New Source Option 2 - Basic Option + Common Standards + Stringent LVM
- H.5 New Source Option 3 - Basic Option with Improved PCDD/PCDF and Hg

LIST OF TABLES

- H-1 MACT New Source Costs
- H-2 Differential MACT New Source Costs
- H-3 Cost Estimate Details for New Model Plants for Cement Kilns
- H-4 Cost Estimate Details for New Model Plants for LWA Kilns
- H-5 Cost Estimate Details for New Model Plants for Incinerators

APPENDIX H

ENGINEERING COSTS FOR MACT NEW SOURCES FOR OPTIONS 1 -3

MACT standards are also proposed for new sources. A new source can be a newly constructed HWI or an existing BIF that begins burning hazardous waste. Costs to meet MACT standards for new sources were determined for current "baseline" standards as well as the new sources floor and new sources BTF. This analysis is of three early MACT options that are no longer under consideration. The brief description of the options is given below.

- Option 1 -- Basic Option
- Option 2 -- Basic Option + Common Standards + Stringent LVM
- Option 3 -- Basic Option with Improved PCDD/PCDF and Hg

H.1 Approach

The following procedure is used to calculate costs for new sources:

- Determine the air pollution control system (APCS) that is necessary to simultaneously meet the proposed MACT standard options for all HAPs. Technology decisions are based on a combination of engineering judgement and demonstrated performance of existing sources.
- Determine the APCS that is necessary to meet the current regulatory standards ("baseline" system).
- Determine the cost of the MACT option standards as the difference between the APCS necessary to meet present regulatory standards (baseline) and the system that is required to meet the proposed MACT option standards. The cost models used to cost the APCDs for new sources are the same models that were utilized in the engineering cost analysis for existing sources. A complete description of these cost models is given in Appendix E.

The air pollution control system costs are not intended to be "complete system costs" since the costs of ancillary equipment (e.g., fans, stack) which are required by both the baseline the MACT systems are not included. The costs provided are for "differential" items.

Each piece of control equipment in the system has been costed as a stand-alone device; this may be a conservative estimate since there would most likely be a certain "economy of purchase and installation" when building a complete new facility.

The standards, required APCS and assumptions made in the cost analysis are presented in sections H.2, H.3, H.4 and H.5 for the current baseline and option 1, 2 and 3 respectively. The cost tables for new sources follow these sections. Table H-1 summarizes the annualized costs for the current baseline standard as well as the floor and BTF standards. In Table H-2, the differential cost between the baseline cost and the cost for the floor and BTF options is given. Tables H-3, H-4 and H-5 present a breakdown of the capital, annual operating and total annualized cost for each of the option and baseline components for cement kilns, LWA Kilns and incinerators respectively.

H.2 New Sources Baseline System

The standards, required APCS and assumptions made in assigning the APCS are listed below for the new source current baseline standards.

- Standards:

Current RCRA and BIF standards

- Required APCS:

Incinerator	WQ + VS + WS
Cement Kilns	FF
LWA Kilns	FF

where:

- FF : fabric filter
- WS : wet scrubber for acid gas control
- WQ : water quench cooling tower
- VS: venturi scrubber

- Assumptions:

- 1.) Required APCSs are the most cost effective alternative to meet currently operating facility median emissions levels for HAPs and source categories; these facilities are meeting current regulatory standards.
- 2.) Medium energy VS (50 in. H₂O pressure drop) to meet current standards for incinerators.

H.3 New Source Option 1 - Basic Option

The standards, required APCS and assumptions made in assigning the APCS are listed below for the new source Option 1 standards.

- Standards:

PCDD/PCDF	0.2 TEQ ng/dscm for all
Hg	30 $\mu\text{g}/\text{dscm}$ for all
SVM	40 $\mu\text{g}/\text{dscm}$ for all
LVM	80 $\mu\text{g}/\text{dscm}$ for all
HCl	25 ppmv for all
Cl ₂	1 ppmv for all
PM	0.01 for LWAK and incinerators and 0.03 for CKs
CO/THC	50/5 ppmv for incinerators and LWAK, and NA/20 for CKs

- Required APCS:

Incinerators	WQ + (DI + CI + FF) + WS (for medium and large sized facilities) WQ + FF + PT + RH + CB (for small sized facilities)
Cement Kilns	WQ + FF + (CI + FF) + WS
LWA Kilns	WQ + FF + (DI + CI + FF) + WS

where:

- CI : carbon injection for Hg and PCDD/PCDF control
- CB : carbon bed for Hg and PCDD/PCDF control
- DI : dry sorbent injection for acid gas control
- FF : fabric filter
- RH : reheat (to raise flue gas temperature above saturation level)
- WS : wet scrubber for acid gas control
- WQ : water quench cooling tower

- Assumptions:

- 1.) CI (or CB based on cost effectiveness) is needed for all source categories to control PCDD/PCDF to 0.2 TEQ ng/dscm and Hg to 30 $\mu\text{g}/\text{dscm}$. About 50% of CK and 40% of incinerator PCDD/PCDF condition medians are < 0.2 TEQ ng/dscm.
- 2.) LVM and SVM limits achievable through combination of feed and well operated and designed FF (limits set at floors for existing sources).
- 3.) HCl CK limit of 25 ppmv requires add-on wet scrubbing (over 50% of hazardous waste burning CK condition medians are less than 25 ppmv).
- 4.) For large and medium sized incinerators and LWAKs, dry sorbent injection for acid gas control is used in combination with carbon injection. Carbon injection is not typically used when high acid gas levels are present since acid gases are adsorbed on the carbon, leading to premature saturation and loss of

carbon capture effectiveness. A wet scrubber is used downstream for final acid gas cleanup.

- 5.) For small sized incinerators, carbon beds are more cost effective than carbon injection. Similar to carbon injection, carbon beds are not used when high acid gas levels are present. Thus the carbon bed is positioned downstream of acid gas removing wet scrubber; flue gas reheat is required since the carbon bed can not operate effectively when the flue gas temperature is below the saturation level.

H.4 New Source Option 2 -- Basic Option + Common Standards + Stringent LVM

The standards, required APCS and assumptions made in assigning the APCS are listed below for the new source Option 2 standards.

- Standards:

PCDD/PCDF	0.2 TEQ ng/dscm for all
Hg	30 µg/dscm for all
SVM	40 µg/dscm for all
LVM	30 µg/dscm for all
HCl	25 ppmv for all
Cl ₂	1 ppmv for all
PM	0.01 for LWAK and incinerators and 0.015 for CKs
CO/THC	50/5 ppmv for all

- Required APCS:

Incinerators	WQ + (DI + CI + FF) + WS (for medium and large sized facilities)
	WQ + FF + WS + RH + CB (for small sized facilities)
Cement Kilns	AB + WQ + FF + (CI + FF) + WS
LWA Kilns	WQ + FF + (DI + CI + FF) + WS

- Assumptions:

- 1.) Afterburner required for CKs to achieve 50/5 CO/THC levels.
- 2.) PM limit for CKs achieved by well operated and designed FF.
- 3.) Low LVM common limit of 30 µg/dscm is achievable with well operated and designed FF with high performance fabric such as Nomex or Goretex.

H.5 Option 3 -- Basic Option with Improved PCDD/PCDF and Hg

The standards, required APCS and assumptions made in assigning the APCS are listed below for the new source Option 3 standards.

- Standards:

PCDD/PCDF	0.1 TEQ ng/dscm for all
Hg	5 µg/dscm for all
SVM	40 µg/dscm for all
LVM	80 µg/dscm for all
HCl	25 ppmv for all
Cl ₂	1 ppmv for all
PM	0.01 for LWAK and incinerators and 0.03 for CKs
CO/THC	50/5 ppmv for incinerator and LWAKs, and NA/20 for CKs

- Required APCS:

Incinerators	WQ + FF + WS + RH + CB
Cement Kilns	WQ + FF + CB + WS
LWA Kilns	WQ + FF + WS + RH + CB

- Assumptions:

- 1.) CB required for Hg control to 5 µg/dscm and PCDD/PCDF control to 0.1 TEQ ng/dscm for all source categories.

TABLE H-1

TABLE H-1. MACT NEW SOURCE COSTS				
Category	Option (annualized costs shown)			
	Baseline	1	2	3
Cement Kilns				
Small	\$571 K	\$2,174 K	\$5,770 K	\$2,782 K
Large	\$1,264 K	\$4,581 K	\$13,141 K	\$6,122 K
Light Wt. Agg. Kilns				
Medium	\$228 K	\$1,530 K	\$1,530 K	\$1,591 K
Incinerators				
Small	\$321 K	\$530 K	\$530 K	\$530 K
Medium	\$537 K	\$923 K	\$923 K	\$1,129 K
Large	\$985 K	\$1,626 K	\$1,626 K	\$2,042 K

TABLE H-2. DIFFERENTIAL MACT NEW SOURCE COSTS

Category	Option (differential annualized costs shown)			
		1	2	3
Cement Kilns				
Small		\$1,603 K	\$5,199 K	\$2,211 K
Large		\$3,317 K	\$11,877 K	\$4,858 K
Light Wt. Agg. Kilns				
Medium		\$1,302 K	\$1,302 K	\$1,363 K
Incinerators				
Small		\$209 K	\$209 K	\$209 K
Medium		\$386 K	\$386 K	\$592 K
Large		\$641 K	\$641 K	\$1,057 K

COST ESTIMATE DETAILS FOR NEW MODEL PLANTS FOR CEMENT KILNS

Source Group	Model Plant	Size Category	Description of Model Plant	Cost Model Used	Capital Cost	Annualized O&M Cost	Annualized Total Cost	
CK	Baseline	S	Add FF	4M	\$1,977K	\$348K	\$571K	
		L	Add FF	4M	\$4,683K	\$739K	\$1,264K	
	Option 1	S	Add WQ	2M	\$444K	\$83K	\$141K	
			Add FF	4M	\$1,977K	\$348K	\$571K	
			Add CI	9M	\$409K	\$359K	\$412K	
			Add FF	4M	\$1,977K	\$348K	\$571K	
			Add PT	16M	\$840K	\$342K	\$479K	
			TOTAL		\$5,646K	\$1,480K	\$2,174K	
	Option 1	L	Add WQ	2M	\$760K	\$147K	\$247K	
			Add FF	4M	\$4,683K	\$739K	\$1,264K	
			Add CI	9M	\$510K	\$730K	\$797K	
			Add FF	4M	\$4,683K	\$739K	\$1,264K	
			Add PT	16M	\$1,802K	\$715K	\$1,009K	
			TOTAL		\$12,439K	\$3,069K	\$4,581K	
	Option 2	S	Add AB	17M	\$651K	\$3,511K	\$3,596K	
			Add WQ	2M	\$444K	\$83K	\$141K	
			Add FF	4M	\$1,977K	\$348K	\$571K	
			Add CI	9M	\$409K	\$359K	\$412K	
			Add FF	4M	\$1,977K	\$348K	\$571K	
			Add PT	16M	\$840K	\$342K	\$479K	
		TOTAL		\$6,297K	\$4,991K	\$5,770K		
		Option 2	L	Add AB	17M	\$828K	\$8,451K	\$8,560K
				Add WQ	2M	\$760K	\$147K	\$247K
Add FF				4M	\$4,683K	\$739K	\$1,264K	
Add CI	9M			\$510K	\$730K	\$797K		
Add FF	4M	\$4,683K	\$739K	\$1,264K				
Add PT	16M	\$1,802K	\$715K	\$1,009K				
TOTAL		\$13,267K	\$11,520K	\$13,141K				
Option 3	S	Add WQ	2M	\$444K	\$83K	\$141K		
		Add FF	4M	\$1,977K	\$348K	\$571K		
		Add CB	6M	\$6,873K	\$688K	\$1,591K		
		Add PT	16M	\$840K	\$342K	\$479K		
	TOTAL		\$10,133K	\$1,461K	\$2,782K			
	Option 3	L	Add WQ	2M	\$760K	\$147K	\$247K	
			Add FF	4M	\$4,683K	\$739K	\$1,264K	
			Add CB	6M	\$15,686K	\$1,540K	\$3,603K	
Add PT			16M	\$1,802K	\$715K	\$1,009K		
TOTAL		\$22,932K	\$3,141K	\$6,122K				

TABLE H-4. COST ESTIMATE DETAILS FOR NEW MODEL PLANTS FOR LWA KILNS

Source Group	Model Plant	Size Category	Description of Model Plant	Cost Model Used	Capital Cost	Annualized O&M Cost	Annualized Total Cost
LWAK	Baseline		Add FF	4M	\$610K	\$159K	\$228K
	Option 1		Add WQ	2M	\$269K	\$51K	\$86K
			Add FF	4M	\$610K	\$159K	\$228K
			Add DI	13M	\$624K	\$428K	\$510K
			Add CI	8M	\$208K	\$173K	\$200K
			Add FF	4M	\$610K	\$159K	\$228K
			Add PT	16M	\$302K	\$229K	\$278K
			TOTAL		\$2,624K	\$1,198K	\$1,530K
	Option 2		Add WQ	2M	\$269K	\$51K	\$86K
			Add FF	4M	\$610K	\$159K	\$228K
			Add DI	13M	\$624K	\$428K	\$510K
			Add CI	8M	\$208K	\$173K	\$200K
			Add FF	4M	\$610K	\$159K	\$228K
			Add PT	16M	\$302K	\$229K	\$278K
			TOTAL		\$2,624K	\$1,198K	\$1,530K
	Option 3		Add WQ	2M	\$269K	\$51K	\$86K
			Add FF	4M	\$610K	\$159K	\$228K
			Add ST	12M	\$946K	\$309K	\$463K
			Add RH	18M	\$269K	\$183K	\$218K
Add CB			6M	\$2,477K	\$270K	\$596K	
TOTAL				\$4,571K	\$972K	\$1,591K	

TABLE H-5. COST ESTIMATE DETAILS FOR NEW SOURCE MODEL PLANTS FOR INCINERATORS

Source Group	Model Plant	Size Category	Description of Model Plant	Cost Model Used	Capital Cost	Annualized O&M Cost	Annualized Total Cost
INC	Baseline	S	Add WQ	2M	\$184K	\$39K	\$63K
			Add VS	11M	\$84K	\$146K	\$159K
			Add PT	16M	\$54K	\$90K	\$99K
			TOTAL		\$321K	\$274K	\$321K
		M	Add WQ	2M	\$232K	\$45K	\$76K
			Add VS	11M	\$154K	\$281K	\$306K
			Add PT	16M	\$191K	\$125K	\$156K
			TOTAL		\$576K	\$451K	\$537K
		L	Add WQ	2M	\$306K	\$58K	\$98K
			Add VS	11M	\$308K	\$573K	\$623K
			Add PT	16M	\$415K	\$197K	\$265K
			TOTAL		\$1,029K	\$827K	\$985K
	Option 1	S	Add WQ	2M	\$184K	\$39K	\$63K
			Add FF	4M	\$76K	\$89K	\$97K
			Add PT	16M	\$54K	\$145K	\$154K
			Add RH	18M	\$146K	\$60K	\$79K
		Add CB	6M	\$340K	\$91K	\$136K	
		TOTAL		\$799K	\$424K	\$530K	
		M	Add WQ	2M	\$232K	\$45K	\$76K
			Add DI	13M	\$574K	\$274K	\$349K
			Add CI	8M	\$198K	\$131K	\$157K
			Add FF	4M	\$273K	\$120K	\$151K
		Add PT	16M	\$191K	\$160K	\$191K	
		TOTAL		\$1,466K	\$729K	\$923K	
	L	Add WQ	2M	\$306K	\$58K	\$98K	
		Add DI	13M	\$667K	\$554K	\$641K	
		Add CI	8M	\$217K	\$207K	\$235K	
		Add FF	4M	\$871K	\$195K	\$293K	
	Add PT	16M	\$415K	\$290K	\$358K		
	TOTAL		\$2,476K	\$1,304K	\$1,626K		
	Option 2	S	Add WQ	2M	\$184K	\$39K	\$63K
			Add FF	4M	\$76K	\$89K	\$97K
			Add PT	16M	\$54K	\$145K	\$154K
			Add RH	18M	\$146K	\$60K	\$79K
		Add CB	6M	\$340K	\$91K	\$136K	
		TOTAL		\$799K	\$424K	\$530K	
M		Add WQ	2M	\$232K	\$45K	\$76K	
		Add DI	13M	\$574K	\$274K	\$349K	
		Add CI	8M	\$198K	\$131K	\$157K	
		Add FF	4M	\$273K	\$120K	\$151K	
Add PT		16M	\$191K	\$160K	\$191K		
TOTAL			\$1,466K	\$729K	\$923K		
L	Add WQ	2M	\$306K	\$58K	\$98K		
	Add DI	13M	\$667K	\$554K	\$641K		
	Add CI	8M	\$217K	\$207K	\$235K		
	Add FF	4M	\$871K	\$195K	\$293K		
Add PT	16M	\$415K	\$290K	\$358K			
TOTAL		\$2,476K	\$1,304K	\$1,626K			
Option 3	S	Add WQ	2M	\$184K	\$39K	\$63K	
		Add FF	4M	\$76K	\$89K	\$97K	
		Add PT	16M	\$54K	\$145K	\$154K	
		Add RH	18M	\$146K	\$60K	\$79K	
	Add CB	6M	\$340K	\$91K	\$136K		
	TOTAL		\$799K	\$424K	\$530K		
	M	Add WQ	2M	\$232K	\$45K	\$76K	
		Add FF	4M	\$273K	\$120K	\$151K	
		Add PT	16M	\$191K	\$367K	\$398K	
		Add RH	18M	\$230K	\$122K	\$152K	
	Add CB	6M	\$1,339K	\$177K	\$353K		
	TOTAL		\$2,264K	\$831K	\$1,129K		
L	Add WQ	2M	\$306K	\$58K	\$98K		
	Add FF	4M	\$871K	\$195K	\$293K		
	Add ST	12M	\$1,075K	\$391K	\$566K		
	Add RH	18M	\$299K	\$250K	\$289K		
Add CB	6M	\$3,374K	\$353K	\$796K			
TOTAL		\$5,925K	\$1,246K	\$2,042K			

APPENDIX I

ADDENDUM TO THE MAIN REPORT

The 6 Percent Floor emissions standards have been modified since the first draft of Volume V was written in September of 1995. Section 2 of Volume V was updated in November to include a discussion of the change in the 6 Percent Floor emission standards but the engineering costs presented in Section 2 are for the initial 6 Percent Floor emission standards. A qualitative discussion of the impact on engineering costs due to the change in standards is contained in Section 2.8 of the Volume V main report. In addition, the fabric filter (FF) cost model and the methodology for estimating the engineering cost per HAP to comply with the 6 Percent BTF Proposal have been modified since the November draft of Volume V. This addendum contains a discussion of all of these changes along with updated engineering cost analysis tables and national emission estimates for the Final Recommended 6 Percent Floor.

The discussion provided in this addendum (Appendix I) of the changes to the the fabric filter (FF) cost model and the methodology for estimating the engineering cost per HAP to comply with the 6 Percent BTF Proposal is the only discussion of these subjects included in Volume V. Since the engineering costs are dependent on the FF cost model, the discussion of the cost model is provided prior to the presentation of the revised engineering costs for the 6 Percent Floor and BTF proposal.

I.1 FABRIC FILTER COST MODEL

As described in Section 2.4, a fabric filter is projected for any HWC that requires greater than 75 percent reduction in emissions of PM, SVM or LVM. A FF is also installed for carbon capture (in addition to PM, SVM and LVM control) when activated carbon injection is required for control of Hg and PCDD/PCDF on cement and LWA kilns. Due to this multi-functional use of the FF in the engineering cost analysis, a broad range of FF performance is required.

An OAQPS FF cost model is utilized to determine the cost of FFs in the engineering cost analysis. The OAQPS cost model contains separate algorithms for a reverse air FF and a pulse jet FF. In the previous engineering cost analyses a reverse air FF with fiberglass bags and a gas-

to-cloth ratio of 2 was specified for all cases where a FF was required. For the current engineering cost analysis of the final Recommended 6 Percent Floor, the FF specification has been modified to a pulse jet unit with felted bags and a gas-to-cloth ratio of 6.

The pulse jet FF with a higher gas to cloth ratio is more representative of the type of FF that will be required for HWCs since the vast majority of FFs are specified to be placed in series with an existing PM control device. The algorithm for the pulse jet FF in the OAQPS model was not originally developed for extrapolation to the larger FFs required on cement kilns so a vendor quote was utilized to verify the applicability of the model in this range. The OAQPS algorithm was found to provide a conservative estimate of the cost of FFs large enough for CK utilization.

I.2 ENGINEERING COST ANALYSIS FOR THE FINAL RECOMMENDED 6 PERCENT FLOOR AND 6 PERCENT BTF PROPOSAL

As mentioned above, the 6 Percent Floor emission standards have been revised since the engineering cost analysis reported in Section 2 of the main report was performed. This addendum provides the results and tables from the engineering cost analysis of the Final Recommended 6 Percent Floor and 6 Percent BTF Proposal.

The engineering cost analysis methodology remains as described in Section 2 of the main report. Other changes that affect the results of this cost analysis include the modification of the FF cost model (as described in the previous section) and a change in the Hg emissions for cement kiln site 306. The change to the emissions levels for this cement kiln is based on conversations with a representative of the cement kiln company. The company representative confirmed that average Hg feedrates and emissions are much lower than the Hg feedrate and emissions from the RCRA trial burn.

I.2.1 Emission Standards

The emissions standards and "design" level for the initial and final recommended 6 Percent Floor and the 6 Percent BTF are presented in Table I-2. The standards and "design" levels that have changed are highlight in bold italics. The changes in the "design" level are described in the following sections since the engineering cost analysis is based on this "design" level.

I.2.1.1 Cement Kilns

The 6 Percent Floor emissions standards and "design" levels for cement kilns have

changed for mercury and PCDD/PCDF since the previous engineering cost analysis was performed. The design level for mercury has been reduced from 110 µg/dscm to 81 µg/dscm and the TEQ design level has changed from 4.7 ng/dscm to 0.2 ng/dscm or a PM control device temperature of less than 418°F. There is no change in the 6 Percent BTF for cement kilns.

I.2.1.2 LWAKs

The proposed mercury, PCDD/PCDF and PM standards for LWAKs have been changed from the levels utilized in the previous cost analysis. The TEQ design level for LWAKs has changed from 4.7 ng/dscm to 0.2 ng/dscm or a PM control device temperature of less than 400°F. The mercury design level for LWAKs has been reduced from 910 µg/dscm to 36 µg/dscm and the PM design level has increased from 0.015 gr/dscf to 0.024 gr/dscf.

Two changes have been made to the 6 Percent BTF Proposal. For PM, the BTF "design" level remains at 0.015 gr/dscf but it is now associated with a proposed BTF Standard since the 6 Percent Floor Standard has been increased from 0.03 gr/dscf ("design" level of 0.015 gr/dscf) to 0.05 gr/dscf ("design" level of 0.024 gr/dscf). Since the "design" level for the BTF Proposal remains the same as for the previous engineering cost analysis the model plant assignments for the 6 Percent BTF Proposal are not affected.

The proposed Hg BTF "design" level of 30 µg/dscm was eliminated with the reduction of the floor "design" level to 36 µg/dscm. This change impacts the model plant assignment of one facility.

I.2.1.3 Incinerators

The proposed standards for mercury, PCDD/PCDF and PM have been changed for incinerators. The design level for TEQ has changed from 20 ng/dscm to 0.2 ng/dscm or a PM control device temperature of less than 400°F. The mercury design level for incinerators has increased from 53 µg/dscm to 57 µg/dscm and the PM "design" level has increased from 0.015 gr/dscf to 0.040 gr/dscf.

As with the LWAKs, the only change in the 6 percent BTF Proposal is that the BTF limit of 0.03 gr/dscf ("design" level of 0.015 gr/dscf) is now a proposed BTF Standard since the 6 Percent Floor Standard has been increased from 0.03 gr/dscf ("design" level of 0.015 gr/dscf) to 0.08 gr/dscf ("design" level of 0.04 gr/dscf).

I.2.2 Required Emissions Reduction and Model Plant Assignments to Meet the Specified Emissions Levels

Required emissions reductions to meet the "design" level for each HAP are shown in Tables I-3 and I-4 for the final recommended 6 Percent Floor and 6 Percent BTF respectively. The model plant group that each facility is assigned to based on the existing air pollution control system and the emissions reduction required for each HAP are contained in Tables I-5 and I-6 for the final recommended 6 Percent Floor and 6 Percent BTF respectively. These tables include the existing APCD configuration, the emissions reduction required to meet the Floor or BTF for each HAP, the required add-on control equipment, and the model group number.

I.2.3 Characterization of Model Plant Groups

Tables I-7 and I-8 provide a characterization of the model plant groups assigned in each source category for the Final Recommended 6 Percent Floor and 6 Percent BTF Proposal, respectively. These tables are sorted by the source category and model plant number. The site I.D., facility name, size category, existing APCD configuration, actual and assigned flue gas flowrate, equivalent HCl concentration and reported ratio are all listed. The reported ratio is the number of total units at a site divided by the number of units for which measured emissions and operational data were provided. In cases where there are more than one unit at a site but information is only provided for one unit, the single unit for which emissions measurements were performed is considered to be representative of the units for which no emissions measurements were performed.

I.2.4 Determination of Model Plant Costs

The breakdown of estimated costs for each model plant group is given in Tables I-9 and I-10 for the final recommended 6 Percent Floor and 6 Percent BTF, respectively. These tables include the source category, model plant number, size category, required add-on control equipment, number of sources and the capital, annualized O & M, and annualized total costs for each applicable model plant group. The total number of sources in a model plant group is determined by summing the reported ratios for all of the sites in a given source category that are in the same size categories and model plant groups. With this methodology the units for which emissions measurements were not performed are assigned to the same model plant/ size category group as the unit from the same site for which emission measurements were performed.

I.3 NATIONAL ENGINEERING COST PER HAP FOR THE FINAL RECOMMENDED 6 PERCENT FLOOR AND 6 PERCENT BTF PROPOSAL

The national engineering cost per HAP is a breakdown by HAP of the total engineering cost for a particular regulatory option. Table I-13 contains the national engineering cost per HAP for the Final Recommended 6 Percent Floor and 6 Percent BTF Proposal. The procedure for calculating the total engineering cost per HAP for the 6 Percent Floor is the same as described in Section 3-4 of the main report. The fraction of the engineering cost of each device required for the 6 Percent Floor that is attributed to each of the HAPs that is controlled by a HAP is shown in Table I-11.

The methodology for calculation of the incremental increase in the engineering cost to comply with the 6 Percent BTF has been modified to provide more representative estimates of the actual incremental engineering costs to go from the floor to the BTF. With the revised methodology the engineering cost per HAP to comply with the BTF standards is calculated from the floor and all HAPs are considered compositely. Composite consideration means that one integrated control system is specified to control all HAPs simultaneously. The additional equipment required beyond that required to comply with the 6 percent Floor standards is apportioned to the HAPs that the specific equipment controls. It accounts for the actual cost sharing that would occur in selection and installation of control devices for different HAPs. The procedure for calculation of the cost per HAP to go beyond-the-floor is outlined below:

- Specify the required add-on control devices required to meet the Final Recommended 6 Percent Floor for all HAPs.
- Assign additional APCDs required to meet the BTF standard for all of the HAPs under consideration compositely.
- Sum the reductions required (from the baseline to the BTF "design" level) to meet the emission standard) for all of the HAPs controlled by each additional control device.
- Calculate the fraction of the cost of the control device assigned to each individual HAP by dividing the individual HAP reduction required by the sum of all reductions required.
- Determine the cost assigned to each individual HAP by multiplying the total annual cost of the control device by the fraction of the cost assigned to each individual HAP.

A breakdown of the incremental engineering cost for the 6 Percent BTF assigned to each HAP for each facility is provided in Table I-12. This table includes the existing air pollution control

system, the total additional control equipment required for the BTF and the equipment required in addition to that required for the 6 Percent Floor.

I.4 NATIONAL EMISSIONS ESTIMATE FOR THE FINAL RECOMMENDED 6 PERCENT FLOOR AND 6 PERCENT BTF PROPOSAL

The estimates of national emissions changed for those HAPs for which the standards changed. Two types of estimates of national emissions were calculated. The "baseline emission estimate is the total current HAP emissions (in lb/year) from all facilities nationwide based on measured emissions for facilities in the OSW database. The second set of estimates is of the HAP emissions from all facilities if all facilities complied with the emission limits set for the Final Recommended 6 Percent Floor or 6 Percent BTF Proposal respectively. The baseline emissions estimate and emissions estimate for the final recommended 6 Percent Floor and BTF proposal are presented in Table I-14. A detailed description of the national emissions estimation methodology is contained in Section 3-1 of the main report.

Comparison of these emissions estimates provides the incremental benefits (in pounds removed per year) of going from the existing baseline to the floor, going from the existing baseline to the beyond-the-floor proposal, and going from the floor to the beyond-the-floor proposal.

I.5 SENSITIVITY ANALYSIS

Section 7 of the main report contains a sensitivity analysis performed to determine which assumptions made in the development of the cost models have the greatest impact on overall engineering costs. This analysis is based on the engineering costs for the initial 6 Percent Floor and 6 Percent BTF. This analysis remains valid for the Final Recommended 6 Percent Floor and 6 Percent BTF Proposal. Although the absolute costs have changed the costs models discussed in Section 7 remain the most significant cost models with respect to overall engineering costs. The FF cost model is the only cost model that has been modified since the sensitivity analysis was performed. The changes to the FF cost model are discussed above in Section I.1.

TABLE I-1. REVISED COST MODEL 4M: INSTALLATION OF A FABRIC FILTER

	Source Category:		CK		CK		LWAK		Incinerator		Incinerator		Incinerator	
	A	B	S	L	M	L	M	S	M	S	M	L	M	L
Annual Costs														
Total Annual Costs	A1		\$400,678	\$845,875	\$165,162	\$94,019	\$129,064	\$203,843						
Annual Operating Cost	A2		\$300,700	\$616,229	\$140,475	\$87,818	\$113,670	\$168,902						
Annualized Capital Cost	A3		\$99,978	\$229,647	\$24,688	\$6,202	\$15,394	\$34,941						
Capital Investment														
Total Capital Investment (TCI) (=DC+TIC)	B1		\$934,065	\$2,159,592	\$232,562	\$54,955	\$143,273	\$331,070						
Model Plant Input Parameters														
Flue Gas Flow Rate (acfm)	C1		150,000	370,000	40,500	3,900	22,100	60,800						
Flue gas flow rate (dscfm)	C2		73,700	179,000	24,600	2,910	12,700	34,300						
Operational time (hr/yr)	C5		8,000	8,000	8,000	8,000	8,000	8,000						
Control Option Design Input Parameters														
Increased Pressure Drop (in. H2O)	D2		10.0	10.0	10.0	10.0	10.0	10.0						
FF Bag Material Cost (\$/sq. ft.)	D8		\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50						
FF Gas-to-Cloth Ratio (aft/min)	D9		6.0	6.0	6.0	6.0	6.0	6.0						
FF Bag Replacement Labor Rate (\$/sq.ft.)	D10		\$0.16	\$0.16	\$0.16	\$0.16	\$0.16	\$0.16						
Economic Factors														
Projected FF Equipment Life (years)	E1		20	20	20	20	20	20						
Projected FF Bag Life (years)	E2		2	2	2	2	2	2						
Interest Rate (%)	E3		10%	10%	10%	10%	10%	10%						
Equipment Capital Recovery Factor (CRFe)	E4		0.1175	0.1175	0.1175	0.1175	0.1175	0.1175						
Retrofit Factor (RF)	E5		1.25	1.25	1.25	1.25	1.25	1.25						
Operator Labor (\$/hr)	E6		\$14.00	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00						
Maintenance Labor (\$/hr)	E7		\$18.00	\$18.00	\$18.00	\$18.00	\$18.00	\$18.00						
Electricity Cost (\$/kwh)	E8		\$0.048	\$0.048	\$0.048	\$0.048	\$0.048	\$0.048						

TABLE I-1. REVISED COST MODEL 4M: INSTALLATION OF A FABRIC FILTER

	Source Category:	CK		CK		LWAK		Incinerator		Incinerator		Incinerator	
		S	L	S	L	M	L	S	M	S	M	L	
Fabric Filter (baghouse and bags)	I5	\$288,183	\$666,290	\$71,751	\$16,955	\$44,203	\$102,144						
Total Equipment	I23	\$288,183	\$666,290	\$71,751	\$16,955	\$44,203	\$102,144						
Instrumentation (=0.1*equipment)	I24	\$28,818	\$66,629	\$7,175	\$1,695	\$4,420	\$10,214						
Sales Taxes (=0.03*equipment)	I25	\$8,645	\$19,989	\$2,153	\$509	\$1,326	\$3,064						
Freight (=0.05*equipment)	I26	\$14,409	\$33,314	\$3,588	\$848	\$2,210	\$5,107						
Purchased Equipment with Tax and Freight	I27	\$340,056	\$786,222	\$84,666	\$20,007	\$52,160	\$120,530						
Purchased Equipment with Escalation	I28	\$397,474	\$918,975	\$98,962	\$23,385	\$60,967	\$140,881						
Total Purchased Equipment Cost	I30	\$397,474	\$918,975	\$98,962	\$23,385	\$60,967	\$140,881						
Direct Installation Costs													
Foundations and supports (=0.04*PEC)	I31	\$15,899	\$36,759	\$3,958	\$935	\$2,439	\$5,635						
Handling and erection (=0.5*PEC)	I32	\$198,737	\$459,488	\$49,481	\$11,692	\$30,484	\$70,441						
Electrical (=0.08*PEC)	I33	\$31,798	\$73,518	\$7,917	\$1,871	\$4,877	\$11,270						
Piping (=0.01*PEC)	I34	\$3,975	\$9,190	\$990	\$234	\$610	\$1,409						
Insulation for ductwork (=0.07*PEC)	I35	\$27,823	\$64,328	\$6,927	\$1,637	\$4,268	\$9,862						
Painting (=0.02*PEC)	I36	\$7,949	\$18,380	\$1,979	\$468	\$1,219	\$2,818						
Total Installation Costs	I47	\$286,182	\$661,662	\$71,253	\$16,837	\$43,896	\$101,434						
Total Installation Costs with Retrofit Factor	I48	\$357,727	\$827,078	\$89,066	\$21,046	\$54,870	\$126,793						
Total Direct Installation Cost	I49	\$357,727	\$827,078	\$89,066	\$21,046	\$54,870	\$126,793						
Total Direct Cost (DC) (=PEC+DIC*RF)	I50	\$755,201	\$1,746,053	\$188,029	\$44,431	\$115,838	\$267,674						
Indirect Installation Costs													
Engineering (=0.1*PEC)	J1	\$39,747	\$91,898	\$9,896	\$2,338	\$6,097	\$14,088						
Construction and Field Expense (=0.2*PEC)	J2	\$79,495	\$183,795	\$19,792	\$4,677	\$12,193	\$28,176						
Contractor Fees (=0.1*PEC)	J3	\$39,747	\$91,898	\$9,896	\$2,338	\$6,097	\$14,088						
Start-up (=0.01*PEC)	J4	\$3,975	\$9,190	\$990	\$234	\$610	\$1,409						
Performance Test (=0.01*PEC)	J5	\$3,975	\$9,190	\$990	\$234	\$610	\$1,409						
Contingencies (=0.03*PEC)	J7	\$11,924	\$27,569	\$2,969	\$702	\$1,829	\$4,226						
Total Indirect Costs (TIC)	J8	\$178,863	\$413,539	\$44,533	\$10,523	\$27,435	\$63,396						

TABLE I-1. REVISED COST MODEL 4M: INSTALLATION OF A FABRIC FILTER

	Source Category:	CK		LWAK		Incinerator		Incinerator		Incinerator	
		S	L	M	L	S	M	L	S	M	L
Direct Annual Costs											
Operating Labor											
Operator	K1	\$28,000	\$28,000	\$28,000	\$28,000	\$28,000	\$28,000	\$28,000	\$28,000	\$28,000	\$28,000
Supervisor	K2	\$4,200	\$4,200	\$4,200	\$4,200	\$4,200	\$4,200	\$4,200	\$4,200	\$4,200	\$4,200
Maintenance											
Labor	K3	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000
Material (.01*PEC)	K4	\$3,975	\$9,190	\$990	\$234			\$610		\$1,409	
Utilities											
Electricity	K5	\$104,256	\$257,165	\$28,149	\$2,711			\$15,360		\$42,258	
Replacement Parts, bags	K8	\$47,765	\$117,820	\$12,896	\$1,242			\$7,037		\$19,361	
Solid Waste Disposal	K13	\$24,637	\$59,837	\$8,223	\$973			\$4,245		\$11,466	
Total Direct Annual Cost (TDAC)	K15	\$230,832	\$494,211	\$100,459	\$55,359			\$77,453		\$124,694	
Indirect Annual Costs											
Overhead (=0.6*TDAC)	L1	\$32,505	\$35,634	\$30,714	\$30,260			\$30,486		\$30,965	
Administrative charges (=0.02*TCI)	L2	\$18,681	\$43,192	\$4,651	\$1,099			\$2,865		\$6,621	
Property taxes (=0.01*TCI)	L3	\$9,341	\$21,596	\$2,326	\$550			\$1,433		\$3,311	
Insurance (=0.01*TCI)	L4	\$9,341	\$21,596	\$2,326	\$550			\$1,433		\$3,311	
Capital recovery of baghouse, excluding bags (CR)	L5	\$99,978	\$229,647	\$24,688	\$6,202			\$15,394		\$34,941	
Total Indirect Costs (TIAC)	L6	\$169,845	\$351,664	\$64,704	\$38,660			\$51,611		\$79,149	

TABLE I-2. EMISSION LIMITS FOR THE INITIAL AND FINAL RECOMMENDED 6 PERCENT FLOOR AND THE 6 PERCENT BTF PROPOSAL

System Type	Substance	Initial 6 Percent Floor		Final Recommended 6 Percent Floor		Final 6% BTF Proposal		Limit Units
		Standard	"Design" Level	Standard	"Design" Level	Standard	"Design" Level	
Cement Kiln	Particulate	0.03	0.015	0.03	0.015	0.03	0.015	gr/dscf @ 7%O2
Cement Kiln	LVM	130	67	130	67	130	67	ug/dscm @ 7%O2
Cement Kiln	SVM	57	34	57	34	57	34	ug/dscm @ 7%O2
Cement Kiln	Mercury	140	110	130	81	50	30	ug/dscm @ 7%O2
Cement Kiln	TEQ	8	4.7	0.2 or 418 °F	N/A	0.2	N/A	ng/dscm @ 7%O2
Cement Kiln	Total Cl	630	270	630	270	630	270	ppmv @ 7%O2
Cement Kiln	CO	No Floor	No Floor	No Floor	No Floor	No Floor	No Floor	ppmv @ 7%O2
Cement Kiln	CO(MHRA)	No Floor	No Floor	No Floor	No Floor	No Floor	No Floor	ppmv @ 7%O2
Cement Kiln	THC	20	10	20	10	20	10	ppmv @ 7%O2
Cement Kiln	THC(MHRA)	20	10	20	10	20	10	ppmv @ 7%O2
Incinerator	Particulate	0.03	0.015	0.08	0.04	0.03	0.015	gr/dscf @ 7%O2
Incinerator	LVM	210	110	210	110	210	110	ug/dscm @ 7%O2
Incinerator	SVM	270	120	270	120	270	120	ug/dscm @ 7%O2
Incinerator	Mercury	100	53	130	57	50	30	ug/dscm @ 7%O2
Incinerator	TEQ	40	20	0.2 or 400 °F	N/A	0.2	N/A	ng/dscm @ 7%O2
Incinerator	Total Cl	280	96	280	96	280	96	ppmv @ 7%O2
Incinerator	CO	100	50	100	50	100	50	ppmv @ 7%O2
Incinerator	CO(MHRA)	100	50	100	50	100	50	ppmv @ 7%O2
Incinerator	THC	12	6.1	12	6.1	12	6.1	ppmv @ 7%O2
Incinerator	THC(MHRA)	12	6.1	12	6.1	12	6.1	ppmv @ 7%O2
LWA Kiln	Particulate	0.03	0.015	0.05	0.024	0.03	0.015	gr/dscf @ 7%O2
LWA Kiln	LVM	340	230	340	230	340	230	ug/dscm @ 7%O2
LWA Kiln	SVM	12	7.4	12	7.4	12	7.4	ug/dscm @ 7%O2
LWA Kiln	Mercury	1800	910	72	36	72	36	ug/dscm @ 7%O2
LWA Kiln	TEQ	8	4.7	0.2 or 400 °F	N/A	0.2	N/A	ng/dscm @ 7%O2
LWA Kiln	Total Cl	2100	1400	2100	1400	450	210	ppmv @ 7%O2
LWA Kiln	CO	100	50	100	50	100	50	ppmv @ 7%O2
LWA Kiln	CO(MHRA)	100	50	100	50	100	50	ppmv @ 7%O2
LWA Kiln	THC	14	6.4	14	6.4	14	6.4	ppmv @ 7%O2
LWA Kiln	THC(MHRA)	14	6.4	14	6.4	14	6.4	ppmv @ 7%O2

TABLE I-3. REQUIRED REDUCTION TO MEET THE FINAL RECOMMENDED 6% FLOOR

EER	Site ID No.	Type	Hg Req. % Reduct.	Hg Adj. Reduct.	PM Req. % Reduct.	PM Adj. Reduct.	SVM Req. % Reduct.	SVM Adj. Reduct.	LVM Req. % Reduct.	LVM Adj. Reduct.	HCl/C12 Req. % Reduct.	HCl/C12 Adj. Reduct.	HC Req. % Reduct.	HC Adj. Reduct.	CO Req. % Reduct.	CO Adj. Reduct.	HC-Byp Req. % Reduct.	HC-Byp Adj. Reduct.	CO-Byp Req. % Reduct.	CO-Byp Adj. Reduct.	TEQ Req. % Reduct.	TEQ Adj. Reduct.	APCD Temp (°F)	TEQ
		Floor Levels	81		0.015		34		67		270		10		na		5.1		50		0.2		or 418°F	
200	CK		-631	0	-11	0	45	82	82	-1384	0	0	0	0	na	na	na	na	na	na	nr	550	50	
201	CK		-1389	0	58	58	96	87	87	-1242	0	0	0	0	na	na	na	na	na	na	nr	550	75	
202	CK		-301	0	nr	0	69	0	0	-1546	0	0	0	0	na	na	na	na	na	na	nr	440	75	
203	CK		-1242	0	-8	0	94	0	0	-130	0	0	0	0	na	na	na	na	na	na	96	500	96	
204	CK		-329	0	47	47	93	0	0	-312181	0	0	0	0	na	na	na	na	na	na	74	600	74	
205	CK		-172	0	70	70	97	0	0	-1529	0	0	0	0	na	na	na	na	na	na	-81	500	0	
206	CK		-366	0	34	34	88	0	0	-232	0	0	0	0	na	na	na	na	na	na	83	500	83	
207	CK		-377	0	35	35	91	0	0	-5411	0	0	0	0	na	na	na	na	na	na	-1146	400	0	
208	CK		-314	0	-2	0	63	0	0	-5872	0	0	0	0	na	na	na	na	na	na	-4481	400	0	
228	CK		nr	0	nr	50	75	nr	nr	nr	0	0	0	0	na	na	na	na	na	na	18	500	18	
300	CK		nr	0	79	79	99	35	35	-699	0	0	0	0	na	na	na	na	na	na	98	600	98	
301	CK		31	31	57	57	0	0	0	-45257	0	0	0	0	na	na	na	na	na	na	57	400	50	
302	CK		nr	0	55	55	98	0	0	-2539	0	0	0	0	na	na	na	na	na	na	nr	420	75	
303	CK		-71	0	36	36	-50	0	0	-1319	0	0	0	0	na	na	na	na	na	na	nr	250	0	
304	CK		-93	0	74	74	94	0	0	-68338	0	0	0	0	na	na	na	na	na	na	89	460	89	
305	CK		-659	0	79	79	97	0	0	-9347	0	0	0	0	na	na	na	na	na	na	nr	460	100	
306	CK		87	87	8	8	-105	0	0	-404	0	0	0	0	na	na	na	na	na	na	-275	550	0	
308	CK		nr	0	27	27	64	0	0	-4721	0	0	0	0	na	na	na	na	na	na	nr	440	75	
309	CK		-90	0	39	39	94	0	0	-482	0	0	0	0	na	na	na	na	na	na	100	640	100	
315	CK		nr	0	-1497	0	-73	0	0	-13048	0	0	0	0	na	na	na	na	na	na	-550	450	0	
316	CK		nr	0	-29	0	-479	0	0	-842	0	0	0	0	na	na	na	na	na	na	36	500	25	
317	CK		nr	0	-472	0	-19	0	0	-5848	0	0	0	0	na	na	na	na	na	na	84	500	84	
318	CK		nr	0	-56	0	76	0	0	-430	0	0	0	0	na	na	na	na	na	na	nr	420	0	
319	CK		-45	0	60	60	95	0	0	-252	0	0	0	0	na	na	na	na	na	na	97	540	97	
320	CK		nr	0	-350	0	-842	0	0	-4515	0	0	0	0	na	na	na	na	na	na	-125	480	0	
321	CK		nr	0	93	93	-199	0	0	-2746	0	0	0	0	na	na	na	na	na	na	nr	240	0	
322	CK		nr	0	21	21	77	0	0	-1096	0	0	0	0	na	na	na	na	na	na	95	550	95	
323	CK		nr	75	32	32	97	46	46	-276	0	0	0	0	na	na	na	na	na	na	96	500	96	
335	CK		-36	0	36	36	95	0	0	-122	0	0	0	0	na	na	na	na	na	na	99	718	99	
401	CK		12	12	72	72	97	33	33	-1059	0	0	0	0	na	na	na	na	na	na	58	400	58	
402	CK		-128	0	74	74	99	37	37	-1140	0	0	0	0	na	na	na	na	na	na	90	450	50	
403	CK		92	92	55	55	-14	0	0	-34288	0	0	0	0	na	na	na	na	na	na	95	500	95	
404	CK		-1750	0	-153	0	41	49	49	-305	0	0	0	0	na	na	na	na	na	na	nr	500	80	
405	CK		-289	0	58	58	97	78	78	-8372	0	0	0	0	na	na	na	na	na	na	-20	250	0	
406	CK		-951	0	21	21	95	64	64	-530	0	0	0	0	na	na	na	na	na	na	60	250	60	
		Floor Levels	36		0.024		7.4	230	230	1400		6.4			50		na		na		0.2		or 400°F	
223	LWAK		-14	0	-463	0	-43	0	0	33	33	nr	nr	0	-443	0	na	na	na	na	nr	0	0	0
224	LWAK		-128	0	-409	0	-85	0	0	-4762	0	0	0	0	-558	0	na	na	na	na	nr	0	0	0
225	LWAK		-687	0	-4947	0	-602	0	0	-118	0	0	0	0	-541	0	na	na	na	na	nr	0	0	0
226	LWAK		nr	0	nr	0	nr	0	0	nr	0	0	0	0	-144	0	na	na	na	na	nr	0	0	0
227	LWAK		-112	0	-1551	0	76	0	0	-4	0	49	49	49	96	96	na	na	na	na	nr	0	0	0
307	LWAK		93	93	-102	0	-15	0	0	-4903	0	0	0	0	-10	0	na	na	na	na	nr	0	0	0
310	LWAK		-137	0	-31	0	99	0	0	-17	0	0	0	0	42	42	na	na	na	na	nr	0	0	0
311	LWAK		-137	0	-324	0	99	0	0	-11	0	0	0	0	25	25	na	na	na	na	nr	0	0	0
312	LWAK		-310	0	-140	0	98	0	0	-13	0	0	0	0	42	42	na	na	na	na	nr	0	0	0
313	LWAK		-9459	0	-260	0	99	21	21	7	7	-49	-49	-163	0	0	na	na	na	na	nr	0	0	0

TABLE I-3. REQUIRED REDUCTION TO MEET THE FINAL RECOMMENDED 6% FLOOR

EER	Type	Hg	Hg	PM	PM	PM	SVM	SVM	LVM	LVM	HCl/C12	HCl/C12	HC	HC	CO	CO	CO	HC-ByP	HC-ByP	CO-ByP	CO-ByP	TEQ	TEQ	TEQ	TEQ	AFPCD	AFPCD	Temp(°F)	Temp(°F)							
Site ID No.		Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.							
314	LWAK	-62	0	-7	0	100	100	-1	0	-64	0	-42	0	-1289	0	25	25	na	na	na	na	na	na	na	na	na	na	na	0	0						
336	LWAK	nr	0	nr	0	nr	75	nr	0	nr	0	-31	0	0	0	0	0	na	na	na	na	na	na	na	na	na	na	na	na	0	0					
Floor Levels																																				
209	INC	-1908	57	na.	na.	na.	120	110	0	96	0	6.1	25	50	82	82	82	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0				
210	INC	nr	75	na.	na.	nr	50	nr	75	-175	0	-55	0	-13643	0	-13643	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	75	75			
211	INC	nr	0	na.	na.	nr	75	nr	75	-155	0	-115	0	-951	0	-951	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0			
212	INC	nr	0	na.	na.	nr	0	nr	0	28	28	-47	0	-917	0	-917	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0			
214	INC	70	70	na.	na.	81	81	24	24	-5379	0	-377	0	-231	0	-231	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0			
216	INC	26	26	na.	na.	84	84	10	10	-857	0	-74	0	-385	0	-385	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0			
221	INC	-460	-460	na.	na.	0	0	-45	0	-312	0	-74	0	-226	0	-226	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	52	52			
222	INC	nr	50	na.	na.	nr	0	nr	0	-4642	0	-1537	0	-34	0	-34	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	81	81			
229	INC	nr	0	na.	na.	nr	0	-76	0	10	10	nr	0	nr	75	75	75	na	na	na	na	na	na	na	na	na	na	na	na	na	na	97	97			
324	INC	nr	0	na.	na.	nr	96	15	15	50	50	nr	0	-60	0	-60	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	75	75			
325	INC	9	9	na.	na.	nr	0	-207	0	-816	0	-756	0	-384	0	-384	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	91	91			
327	INC	94	94	na.	na.	nr	0	-307	0	-2304	0	-17	0	-498	0	-498	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	98	98			
329	INC	nr	75	na.	na.	nr	75	nr	75	-1053	0	-140	0	-418	0	-418	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	50	50		
330	INC	-998	0	na.	na.	nr	64	-114	0	-72	0	nr	0	nr	0	nr	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	99	99			
331	INC	-47	0	na.	na.	nr	97	-120	0	-48	0	nr	0	50	0	50	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0			
332	INC	nr	0	na.	na.	nr	0	nr	0	nr	0	nr	0	nr	90	90	90	na	na	na	na	na	na	na	na	na	na	na	na	na	na	75	75			
333	INC	nr	0	na.	na.	nr	0	nr	0	-79	0	nr	0	nr	0	nr	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0		
334	INC	-723	0	na.	na.	nr	98	83	83	-452	0	-203	0	-1018	0	-1018	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	90	90		
337	INC	70	70	na.	na.	nr	-28	58	58	-92	0	-87	0	-6481	0	-6481	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0		
338	INC	3	3	na.	na.	nr	-308	-30	-30	-37813	0	-245	0	-2389	0	-2389	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	413	413		
339	INC	nr	75	na.	na.	nr	0	nr	0	-731	0	-365	0	nr	0	nr	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0		
340	INC	-473	0	na.	na.	nr	0	-39	0	-427	0	-237	0	-69	0	-69	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0		
341	INC	-4890	0	na.	na.	nr	-767	-1075	0	-2118	0	nr	25	13	13	13	13	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	75	75		
342	INC	-813	0	na.	na.	nr	-480	-2829	0	-37349	0	nr	0	nr	0	nr	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	50	50	
344	INC	na.	50	na.	na.	nr	-398	-22	0	-8120	0	-228	0	-210	0	-210	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0	
346	INC	-15733	0	na.	na.	nr	-34	-638	0	-10700	0	nr	0	-78	0	-78	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0	
347	INC	-847	0	na.	na.	nr	-1033	-602	0	-5235	0	nr	0	nr	0	nr	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0	
348	INC	nr	75	na.	na.	nr	-443	-2921	0	-10670	0	nr	0	-502	0	-502	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	75	75	
349	INC	nr	0	na.	na.	nr	-202	nr	75	nr	0	nr	0	-477	0	-477	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0	
350	INC	nr	0	na.	na.	nr	nr	nr	75	nr	0	nr	50	-1385	0	-1385	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0	
351	INC	nr	25	na.	na.	nr	0	-965	0	nr	0	nr	25	32	32	32	32	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	50	50	
353	INC	-1168	0	na.	na.	nr	-8	42	42	nr	50	nr	0	-215	0	-215	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0
354	INC	-3923	0	na.	na.	nr	-4675	-991	0	-3160	0	nr	0	-1591	0	-1591	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0
356	INC	nr	0	na.	na.	nr	nr	nr	0	nr	0	nr	50	50	0	50	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	75	75
357	INC	nr	0	na.	na.	nr	nr	nr	0	nr	0	nr	0	-1174	0	-1174	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0
358	INC	nr	0	na.	na.	nr	nr	nr	0	-2595	0	nr	0	-354	0	-354	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0
359	INC	nr	50	na.	na.	nr	77	100	100	-1046	0	nr	0	50	50	50	50	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0
400	INC	-194	0	na.	na.	nr	82	-8	0	nr	0	nr	0	nr	0	nr	0	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	50	50
500	INC	-1879	0	na.	na.	nr	-3257	-3021	0	-124	0	nr	25	nr	nr	nr	nr	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0
502	INC	nr	50	na.	na.	nr	92	-67	0	-388	0	nr	0	nr	nr	nr	nr	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0	0
503	INC	-159	0	na.	na.	nr	85	75	75	nr	0	nr	50	nr	nr	nr	nr	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	75	75
504	INC	96	96	na.	na.	nr																														

TABLE I-3. REQUIRED REDUCTION TO MEET THE FINAL RECOMMENDED 6% FLOOR

EER Site ID No.	Type	Hg Req. % Reduct.	Hg Adj. Reduct.	PM Req. % Reduct.	PM Adj. Reduct.	SVM Req. % Reduct.	SVM Adj. Reduct.	LVM Req. % Reduct.	LVM Adj. Reduct.	HCl/C12 Req. % Reduct.	HCl/C12 Adj. Reduct.	HC Req. % Reduct.	HC Adj. Reduct.	CO Req. % Reduct.	CO Adj. Reduct.	HC-Byp Req. % Reduct.	HC-Byp Adj. Reduct.	CO-Byp Req. % Reduct.	CO-Byp Adj. Reduct.	TEQ Req. % Reduct.	TEQ Adj. Reduct.
700	INC	nr	0	na.	na.	100	100	85	85	-469	0	nr	0	nr	0	na	na	na	na	nr	0
701	INC	nr	0	na.	na.	nr	0	nr	75	-737	0	-523	0	nr	0	na	na	na	na	nr	50
702	INC	nr	0	na.	na.	nr	75	nr	0	nr	0	nr	0	nr	0	na	na	na	na	nr	75
703	INC	nr	25	na.	na.	nr	0	nr	0	73	73	-1516	0	-4240	0	na	na	na	na	nr	0
704	INC	nr	0	na.	na.	nr	0	nr	0	49	49	nr	0	-1042	0	na	na	na	na	nr	0
705	INC	-417	0	na.	na.	43	43	33	33	-795	0	nr	25	-1632	0	na	na	na	na	nr	75
706	INC	nr	0	na.	na.	nr	0	nr	0	-18062	0	-20	0	-26	0	na	na	na	na	-893	0
707	INC	nr	0	na.	na.	nr	75	nr	75	-1407	0	nr	0	99	99	na	na	na	na	nr	50
708	INC	nr	0	na.	na.	nr	0	nr	50	-7418	0	nr	0	-474	0	na	na	na	na	nr	75
709	INC	nr	50	na.	na.	nr	0	nr	0	nr	25	-307	0	-544	0	na	na	na	na	nr	0
710	INC	nr	0	na.	na.	nr	75	nr	0	75	75	63	63	-70	0	na	na	na	na	nr	0
711	INC	nr	0	na.	na.	nr	0	nr	0	-10006	0	nr	0	-246	0	na	na	na	na	nr	75
712	INC	nr	0	na.	na.	nr	0	nr	0	nr	0	nr	0	nr	0	na	na	na	na	nr	0
713	INC	nr	0	na.	na.	nr	0	nr	0	-257	0	nr	50	-2399	0	na	na	na	na	nr	75
714	INC	nr	0	na.	na.	nr	75	nr	0	-53	0	nr	0	-195	0	na	na	na	na	nr	50
725	INC	-3347	0	na.	na.	nr	0	nr	0	20	20	-263	0	-1110	0	na	na	na	na	-17	0
726	INC	nr	50	na.	na.	nr	75	nr	75	nr	0	48	48	-147	0	na	na	na	na	nr	0
727	INC	nr	0	na.	na.	nr	75	nr	50	-21876	0	96	96	98	98	na	na	na	na	nr	0
728	INC	nr	0	na.	na.	nr	0	nr	0	nr	0	nr	0	nr	0	na	na	na	na	nr	75
805	INC	nr	0	na.	na.	nr	75	nr	50	91	91	nr	0	-1273	0	na	na	na	na	nr	0
806	INC	61	0	na.	na.	nr	77	nr	0	-97	0	74	74	75	75	na	na	na	na	nr	75
807	INC	-405	0	na.	na.	43	43	24	24	-3402	0	15	15	-831	0	na	na	na	na	nr	0
808	INC	nr	0	na.	na.	nr	75	nr	75	-17835	0	nr	0	2	2	na	na	na	na	-30	50
809	INC	nr	0	na.	na.	nr	99	nr	97	nr	0	-41	0	96	96	na	na	na	na	nr	75
810	INC	nr	0	na.	na.	nr	91	nr	81	nr	0	nr	0	-222	0	na	na	na	na	nr	0
824	INC	-7376	0	na.	na.	-189	0	nr	11	-3855	0	nr	0	-487	0	na	na	na	na	nr	0
825	INC	nr	25	na.	na.	nr	0	nr	0	-2307	0	nr	75	nr	75	na	na	na	na	nr	50
902	INC	-20	0	na.	na.	-403	0	-1054	0	-1995	0	-13	0	-27	0	na	na	na	na	-2877	0
904	INC	nr	0	na.	na.	nr	75	nr	0	nr	75	17	17	-9832	0	na	na	na	na	nr	0
905	INC	nr	0	na.	na.	100	100	38	38	nr	nr	nr	0	-36	0	na	na	na	na	nr	0
906	INC	nr	0	na.	na.	nr	50	nr	75	38	38	-206	0	-730	0	na	na	na	na	nr	75
914	INC	nr	0	na.	na.	nr	0	nr	75	58	58	nr	75	-1289	0	na	na	na	na	95	95
915	INC	nr	50	na.	na.	91	91	83	83	nr	0	66	66	92	92	na	na	na	na	56	56

TABLE I-4. REQUIRED REDUCTION TO MEET THE FINAL 6% BTF PROPOSAL

EER	Type	Hg	Hg	PM	PM	SVM	SVM	LVM	LVM	HCl/C12	HCl/C12	HC	HC	CO	CO	HC-Byp	HC-Byp	CO-Byp	CO-Byp	TEQ	TEQ	APCD	TEQ	TEQ
Site ID No.		Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Temp (°F)	Req. % Reduct.	Adj. Reduct.	
Floor Levels		30		0.015		67		270		0		10		na		5.1		50		0.2		550	0.2	50
200	CK	-171	0	-11	0	82	45	-1384	0	0	0	0	0	na	na	na	na	na	na	nr	na	550	nr	50
201	CK	-452	0	58	58	87	96	-1242	0	0	0	0	0	na	na	na	na	na	na	nr	na	550	nr	75
202	CK	-49	0	nr	0	0	69	-1546	0	0	0	0	0	na	na	na	na	na	na	nr	na	440	nr	75
203	CK	-397	0	-8	0	-113	94	-130	0	0	0	0	0	na	na	na	na	na	na	nr	na	500	nr	96
204	CK	-59	0	47	47	-979	93	-312181	0	0	0	0	0	na	na	na	na	na	na	74	na	600	74	74
205	CK	-1	0	70	70	-262	97	-1529	0	0	0	0	0	na	na	na	na	na	na	-81	na	500	0	0
206	CK	-73	0	34	34	-671	88	-232	0	0	0	0	0	na	na	na	na	na	na	83	na	500	83	83
207	CK	-77	0	35	35	-19	91	-5411	0	0	0	0	0	na	na	na	na	na	na	-1146	na	400	-1146	0
208	CK	-53	0	-2	0	-469	63	-5872	0	0	0	0	0	na	na	na	na	na	na	-4481	na	400	-4481	0
228	CK	nr	50	nr	50	nr	75	nr	0	0	0	0	0	na	na	na	na	na	na	18	na	500	18	18
300	CK	nr	0	79	79	35	99	-699	0	0	0	0	0	na	na	na	na	na	na	98	na	600	98	98
301	CK	74	74	57	57	0	-299	-45257	0	0	0	0	0	na	na	na	na	na	na	57	na	400	57	50
302	CK	nr	50	55	55	-144	98	-2539	0	0	0	0	0	na	na	na	na	na	na	nr	na	420	nr	75
303	CK	37	37	36	36	0	-274	-1319	0	0	0	0	0	na	na	na	na	na	na	12	na	250	12	0
304	CK	28	28	74	74	-18	94	-68338	0	0	0	0	0	na	na	na	na	na	na	89	na	460	89	89
305	CK	-181	0	79	79	0	97	-191	0	0	0	0	0	na	na	na	na	na	na	100	na	730	100	100
306	CK	99	99	8	8	-404	0	-9347	0	0	0	0	0	na	na	na	na	na	na	-275	na	550	-275	0
308	CK	nr	0	27	27	-842	64	-4721	0	0	0	0	0	na	na	na	na	na	na	100	na	640	100	75
309	CK	30	30	39	39	-619	94	-482	0	0	0	0	0	na	na	na	na	na	na	0	na	640	0	100
315	CK	nr	0	-1497	0	-73	0	-13048	0	0	0	0	0	na	na	na	na	na	na	-550	na	450	-550	0
316	CK	nr	50	-29	0	-479	0	-842	0	0	0	0	0	na	na	na	na	na	na	36	na	500	36	25
317	CK	nr	0	-472	0	-19	0	-5848	0	0	0	0	0	na	na	na	na	na	na	84	na	500	84	84
318	CK	nr	0	-56	0	-261	0	-430	0	0	0	0	0	na	na	na	na	na	na	420	na	420	420	0
319	CK	46	46	60	60	-11	95	-252	0	0	0	0	0	na	na	na	na	na	na	97	na	540	97	97
320	CK	nr	0	-350	0	-1471	0	-4515	0	0	0	0	0	na	na	na	na	na	na	-125	na	480	-125	0
321	CK	nr	50	93	93	-484	0	-2746	0	0	0	0	0	na	na	na	na	na	na	0	na	240	0	0
322	CK	nr	0	21	21	-178	77	-1096	0	0	0	0	0	na	na	na	na	na	na	95	na	550	95	95
323	CK	nr	75	32	32	46	97	-276	0	0	0	0	0	na	na	na	na	na	na	96	na	500	96	96
335	CK	50	50	36	36	-521	95	-122	0	0	0	0	0	na	na	na	na	na	na	99	na	718	99	99
401	CK	67	67	72	72	33	97	-1059	0	0	0	0	0	na	na	na	na	na	na	58	na	400	58	58
402	CK	15	15	74	74	37	99	-1140	0	0	0	0	0	na	na	na	na	na	na	90	na	450	90	50
403	CK	97	97	55	55	-100	0	-34288	0	0	0	0	0	na	na	na	na	na	na	95	na	500	95	95
404	CK	-585	0	-153	0	41	41	-305	0	0	0	0	0	na	na	na	na	na	na	-20	na	500	-20	80
405	CK	-44	0	58	58	78	97	-8372	0	0	0	0	0	na	na	na	na	na	na	60	na	250	60	60
406	CK	-289	0	21	21	64	95	-530	0	0	0	0	0	na	na	na	na	na	na	60	na	250	60	60

Floor Levels	TEQ	TEQ	APCD	TEQ	TEQ	APCD	TEQ	TEQ	APCD	TEQ	TEQ	APCD	TEQ	TEQ	APCD	TEQ	TEQ	APCD	TEQ	TEQ	APCD	TEQ	TEQ	APCD	TEQ
Site ID No.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Adj. Reduct.	Req. % Reduct.	Temp (°F)	Req. % Reduct.	Adj. Reduct.	
223	LWAK	30	5	0.015	0	230	7.4	210	90	6.4	nr	50	443	0	na	na	na	na	na	0.2	na	550	0.2	0	
224	LWAK	-90	0	-218	0	-962	-85	-629	0	nr	0	-558	0	na	na	na	na	na	na	nr	na	550	nr	0	
225	LWAK	-556	0	-3054	0	-2140	-602	67	67	nr	50	-541	0	na	na	na	na	na	na	nr	na	500	nr	0	
226	LWAK	nr	0	nr	0	nr	nr	nr	75	nr	0	-144	0	na	na	na	na	na	na	nr	na	500	nr	0	
227	LWAK	-76	0	-932	0	-821	76	84	84	49	49	96	96	na	na	na	na	na	na	nr	na	500	nr	0	
307	LWAK	94	94	-26	0	-70	-15	-651	0	nr	0	-10	0	na	na	na	na	na	na	nr	na	500	nr	0	
310	LWAK	-97	0	18	18	-286	99	82	82	-83	0	42	42	na	na	na	na	na	na	nr	na	500	nr	0	
311	LWAK	-97	0	-165	0	-456	99	83	83	-31	0	25	25	na	na	na	na	na	na	nr	na	500	nr	0	
312	LWAK	-242	0	-50	0	-518	98	83	83	-83	0	42	42	na	na	na	na	na	na	nr	na	500	nr	0	
313	LWAK	-7866	0	-125	0	21	99	86	86	-49	0	-163	0	na	na	na	na	na	na	nr	na	250	nr	0	

TABLE I-4. REQUIRED REDUCTION TO MEET THE FINAL 6% BTF PROPOSAL

EER Site ID No.	Type	Hg Req. % Reduct.	Hg Adj. Reduct.	PM Req. % Reduct.	PM Adj. Reduct.	SVM Req. % Reduct.	SVM Adj. Reduct.	LVM Req. % Reduct.	LVM Adj. Reduct.	HCl/C12 Req. % Reduct.	HCl/C12 Adj. Reduct.	HC Req. % Reduct.	HC Adj. Reduct.	CO Req. % Reduct.	CO Adj. Reduct.	HC-Byp Req. % Reduct.	HC-Byp Adj. Reduct.	CO-Byp Req. % Reduct.	CO-Byp Adj. Reduct.	TEQ Req. % Reduct.	TEQ Adj. Reduct.	APCD Temp (°F)
700	INC	nr	0	66	66	100	100	85	85	-469	0	nr	0	nr	0	na	na	na	na	nr	0	
701	INC	nr	0	65	65	nr	0	75	75	-737	0	-523	0	nr	0	na	na	na	na	nr	50	
702	INC	nr	0	82	82	nr	75	0	0	nr	0	0	0	nr	0	na	na	na	na	nr	75	
703	INC	nr	75	-429	0	nr	0	0	0	73	73	-1516	0	-4240	0	na	na	na	na	nr	0	
704	INC	nr	0	20	20	0	0	0	0	49	49	nr	0	-1042	0	na	na	na	na	nr	0	
705	INC	-172	0	63	63	43	43	33	33	-795	0	nr	25	-1632	0	na	na	na	na	nr	75	
706	INC	nr	0	65	65	nr	0	nr	0	-18062	0	-20	0	-26	0	na	na	na	na	-893	0	
707	INC	nr	0	94	94	nr	75	75	75	-1407	0	nr	0	99	99	na	na	na	na	nr	50	
708	INC	nr	0	43	43	nr	0	nr	50	-7418	0	nr	0	-474	0	na	na	na	na	nr	75	
709	INC	nr	50	70	70	nr	0	0	0	nr	25	-307	0	-544	0	na	na	na	na	nr	0	
710	INC	nr	0	44	44	nr	75	nr	0	75	75	63	63	-70	0	na	na	na	na	nr	0	
711	INC	nr	0	53	53	nr	0	nr	0	-10006	0	nr	0	-246	0	na	na	na	na	nr	75	
712	INC	nr	0	50	50	-4909	0	0	0	nr	0	nr	0	nr	0	na	na	na	na	nr	0	
713	INC	nr	0	77	77	nr	0	0	0	-257	0	nr	50	-2399	0	na	na	na	na	nr	75	
714	INC	nr	0	18	18	nr	75	nr	0	-53	0	nr	0	-195	0	na	na	na	na	nr	50	
725	INC	-1714	0	30	30	nr	0	-117	0	20	20	-263	0	-1110	0	na	na	na	na	-17	0	
726	INC	nr	75	-500	0	nr	75	nr	75	nr	0	48	48	-147	0	na	na	na	na	nr	0	
727	INC	nr	0	82	82	nr	75	50	50	nr	0	96	96	98	98	na	na	na	na	nr	0	
728	INC	nr	0	66	66	nr	0	nr	0	-21876	0	nr	0	nr	0	na	na	na	na	nr	75	
784	INC	nr	0	63	63	nr	75	nr	50	91	91	nr	0	-1273	0	na	na	na	na	nr	0	
805	INC	nr	0	72	72	nr	0	nr	0	10	10	20	20	85	85	na	na	na	na	nr	75	
806	INC	79	79	65	65	77	77	0	0	-97	0	74	74	75	75	na	na	na	na	nr	0	
807	INC	-166	0	47	47	43	43	24	24	-3402	0	15	15	-831	0	na	na	na	na	nr	50	
808	INC	nr	0	22	22	nr	75	nr	75	-17835	0	nr	0	2	2	na	na	na	na	-30	0	
809	INC	nr	0	nr	nr	99	99	97	97	nr	0	-41	0	96	96	na	na	na	na	nr	75	
810	INC	nr	0	nr	75	91	91	81	81	nr	0	nr	0	-222	0	na	na	na	na	nr	0	
824	INC	-3835	0	-139	0	-189	0	11	11	-3855	0	nr	0	-487	0	na	na	na	na	nr	0	
825	INC	nr	50	77	77	nr	0	nr	0	-2307	0	nr	75	75	75	na	na	na	na	nr	50	
902	INC	37	37	30	30	-403	0	-1054	0	-1995	0	-13	0	-27	0	na	na	na	na	-2877	0	
904	INC	nr	50	-37	0	75	75	0	0	nr	75	17	17	-9832	0	na	na	na	na	nr	0	
905	INC	nr	0	nr	50	100	100	38	38	nr	nr	0	0	-36	0	na	na	na	na	nr	75	
906	INC	nr	0	79	79	nr	50	75	75	38	38	-206	0	-730	0	na	na	na	na	nr	95	
914	INC	nr	0	-269	0	nr	0	75	75	58	58	75	75	-1289	0	na	na	na	na	nr	95	
915	INC	nr	75	74	74	91	91	83	83	nr	0	66	66	92	92	na	na	na	na	56	56	

TABLE I-5. MODEL GROUP SELECTION FOR THE FINAL 6 PERCENT FLOOR

EER ID No.	Type	Current APCD	% Emissions Reduction Required to meet the Final 6 Percent Floor										Model Group No.	Required Add-on Flue Gas Control		
			Hg	PM	SVM	LVM	HCl/Cl2	HC	CO	HC-Byp	CO-Byp	APCD Temp			TEQ	
200	CK	FF	0	0	45	82	0	0	0	na	na	na	550	50	18	Add Q, FF
201	CK	FF	0	58	96	87	0	0	na	na	na	na	550	75	18	Add Q, FF
202	CK	FF	0	0	69	0	0	0	na	na	na	na	440	75	42	Moderate DOM on Existing FF, Add Q
203	CK	ESP	0	0	94	0	0	0	na	na	na	na	500	96	18	Add Q, FF
204	CK	ESP	0	47	93	0	0	0	na	na	na	na	600	74	18	Add Q, FF
205	CK	ESP	0	70	97	0	0	0	na	na	na	na	500	0	3	Add FF
206	CK	ESP	0	34	88	0	0	0	na	na	na	na	500	83	18	Add Q, FF
207	CK	MC/ESP	0	35	91	0	0	0	na	na	na	na	400	0	3	Add FF
208	CK	ESP	0	0	63	0	0	0	na	na	na	na	420	0	2	Moderate DOM on existing ESP
228	CK	ESP	0	50	75	0	0	0	na	na	na	na	500	18	18	Add Q, FF
300	CK	ESP	0	79	99	35	0	0	na	na	na	na	600	98	18	Add Q, FF
301	CK	FF	31	57	0	0	0	0	na	na	76	57	400	50	28	Moderate DOM on Combustor, Add Cl, FF
302	CK	ESP	50	55	98	0	0	0	na	na	na	na	420	75	5	Add Q, Cl, FF
303	CK	QC/FF	0	36	0	0	0	0	na	na	0	12	250	0	7	Moderate DOM on existing FF
304	CK	ESP	0	74	94	0	0	0	na	na	na	na	460	89	18	Add Q, FF
305	CK	ESP	0	79	97	0	0	0	na	na	na	na	730	100	18	Add Q, FF
306	CK	MC/FF	87	8	0	0	0	0	na	na	na	na	550	0	5	Add Q, Cl, FF
308	CK	ESP	0	27	64	0	0	0	na	na	na	na	440	75	20	Moderate DOM on Existing ESP, Add Q
309	CK	MC/ESP	0	39	94	0	0	0	na	na	na	na	640	100	18	Add Q, FF
315	CK	FF	0	0	0	0	0	0	na	na	0	0	450	0	1	None
316	CK	FF	0	0	0	0	0	0	na	na	15	82	500	25	35	Moderate DOM on Combustor, Add Q
317	CK	FF	0	0	0	0	0	0	na	na	na	na	500	84	17	Add Q
318	CK	ESP	0	0	76	0	0	0	na	na	na	na	420	0	3	Add FF
319	CK	ESP	0	60	95	0	0	0	na	na	na	na	540	97	18	Add Q, FF
320	CK	FF	0	0	0	0	0	0	na	na	na	na	480	0	1	None
321	CK	ESP	0	93	0	0	0	0	na	na	0	0	240	0	3	Add FF
322	CK	ESP	0	21	77	0	0	0	na	na	na	na	550	95	18	Add Q, FF
323	CK	ESP	75	32	97	46	0	0	na	na	na	na	500	96	5	Add Q, Cl, FF
335	CK	ESP	0	36	95	0	0	0	na	na	na	na	718	99	18	Add Q, FF
401	CK	ESP	12	72	97	33	0	0	na	na	na	na	400	58	4	Add Cl, FF
402	CK	ESP	0	74	99	37	0	0	na	na	7	90	450	50	41	Moderate DOM on Combustor, Add Q, FF
403	CK	ESP	92	55	0	0	0	0	na	na	na	na	500	95	5	Add Q, Cl, FF
404	CK	ESP	0	0	41	49	0	0	na	na	na	na	500	80	20	Moderate DOM on existing ESP, Add Q
405	CK	ESP	0	58	97	78	0	0	na	na	na	na	250	0	3	Add FF
406	CK	ESP	0	21	95	64	0	0	na	na	na	na	280	60	3	Add FF

223	LWAK	FF	0	0	0	0	0	33	0	0	na	na	0	0	5	Add ST
224	LWAK	FF	0	0	0	0	0	0	0	0	na	na	0	0	1	None
225	LWAK	FF	0	0	0	0	50	0	0	0	na	na	0	0	18	Moderate DOM on Combustor

TABLE I-5. MODEL GROUP SELECTION FOR THE FINAL 6 PERCENT FLOOR

EER ID No.	Type	Current APCD	% Emissions Reduction Required to meet the Final 6 Percent Floor										Model Group No.	Required Add-on Flue Gas Control		
			Hg	PM	SVM	LVM	HCl/Cl2	HC	CO	HC-Byp	CO-Byp	APCD Temp			TEQ	
226	LWAK	FF	0	0	0	0	0	0	0	0	0	0	na	0	0	None
227	LWAK	FF	0	0	76	0	0	0	49	0	96	na	na	0	0	Add AB, Q, FF
307	LWAK	FF/VS	93	0	0	0	0	0	0	0	0	na	na	0	0	Add CI, FF
310	LWAK	FF	0	0	99	0	0	0	0	0	42	na	na	0	0	Moderate DOM on Combustor, Add FF
311	LWAK	FF	0	0	99	0	0	0	0	0	25	na	na	0	0	Moderate DOM on Combustor, Add FF
312	LWAK	FF	0	0	98	0	0	0	0	0	42	na	na	0	0	Moderate DOM on Combustor, Add FF
313	LWAK	FF	0	0	99	21	7	0	0	0	0	na	na	0	0	Add IWS
314	LWAK	FF	0	0	100	0	0	0	0	0	0	na	na	0	0	Add FF
336	LWAK	FF	0	0	75	0	0	0	0	0	25	na	na	0	0	Moderate DOM on Combustor, Add FF
209	INC	WHB, FF/VQ/PT/DM	0	na.	0	0	0	0	25	0	82	na	na	75	81	Add AB
210	INC	FF/S	75	na.	50	75	0	0	0	0	0	na	na	50	9	Add RH, CI, FF
211	INC	SS/PT/VS	0	na.	75	75	0	0	0	0	0	na	na	0	6	Add FF
212	INC	FF/S	0	na.	0	0	28	0	0	0	0	na	na	0	30	Moderate DOM on Existing WS
214	INC	IWS	70	na.	81	24	0	0	0	0	0	na	na	0	9	Add RH, CI, FF
216	INC	HES / WS	26	na.	84	10	0	0	0	0	0	na	na	0	9	Add RH, CI, FF
221	INC	PT	0	na.	0	0	0	0	0	0	0	na	na	52	1	None
222	INC	WHB/SD/ESP/Q/PBS	50	na.	0	0	0	0	0	0	0	na	na	81	8	Add CI
229	INC	WHB/ACS/HCS/CS	0	na.	0	0	10	0	0	75	0	na	na	97	112	Moderate DOM on Existing WS, Add AB
324	INC	?	0	na.	96	15	50	0	0	0	0	na	na	75	4	Add IWS
325	INC	SD/FF/WS/IWS	9	na.	0	0	0	0	0	0	0	na	na	91	8	Add CI
327	INC	SD/FF/WS/ESP	94	na.	0	0	0	0	0	0	0	na	na	98	8	Add CI
329	INC	PT/IWS	75	na.	75	75	0	0	0	0	0	na	na	50	9	Add RH, CI, FF
330	INC	QT/WS/DM	0	na.	64	0	0	0	0	0	0	na	na	99	6	Add FF
331	INC	PT/IWS	0	na.	97	0	0	50	0	0	0	na	na	0	55	Moderate DOM on Combustor, Add FF
332	INC	WS	0	na.	0	0	0	0	0	90	0	na	na	75	81	Add AB
333	INC	SD/FF	0	na.	0	50	0	0	0	0	0	na	na	0	66	Moderate DOM on existing FF
334	INC	WS/ESP/PT	0	na.	98	83	0	0	0	33	0	na	na	90	55	Moderate DOM on Combustor, Add FF
337	INC	WHB/DA/DI/FF	70	na.	0	58	0	0	0	0	0	na	na	0	67	Moderate DOM on existing FF, Add CI
338	INC	QC/FF/SS/C/HES/DM	3	na.	0	0	0	0	0	0	0	na	na	41.3	8	Add CI
339	INC	AT/PT/R/S/ESP	75	na.	0	0	0	0	0	0	0	na	na	41.5	61	Add RH, CB
340	INC	WHB/ESP/WS	0	na.	0	0	0	0	0	0	0	na	na	444	72	Add Q
341	INC	DA/DI/FF/HEPA/CA	0	na.	0	0	0	25	0	13	0	na	na	50	111	Moderate DOM on Combustor, Add Q
342	INC	WHB/QC/S/VS/DM	0	na.	0	0	0	0	0	0	0	na	na	0	1	None
344	INC	QC/VS/PT/DM	50	na.	0	0	0	0	0	0	0	na	na	0	9	Add RH, CI, FF
346	INC	C/QC/VS/PT/DM	0	na.	0	0	0	0	0	0	0	na	na	0	1	None
347	INC	C/QC/VS/S/DM	0	na.	0	0	0	0	0	0	0	na	na	0	1	None
348	INC	QC/AS/IWS	75	na.	0	0	0	0	0	0	0	na	na	75	61	Add RH, CB
349	INC	QC/FF/QC/PT	0	na.	0	75	0	0	0	0	0	na	na	0	6	Add FF
350	INC	WHB/HE/FF	0	na.	75	75	0	50	0	0	0	na	na	0	55	Moderate DOM on Combustor, Add FF

TABLE I-5. MODEL GROUP SELECTION FOR THE FINAL 6 PERCENT FLOOR

EER ID No.	Type	Current APCD	% Emissions Reduction Required to meet the Final 6 Percent Floor											Model Group No.	Required Add-on Flue Gas Control
			Hg	PM	SVM	LVM	HCl/Cl2	HC	CO	HC-Byp	CO-Byp	APCD Temp	TEQ		
351	INC	GC/C/FF	25	na.	0	0	0	0	25	32	na	na	290	50	Moderate DOM on Combustor, Add CB
353	INC	QC/VS/DM/ESP	0	na.	0	42	0	50	0	0	na	na		0	Moderate DOM on Existing ESP, Add PT
354	INC	QC/AS/VS/DM/IWS	0	na.	0	0	0	0	0	0	na	na		0	None
356	INC	QC/AS/FF/DM	0	na.	0	0	0	0	50	0	na	na		75	Moderate DOM on Combustor
357	INC	QC/VS/PT/IWS	0	na.	50	0	0	0	0	0	na	na		0	Moderate DOM on Existing VS
358	INC	QC/VS/C/CT/S/DM	0	na.	0	0	0	0	0	0	na	na		0	None
359	INC	WHB/FF/S	50	na.	77	100	0	0	0	50	na	na	375	0	Moderate DOM on Combustor, Add RH, CI, FF
400	INC	SD/FF	0	na.	82	0	0	0	0	0	na	na	400	50	Add FF
500	INC	QC/VS/KOV/DM	0	na.	0	0	0	0	25	0	na	na		0	Moderate DOM on Combustor
502	INC	WHB/QC/PBC/VS/ES	50	na.	92	0	0	0	0	0	na	na		0	Add RH, CB, FF
503	INC	HTHE/LTHE/FF	0	na.	85	75	0	0	50	75	na	na	285	75	Add AB, FF
504	INC	VS/C	96	na.	0	30	0	0	0	0	na	na		0	Moderate DOM on existing VS, Add RH, CB
600	INC	WHB/QC/PT/IWS	0	na.	0	75	0	0	0	50	na	na		0	Moderate DOM on Combustor, Add FF
700	INC	SD/RIS/VS/WS	0	na.	100	85	0	0	0	0	na	na		0	Add FF
701	INC	VS/PT	0	na.	0	75	0	0	0	0	na	na		50	Add FF
702	INC	QT/S/C	0	na.	75	0	0	0	0	0	na	na		75	Add FF
703	INC	WHB	25	na.	0	0	0	73	0	0	na	na		0	Add Q, CB, PT
704	INC	NONE	0	na.	0	0	0	49	0	0	na	na		0	Add PT
705	INC	QT/VS/ESP/PT	0	na.	43	33	0	0	25	0	na	na		75	Moderate DOM on Existing Combustor and ESP
706	INC	QT/HS/C	0	na.	0	0	0	0	0	0	na	na		0	None
707	INC	QT/WS	0	na.	75	75	0	0	0	99	na	na		50	Add AB, FF
708	INC	WS/ESP	0	na.	0	50	0	0	0	0	na	na		75	Moderate DOM on Existing ESP
709	INC	NONE	50	na.	0	0	0	25	0	0	na	na		0	Add PT, RH, CB
710	INC	QT/OS/C/S	0	na.	75	0	0	75	63	0	na	na		0	Moderate DOM on Combustor, Add IWS
711	INC	CVS/AS	0	na.	0	0	0	0	0	0	na	na		75	None
712	INC	NONE	0	na.	0	0	0	0	0	0	na	na		0	None
713	INC	VS/PT	0	na.	0	0	0	0	50	0	na	na		75	Moderate DOM on Combustor
714	INC	WS	0	na.	75	0	0	0	0	0	na	na		50	Add FF
725	INC	WS/QT	0	na.	0	0	0	20	0	0	na	na		0	Moderate DOM on Existing WS
726	INC	QC/CS/DM/VS	50	na.	75	75	0	0	48	0	na	na		0	Moderate DOM on Combustor, Add RH, CB, FF
727	INC	GC/C/FF	0	na.	75	50	0	0	96	98	na	na		0	Add AB, FF
728	INC	QT/PT/VS	0	na.	0	0	0	0	0	0	na	na		75	None
784	INC	NONE	0	na.	75	50	0	91	0	0	na	na		0	Add IWS
805	INC	QT/QS/VS/ES/PBS	0	na.	0	0	0	10	20	85	na	na		75	Small DOM on WS, Add AB
806	INC	CVS	61	na.	77	0	0	0	74	75	na	na		0	Add AB, RH, CI, FF
807	INC	C/WHB/VQ/PT/HS/DM	0	na.	43	24	0	0	15	0	na	na		50	Moderate DOM on Existing Combustor and VS
808	INC	QT/PBS/ESP	0	na.	75	75	0	0	0	2	na	na		0	Moderate DOM on Combustor, Add FF
809	INC	VS	0	na.	99	97	0	0	0	96	na	na		75	Add AB, FF
810	INC	QVS/PBS	0	na.	91	81	0	0	0	0	na	na		0	Add FF
824	INC	QT/VS/PT/DM	0	na.	0	11	0	0	0	0	na	na		0	Small DOM on Existing VS
825	INC	CCS/QC/ESP	25	na.	0	0	0	0	75	75	na	na		50	Add AB, RH, CI, FF

TABLE I-5. MODEL GROUP SELECTION FOR THE FINAL 6 PERCENT FLOOR

EER ID No.	Type	Current APCD	% Emissions Reduction Required to meet the Final 6 Percent Floor										Model Group No.	Required Add-on Flue Gas Control		
			Hg	PM	SVM	LVM	HC/C12	HC	CO	HC-Byp	CO-Byp	APCD Temp			TEQ	
902	INC	QT/VS/PT	0	na.	0	0	0	0	0	0	0	na	na	0	1	None
904	INC	?	0	na.	75	0	0	75	17	0	0	na	na	0	33	Moderate DOM on Combustor, Add IWS
905	INC	QT/VS/AS/CS	0	na.	100	38	0	0	0	0	0	na	na	0	6	Add FF
906	INC	QT/PT	0	na.	50	75	38	0	0	0	0	na	na	75	12	Moderate DOM on Existing WS, Add FF
914	INC	?	0	na.	0	75	58	75	75	0	0	na	na	95	5	Add AB, IWS
915	INC	QC/VS/C	50	na.	91	83	0	66	66	92	na	na	na	56	25	Add AB, RH, Cl, FF

TABLE I-6. MODEL GROUP SELECTION FOR THE FINAL 6 PERCENT BTF PROPOSAL

EER ID No.	Type	Current APCD	% Emissions Reduction Required to meet the Final 6 Percent BTF Proposal										Model Group No.	Required Add-on Flue Gas Control	
			Hg	PM	SVM	LVM	HCl/Cl ₂	HC	CO	HC-Byp	CO-Byp	APCD Temp			TEQ
200	CK	FF	0	0	45	82	0	0	na	na	na	550	50	18	Add Q, FF
201	CK	FF	0	58	96	87	0	0	na	na	na	550	75	18	Add Q, FF
202	CK	FF	0	0	69	0	0	0	na	na	na	440	75	5	Add Q, CI, FF
203	CK	ESP	0	0	94	0	0	0	na	na	na	500	96	5	Add Q, CI, FF
204	CK	ESP	0	47	93	0	0	0	na	na	na	600	74	18	Add Q, FF
205	CK	ESP	0	70	97	0	0	0	na	na	na	500	0	3	Add FF
206	CK	ESP	0	34	88	0	0	0	na	na	na	500	83	18	Add Q, FF
207	CK	MC / ESP	0	35	91	0	0	0	na	na	na	400	0	3	Add FF
208	CK	ESP	0	0	63	0	0	0	na	na	na	420	0	2	Moderate DOM on existing ESP
228	CK	ESP	50	50	75	0	0	0	na	na	na	500	18	5	Add Q, CI, FF
300	CK	ESP	0	79	99	35	0	0	na	na	na	600	98	18	Add Q, FF
301	CK	FF	74	57	0	0	0	0	na	76	57	400	50	28	Moderate DOM on Combustor, Add CI, FF
302	CK	ESP	50	55	98	0	0	0	na	na	na	420	75	4	Add CI, FF
303	CK	QC/FF	37	36	0	0	0	0	na	0	12	250	0	4	Add CI, FF
304	CK	ESP	28	74	94	0	0	0	na	na	na	460	89	5	Add Q, CI, FF
305	CK	ESP	0	79	97	0	0	0	na	na	na	730	100	5	Add Q, CI, FF
306	CK	MC/FF	95	8	0	0	0	0	na	na	na	550	0	5	Add Q, CI, FF
308	CK	ESP	0	27	64	0	0	0	na	na	na	440	75	5	Add Q, CI, FF
309	CK	MC / ESP	30	39	94	0	0	0	na	na	na	640	100	5	Add Q, CI, FF
315	CK	FF	0	0	0	0	0	0	na	0	0	450	0	1	None
316	CK	FF	50	0	0	0	0	0	na	82	82	500	25	37	Moderate DOM on Combustor, Add Q, CI, FF
317	CK	FF	0	0	0	0	0	0	na	na	na	500	84	17	Add Q
318	CK	ESP	0	0	76	0	0	0	na	na	na	420	0	3	Add FF
319	CK	ESP	46	60	95	0	0	0	na	na	na	540	97	5	Add Q, CI, FF
320	CK	FF	0	0	0	0	0	0	na	na	na	480	0	1	None
321	CK	ESP	50	93	0	0	0	0	na	0	0	240	0	4	Add CI, FF
322	CK	ESP	0	21	77	0	0	0	na	na	na	550	95	18	Add Q, FF
323	CK	ESP	75	32	97	46	0	0	na	na	na	500	96	5	Add Q, CI, FF
335	CK	ESP	50	36	95	0	0	0	na	na	na	718	99	5	Add Q, CI, FF
401	CK	ESP	67	72	97	33	0	0	na	na	na	400	58	4	Add CI, FF
402	CK	ESP	15	74	99	37	0	0	na	7	90	450	50	37	Moderate DOM on Combustor, Add Q, CI, FF
403	CK	ESP	97	55	0	0	0	0	na	na	na	500	95	33	Moderate DOM on Existing ESP, Add Q, CB
404	CK	ESP	0	0	41	49	0	0	na	na	na	500	80	20	Moderate DOM on existing ESP, Add Q
405	CK	ESP	0	58	97	78	0	0	na	na	na	250	0	3	Add FF
406	CK	ESP	0	21	95	64	0	0	na	na	na	280	60	4	Add CI, FF
223	LWAK	FF	0	0	0	0	90	0	0	na	na	0	0	5	Add ST
224	LWAK	FF	0	0	0	0	0	0	0	na	na	0	0	1	None
225	LWAK	FF	0	0	0	0	67	50	0	na	na	0	0	19	Moderate DOM on Combustor, Add ST
226	LWAK	FF	0	0	0	0	75	0	0	na	na	0	0	5	Add ST
227	LWAK	FF	0	0	76	0	84	49	96	na	na	0	0	13	Add AB, WQ, IWS
307	LWAK	FF/VS	93	0	0	0	0	0	0	na	na	0	0	3	Add CI, FF
310	LWAK	FF	0	18	99	0	82	0	42	na	na	0	0	20	Moderate DOM on Combustor, Add IWS
311	LWAK	FF	0	0	99	0	83	0	25	na	na	0	0	20	Moderate DOM on Combustor, Add IWS
312	LWAK	FF	0	0	98	0	83	0	42	na	na	0	0	20	Moderate DOM on Combustor, Add IWS

TABLE I-6. MODEL GROUP SELECTION FOR THE FINAL 6 PERCENT BTF PROPOSAL

EER ID No.	Type	Current APCD	% Emissions Reduction Required to meet the Final 6 Percent BTF Proposal										Model Group No.	Required Add-on Flue Gas Control		
			Hg	PM	SVM	LVM	HCl/Cl2	HC	CO	HC-Byp	CO-Byp	APCD Temp			TEQ	
313	LWAK	FF	0	0	99	21	86	0	0	0	0	na	na	0	6	Add IWS
314	LWAK	FF	0	33	100	0	75	0	0	0	0	na	na	0	6	Add IWS
336	LWAK	FF	0	0	75	0	75	0	25	0	0	na	na	0	20	Moderate DOM on Combustor, Add IWS
209	INC	WHB, FF/VQ/PT/DM	0	0	0	0	0	0	0	0	0	na	na	75	44	Add AB, CI
210	INC	FF/S	75	0	50	75	0	0	0	0	0	na	na	50	9	Add RH, CI, FF
211	INC	SS/PT/VS	0	0	75	75	0	0	0	0	0	na	na	0	6	Add FF
212	INC	FF/S	0	33	0	0	28	0	0	0	0	na	na	0	7	Moderate DOM on Existing FF and WS
214	INC	IWS	84	30	81	24	0	0	0	0	0	na	na	0	9	Add RH, CI, FF
216	INC	HES / WS	61	51	84	10	0	0	0	0	0	na	na	0	9	Add RH, CI, FF
221	INC	PT	0	0	0	0	0	0	0	0	0	na	na	52	9	Add RH, CI, FF
222	INC	WHB/SD/ESP/Q/PBS	50	0	0	0	0	0	0	0	0	na	na	81	8	Add CI
229	INC	WHB/ACS/HCS/CS	0	21	0	0	10	0	75	0	0	na	na	97	70	Moderate DOM on Existing WS, Add AB, RH, CB, FF
324	INC	?	25	28	96	15	50	0	0	0	0	na	na	75	13	Add PT, RH, CI, FF
325	INC	SD/FF/WS/ IWS	52	0	0	0	0	0	0	0	0	na	na	91	8	Add CI
327	INC	SD/FF/WS/ ESP	97	0	0	0	0	0	0	0	0	na	na	98	61	Add RH, CB
329	INC	PT/IWS	75	52	75	75	0	0	0	0	0	na	na	50	9	Add RH, CI, FF
330	INC	QT/WS/DM	0	63	64	0	0	0	0	0	0	na	na	99	9	Add RH, CI, FF
331	INC	PT/IWS	23	0	97	0	0	50	0	0	0	na	na	0	54	Moderate DOM on Combustor, Add RH, CI, FF
332	INC	WS	0	87	0	0	0	0	90	0	0	na	na	75	25	Add AB, RH, CI, FF
333	INC	SD/FF	50	0	0	50	0	0	0	0	0	na	na	0	67	Moderate DOM on existing FF, Add CI
334	INC	WS/ESP/PT	0	75	98	83	0	0	33	0	0	na	na	90	54	Moderate DOM on Combustor, Add RH, CI, FF
337	INC	WHB/DA/DI/FF	84	0	0	58	0	0	0	0	0	na	na	0	67	Moderate DOM on existing FF, Add CI
338	INC	QC/FF/SS/C/HES/DM	49	0	0	0	0	0	0	0	0	na	na	0	8	Add CI
339	INC	AT/PT/RJS/ESP	75	0	0	0	0	0	0	0	0	na	na	415	61	Add RH, CB
340	INC	WHB/ESP/WS	0	0	0	0	0	0	0	0	0	na	na	444	32	Add Q, CI
341	INC	DA/DI/FF/HEPA/CA	0	0	0	0	0	0	13	0	0	na	na	50	53	Moderate DOM on Combustor, Add CI
342	INC	WHB/QC/S/VS/DM	0	0	0	0	0	0	0	0	0	na	na	0	1	None
344	INC	QC/VS/PT/DM	50	0	0	0	0	0	0	0	0	na	na	0	9	Add RH, CI, FF
346	INC	C/QC/VS/PT/DM	0	0	0	0	0	0	0	0	0	na	na	0	1	None
347	INC	C/QC/VS/S/DM	0	0	0	0	0	0	0	0	0	na	na	0	1	None
348	INC	QC/AS/IWS	75	0	0	0	0	0	0	0	0	na	na	75	61	Add RH, CB
349	INC	QC/FF/QC/PT	0	0	0	75	0	0	0	0	0	na	na	350	6	Add FF
350	INC	WHB/HE/FF	0	0	75	75	0	50	0	0	0	na	na	0	55	Moderate DOM on Combustor, Add FF
351	INC	GC/C/ FF	0	0	0	0	0	25	32	0	0	na	na	290	53	Moderate DOM on Combustor, Add CB
353	INC	QC/VS/DM/ ESP	0	32	0	42	50	0	0	0	0	na	na	0	22	Moderate DOM on Existing ESP, Add PT
354	INC	QC/AS/VS/DM/IWS	0	0	0	0	0	0	0	0	0	na	na	0	1	None
356	INC	QC/AS/FN/DM	0	54	0	0	0	50	0	0	0	na	na	75	54	Moderate DOM on Combustor, Add RH, CB, FF
357	INC	QC/VS/PT/IWS	0	40	50	0	0	0	0	0	0	na	na	0	19	Moderate DOM on Existing VS
358	INC	QC/VS/C/CT/S/DM	50	53	0	0	0	0	0	0	0	na	na	0	9	Add RH, CI, FF
359	INC	WHB/ FF/S	75	39	77	100	0	0	50	0	0	na	na	375	54	Moderate DOM on Combustor, Add RH, CI, FF
400	INC	SD/FF	0	0	82	0	0	0	0	0	0	na	na	400	49	Add CI, FF
500	INC	QC/VS/KOV/ DM	0	0	0	0	0	25	0	0	0	na	na	0	94	Moderate DOM on Combustor
502	INC	WHB/QC/PBC/ VS/ES	50	58	92	0	0	0	0	0	0	na	na	0	9	Add RH, CB, FF
503	INC	HTHE/LT/HE/FF	0	47	85	75	0	50	75	0	0	na	na	285	97	Add AB, CB, FF
504	INC	VS/C	98	28	0	30	0	0	0	0	0	na	na	0	63	Moderate DOM on existing VS, Add RH, CB

TABLE I-6. MODEL GROUP SELECTION FOR THE FINAL 6 PERCENT BTF PROPOSAL

EER ID No.	Type	Current APCD	% Emissions Reduction Required to meet the Final 6 Percent BTF Proposal											Model Group No.	Required Add-on Flue Gas Control
			Hg	PM	SVM	LVM	HCl/Cl2	HC	CO	HC-Byp	CO-Byp	APCD Temp	TEQ		
600	INC	WHB/QC/PT/IWS	0	0	0	75	0	0	0	50	na	na	0	55	Moderate DOM on Combustor, Add FF
700	INC	SD/RJS/VWS	0	66	100	85	0	0	0	0	na	na	0	6	Add FF
701	INC	V/S/PT	0	65	0	75	0	0	0	0	na	na	0	9	Add RH, CI, FF
702	INC	QT/S/C	0	82	75	0	0	0	0	0	na	na	75	9	Add RH, CI, FF
703	INC	WHB	75	0	0	0	73	0	0	0	na	na	0	20	Add Q, CB, PT
704	INC	NONE	0	20	0	0	49	0	0	0	na	na	0	4	Add IWS
705	INC	QT/V/S/ESP/PT	0	63	43	33	0	0	25	0	na	na	75	54	Moderate DOM on Combustor, Add RH, CI, FF
706	INC	QT/HS/C	0	65	0	0	0	0	0	0	na	na	0	19	Moderate DOM on Existing VS
707	INC	QT/WS	0	94	75	75	0	0	0	99	na	na	50	25	Add AB, RH, CI, FF
708	INC	WS/ESP	0	43	0	0	0	0	0	0	na	na	75	28	Moderate DOM on Existing ESP, Add RH, CB
709	INC	NONE	50	70	0	0	25	0	0	0	na	na	0	42	Add RH, CB, IWS
710	INC	QT/OS/C/S	0	44	75	0	75	0	63	0	na	na	0	33	Moderate DOM on Combustor, Add IWS
711	INC	C/V/S/AS	0	53	0	0	0	0	0	0	na	na	75	9	Add RH, CI, FF
712	INC	NONE	0	50	0	0	0	0	0	0	na	na	0	6	Add FF
713	INC	V/S/PT	0	77	0	0	0	0	0	0	na	na	0	54	Moderate DOM on Combustor, Add RH, CB, FF
714	INC	WS	0	18	75	0	0	0	50	0	na	na	75	9	Add RH, CI, FF
725	INC	WS/QT	0	30	0	0	0	0	0	0	na	na	50	12	Moderate DOM on Existing WS, Add FF
726	INC	QC/CS/DM/V/S	75	0	75	75	0	0	48	0	na	na	0	54	Moderate DOM on Combustor, Add RH, CB, FF
727	INC	GC/C/FF	0	82	75	50	0	0	96	0	na	na	0	21	Add AB, FF
728	INC	QT/PT/V/S	0	66	0	0	0	0	0	0	na	na	75	63	Moderate DOM on existing VS, Add RH, CB
784	INC	NONE	0	63	75	50	91	0	0	0	na	na	0	4	Add IWS
805	INC	QT/Q/S/V/S/ES/PBS	0	72	0	0	10	0	20	85	na	na	75	98	Small DOM on Existing WS, Add AB, RH, CI, FF
806	INC	C/V/S	79	65	77	0	0	0	74	75	na	na	0	25	Add AB, RH, CI, FF
807	INC	C/W/HB/V/Q/PT/HS/DM	0	47	43	24	0	0	15	0	na	na	50	54	Moderate DOM on Combustor, Add RH, CI, FF
808	INC	QT/PBS/ESP	0	22	75	75	0	0	0	2	na	na	0	55	Moderate DOM on Combustor, Add FF
809	INC	V/S	0	0	99	97	0	0	0	96	na	na	75	25	Add AB, RH, CI, FF
810	INC	Q/V/S/PBS	0	75	91	81	0	0	0	0	na	na	0	6	Add FF
824	INC	QT/V/S/PT/DM	0	0	0	11	0	0	0	0	na	na	0	95	Small DOM on Existing VS
825	INC	CCS/QC/ESP	50	77	0	0	0	0	75	75	na	na	50	25	Add AB, RH, CI, FF
902	INC	QT/V/S/PT	37	30	0	0	0	0	0	0	na	na	0	9	Add RH, CI, FF
904	INC	?	50	0	75	0	75	0	17	0	na	na	0	93	Moderate DOM on Combustor, Add RH, CB, IWS
905	INC	QT/V/S/AS/CS	0	50	100	38	0	0	0	0	na	na	0	6	Add FF
906	INC	QT/PT	0	79	50	75	38	0	0	0	na	na	75	3	Moderate DOM on Existing WS, Add RH, CB, FF
914	INC	?	0	0	0	75	58	0	75	0	na	na	95	39	Add AB, RH, CI, FF, PT
915	INC	QC/V/S/C	75	74	91	83	0	0	66	92	na	na	56	25	Add AB, RH, CI, FF

TABLE I-7. CHARACTERIZATION OF MODEL PLANTS FOR THE FINAL RECOMMENDED 6% FLOOR

Source Group	Model Plant Number	Required Equipment	Reported Ratio**	Site ID	Size Category	Facility Name	Existing APCD	Flue gas Flowrate (acfm)	Assigned Flue Gas Flowrate (acfm)	Equivalent HCl Conc (ppm)
CK	1	None	3	320 *	L	Lafarge	FF	nr	370,000	
CK	1	None	1	315 *	S	Southdown	FF	102,042	147,000	
CK	2	Moderate DOM on existing ESP	1	208 *	L	Keystone	ESP	307,644	370,000	
CK	3	Add FF	1	205 *	L	Holnam	ESP	253,556	370,000	
CK	3	Add FF	1	207 *	S	Keystone	MC / ESP	90,681	147,000	
CK	3	Add FF	4	318 *	S	Texas Industries	ESP	152,675	147,000	
CK	3	Add FF	1	321 *	S	Lafarge	ESP	59,542	147,000	
CK	3	Add FF	1	405 *	S	Ash Grove	ESP	194,905	147,000	
CK	3	Add FF	1	406 *	S	Ash Grove	ESP	190,180	147,000	
CK	4	Add Cl,FF	1	401	S	Ash Grove	ESP	172,481	147,000	
CK	5	Add Q,Cl,FF	1	306 *	L	National	MC,FF	280,868	370,000	
CK	5	Add Q,Cl,FF	2	302 *	S	Lafarge	ESP	130,576	147,000	
CK	5	Add Q,Cl,FF	1	323 *	S	Lafarge	ESP	185,409	147,000	85
CK	5	Add Q,Cl,FF	1	403	S	Ash Grove	ESP	184,877	147,000	
CK	7	Moderate DOM on existing FF	1	303	L	Lone Star	QC,FF	408,681	370,000	
CK	17	Add Q	1	317 *	L	Southdown	FF	422,190	370,000	
CK	18	Add Q, FF	1	203	L	Holnam	ESP	291,645	370,000	85
CK	18	Add Q, FF	1	204 *	L	Holnam	ESP	693,613	370,000	
CK	18	Add Q, FF	1	206	L	Holnam	ESP	348,510	370,000	85
CK	18	Add Q, FF	1	304 *	L	Lone Star	ESP	300,367	370,000	
CK	18	Add Q, FF	1	309	L	River Cement	MC / ESP	665,839	370,000	
CK	18	Add Q, FF	1	319	L	Continental	ESP	344,250	370,000	85
CK	18	Add Q, FF	2	200 *	S	Giant	FF	123,584	147,000	
CK	18	Add Q, FF	2	201 *	S	Giant	FF	137,945	147,000	
CK	18	Add Q, FF	1	228 *	S	Ash Grove	ESP	148,537	147,000	
CK	18	Add Q, FF	2	300 *	S	Essroc	ESP	164,692	147,000	
CK	18	Add Q, FF	2	305	S	Medusa	ESP	196,903	147,000	85
CK	18	Add Q, FF	1	322 *	S	Lafarge	ESP	112,269	147,000	
CK	18	Add Q, FF	1	335	S	Medusa	ESP	100,378	147,000	85
CK	20	Moderate DOM on existing ESP, Add Q	1	404	L	Ash Grove	ESP	265,721	370,000	85
CK	20	Moderate DOM on existing ESP, Add Q	3	308 *	S	North Texas	ESP	162,599	147,000	
CK	28	Moderate DOM on Combustor, Add Cl, FF	1	301	S	Essroc	FF	185,409	147,000	
CK	35	Moderate DOM on Combustor, Add Q	1	316 *	L	Southdown	FF	nr	370,000	
CK	41	Moderate DOM on Combustor, Add Q, FF	1	402 *	S	Ash Grove	ESP	187,605	147,000	
CK	42	Moderate DOM on Existing FF, Add Q	1	202 *	L	Heartland	FF	221,421	370,000	
INC	1	None	1	221	L	Rollins	PT	51,114	60,800	
INC	1	None	1	711 *	L	Chevron Chemical	C/VS/AS	52,907	60,800	
INC	1	None	1	712 *	L	Nepera	NONE	65,256	60,800	
INC	1	None	1	346 *	M	Department of Army	C/QC/VS/PT/DM	21,812	22,100	
INC	1	None	1	347 *	M	Department of Army	C/QC/VS/S/DM	10,795	22,100	
INC	1	None	1	354 *	M	Dow Chemical	QC/AS/VS/DM/IWS	27,383	22,100	
INC	1	None	1	358 *	M	Eli Lilly	QC/VS/C/CT/S/DM	14,406	22,100	
INC	1	None	1	706 *	M	Ciba-Geigy	QT/HS/C	nr	22,100	
INC	1	None	1	902 *	M	Rocky Mountain Arsenal	QT/VS/PT	25,436	22,100	
INC	1	None	1	342 *	S	Upjohn	WHB/QC/S/VS/DM	5,640	3,900	
INC	1	None	1	728 *	S	Eli Lilly	QT/PT/VS	5,819	3,900	
INC	2	Add PT	1	704 *	S	Ashland	NONE	5,011	3,900	92
INC	4	Add IWS	1	324 *	M	Allied	?	12,120	22,100	92
INC	4	Add IWS	1	784 *	S	Cook Composites	NONE	nr	3,900	92
INC	5	Add AB, IWS	1	914 *	M	Vertac Superfund	?	25,849	22,100	92
INC	6	Add FF	1	211 *	L	LWD	SS/PT/VS	43,596	60,800	

TABLE I-7. CHARACTERIZATION OF MODEL PLANTS FOR THE FINAL RECOMMENDED 6% FLOOR

Source Group	Model Plant Number	Required Equipment	Reported Ratio**	Site ID	Size Category	Facility Name	Existing APCD	Flue gas Flowrate (acfm)	Assigned Flue Gas Flowrate (acfm)	Equivalent HCl Conc (ppm)
INC	6	Add FF	1	400 *	L	Marine Shale	SD/FF	179,333	60,800	
INC	6	Add FF	1	330 *	M	General Electric	QT/WS/DM	10,345	22,100	
INC	6	Add FF	1	700 *	M	Dupont	SD/RIS/VS/WS	30,185	22,100	92
INC	6	Add FF	1	701 *	M	Eli Lilly	VS/PT	9,208	22,100	
INC	6	Add FF	1	702 *	M	Dupont	QT/S/C	nr	22,100	
INC	6	Add FF	2	714 *	M	Olin Chemical	WS	19,185	22,100	92
INC	6	Add FF	1	810 *	M	Tennessee Eastman	Q/V/SPBS	28,434	22,100	
INC	6	Add FF	2	349 *	S	Radford Army Ammo Plant	QC/FF/QC/PT	5,653	3,900	
INC	6	Add FF	1	905 *	S	Valsicol Chemical	QT/VS/AS/CS	nr	3,900	92
INC	8	Add CI	1	222 *	L	WTI	WHB/SD/ESP/Q/PBS	93,718	60,800	
INC	8	Add CI	1	327	L	Aptus	SD/FF/WS/ESP	49,572	60,800	
INC	8	Add CI	1	338 *	L	Dupont	QC/FF/SS/C/HES/DM	65,598	60,800	
INC	8	Add CI	1	325 *	M	Aptus	SD/FF/WS/ IWS	23,127	22,100	
INC	9	Add RH, CI, FF	1	210 *	L	LWD	FFS	96,107	60,800	
INC	9	Add RH, CI, FF	1	216 *	L	Rollins	HES / WS	40,002	60,800	
INC	9	Add RH, CI, FF	1	329 *	L	Dupont	PT/IWS	53,489	60,800	
INC	9	Add RH, CI, FF	1	214 *	M	Rollins	IWS	34,655	22,100	
INC	9	Add RH, CI, FF	1	344 *	M	Department of Army	QC/VS/PT/DM	13,886	22,100	
INC	9	Add RH, CB, FF	1	502 *	S	Pfizer	WHB/QC/PBC/VS/ES	6,647	3,900	92
INC	12	Moderate DOM on Existing WS, Add FF	1	906 *	S	Monsanto	QT/PT	2,738	3,900	
INC	17	Moderate DOM on Existing ESP	1	708 *	S	Burroughs Wellcome	WS/ESP	3,687	3,900	
INC	19	Moderate DOM on Existing VS	1	357 *	M	Department of Energy	QC/VS/PT/IWS	20,778	22,100	
INC	20	Add Q, CB, PT	1	703 *	S	Aristech	WHB	1,873	3,900	92
INC	21	Add AB, FF	1	707 *	L	Dupont	QT/WS	58,120	60,800	
INC	21	Add AB, FF	1	809 *	L	Tennessee Eastman	VS	40,524	60,800	92
INC	21	Add AB, FF	1	503 *	S	Lake City Army Ammo Plant	HTHE/LTHE/FF	4,747	3,900	
INC	21	Add AB, FF	1	727 *	S	Iowa Army Ammo Plant	GC/FF	3,043	3,900	92
INC	22	Moderate DOM on Existing ESP, Add PT	1	353 *	M	Dow Chemical	QC/VS/DM/ESP	nr	22,100	
INC	25	Add AB, RH, CI, FF	1	806 *	M	Amoco Oli	C/VS	20,641	22,100	92
INC	25	Add AB, RH, CI, FF	1	825 *	M	General Electric	CCS/QC/ESP	21,363	22,100	92
INC	25	Add AB, RH, CI, FF	1	915 *	M	Eastman Kodak	QC/VS/C	nr	22,100	92
INC	30	Moderate DOM on existing WS	1	212 *	L	LWD	FF/S	44,610	60,800	
INC	30	Moderate DOM on existing WS	1	725	S	Zeneca	WS/QT	1,489	3,900	
INC	33	Moderate DOM on Combustor, Add IWS	1	710 *	M	Dupont	QT/OS/CS	nr	22,100	92
INC	33	Moderate DOM on Combustor, Add IWS	1	904 *	S	First Chemical	?	5,950	3,900	92
INC	40	Add RH, CB, PT	1	709 *	S	Cargill Chemical	NONE	3,123	3,900	
INC	53	Moderate DOM on Combustor, Add CI	1	805 *	M	American Cyanamid	QT/OS/VS/ES/PBS	31,943	22,100	
INC	53	Moderate DOM on Combustor, Add CB	1	351 *	S	Iowa Army Ammo Plant	GC/C/FF	3,457	3,900	
INC	54	Moderate DOM on Combustor, Add RH, CI, FF	1	359 *	M	Atotech	WHB/FFS	13,802	22,100	
INC	54	Moderate DOM on Combustor, Add RH, CB, FF	1	726 *	S	Shell Oil	QC/CS/DM/VS	3,669	3,900	
INC	55	Moderate DOM on Combustor, Add FF	1	331 *	L	Ross	PT/IWS	44,379	60,800	
INC	55	Moderate DOM on Combustor, Add FF	1	334 *	L	3M	WS/ESP/PT	40,599	60,800	
INC	55	Moderate DOM on Combustor, Add FF	1	600 *	L	Dow Chemical	WHB/QC/PT/IWS	43,839	60,800	
INC	55	Moderate DOM on Combustor, Add FF	1	350 *	M	Dupont	WHB/HE/FF	15,883	22,100	
INC	55	Moderate DOM on Combustor, Add FF	1	808 *	M	Dow Chemical	QT/PBS/ESP	35,720	22,100	
INC	55	Moderate DOM on Combustor, Add FF	1	339 *	S	Dupont	AT/PT/RIS/ESP	6,263	3,900	
INC	61	Add RH, CB	1	348 *	S	Occidental Chemical	QC/AS/IWS	nr	3,900	
INC	63	Moderate DOM on existing VS, Add RH, CB	1	504 *	M	Chevron Chemical	VS/C	32,804	22,100	92
INC	66	Moderate DOM on existing FF	1	333 *	L	Trade Waste	SD/FF	42,042	60,800	
INC	67	Moderate DOM on existing FF, Add CI	2	337 *	M	Olin Chemical	WHB/DA/DI/FF	13,807	22,100	
INC	72	Add Q	1	340 *	M	Miles	WHB/ESP/WS	16,003	22,100	
INC	81	Add AB	1	209 *	M	Landlaw	WHB, FF/VQ/PT/DM	21,716	22,100	

TABLE I-7. CHARACTERIZATION OF MODEL PLANTS FOR THE FINAL RECOMMENDED 6% FLOOR

Source Group	Model Plant Number	Required Equipment	Reported Ratio**	Site ID	Size Category	Facility Name	Existing APCD	Flue gas Flowrate (acfm)	Assigned Flue Gas Flowrate (acfm)	Equivalent HCl Conc (ppm)
INC	81	Add AB	1	332	M	Thermalchem	WS	20,208	22,100	
INC	82	Moderate DOM on Existing Combustor and ESP	1	705	M	Ciba-Geigy	QT/VS/ESP/PT	36,116	22,100	
INC	94	Moderate DOM on Combustor	1	500	L	Chevron	QC/VS/KOV/DM	49,822	60,800	
INC	94	Moderate DOM on Combustor	1	356	S	Dupont	QC/AS/FN/DM	5,100	3,900	
INC	94	Moderate DOM on Combustor	1	713	S	Pfizer	VS/PT	2,625	3,900	
INC	95	Small DOM on Existing VS	1	824	S	Penwalt	QT/VS/PT/DM	1,086	3,900	
INC	96	Moderate DOM on Existing Combustor and VS	1	807	M	Bros Lagoon Site	C/WHB/VQ/PT/HS/DM	34,109	22,100	
INC	111	Moderate DOM on Combustor; Add Q	1	341	M	Glaxo	DA/DI/FF/HEPA/CA	nr	22,100	
INC	112	Moderate DOM on Existing WS; Add AB	1	229	S	Vulcan Materials	WHB/ACS/HCS/CS	1,171	3,900	
LWAK	1	None	1	224	M (Lo HC)	Solite	FF	39,049	40,500	
LWAK	1	None	1	226	M (Lo HC)	Solite	FF	nr	40,500	
LWAK	2	Add FF	1	314	M (Lo HC)	Solite	FF	36,793	40,500	
LWAK	3	Add Cl, FF	2	307	M (Lo HC)	Nortlie	FF/VS	49,050	40,500	
LWAK	5	Add ST	1	223	M (Hi HC)	Solite	FF	29,092	40,500	1570
LWAK	6	Add IWS	1	313	M (Hi HC)	Solite	FF	36,793	40,500	1570
LWAK	16	Moderate DOM on Combustor; Add FF	1	311	M (Hi HC)	Solite	FF	51,627	40,500	
LWAK	16	Moderate DOM on Combustor; Add FF	1	312	M (Hi HC)	Solite	FF	47,698	40,500	
LWAK	16	Moderate DOM on Combustor; Add FF	1	310	M (Lo HC)	Solite	FF	47,770	40,500	
LWAK	16	Moderate DOM on Combustor; Add FF	1	336	M (Lo HC)	Solite	FF	30,336	40,500	875
LWAK	17	Add AB, Q, FF	1	227	M (Hi HC)	Solite	FF	38,796	40,500	
LWAK	18	Moderate DOM on Combustor	1	225	M (Lo HC)	Solite	FF	38,270	40,500	

* Facility has been assigned to model group based on assumed emission level. Facility did not report the necessary emission value, therefore one was assigned based on the distribution of reported values from other facilities.

** Reported Ratio is equal to the number of total units located at a site divided by the number of units for which information was reported.

Often a facility will report data for only one unit even when the facility has two or three units at the particular site, since the single reported unit can be considered as representative of the other nonreported units.

nr = not reported

TABLE I-8. CHARACTERIZATION OF MODEL PLANTS FOR THE FINAL 6% BTF PROPOSAL

Source Group	Model Plant Number	Required Equipment	Reported Ratio**	Site ID	Size Category	Facility Name	Existing APCD	Flue gas Flowrate (acfm)	Assigned Flue Gas Flowrate (acfm)	Equivalent HCl Conc (ppm)
CK	1	None	3	320 *	L	Lafarge	FF		370,000	
CK	1	None	1	315 *	S	Southdown	FF	102,042	147,000	
CK	2	Moderate DOM on existing ESP	1	208 *	L	Keystone	ESP	307,644	370,000	
CK	3	Add FF	1	205 *	L	Holnam	ESP	253,556	370,000	
CK	3	Add FF	1	207 *	S	Keystone	MC / ESP	90,681	147,000	
CK	3	Add FF	4	318 *	S	Texas Industries	ESP	152,675	147,000	
CK	3	Add FF	1	405 *	S	Ash Grove	ESP	194,905	147,000	
CK	4	Add Cl,FF	1	303 *	L	Lone Star	QC/FF	408,681	370,000	
CK	4	Add Cl,FF	2	302 *	S	Lafarge	ESP	130,576	147,000	
CK	4	Add Cl,FF	1	321 *	S	Lafarge	ESP	59,542	147,000	
CK	4	Add Cl,FF	1	401 *	S	Ash Grove	ESP	172,481	147,000	
CK	4	Add Cl, FF	1	406 *	S	Ash Grove	ESP	190,180	147,000	
CK	5	Add Q,Cl,FF	1	202 *	L	Heartland	FF	221,421	370,000	
CK	5	Add Q,Cl,FF	1	203 *	L	Holnam	ESP	291,645	370,000	85
CK	5	Add Q,Cl,FF	1	304 *	L	Lone Star	ESP	300,367	370,000	
CK	5	Add Q,Cl,FF	1	306 *	L	National	MC/FF	280,868	370,000	
CK	5	Add Q,Cl,FF	1	309 *	L	River Cement	MC / ESP	665,839	370,000	85
CK	5	Add Q,Cl,FF	1	319 *	L	Continental	ESP	344,250	370,000	
CK	5	Add Q,Cl,FF	1	228 *	S	Ash Grove	ESP	148,537	147,000	
CK	5	Add Q,Cl,FF	2	305 *	S	Medusa	ESP	196,903	147,000	85
CK	5	Add Q,Cl,FF	3	308 *	S	North Texas	ESP	162,599	147,000	
CK	5	Add Q,Cl,FF	1	323 *	S	Lafarge	ESP	185,409	147,000	85
CK	5	Add Q,Cl,FF	1	335 *	S	Medusa	ESP	100,378	147,000	85
CK	17	Add Q	1	317 *	L	Southdown	FF	422,190	370,000	
CK	18	Add Q, FF	1	204 *	L	Holnam	ESP	693,613	370,000	
CK	18	Add Q, FF	1	206 *	L	Holnam	ESP	348,510	370,000	85
CK	18	Add Q, FF	2	200 *	S	Giant	FF	123,584	147,000	
CK	18	Add Q, FF	2	201 *	S	Giant	FF	137,945	147,000	
CK	18	Add Q, FF	2	300 *	S	Essroc	ESP	164,692	147,000	
CK	18	Add Q, FF	1	322 *	S	Lafarge	ESP	112,269	147,000	
CK	20	Moderate DOM on existing ESP, Add Q	1	404 *	L	Ash Grove	ESP	265,721	370,000	85
CK	28	Moderate DOM on Combustor, Add Cl, FF	1	301 *	S	Essroc	FF	185,409	147,000	
CK	33	Moderate DOM on Existing ESP, Add Q, CB	1	403 *	S	Ash Grove	ESP	184,877	147,000	
CK	37	Moderate DOM on Combustor, Add Q, Cl, FF	1	316 *	L	Southdown	FF		370,000	
CK	37	Moderate DOM on Combustor, Add Q, Cl, FF	1	402 *	S	Ash Grove	ESP	187,605	147,000	
INC	1	None	1	346 *	M	Department of Army	C/QC/VS/PT/DM	21,812	22,100	
INC	1	None	1	347 *	M	Department of Army	C/QC/VS/S/DM	10,795	22,100	
INC	1	None	1	354 *	M	Dow Chemical	QC/AS/VS/DM/IWS	27,383	22,100	
INC	1	None	1	342 *	S	Upjohn	WHB/QC/VS/S/DM	5,640	3,900	
INC	3	Moderate DOM on Existing WS, Add RH, CB, FF	1	906 *	S	Monsanto	QT/PT	2,738	3,900	92
INC	4	Add IWS	1	704 *	S	Ashland	NONE	5,011	3,900	92
INC	4	Add IWS	1	784 *	S	Cook Composites	NONE		3,900	92
INC	6	Add FF	1	211 *	L	LWD	SS/PT/VS	43,596	60,800	
INC	6	Add FF	1	712 *	L	Nepera	NONE	65,256	60,800	
INC	6	Add FF	1	700 *	M	Dupont	SD/RIS/VS/WS	30,185	22,100	
INC	6	Add FF	1	810 *	M	Tennessee Eastman	Q/VS/PBS	28,434	22,100	
INC	6	Add FF	2	349 *	S	Radford Army Ammo Plant	QC/FF/QC/PT	5,653	3,900	
INC	6	Add FF	1	905 *	S	Valsicol Chemical	QT/VS/AS/CS		3,900	92
INC	7	Moderate DOM on Existing FF and WS	1	212 *	L	LWD	FF/S	44,610	60,800	
INC	8	Add Cl	1	222 *	L	WTI	WHB/SD/ESP/Q/PBS	93,718	60,800	
INC	8	Add Cl	1	338 *	L	Dupont	QC/FF/SS/C/HES/DM	65,598	60,800	

TABLE I-8. CHARACTERIZATION OF MODEL PLANTS FOR THE FINAL 6% BTF PROPOSAL

Source Group	Model Plant Number	Required Equipment	Reported Ratio**	Site ID	Size Category	Facility Name	Existing APCD	Flue gas Flowrate (acfm)	Assigned Flue Gas Flowrate (acfm)	Equivalent HCl Conc (ppm)
INC	8	Add CI	1	325 *	M	Aptus	SD/FF/WS/ IWS	23,127	22,100	
INC	9	Add RH, CI, FF	1	210 *	L	LWD	FF/S	96,107	60,800	
INC	9	Add RH, CI, FF	1	216 *	L	Rollins	HES / WS	40,002	60,800	
INC	9	Add RH, CI, FF	1	221 *	L	Rollins	PT	51,114	60,800	
INC	9	Add RH, CI, FF	1	329 *	L	Dupont	PT/IWS	53,489	60,800	
INC	9	Add RH, CI, FF	1	711 *	L	Chevron Chemical	C/VS/AS	52,907	60,800	
INC	9	Add RH, CI, FF	1	214 *	M	Rollins	IWS	34,655	22,100	
INC	9	Add RH, CI, FF	1	330 *	M	General Electric	QT/WS/DM	10,345	22,100	
INC	9	Add RH, CI, FF	1	344 *	M	Department of Army	QC/VS/PT/DM	13,886	22,100	
INC	9	Add RH, CI, FF	1	358 *	M	Eli Lilly	QC/VS/C/CT/S/DM	14,406	22,100	
INC	9	Add RH, CI, FF	1	701 *	M	Eli Lilly	VS/PT	9,208	22,100	92
INC	9	Add RH, CI, FF	1	702 *	M	Dupont	QT/S/C	22,100	22,100	
INC	9	Add RH, CI, FF	2	714 *	M	Ohlin Chemical	WS	19,185	22,100	92
INC	9	Add RH, CI, FF	1	902 *	M	Rocky Mountain Arsenal	QT/VS/PT	25,436	22,100	
INC	9	Add RH, CB, FF	1	502 *	S	Pfizer	WHB/QC/PBC/VS/ES	6,647	3,900	
INC	12	Moderate DOM on Existing WS, Add FF	1	725 *	S	Zeneca	WS/QT	1,489	3,900	
INC	13	Add PT, RH, CI, FF	1	324 *	M	Allied	?	12,120	22,100	92
INC	19	Moderate DOM on Existing VS	1	357 *	M	Department of Energy	QC/VS/PT/IWS	20,778	22,100	
INC	19	Moderate DOM on Existing VS	1	706 *	M	Ciba-Geigy	QT/HS/C	22,100	22,100	
INC	20	Add Q, CB, PT	1	703 *	S	Aristech	WHB	1,873	3,900	92
INC	21	Add AB, FF	1	727 *	S	Iowa Army Ammo Plant	GC/C/FF	3,043	3,900	92
INC	22	Moderate DOM on Existing ESP, Add PT	1	353 *	M	Dow Chemical	QC/VS/DM/ ESP	22,100	22,100	
INC	25	Add AB, RH, CI, FF	1	707 *	L	Dupont	QT/WS	58,120	60,800	92
INC	25	Add AB, RH, CI, FF	1	809 *	L	Tennessee Eastman	VS	40,524	60,800	
INC	25	Add AB, RH, CI, FF	1	332 *	M	Thermalken	WS	20,208	22,100	
INC	25	Add AB, RH, CI, FF	1	806 *	M	Anoco Oli	C/VS	20,641	22,100	92
INC	25	Add AB, RH, CI, FF	1	825 *	M	General Electric	CCS/QC/ESP	21,363	22,100	92
INC	25	Add AB, RH, CI, FF	1	915 *	M	Eastman Kodak	QC/VS/C	22,100	22,100	92
INC	28	Moderate DOM on Existing ESP, Add RH, CB	1	708 *	S	Burroughs Wellcome	WS/ESP	3,687	3,900	
INC	32	Add Q, CI	1	340 *	M	Miles	WHB/ESP/WS	16,003	22,100	92
INC	33	Moderate DOM on Combustor, Add IWS	1	710 *	M	Dupont	QT/OS/C/S	22,100	22,100	92
INC	39	Add AB, RH, CI, FF, PT	1	914 *	M	Vertac Superfund	?	25,849	22,100	
INC	42	Add RH, CB, IWS	1	709 *	S	Cargill Chemical	WHB, FF/VQ/PT/DM	3,123	3,900	
INC	44	Add AB, CI	1	209 *	M	Laidlaw	SD/FF	21,716	22,100	
INC	49	Add CI, FF	1	400 *	L	Marine Shale	SD/FF	179,333	60,800	
INC	53	Moderate DOM on Combustor, Add CI	1	341 *	M	Glaxo	DA/DI/FF/HEPA/CA	22,100	22,100	
INC	53	Moderate DOM on Combustor, Add CB	1	351 *	S	Iowa Army Ammo Plant	GC/C/ FF	3,457	3,900	
INC	54	Moderate DOM on Combustor, Add RH, CI, FF	1	331 *	L	Ross	PT/IWS	44,379	60,800	
INC	54	Moderate DOM on Combustor, Add RH, CI, FF	1	334 *	L	3M	WS/ESP/PT	40,599	60,800	
INC	54	Moderate DOM on Combustor, Add RH, CI, FF	1	359 *	M	Atocchem	WHB/FF/S	13,802	22,100	
INC	54	Moderate DOM on Combustor, Add RH, CI, FF	1	705 *	M	Ciba-Geigy	QT/VS/ESP/PT	36,116	22,100	
INC	54	Moderate DOM on Combustor, Add RH, CI, FF	1	807 *	M	Bros Lagoon Site	C/WHB/VQ/PT/HS/DM	34,109	22,100	
INC	54	Moderate DOM on Combustor, Add RH, CB, FF	1	356 *	S	Dupont	QC/AS/FN/DM	5,100	3,900	
INC	54	Moderate DOM on Combustor, Add RH, CB, FF	1	713 *	S	Pfizer	VS/PT	2,625	3,900	
INC	54	Moderate DOM on Combustor, Add RH, CB, FF	1	726 *	S	Shell Oil	QC/CS/DM/VS	3,669	3,900	
INC	55	Moderate DOM on Combustor, Add FF	1	600 *	L	Dow Chemical	WHB/QC/PT/IWS	43,839	60,800	
INC	55	Moderate DOM on Combustor, Add FF	1	350 *	M	Dupont	WHB/HE/FF	22,100	22,100	
INC	55	Moderate DOM on Combustor, Add FF	1	808 *	M	Dow Chemical	QT/PBS/ESP	15,883	22,100	
INC	61	Add RH, CB	1	327 *	L	Aptus	SD/FF/WS/ ESP	35,720	22,100	
INC	61	Add RH, CB	1	339 *	S	Dupont	AT/PT/RIS/ESP	49,572	60,800	
INC	61	Add RH, CB	1	348 *	S	Occidental Chemical	QC/AS/IWS	6,263	3,900	
INC	63	Moderate DOM on existing VS, Add RH, CB	1	504 *	M	Chevron Chemical	VS/C	32,804	22,100	92

TABLE I-8. CHARACTERIZATION OF MODEL PLANTS FOR THE FINAL 6% BTF PROPOSAL

Source Group	Model Plant Number	Required Equipment	Reported Ratio**	Site ID	Size Category	Facility Name	Existing APCD	Flue gas Flowrate (acfm)	Assigned Flue Gas Flowrate (acfm)	Equivalent HCl Conc (ppm)
INC	63	Moderate DOM on existing VS, Add RH, CB	1	728 *	S	Eli Lilly	QT/PT/VS	5,819	3,900	
INC	67	Moderate DOM on existing FF, Add CI	1	333 *	L	Trade Waste	SD/FF	42,042	60,800	
INC	67	Moderate DOM on existing FF, Add CI	2	337 *	M	Olin Chemical	WHB/DA/DI/FF	13,807	22,100	
INC	70	Moderate DOM on Existing WS, Add AB, RH, CB, FF	1	229 *	S	Vulcan Materials	WHB/ACS/HCS/CS	1,171	3,900	
INC	93	Moderate DOM on Combustor, Add IWS, RH, CB	1	904 *	S	First Chemical	?	5,950	3,900	92
INC	94	Moderate DOM on Combustor	1	500 *	L	Chevron	QC/VS/KOV/DM	49,822	60,800	
INC	95	Small DOM on Existing VS	1	824 *	S	Penwalt	QT/VS/PT/DM	1,086	3,900	
INC	97	Add AB, CB, FF	1	503 *	S	Lake City Army Ammo Plant	HTHE/LTHE/FF	4,747	3,900	
INC	98	Small DOM on Existing WS, Add AB, RH, CI, FF	1	805 *	M	American Cyanamid	QT/QS/VS/ES/PBS	31,943	22,100	
LWAK	1	None	1	224 *	M (Lo HC)	Solite	FF	39,049	40,500	
LWAK	3	Add CI, FF	2	307 *	M (Lo HC)	Norlite	FF/VS	49,050	40,500	1570
LWAK	5	Add ST	1	223 *	M (Hi HC)	Solite	FF	29,092	40,500	
LWAK	5	Add ST	1	226 *	M (Lo HC)	Solite	FF		40,500	
LWAK	6	Add IWS	1	313 *	M (Hi HC)	Solite	FF	36,793	40,500	1570
LWAK	6	Add IWS	1	314 *	M (Lo HC)	Solite	FF	36,793	40,500	
LWAK	13	Add AB, WQ, IWS	1	227 *	M (Hi HC)	Solite	FF	38,796	40,500	1570
LWAK	19	Moderate DOM on Combustor, Add ST	1	225 *	M (Lo HC)	Solite	FF	38,270	40,500	
LWAK	20	Moderate DOM on Combustor, Add IWS	1	311 *	M (Hi HC)	Solite	FF	51,627	40,500	
LWAK	20	Moderate DOM on Combustor, Add IWS	1	312 *	M (Hi HC)	Solite	FF	47,698	40,500	
LWAK	20	Moderate DOM on Combustor, Add IWS	1	310 *	M (Lo HC)	Solite	FF	47,770	40,500	
LWAK	20	Moderate DOM on Combustor, Add IWS	1	336 *	M (Lo HC)	Solite	FF	30,336	40,500	875

* Facility has been assigned to model group based on assumed emission level. Facility did not report the necessary emission value, therefore one was assigned based on the distribution of reported values from other facilities.

** Reported Ratio is equal to the number of total units located at a site divided by the number of units for which information was reported.

Often a facility will report data for only one unit even when the facility has two or three units at the particular site, since the single reported unit can be considered as representative of the other nonreported units.

nr = not reported

TABLE I-9. COST ESTIMATES FOR MODEL PLANTS FOR THE FINAL RECOMMENDED 6% FLOOR

Source Group	Model Plant Number	Size Category	Required Equipment	Number of Sources	Capital Cost	Annualized O&M Cost	Annualized Total Cost
CK	1	L	None	3	\$K	\$K	\$K
CK	1	S	None	1	\$K	\$K	\$K
CK	2	L	Moderate DOM on existing ESP	1	\$3,136K	\$287K	\$699K
CK	3	L	Add FF	1	\$2,160K	\$616K	\$846K
CK	3	S	Add FF	8	\$934K	\$301K	\$401K
CK	4	S	Add CI,FF	1	\$1,405K	\$664K	\$826K
CK	5	L	Add Q,CI,FF	1	\$3,658K	\$1,507K	\$1,934K
CK	5	S	Add Q,CI,FF	4	\$1,937K	\$752K	\$984K
CK	7	L	Moderate DOM on existing FF	1	\$315K	\$104K	\$115K
CK	17	L	Add Q	1	\$912K	\$155K	\$275K
CK	18	L	Add Q, FF	6	\$3,072K	\$771K	\$1,121K
CK	18	S	Add Q, FF	11	\$1,467K	\$389K	\$559K
CK	20	L	Moderate DOM on existing ESP, Add Q	1	\$4,048K	\$442K	\$974K
CK	20	S	Moderate DOM on existing ESP, Add Q	3	\$2,290K	\$237K	\$538K
CK	28	S	Moderate DOM on Combustor, Add CI, FF	1	\$1,625K	\$664K	\$862K
CK	35	L	Moderate DOM on Combustor, Add Q	1	\$1,179K	\$155K	\$319K
CK	41	S	Moderate DOM on Combustor, Add Q, FF	1	\$2,113K	\$456K	\$719K
CK	42	L	Moderate DOM on Existing FF, Add Q	1	\$1,226K	\$259K	\$390K
INC	1	L	None	3	\$K	\$K	\$K
INC	1	M	None	6	\$K	\$K	\$K
INC	1	S	None	2	\$K	\$K	\$K
INC	2	S	Add PT	1	\$57K	\$90K	\$99K
INC	4	M	Add IWS	1	\$680K	\$144K	\$254K
INC	4	S	Add IWS	1	\$215K	\$97K	\$132K
INC	5	M	Add AB, IWS	1	\$1,097K	\$677K	\$843K
INC	6	L	Add FF	2	\$331K	\$169K	\$204K
INC	6	M	Add FF	7	\$143K	\$114K	\$129K
INC	6	S	Add FF	3	\$55K	\$88K	\$94K
INC	8	L	Add CI	3	\$425K	\$224K	\$280K
INC	8	M	Add CI	1	\$397K	\$147K	\$199K
INC	9	L	Add RH, CI, FF	3	\$1,069K	\$643K	\$775K
INC	9	M	Add RH, CI, FF	2	\$780K	\$383K	\$483K
INC	9	S	Add RH, CB, FF	1	\$548K	\$239K	\$310K
INC	12	S	Moderate DOM on Existing WS, Add FF	1	\$68K	\$90K	\$100K
INC	17	S	Moderate DOM on Existing ESP	1	\$180K	\$27K	\$50K
INC	19	M	Moderate DOM on Existing VS	1	\$46K	\$35K	\$47K
INC	20	S	Add Q, CB, PT	1	\$619K	\$222K	\$305K
INC	21	L	Add AB, FF	2	\$874K	\$1,444K	\$1,551K
INC	21	S	Add AB, FF	2	\$320K	\$280K	\$321K
INC	22	M	Moderate DOM on Existing ESP, Add PT	1	\$740K	\$174K	\$277K
INC	25	M	Add AB, RH, CI, FF	3	\$1,197K	\$917K	\$1,071K
INC	30	L	Moderate DOM on existing WS	1	\$195K	\$41K	\$92K
INC	30	S	Moderate DOM on existing WS	1	\$13K	\$3K	\$6K
INC	33	M	Moderate DOM on Combustor, Add IWS	1	\$834K	\$144K	\$280K
INC	33	S	Moderate DOM on Combustor, Add IWS	1	\$331K	\$97K	\$151K
INC	40	S	Add RH, CB, PT	1	\$550K	\$242K	\$316K
INC	53	S	Moderate DOM on Combustor, Add CB	1	\$457K	\$91K	\$155K
INC	54	M	Moderate DOM on Combustor, Add RH, CI, FF	1	\$934K	\$383K	\$508K
INC	54	S	Moderate DOM on Combustor, Add RH, CB, FF	1	\$664K	\$239K	\$329K
INC	55	L	Moderate DOM on Combustor, Add FF	3	\$517K	\$169K	\$234K
INC	55	M	Moderate DOM on Combustor, Add FF	2	\$297K	\$114K	\$154K
INC	61	S	Add RH, CB	2	\$493K	\$152K	\$216K
INC	63	M	Moderate DOM on existing VS, Add RH, CB	1	\$1,625K	\$334K	\$554K
INC	66	L	Moderate DOM on existing FF	1	\$52K	\$17K	\$19K
INC	67	M	Moderate DOM on existing FF, Add CI	2	\$416K	\$153K	\$206K
INC	72	M	Add Q	1	\$278K	\$48K	\$84K
INC	81	M	Add AB	2	\$417K	\$534K	\$588K
INC	82	M	Moderate DOM on Existing Combustor and ESP	1	\$432K	\$48K	\$110K
INC	94	L	Moderate DOM on Combustor	1	\$186K	\$K	\$30K
INC	94	S	Moderate DOM on Combustor	2	\$116K	\$K	\$19K

TABLE I-9. COST ESTIMATES FOR MODEL PLANTS FOR THE FINAL RECOMMENDED 6% FLOOR 2 OF 2

Source Group	Model Plant Number	Size Category	Required Equipment	Number of Sources	Capital Cost	Annualized O&M Cost	Annualized Total Cost
INC	95	S	Small DOM on Existing VS	1	\$5K	\$7K	\$8K
INC	96	M	Moderate DOM on Existing Combustor and VS	1	\$200K	\$35K	\$72K
INC	111	M	Moderate DOM on Combustor, Add Q	1	\$432K	\$48K	\$110K
INC	112	M	Moderate DOM on Existing WS, Add AB	1	\$488K	\$548K	\$622K
INC	112	S	Moderate DOM on Existing WS, Add AB	1	\$278K	\$195K	\$233K
LWAK	1	M (Lo HCl)	None	2	\$K	\$K	\$K
LWAK	2	M (Lo HCl)	Add FF	1	\$233K	\$140K	\$165K
LWAK	3	M (Lo HCl)	Add CI, FF	2	\$645K	\$330K	\$409K
LWAK	5	M (Hi HCl)	Add ST	1	\$1,229K	\$330K	\$530K
LWAK	6	M (Hi HCl)	Add IWS	1	\$1,016K	\$682K	\$847K
LWAK	16	M (Hi HCl)	Moderate DOM on Combustor, Add FF	2	\$405K	\$140K	\$193K
LWAK	16	M (Lo HCl)	Moderate DOM on Combustor, Add FF	2	\$405K	\$140K	\$193K
LWAK	17	M (Hi HCl)	Add AB, Q, FF	1	\$1,042K	\$1,405K	\$1,536K
LWAK	18	M (Lo HCl)	Moderate DOM on Combustor	1	\$172K	\$K	\$28K

TABLE I-10. COST ESTIMATES FOR MODEL PLANTS FOR THE FINAL 6% BTF PROPOSAL

Source Group	Model Plant Number	Size Category	Required Equipment	Number of Sources	Capital Cost	Annualized O&M Cost	Annualized Total Cost
CK	1	L	None	3	\$K	\$K	\$K
CK	1	S	None	1	\$K	\$K	\$K
CK	2	L	Moderate DOM on existing ESP	1	\$3,136K	\$287K	\$699K
CK	3	L	Add FF	1	\$2,160K	\$616K	\$846K
CK	3	S	Add FF	6	\$934K	\$301K	\$401K
CK	4	S	Add CI, FF	5	\$1,405K	\$664K	\$826K
CK	4	L	Add CI,FF	1	\$2,746K	\$1,352K	\$1,659K
CK	5	L	Add Q,CI,FF	6	\$3,658K	\$1,507K	\$1,934K
CK	5	S	Add Q,CI,FF	8	\$1,937K	\$752K	\$984K
CK	17	L	Add Q	1	\$912K	\$155K	\$275K
CK	18	L	Add Q, FF	2	\$3,072K	\$771K	\$1,121K
CK	18	S	Add Q, FF	7	\$1,467K	\$389K	\$559K
CK	20	L	Moderate DOM on existing ESP, Add Q	1	\$4,048K	\$442K	\$974K
CK	28	S	Moderate DOM on Combustor, Add CI, FF	1	\$1,625K	\$664K	\$862K
CK	33	S	Moderate DOM on Existing ESP, Add Q, CB	1	\$9,162K	\$924K	\$2,129K
CK	37	L	Moderate DOM on Combustor, Add Q, CI, FF	1	\$3,925K	\$1,507K	\$1,977K
CK	37	S	Moderate DOM on Combustor, Add Q, CI, FF	1	\$2,158K	\$752K	\$1,020K
INC	1	M	None	3	\$K	\$K	\$K
INC	1	S	None	1	\$K	\$K	\$K
INC	3	S	Moderate DOM on Existing WS, Add RH, CB, FF	1	\$561K	\$242K	\$316K
INC	4	S	Add IWS	2	\$215K	\$97K	\$132K
INC	6	L	Add FF	2	\$331K	\$169K	\$204K
INC	6	M	Add FF	2	\$143K	\$114K	\$129K
INC	6	S	Add FF	3	\$55K	\$88K	\$94K
INC	7	L	Moderate DOM on Existing FF and WS	1	\$247K	\$58K	\$111K
INC	8	L	Add CI	2	\$425K	\$224K	\$280K
INC	8	M	Add CI	1	\$397K	\$147K	\$199K
INC	9	S	Add RH, CB, FF	1	\$548K	\$239K	\$310K
INC	9	L	Add RH, CI, FF	5	\$1,069K	\$643K	\$775K
INC	9	M	Add RH, CI, FF	9	\$780K	\$383K	\$483K
INC	12	S	Moderate DOM on Existing WS, Add FF	1	\$68K	\$90K	\$100K
INC	13	M	Add PT, RH, CI, FF	1	\$985K	\$508K	\$640K
INC	19	M	Moderate DOM on Existing VS	2	\$46K	\$35K	\$47K
INC	20	S	Add Q, CB, PT	1	\$619K	\$222K	\$305K
INC	21	S	Add AB, FF	1	\$320K	\$280K	\$321K
INC	22	M	Moderate DOM on Existing ESP, Add PT	1	\$740K	\$174K	\$277K
INC	25	L	Add AB, RH, CI, FF	2	\$1,611K	\$1,919K	\$2,122K
INC	25	M	Add AB, RH, CI, FF	4	\$1,197K	\$917K	\$1,071K
INC	28	S	Moderate DOM on Existing ESP, Add RH, CB	1	\$673K	\$178K	\$267K
INC	32	M	Add RH, CI	1	\$637K	\$270K	\$354K
INC	33	M	Moderate DOM on Combustor, Add IWS	1	\$834K	\$144K	\$280K
INC	39	M	Add AB, RH, CI, FF, PT	1	\$1,401K	\$1,041K	\$1,228K
INC	42	S	Add RH, CB, IWS	1	\$708K	\$249K	\$348K
INC	44	M	Add AB, CI	1	\$1,493K	\$825K	\$1,042K
INC	49	L	Add CI, FF	1	\$756K	\$393K	\$484K
INC	53	S	Moderate DOM on Combustor, Add CB	1	\$457K	\$91K	\$155K
INC	53	M	Moderate DOM on Combustor, Add CI	1	\$551K	\$147K	\$225K
INC	54	S	Moderate DOM on Combustor, Add RH, CB, FF	3	\$664K	\$239K	\$329K
INC	54	L	Moderate DOM on Combustor, Add RH, CI, FF	2	\$1,254K	\$643K	\$805K
INC	54	M	Moderate DOM on Combustor, Add RH, CI, FF	3	\$934K	\$383K	\$508K
INC	55	L	Moderate DOM on Combustor, Add FF	1	\$517K	\$169K	\$234K
INC	55	M	Moderate DOM on Combustor, Add FF	2	\$297K	\$114K	\$154K
INC	61	L	Add RH, CB	1	\$3,687K	\$603K	\$1,088K
INC	61	S	Add RH, CB	2	\$493K	\$152K	\$216K
INC	63	M	Moderate DOM on existing VS, Add RH, CB	1	\$1,625K	\$334K	\$554K
INC	63	S	Moderate DOM on existing VS, Add RH, CB	1	\$504K	\$158K	\$226K
INC	67	L	Moderate DOM on existing FF, Add CI	1	\$476K	\$241K	\$299K
INC	67	M	Moderate DOM on existing FF, Add CI	2	\$416K	\$153K	\$206K
INC	70	S	Moderate DOM on Existing WS, Add AB, RH, CB, FF	1	\$826K	\$435K	\$544K
INC	93	S	Moderate DOM on Combustor, Add IWS, RH, CB	1	\$824K	\$249K	\$367K
INC	94	L	Moderate DOM on Combustor	1	\$186K	\$K	\$30K
INC	95	S	Small DOM on Existing VS	1	\$5K	\$7K	\$8K

TABLE I-10. COST ESTIMATES FOR MODEL PLANTS FOR THE FINAL 6% BTF PROPOSAL

20F2

Source Group	Model Plant Number	Size Category	Required Equipment	Number of Sources	Capital Cost	Annualized O&M Cost	Annualized Total Cost
INC	97	S	Add AB, CB, FF	1	\$660K	\$372K	\$457K
INC	98	M	Small DOM on Existing WS, Add AB, RH, CI, FF	1	\$1,237K	\$930K	\$1,091K
LWAK	1	M (Lo HCl)	None	1	\$K	\$K	\$K
LWAK	3	M (Lo HCl)	Add CI, FF	2	\$645K	\$330K	\$409K
LWAK	5	M (Hi HCl)	Add ST	1	\$1,229K	\$330K	\$530K
LWAK	5	M (Lo HCl)	Add ST	1	\$1,229K	\$261K	\$461K
LWAK	6	M (Hi HCl)	Add IWS	1	\$1,016K	\$682K	\$847K
LWAK	6	M (Lo HCl)	Add IWS	1	\$1,016K	\$449K	\$615K
LWAK	13	M (Hi HCl)	Add AB, WQ, IWS	1	\$1,825K	\$1,946K	\$2,218K
LWAK	19	M (Lo HCl)	Moderate DOM on Combustor, Add ST	1	\$1,401K	\$261K	\$489K
LWAK	20	M (Hi HCl)	Moderate DOM on Combustor, Add IWS	2	\$1,188K	\$682K	\$875K
LWAK	20	M (Lo HCl)	Moderate DOM on Combustor, Add IWS	2	\$1,188K	\$449K	\$643K

TABLE I-11. PERCENTAGE OF COST OF EACH CONTROL DEVICE ATTRIBUTED TO CONTROLLED HAPS FOR THE FINAL RECOMMENDED 6 PERCENT FLOOR

Type	ID No.	Category	APCD	Temp	Group No.	Model No.	Required Add-on Flue Gas Control	Hg Model Fraction	PM Model Fraction	SVM Model Fraction	LVM Model Fraction	HCl/Cl2 Model Fraction	HC Model Fraction	CO Model Fraction	HC-Byp Model Fraction	CO-Byp Model Fraction	TEQ Model Fraction
INC	358	M	QC/VS/C/PT/S/DM		1	0	None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	359	M	WHB/FF/S	375	54	14E	Moderate DOM on Combustor,	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	359	M	WHB/FF/S	375	54	18M	Add RH	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	359	M	WHB/FF/S	375	54	9M	Add CI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	359	M	WHB/FF/S	375	54	4M	Add FF	0.22	0.00	0.34	0.44	0.00	0.00	0.00	0.00	0.00	0.00
INC	400	L	SD/FF	400	6	4M	Add FF	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	500	L	QC/VS/KOV/DM		9	14E	Moderate DOM on Combustor	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
INC	502	S	WHB/QC/PBC/VS/ES		9	18M	Add RH,	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	502	S	WHB/QC/PBC/VS/ES		9	6M	Add CB	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	502	S	WHB/QC/PBC/VS/ES		9	4M	Add FF	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	503	S	HTHE/LTHE/FF	285	21	17M	Add AB,	0.00	0.00	0.00	0.00	0.40	0.60	0.00	0.00	0.00	0.00
INC	503	S	HTHE/LTHE/FF	285	21	4M	Add FF	0.00	0.00	0.53	0.47	0.00	0.00	0.00	0.00	0.00	0.00
INC	504	M	V/S/C		63	7E	Moderate DOM on Existing VS,	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	504	M	V/S/C		63	18M	Add RH	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	504	M	V/S/C		63	6M	Add CB	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	600	L	WHB/QC/PT/WS		55	14E	Moderate DOM on Combustor,	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
INC	600	L	WHB/QC/PT/WS		55	4M	Add FF	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	700	M	SD/R/S/VS/WS		6	4M	Add FF	0.00	0.00	0.54	0.46	0.00	0.00	0.00	0.00	0.00	0.00
INC	701	M	VS/PT		6	4M	Add FF	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	702	M	QT/S/C		6	4M	Add FF	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	703	S	WHB		20	2M	Add O,	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	703	S	WHB		20	6M	Add CB	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	703	S	WHB		20	16M	Add PT	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
INC	704	S	NONE		2	16M	Add PT	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
INC	705	M	QT/VS/ESP/PT		82	14E	Moderate DOM on Combustor	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
INC	705	M	QT/VS/ESP/PT		82	3M	Moderate DOM on Existing ESP	0.00	0.00	0.56	0.44	0.00	0.00	0.00	0.00	0.00	0.00
INC	706	M	QT/HS/C		1	0	None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	707	L	QT/WS		21	17M	Add AB,	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
INC	707	L	QT/WS		21	4M	Add FF	0.00	0.00	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00
INC	708	S	WS/ESP		17	3M	Moderate DOM on Existing ESP	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	709	S	NONE		40	16M	Add PT	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
INC	709	S	NONE		40	18M	Add RH	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	709	S	NONE		40	6M	Add CB	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	710	M	QT/OS/C/S		33	14E	Moderate DOM on Combustor,	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
INC	710	M	QT/OS/C/S		33	15M	Add IWS	0.00	0.00	0.50	0.00	0.50	0.00	0.00	0.00	0.00	0.00
INC	711	L	C/VS/AS		1	0	None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	712	L	NONE		1	0	None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	713	S	VS/PT		94	14E	Moderate DOM on Combustor,	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	714	M	WS		6	4M	Add FF	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	725	S	WSQT		30	12E	Moderate DOM on Existing WS,	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
INC	726	S	QC/CS/DM/VS		54	14E	Moderate DOM on Existing WS,	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
INC	726	S	QC/CS/DM/VS		54	18M	Add RH	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	726	S	QC/CS/DM/VS		54	6M	Add CB	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	726	S	QC/CS/DM/VS		54	4M	Add FF	0.00	0.00	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00
INC	727	S	GC/C/FF		21	17M	Add AB,	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
INC	727	S	GC/C/FF		21	4M	Add FF	0.00	0.00	0.60	0.40	0.00	0.00	0.00	0.00	0.00	0.00
INC	728	S	QT/PT/VS		1	0	None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	784	S	NONE		4	15M	Add IWS	0.00	0.00	0.35	0.23	0.42	0.00	0.00	0.00	0.00	0.00
INC	805	M	QT/OS/VS/ES/PBS		112	5E	Small DOM on Existing WS	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
INC	806	M	QT/OS/VS/ES/PBS		112	17M	Add AB	0.00	0.00	0.00	0.00	0.00	0.19	0.81	0.00	0.00	0.00
INC	806	M	C/VS		25	17M	Add AB,	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.00	0.00	0.00
INC	806	M	C/VS		25	18M	Add RH	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	806	M	C/VS		25	9M	Add CI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	806	M	C/VS		25	4M	Add FF	0.44	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INC	807	M	C/WHB/VQ/PT/HS/DM		96	14E	Moderate DOM on Combustor	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00

TABLE I-12. APPORTIONMENT OF COST FOR CONTROLLED HAPS FOR ADDITIONAL CONTROL EQUIPMENT REQUIRED TO MEET THE FINAL 6 PERCENT BTF PROPOSAL

EER ID No.	Source Type	Size	Current APCD	Controlled HAPs				Model Group No.	Total Required Add-on Plus Gas Control Required to Meet the 6 Percent BTF	Incremental Change in Control Equipment Required to Meet the 6 Percent BTF	Total No. of Units Represented	Incremental Cost for Add-On Equipment For BTF	Total Annual Cost Per Controlled HAP to 66 BTF		
				Hg	PM	HCl / Cl ₂	APCD / TEQ						Hg	TEQ	PM
200	CK S	FF		0	0	0	50	18	Add Q, FF	2					
201	CK S	FF		0	58	0	550	18	Add Q, FF	2	\$1,544,218		\$1,544,218		
202	CK L	FF		0	0	0	440	75	Add Q, CLFF	1	\$813,043		\$813,043		
203	CK L	ESP		0	0	0	500	96	Add Q, CLFF	1					
204	CK L	ESP		0	47	0	600	74	Add Q, FF	1					
205	CK L	ESP		0	70	0	500	0	Add FF	1					
206	CK L	ESP		0	34	0	500	83	Add Q, FF	1					
207	CK S	MC / ESP		0	55	0	400	0	Add FF	1					
208	CK L	ESP		0	0	0	420	0	Moderate DOM on existing ESP	1					
228	CK S	ESP		50	50	0	500	18	Add Q, CLFF	1	\$425,466		\$425,466		
300	CK S	FF		0	79	0	400	98	Add Q, FF	2					
301	CK S	ESP		74	57	0	400	50	Add Q, CLFF	1					
302	CK S	ESP		50	55	0	250	75	Moderate DOM on Combustor, Add Cl, FF	2					
303	CK L	QC/FF		37	36	0	460	89	Add Cl, FF	1	\$1,544,218		\$1,544,218		
304	CK L	ESP		28	74	0	230	100	Add Q, CLFF	1	\$813,043		\$813,043		
305	CK S	ESP		0	79	0	500	0	Add Q, CLFF	2	\$850,932		\$850,932		
306	CK L	MC/FF		95	8	0	440	75	Add Q, CLFF	1					
308	CK S	ESP		0	27	0	440	100	Add Q, CLFF	3	\$1,338,993		\$1,338,993		
309	CK L	MC / ESP		30	39	0	640	100	Add Q, CLFF	1	\$813,043		\$813,043		
315	CK S	FF		0	0	0	450	0	Add Cl, FF	1					
316	CK L	FF		50	0	0	500	25	Moderate DOM on Combustor, Add Q, Cl, FF	1	\$1,658,918		\$1,658,918		
317	CK L	FF		0	0	0	500	84	Add Q	1					
318	CK S	ESP		0	0	0	420	0	Add FF	1					
319	CK L	ESP		0	0	0	540	97	Add Q, CLFF	4					
320	CK L	FF		46	60	0	480	0	Add Cl	1	\$813,043		\$813,043		
321	CK S	ESP		0	0	0	550	95	Add Q, FF	3	\$425,466		\$425,466		
322	CK S	ESP		0	21	0	500	96	Add Cl, FF	1					
323	CK S	ESP		75	32	0	718	99	Add Q, CLFF	1					
335	CK S	ESP		50	36	0	400	58	Add Q, CLFF	1	\$425,466		\$425,466		
401	CK S	ESP		67	72	0	450	50	Add Cl, FF	1					
402	CK S	ESP		15	74	0	500	95	Moderate DOM on Combustor, Add Q, Cl, FF	1					
403	CK S	ESP		97	55	0	500	80	Moderate DOM on Existing ESP, Add Q, CB	1	\$425,466		\$425,466		
404	CK L	ESP		0	0	0	500	80	Moderate DOM on Existing ESP, Add Q	1	\$1,144,814		\$1,144,814		
405	CK S	ESP		0	58	0	250	0	Add FF	1					
406	CK S	ESP		0	21	0	280	60	Add Cl, FF	1	\$425,466		\$425,466		

TABLE I-12. APPORTIONMENT OF COST FOR CONTROLLED HAPS FOR ADDITIONAL CONTROL EQUIPMENT REQUIRED TO MEET THE FINAL 6 PERCENT BTF PROPOSAL

EER ID No.	Source Type	Size	Current APCD	Controlled HAPs				Model Group No.	Total Required Add-on Flue Gas Control Required to Meet the 6 Percent BTF	Incremental Change in Control Equipment Required to Meet the 6 Percent BTF	Total No. of Units Represented	Incremental Cost for Add-On Equipment For BTF	Total Annual Cost Per Controlled HAP to 66 BTF			
				Hg	PM	HCl/Cl ₂	APCD Temp						Hg	TEQ	PM	HCl/Cl ₂
223	LWAK	M (HI) FF		0	0	90	4	Add Cl, FF, ST	Add Cl, FF	1	\$409,030	\$409,030				
224	LWAK	M (Lo) FF		0	0	0	1	None		1	\$461,060	\$461,060			\$461,060	
225	LWAK	M (Lo) FF		0	0	67	19	Moderate DOOM on Combustor, Add ST	Add ST	1	\$461,060	\$461,060			\$461,060	
226	LWAK	M (Lo) FF		0	0	75	5	Add ST	Add ST	1	\$681,897	\$681,897			\$681,897	
227	LWAK	M (HI) FF		0	0	84	13	Add AB, WQ, IWS	Add IWS - Remove FF	1	\$449,389	\$449,389			\$449,389	
307	LWAK	M (Lo) FF/VS		94	0	0	3	Add Cl, FF	Add IWS - Remove FF	2	\$681,897	\$681,897			\$681,897	
310	LWAK	M (Lo) FF		0	18	82	20	Moderate DOOM on Combustor, Add IWS	Add IWS - Remove FF	1	\$449,389	\$449,389			\$449,389	
311	LWAK	M (HI) FF		0	0	83	20	Moderate DOOM on Combustor, Add IWS	Add IWS - Remove FF	1	\$681,897	\$681,897			\$681,897	
312	LWAK	M (HI) FF		0	0	83	20	Moderate DOOM on Combustor, Add IWS	Add IWS - Remove FF	1	\$681,897	\$681,897			\$681,897	
313	LWAK	M (HI) FF		0	0	86	6	Add IWS	Add IWS - Remove FF	1	\$449,389	\$449,389			\$449,389	
314	LWAK	M (Lo) FF		0	33	75	6	Add IWS	Add IWS - Remove FF	1	\$449,389	\$449,389			\$449,389	
336	LWAK	M (Lo) FF		0	0	75	20	Moderate DOOM on Combustor, Add IWS	Add IWS - Remove FF	1	\$449,389	\$449,389			\$449,389	

TABLE I-12. APPORTIONMENT OF COST FOR CONTROLLED HAPS FOR ADDITIONAL CONTROL EQUIPMENT REQUIRED TO MEET THE FINAL 6 PERCENT BTF PROPOSAL

EIR ID No.	Source Type	Size	Current APCD	Controlled HAPs			Model Group No.	Total Required Add-on Fine Gas Control Required to Meet the 6 Percent BTF	Incremental Change in Control Equipment Required to Meet the 6 Percent BTF	Total No. of Units Represented	Incremental Cost for Add-On Equipment For BTF	Total Annual Cost Per Controlled HAP to 66 BTF		
				Hg	PM	TEQ						Hg	TEQ	PM
209	INC M		WHB, FF/VQ/PT/DM	0	0	0	44	Add AB, CI	Add CI	1	\$199,453	\$199,453		
210	INC L		FFS	75	0	0	50	Add RH, CI, FF	Add RH, CI, FF	1			\$18,848	
211	INC L		SS/PT/VS	0	0	0	6	Add FF	Add FF	1	\$18,848	\$18,848		
212	INC L		FFS	0	33	28	0	Moderate DOM on Existing FF and WS	Add Mod DOM FF	1				
214	INC M		IWS	84	30	0	9	Add RH, CI, FF	Add RH, CI, FF	1				
216	INC L		HES / WS	61	51	0	9	Add RH, CI, FF	Add RH, CI, FF	1				
221	INC L		PT	0	0	0	52	Add CI	Add CI	1	77,4916	\$774,916		
222	INC L		WHB/SD/ESP/Q/PBS	50	0	0	81	Moderate DOM on Existing WS, Add AB, RH, CB, FF	Add RH, CB, FF	1	310,449	\$216,430	\$94,019	
229	INC S		WHB/AS/HCS/CS	0	21	10	13	Add PT, RH, CI, FF	Add RH, CI, FF, PT, Remove IWS	1	385,573	\$289,180		
324	INC M		?	25	28	50	50	Add CI	Add CI	1	\$807,801	\$807,801		
325	INC M		SD/FF/WS /WS	52	0	0	91	Add RH, CB	Add RH, CB : Remove CI	1				
327	INC L		SD/FF/WS /ESP	97	0	0	98	Add RH, CI, FF	Add RH, CI, FF	1				
329	INC L		PT/WS	75	52	0	50	Add RH, CI, FF	Add RH, CI, FF	1	353,522	\$353,522		
330	INC M		QT/WS/DM	0	63	0	99	Moderate DOM on Combustor, Add RH, CI, FF	Add RH, CI	1	571,073	\$571,073		
331	INC L		PT/WS	23	0	0	54	Add AB, RH, CI, FF	Add RH, CI, FF	1	482,586	\$482,586		
332	INC M		WS	0	87	0	75	Moderate DOM on Combustor, Add RH, CI, FF	Add CI	1	\$279,873	\$279,873		
333	INC L		SD/FF	50	0	0	67	Moderate DOM on Combustor, Add RH, CI, FF	Add RH, CI	1	571,073	\$571,073		
334	INC L		WS/ESP/PT	0	75	0	54	Moderate DOM on Combustor, Add RH, CI, FF	Add RH, CI	1				
337	INC M		WHB/DA/D/IFF	84	0	0	413	Add CI	Add CI	2				
338	INC L		QC/FF/SS/C/HES/DM	49	0	0	415	Add RH, CB	Add RH, CB	1				
339	INC S		AT/PT/RIS/ESP	75	0	0	61	Add CI	Add CI	1	\$199,453	\$199,453		
340	INC M		WHB/ESP/WS	0	0	0	8	Moderate DOM on Combustor, Add CI	Add CI	1	\$199,453	\$199,453		
341	INC M		DA/D/FF/HEPA/CA	0	0	0	50	Moderate DOM on Combustor, Add CI	Add CI	1				
342	INC S		WHB/QC/S/VS/DM	0	0	0	0	None	None	1				
344	INC M		QC/VS/PT/DM	50	0	0	9	Add RH, CI, FF	Add RH, CI, FF	1				
346	INC M		COC/VS/PT/DM	0	0	0	0	None	None	1				
347	INC M		COC/VS/DM	0	0	0	0	None	None	1				
348	INC S		QC/AS/WS	75	0	0	75	Add RH, CB	Add RH, CB	1				
349	INC S		QC/FF/QC/PT	0	0	0	350	Add FF	Add FF	2				
350	INC M		WHB/HE/FF	0	0	0	0	Moderate DOM on Combustor, Add FF	Moderate DOM on Combustor, Add FF	1				
351	INC S		QC/C/FF	0	0	0	290	Moderate DOM on Combustor, Add CB	Moderate DOM on Combustor, Add CB	1				
353	INC M		QC/VS/DM/ESP	0	32	50	0	Moderate DOM on Existing ESP, Add PT	Moderate DOM on Existing ESP, Add PT	1				
354	INC M		QC/VS/DM/WS	0	0	0	0	None	None	1				
356	INC S		QC/AS/VS/DM/WS	0	54	0	75	Moderate DOM on Combustor, Add RH, CB, FF	Moderate DOM on Combustor, Add RH, CB, FF	1	310,449	\$216,430	\$94,019	
357	INC M		QC/AS/IN/DM	0	40	0	19	Add RH, CI, FF	Add RH, CI, FF	1				
358	INC M		QC/VS/PT/WS	50	53	0	9	Moderate DOM on Combustor, Add RH, CI, FF	Moderate DOM on Combustor, Add RH, CI, FF	1	482,586	\$482,586		
359	INC M		WHB/FF/S	75	39	0	54	Add CI, FF	Add CI, FF	1	\$279,873	\$279,873		
400	INC L		SD/FF	0	0	0	49	Moderate DOM on Combustor	Add CI	1				
500	INC L		QC/VS/KOV/DM	0	0	0	94	Moderate DOM on Combustor	Add CI	1				
502	INC S		WHB/QC/PBC/VS/ES	50	58	0	9	Add RH, CB, FF	Add RH, CB, FF	1				
503	INC S		HTHE/LTHE/FF	0	47	0	285	Add AB, CB, FF	Add AB, CB, FF	1	\$135,990	\$135,990		
504	INC M		VS/C	98	28	0	63	Moderate DOM on existing VS, Add RH, CB	Add CB	1				

TABLE I-12. APPORTIONMENT OF COST FOR CONTROLLED HAPS FOR ADDITIONAL CONTROL EQUIPMENT REQUIRED TO MEET THE FINAL 6 PERCENT BTF PROPOSAL

EER ID No.	Source Type	Size	Current APCD	Controlled HAPs			Model Group No.	Total Required Add-on to Gas Control Required to Meet the 6 Percent BTF	Incremental Change in Control Equipment Required to Meet the 6 Percent BTF	Total No. of Units Represented	Incremental Cost for Add-On Equipment for BTF	Total Annual Cost Per Controlled HAP to 66 BTF		
				Hg	PM	TEQ						Hg	TEQ	PM
600	INC L	WHB/QC/PT/WS	0	0	0	55	Moderate DOM on Combustor, Add FF		1					
700	INC M	SD/R/S/VS/WS	0	66	0	6	Add FF	Add RH, CI, FF	1	353522		\$353,522		
701	INC M	NS/PT	0	65	0	9	Add RH, CI, FF	Add RH, CI, FF	1	353522		\$353,522		
702	INC M	OT/S/C	0	82	0	75	Add Q, CB, PT	Add Q, CB, PT	1					
703	INC S	WHB	75	0	73	0	Add IWS	Add IWS; Remove PT	1	\$32,732		\$32,732		\$32,732
704	INC S	NONE	0	20	49	0	Moderate DOM on Combustor, Add RH, CI, FF	Add RH, CI, FF; Remove Mod DOM ESP	1	362566		\$362,566		
705	INC M	OT/VS/ESP/PT	0	65	0	19	Add AB, RH, CI, FF	Add RH, CI	1	571073		\$571,073		
706	INC M	OT/HS/C	0	94	0	25	Moderate DOM on Existing VS	Add RH, CB	1	216430		\$216,430		
707	INC L	WS/ESP	0	43	0	75	Moderate DOM on Combustor, Add IWS	Add IWS; Remove PT	1	\$32,732		\$32,732		
708	INC S	NONE	50	70	25	0	Add RH, CI, FF	Add RH, CI, FF	1	774816		\$774,816		
709	INC S	OT/OS/C/S	0	44	75	0	Moderate DOM on Combustor, Add RH, CB, FF	Add RH, CB, FF	1	\$203,845		\$203,845		
710	INC M	C/S/AS	0	53	0	6	Moderate DOM on Combustor, Add RH, CB, FF	Add RH, CB, FF	1	\$104,449		\$104,449		
711	INC L	NONE	0	50	0	54	Moderate DOM on Combustor, Add RH, CB, FF	Add RH, CI	1	707044		\$707,044		
712	INC L	NS/PT	0	77	0	0	Moderate DOM on Combustor, Add RH, CB, FF	Add FF	2	\$94,019		\$94,019		
713	INC S	WS	0	18	0	12	Moderate DOM on existing VS, Add RH, CB	Add RH, CB, Mod DOM VS	1	226269		\$226,269		
714	INC M	WS/QT	0	30	20	0	Add IWS	Add RH, CI, FF	1	482586		\$482,586		
725	INC S	WS/QT	0	30	20	0	Small DOM on Existing VS, Add AB, RH, CI, FF	Add RH, CI, FF	1	\$435,255		\$435,255		
726	INC S	QC/CS/DM/VS	0	82	0	0	Moderate DOM on Combustor, Add FF	Add RH, CI, FF; Remove Mod DOM VS	1	\$571,073		\$571,073		
727	INC S	QC/CF/FF	0	66	0	21	Add AB, FF	Add RH, CI	1					
728	INC S	OT/PT/VS	0	66	0	63	Moderate DOM on existing VS, Add RH, CB	Add RH, CI, FF	1	216430		\$216,430		
784	INC S	NONE	0	63	91	0	Add IWS	Add RH, CB, Mod DOM VS	1	\$9,839		\$9,839		
805	INC M	OT/QS/VS/ES/PBS	0	72	10	98	Small DOM on Existing VS, Add AB, RH, CI, FF	Add RH, CI, FF	1	\$435,255		\$435,255		
806	INC M	C/VS	79	65	0	25	Add AB, RH, CI, FF	Add RH, CI, FF	1	\$435,255		\$435,255		
807	INC M	C/WHB/Q/PT/HS/DM	0	47	0	54	Moderate DOM on Combustor, Add RH, CI, FF	Add RH, CI, FF	1					
808	INC M	OT/PBS/ESP	0	22	0	55	Moderate DOM on Combustor, Add FF	Add RH, CI	1					
809	INC L	VS	0	0	0	25	Add AB, RH, CI, FF	Add RH, CI	1					
810	INC M	Q/VS/PBS	0	75	0	6	Add FF	Add RH, CI	1					
824	INC S	OT/VS/PT/DM	0	0	0	95	Small DOM on Existing VS	Add RH, CI, FF	1	482586		\$482,586		
825	INC M	CCS/QC/ESP	50	77	0	25	Add AB, RH, CI, FF	Add RH, CI, FF	1	216430		\$216,430		
902	INC M	OT/VS/PT	0	30	0	9	Moderate DOM on Combustor, Add RH, CB, IWS	Add RH, CB	1					
904	INC S	?/OT/VS/PT	50	0	75	0	Add FF	Add RH, CB	1	216430		\$216,430		
905	INC S	OT/VS/AS/CS	0	79	38	0	Moderate DOM on Existing VS, Add RH, CB, FF	Add RH, CB	1	385573		\$385,573		
914	INC M	?/OT/PT	0	0	58	95	Add AB, RH, CI, FF, PT	Add RH, CI, FF; Remove IWS	1					
915	INC M	QC/VS/C	75	74	0	56	Add AB, RH, CI, FF	Add RH, CI, FF; Remove IWS	1					

TABLE I-13. ENGINEERING COST BREAKDOWN PER HAP FOR THE FINAL RECOMMENDED 6 PERCENT FLOOR AND BTF PROPOSAL

Total Cost for Final Recommended 6 Percent Floor

Syst Type	Hg	PM	SVM	LVM	HCL/CL2	HC	CO	D/F	TOTAL
CK	5,063,456	5,123,526	11,390,286	1,749,769	0	29,960	0	6,015,090	29,372,087
INC	21,296,059	0	8,371,901	6,112,003	2,864,448	6,001,639	16,150,229	1,272,132	62,068,410
LWAK	818,060	0	1,652,289	137,440	578,029	489,130	1,021,526	0	4,696,474
TOTAL	27,177,576	5,123,526	21,414,476	7,999,212	3,442,476	6,520,729	17,171,754	7,287,222	96,136,971

Incremental Cost for 6 Percent BTF Proposal

Syst Type	Hg	PM	SVM	LVM	HCL/CL2	HC	CO	D/F	TOTAL
CK	7,269,379	0	0	0	0	0	0	6,912,217	13,461,596
INC	7,965,679	2,813,304	0	0	0	0	0	27,019,195	37,798,178
LWAK	0	0	0	0	4,315,978	0	0	0	4,315,978
Total	15,235,058	2,813,304	0	0	4,315,978	0	0	33,211,412	55,575,752

Table I-14. NATIONAL EMISSIONS ESTIMATE FOR THE FINAL RECOMMENDED 6 PERCENT FLOOR AND 6 PERCENT BTF PROPOSAL

System Type	Substance	Baseline	Final Recommended 6 Percent Floor	6 Percent BTF Proposal	Unit
Cement Kiln	Particulate	7.90E+06	3.50E+06	3.50E+06	lb/yr
Cement Kiln	LVM	6.32E+03	3.25E+03	3.25E+03	lb/yr
Cement Kiln	SVM	5.76E+04	3.43E+03	3.43E+03	lb/yr
Cement Kiln	Mercury	1.16E+04	4.85E+03	2.86E+03	lb/yr
Cement Kiln	TEQ	1.76E+00	6.18E-02	2.05E-02	lb/yr
Cement Kiln	Total Cl	4.98E+06	4.98E+06	4.98E+06	lb/yr
Cement Kiln	OO	1.32E+08	No Floor	No Floor	lb/yr
Cement Kiln	CO(MHRA)	1.60E+08	No Floor	No Floor	lb/yr
Cement Kiln	THC	8.83E+06	2.34E+06	2.34E+06	lb/yr
Cement Kiln	THC(MHRA)	1.13E+07	2.20E+06	2.20E+06	lb/yr
Incinerator	Particulate	3.31E+06	3.31E+06	1.58E+06	lb/yr
Incinerator	LVM	5.64E+04	4.82E+03	4.82E+03	lb/yr
Incinerator	SVM	1.08E+05	4.71E+03	4.71E+03	lb/yr
Incinerator	Mercury	9.48E+03	2.09E+03	1.31E+03	lb/yr
Incinerator	TEQ	1.74E-01	9.58E-02	8.77E-03	lb/yr
Incinerator	Total Cl	3.53E+06	2.31E+06	2.31E+06	lb/yr
Incinerator	OO	2.90E+07	1.81E+06	1.81E+06	lb/yr
Incinerator	CO(MHRA)	1.19E+07	3.99E+06	3.99E+06	lb/yr
Incinerator	THC	4.93E+05	3.93E+05	3.93E+05	lb/yr
Incinerator	THC(MHRA)	1.40E+06	7.83E+05	7.83E+05	lb/yr
LWA Kiln	Particulate	7.98E+04	7.98E+04	7.31E+04	lb/yr
LWA Kiln	LVM	3.76E+02	3.57E+02	3.57E+02	lb/yr
LWA Kiln	SVM	1.16E+03	2.42E+01	2.42E+01	lb/yr
LWA Kiln	Mercury	5.45E+02	7.93E+01	7.93E+01	lb/yr
LWA Kiln	TEQ	1.76E-04	1.76E-04	1.76E-04	lb/yr
LWA Kiln	Total Cl	5.17E+06	4.85E+06	9.98E+05	lb/yr
LWA Kiln	OO	1.27E+06	2.40E+05	2.40E+05	lb/yr
LWA Kiln	CO(MHRA)	6.59E+06	2.57E+05	2.57E+05	lb/yr
LWA Kiln	THC	7.63E+04	5.18E+04	5.18E+04	lb/yr
LWA Kiln	THC(MHRA)	1.03E+05	5.18E+04	5.18E+04	lb/yr