



Small Municipal Waste Combustors: Background Information Document for New Source Performance Standards and Emission Guidelines

Public Comments and Responses



**SMALL MUNICIPAL WASTE COMBUSTORS:
BACKGROUND INFORMATION DOCUMENT
FOR NEW SOURCE PERFORMANCE STANDARDS
AND EMISSION GUIDELINES**

PUBLIC COMMENTS AND RESPONSES

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Emission Standards Division
Research Triangle Park, North Carolina 27711

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1.0 INTRODUCTION

On August 30, 1999, the U.S. Environmental Protection Agency (EPA) proposed regulations to: (1) reestablish new source performance standards (NSPS) for new small municipal waste combustion (MWC) units, and (2) reestablish emission guidelines for existing small MWC units. These proposals were made under authority of Sections 129 and 111 of the Clean Air Act (CAA). The NSPS and emission guidelines for small municipal waste combustors were originally adopted in December 1995, but were vacated (canceled) by the U.S. Court of Appeals for the District of Columbia Circuit in March 1997. The vacature was based on the court's opinion that the CAA of 1990 requires EPA to establish separate regulations for large and small MWC units and that EPA had inappropriately placed small MWC units located at MWC plants larger than 250 tons per day (tpd) in the large MWC category. The court's opinion did not identify other errors in the 1995 MWC rules. Additionally, the court indicated they expected EPA to reestablish the regulation for small MWC units in an inspired fashion. On August 30, 1999, EPA proposed to reestablish NSPS and emission guidelines for small MWC units. The NSPS and emission guidelines proposed on August 30, 1999 were functionally equivalent to the 1995 NSPS and emission guidelines for small MWC units.

This document contains summaries of the public comments that EPA received on the August 30, 1999 proposal to reestablish NSPS and emission guidelines, and EPA's responses to those comments. This summary of comments and responses serves as the basis for revisions made to the NSPS and emission guidelines between proposal and promulgation.

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2.0 PUBLIC COMMENTS AND ORGANIZATION OF THIS DOCUMENT

In the 1995 rulemaking for MWC units, EPA received 153 letters (approximately 2,000 pages) commenting on the NSPS and emission guidelines. Those comments are summarized in the 1995 background information document.¹ In the current rulemaking, EPA received 48 letters (approximately 350 pages) and heard seven speakers at the public hearing on the proposal (the public hearing occurred October 5, 1999). The commenters, speakers, and their affiliations are listed in Table 2-1.

Many of the comments received on the standards and guidelines are similar to comments received on the 1994 proposal to establish standards and guidelines. Therefore, this document is organized similarly to the 1995 BID. Comments and responses on the NSPS appear first (Section 3.0), followed by comments and responses to the emission guidelines (Section 4.0). Section 5 includes miscellaneous comments on the emission guidelines. Where similar comments are discussed in the 1995 BID, the 1995 BID is referenced at the end of the comment response (e.g., See Section 3.1 of 1995 BID).

¹ Municipal Waste Combustion: Background Information Document for Promulgated Standards and Guidelines - Public Comments and Responses (EPA-453/R-95-0136, Docket No. A-90-45) (1995 BID).

**TABLE 2-1. DOCKET A-98-18 (See Note A)
CATEGORIES: IV-D, IV-F and IV-G**

Item Number	Commenter and Affiliation
IV-D-01	H. G. Rigo, President Rigo & Rigo Associates, Inc., Berea, OH
IV-D-02	L.S. Jenkins, Counsel Wood Crapo Comments of the Davis County Solid Waste Management and Energy Recovery Special Service District Salt Lake City, UT
IV-D-03	D.A. Lue, Environmental Coordinator Montenay International Corp., Miami FL
IV-D-04	D. R. Lispi Assistant to the Mayor for Special Projects City of Harrisburg Harrisburg, PA
IV-D-05	M. Graham, Private Citizen Layton, UT
IV-D-06	D. K. Mount, Director Division of Environmental Engineering North Dakota Department of Health Bismarck, ND
IV-D-07	J. Rossman, Chairperson, Olmsted County Board of Commissioners, and R. Dunnette, Plant Manager Olmsted Waste to Energy Facility Olmsted County Rochester, MN
IV-D-08	R. D. Randolph, Director Air Pollution Control Program Missouri Department of Natural Resources Jefferson City, MO

Note A: Docket A-98-18 for this rulemaking is located at EPA’s Air and Radiation Docket and Information Center (MC-6102), 401 M Street SW., Washington, DC 20460, Room M-1500, Waterside Mall (ground floor, central mall). The docket is available for public inspection and copying between 8:00 a.m. and 5:00 p.m., Monday through Friday. A reasonable fee may be charged for copying.

TABLE 2-1. DOCKET A-98-18 (CONTINUED)
CATEGORIES: IV-D, IV-F and IV-G

Item Number	Commenter and Affiliation
IV-D-09	M. Graham, Private Citizen Layton, UT
IV-D-10	J. S. Austin, Steam Plant, Manager Hampton/NASA Refuse-Fired Steam Plant Hampton, VA
IV-D-11	T. J. Porter, Director Air Quality Wheelabrator Technologies, Inc., Hampton, NH
IV-D-12	E. Eckels, Private Citizen
IV-D-13	J. M. Daniel, Director Division of Air Program Coordination Virginia Department of Environmental Quality Richmond, VA
IV-D-14	J. Veranth, Research Assistant Professor of Chemical Engineering University of Utah Salt Lake City, UT
IV-D-15	M. Graham, Private Citizen Layton, UT
IV-D-16	U. Kramer, Executive Secretary Utah Air Quality Board Utah Department of Environmental Quality Salt Lake City, UT
IV-D-17	J. Skinner, Executive Director & CEO Solid Waste Association of North America Silver Spring, MD
IV-D-18	J. Freeland, Counsel Matthews & Freeland Comments of City of Cleburne Austin, TX
IV-D-19	M. Graham, Private Citizen Layton, UT

**TABLE 2-1. DOCKET A-98-18 (CONTINUED)
CATEGORIES: IV-D, IV-F and IV-G**

Item Number	Commenter and Affiliation
IV-D-20	J. L. Barlow, President The Barlow Group, Inc., Fort Collins, CO
IV-D-21	R. S. Broom and S.R. Johnson, Counsel Dutchess County Resource Recovery Agency Verner Liipfert Bernhard McPherson and Hand Washington, DC
IV-D-22	E.J. Campobenedetto, Deputy Director Institute of Clean Air Companies Washington, DC
IV-D-23	D. Kaplan, Counsel Earthjustice Legal Defense Fund Washington, DC
IV-D-24	D. Kaplan, Counsel Earthjustice Legal Defense Fund Washington, DC
IV-D-25	E.J. Campobenedetto, Deputy Director Institute of Clean Air Companies Washington, DC
IV-D-26	K. Van Dame Wasatch Clean Air Coalition Salt Lake City, UT
IV-D-27	J. A. Musso, General Manager Environmental Affairs and Lands Northern States Power Company Eau Claire, WI
IV-D-28	T.M. Cantrell, Private Citizen
IV-F-1a	William R. Steinhaus County Executive of Dutchess County New York Poughkeepsie, NY (presented by Scott Daniels)
IV-F-1b	Scott Daniels, Executive Director Dutchess County Resource Recovery Agency, and Commissioner Dutchess County Department of Solid Waste Management Poughkeepsie, NY

TABLE 2-1. DOCKET A-98-18 (CONTINUED)
CATEGORIES: IV-D, IV-F and IV-G

Item Number	Commenter and Affiliation
IV-F-1c	Eric Hofmeister, President Islip Resource Recovery Agency Islip, NY
IV-F-1d	John L. Rose, Consulting Engineer Dutchess County Resource Recovery Agency and Islip Resource Recovery Agency
IV-F-1e	Mark L. Wollschlager, Senior Vice President HDR Engineering
IV-F-1f	H. Gregor Rigo, President, Rigo & Rigo Associates, Inc., Berea, OH
IV-F-1g	Maria Zannes, President Integrated Waste Services Association Washington, DC
IV-G-01	T. J. Richter, Executive Director Minnesota Resource Recovery Association St. Paul, MN
IV-G-02	R. E. Brown, General Manager Resource Authority Gallatin, TN
IV-G-03	B. Mathur, Chief Illinois Environmental Protection Agency Springfield, IL
IV-G-04	J. J. Poulton, General Manager Waste Energy Partners, LP Joppa, MD
IV-G-05	D. A. Lue, P.E. Environmental Coordinator Monetary International Corp Miami, FL
IV-G-06	H. G. Rigo, President Rigo & Rigo, Associates, Inc. Berea, OH

TABLE 2-1. DOCKET A-98-18 (CONTINUED)
CATEGORIES: IV-D, IV-F and IV-G

Item Number	Commenter and Affiliation
IV-G-07	W. Strandell, Chairperson, Polk County Board of Commissioners, & B. Wilson Facilities Manager Polk County Resource Recovery Plant Crookston, MN
IV-G-08	D. Kaplan Earthjustice Legal Defense Fund Washington, DC (letter not included in original comment)
IV-G-09	D.Kaplan Earthjustice Legal Defense Fund Washington, DC
IV-G-10	T. J. Porter Director Air Quality Wheelabrator Technologies (fax)
IV-G-11	H. G. Rigo, President Rigo & Rigo, Associates, Inc. Berea, OH
IV-G-12	K. Solbert, Advisory Board, Chair R. Andring, Commissioner J. Dahl, Commissioner J. Heltzer, Commissioner Clearwater County Environmental Services Bagley, MN (letter in support of IV-G-07)
IV-G-13	Shirley Holman, Chair LaCrosse County Solid Waste Committee LaCrosse County, WI
IV-G-14	Frank J. Visser, Deputy Superintendent Energy Recovery Facility County of Oswego Fulton, NY
IV-G-15	James A. Musso, General Manager Environmental Affairs and Lands Northern States Power Co. Eau Claire, WI

TABLE 2-1. DOCKET A-98-18 (CONTINUED)
CATEGORIES: IV-D, IV-F and IV-G

Item Number	Commenter and Affiliation
IV-G-16	Mark Graham, Private Citizen Layton, UT
IV-G-17	D. A. Lue, P.E., Environmental Coordinator Montenay International Corp. Miami, FL

2.1 LIST OF ACRONYMS AND ABBREVIATIONS

Acronyms

1995 BID	Municipal Waste Combustion: Background Information Document for Promulgated Standards and Guidelines - Public Comments and Responses, EPA-453/R-95-0136
Administrator	EPA Administrator
APCD	air pollution control device
ASME	American Society of Mechanical Engineers
BACT	best available control technology
BDT	best demonstrated technology
BID	background information document (see also 1995 BID)
CAA	Clean Air Act
CAM	compliance assurance monitoring
Cd	cadmium
CEMS	continuous emissions monitoring system(s)
CFR	Code of Federal Regulations
CO	carbon monoxide
COMS	continuous opacity monitoring system(s)
dioxins	polychlorinated dibenzo-p-dioxins
DSI	dry sorbent injection
EPA	U.S. Environmental Protection Agency
ESP	electrostatic precipitator
EU	European Union
FBC	fluidized bed combustor
FF	fabric filter (baghouse)
FR	Federal Register
furans	polychlorinated dibenzofurans
GCP	good combustion practice
HCl	hydrogen chloride
Hg	mercury

HMIWI	hospital/medical/infectious waste incinerator
HWC	hazardous waste combustor
MACT	maximum available control technology
MB	mass burn
MB/WW	mass burn/waterwall combustor
MOD/EA	modular/excess air combustor
MOD/SA	modular/starved air combustor
MSW	municipal solid waste
MWC	municipal waste combustion
NO _x	nitrogen oxides
NSPS	new source performance standards
O ₂	oxygen
OMB	Office of Management and Budget
Pb	lead
PCBs	polychlorinated biphenyls
PM	particulate matter
PTC	power test code (see ASME)
QA	quality assurance
QC	quality control
RDF	refuse-derived fuel
REF	refractory
SD	spray dryer
SD/FF/CI	spray dryer/fabric filter/carbon injection
SNCR	selective non-catalytic reduction
SO ₂	sulfur dioxide
USC	United States Code
VOC	volatile organic compound

Abbreviations for Units of Measure

Btu	=	British thermal unit
°C	=	degrees Celsius
dscf	=	dry standard cubic foot (@ 14.7 psia, 68 °F)
dscm	=	dry standard cubic meter (@ 14 psia, 68 °F)
°F	=	degrees Fahrenheit
kg	=	kilogram (10^{+3} grams)
lb	=	pound
m ³	=	cubic meter
mg	=	milligrams (10^{-3} grams)
Mg	=	megagram (10^{+6} grams)
MMBtu	=	million Btu
ng	=	nanogram (10^{-9} grams)
ppm	=	parts per million
ppmv	=	parts per million by volume
tpd	=	tons per day
tons/yr	=	tons per year
µg	=	microgram (10^{-6} grams)
yr	=	year

3.0 COMMENTS ON NEW SOURCE PERFORMANCE STANDARDS (NSPS)

3.1 SELECTION OF SOURCE CATEGORY

Comment: One commenter (IV-G-03) recommended that EPA include a definition of medical waste in the NSPS. The commenter (IV-G-03) noted that medical waste is excluded from the definition of “municipal solid waste,” but the NSPS does not include a definition of medical waste.

Response: The EPA added a reference to the Hospital/Medical/Infectious Waste Incinerators (HMIWI) definition of medical/infectious waste to the NSPS (§60.1465).

Comment: One commenter (IV-G-03) requested that EPA clarify, as it did in the rules for HMIWI (62 FR 48347, September 15, 1997), that emissions from crematoriums and disposal of pathological waste, or waste from agricultural operations will be covered in a future rulemaking.

Response: The NSPS promulgated for MWC units apply only to units combusting municipal solid waste (MSW) and the EPA believes the applicability of the MWC rules is clear as written. Other rules will address or have addressed combustion of waste that are not MSW, including emissions from crematoriums and disposal of pathological waste and agricultural waste.

Comment: One commenter (IV-G-03) recommended that EPA include a definition of “clean wood” in the rules for small MWC units. The commenter (IV-G-03) noted that the requirements that apply to air curtain incinerators are unclear because the definition of “clean wood” has not been included in the regulation. The commenter (IV-G-03) provided a definition consistent with the definition of “clean wood” in the large MWC unit NSPS (40 CFR 60.51b).

Response: As proposed, §60.1465 of the NSPS for small MWC units already contains a definition of “clean wood.” This definition is the same definition of “clean wood” that is used in the NSPS for large MWC units and no change is necessary (see Section 3.1 of 1995 BID; the 1995 BID is discussed on Section 2.0 of this document).

3.2 SELECTION OF AFFECTED FACILITIES

Comment: One commenter (IV-G-03) requested that EPA clarify whether NSPS would apply to units that commenced construction between NSPS proposal (August 30, 1999), and NSPS promulgation. The commenter (IV-G-03) noted that the proposed emission guidelines apply to units that commenced construction before August 30, 1999 and the NSPS applies to units that commenced construction after the final rule is published.

Response: Section 60.1015(a)(1) of the NSPS is corrected in the final rule. The NSPS applies to MWC units that commenced construction after August 30, 1999 or commenced reconstruction or modification at least 6 months after the date the final rule was published.

Comment: One commenter (IV-D-06) recommended that bushes, shrubs, and clippings from bushes and shrubs should be included in the definition of clean wood and should not be subject to the requirements under the proposed NSPS. The commenter (IV-D-06) noted that there seems to be a very fine distinction between clean wood and certain yard waste. In the proposed rules (§60.1465 of Subpart AAAA and §60.1940 of Subpart BBBB), clean wood includes tree stumps (whole or chipped), and tree limbs (whole or chipped); yard waste includes bushes, shrubs and clippings from bushes and shrubs. The commenter (IV-D-06) believes that it would be very difficult to distinguish between this type of yard waste (bushes, shrubs, and clippings from bushes and shrubs) and clean wood, especially if the material is chipped. The commenter (IV-D-06) stated that the difficulty in enforcing this regulation necessitates a change.

Response: The proposed definitions of yard waste and clean wood waste are the same as the NSPS promulgated for large MWC units in 1995 and reflect the comments taken on the definitions at that time. The final NSPS for small MWC units reinstate the 1995 standards and use the same definitions to be consistent with the NSPS for large MWC units.

Comment: One commenter (IV-D-06) believes that it is unnecessary to develop a federal regulation that covers air curtain incinerators. The commenter (IV-D-06) noted that in North Dakota and in many other States, air curtain incinerators are already subject to opacity limitations when burning yard wastes. The commenter (IV-D-06) believes that the proposed rule would only discourage use of air curtain incinerators for burning certain types of yard waste and clean wood and may cause more pollution by encouraging open burning. The commenter (IV-D-06) stated that air curtain incinerators

that are used to burn clean wood and certain yard waste provide a cleaner method of disposal than open burning and help eliminate this material from solid waste landfills.

Response: The EPA is required by Section 129 of the CAA to regulate emissions from air curtain incinerators. The EPA believes it is unlikely that regulating air curtain incinerators will lead to more open burning.

Comment: One commenter (IV-G-03) recommended that EPA reorganize the air curtain incinerator requirements so that the exemption from particular requirements of the NSPS are more clear.

Response: The EPA agrees with the commenter and has reorganized the exemptions for air curtain incinerators. The section of the final NSPS (§60.1445) applying to air curtain incinerators reiterates the exemptions contained in §60.1020(k) of the NSPS. The EPA believes that these changes will help clarify which exemptions and emission limits apply to air curtain incinerators.

3.3 SELECTION OF THE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT)

3.3.1 General Comments on Emission Levels

Comment: One commenter (IV-D-25, IV-D-22) recommended that the subcategories should be consolidated into one class of small MWC units with one set of limits for new and existing facilities. The commenter (IV-D-25, IV-D-22) stated that the technology currently exists to easily achieve the most stringent of the proposed levels for all pollutants. The commenter (IV-D-25, IV-D-22) stated that combining classes would greatly simplify the rule and place it more in line with emission limits currently in place in other heavily industrialized countries.

Response: Section 129 requires that separate regulations must be developed for new MWC units and existing MWC units and specifies different criteria for determining the MACT floors for new versus existing units. Section 129 allows different emissions limits for new versus existing sources. The EPA believes the subcategorization and emission limits in the final regulations for new and existing MWC units have been determined appropriately.

3.3.2 Municipal Waste Combustor Organics

Comment: One commenter (IV-D-07) stated that the NSPS emission limit for dioxins is overly stringent and could be set closer to the MACT floor and still provide good environmental protection.

Response: The limit for dioxins/furans emissions in the NSPS is set at the performance level achieved by the best controlled similar source and includes a margin for variability in emissions. This is required by Section 129 of the CAA (see Section 3.4 of 1995 BID).

3.3.3 Municipal Waste Combustor Metals (Mercury)

Comment: One commenter (IV-D-07) stated that the emission limit for mercury is overly stringent and could be set closer to the MACT floor and still provide good environmental protection.

Response: The EPA analyzed of available test data, including pilot studies of carbon injection (CI) systems and commercial applications of CI in the U.S., and has concluded the mercury emission limits can be continuously achieved. The EPA chose CI as the basis for achieving MACT because of its demonstrated performance and reasonable cost (see Section 3.5.4 of 1995 BID).

3.3.4 Nitrogen Oxides

Comment: One commenter (IV-D-25) stated that by not requiring Class II units to control NO_x, EPA has created a loophole that will encourage new small facilities to avoid NO_x control by limiting plant capacity to 250 tons per day or less. The commenter (IV-D-25) stated that not requiring NO_x control for Class II units could significantly increase facility NO_x emissions. In addition, the commenter (IV-D-25) stated that, based on current technology, all units, regardless of size or design, should be required to control oxides of nitrogen. The commenter (IV-D-25) stated that, at a minimum, NO_x limits should be established at a level based on the equivalent of a 50 percent reduction for all MWC units. The commenter (IV-D-25) asserted that this level of control is easily achievable with currently available technology and is being demonstrated on small MWC units in Europe and Japan as well as on many types of small combustion processes in the U.S.

Response: The EPA has added a “no control” NO_x emission limit of 500 ppmv for all new Class II units. The 500 ppmv emission limit is consistent with the NSPS as proposed on September 20, 1994 (59 FR 48225). This final limit is not intended to result in NO_x emissions control, and the final NSPS does not include any monitoring, testing, recordkeeping, or reporting requirements associated with the final NO_x limit for Class II units. As analyzed in 1995 (59 FR 48225), EPA continues to conclude NO_x emission control is not appropriate to Class II MWC units and control is not required.

Comment: One commenter (IV-D-20) requested that the requirement for nitrogen oxides control of Class I small MWC units for the NSPS be eliminated for refractory lined combustion chambers. The commenter (IV-D-20) believes that all of the MACT facilities used to establish the emissions limits for Class I are based upon waterwall furnace designs. The commenter's (IV-D-20) design does not employ a waterwall furnace and is based upon refractory lined combustion chambers with horizontal heat recovery steam generators. The commenter (IV-D-20) stated that refractory-based designs in Class I with post combustion recovery in waste heat type steam generation equipment do not provide an optimal temperature range for selective non-catalytic reduction (SNCR) employment with sufficient time for reaction to occur.

Response: The EPA is limiting NO_x emissions from all new Class I small MWC units to the same level to assure new MWC units are environmentally competitive. The NSPS applies to future MWC units; therefore, operators can select an MWC type that can most easily comply with the emission standards. Section 111 of the CAA allows the EPA to set a high performance standard for new units, encouraging the use of lower-emitting or more easily controlled technology.

3.3.5 Good Combustion Practices

Comment: One commenter (IV-F-1g) requested that EPA clarify that a 12-hour shift is typical for operators versus the 8-hour shift that seems to be referenced in the control room operator stand-in provision in §60.1195.

Response: The EPA agrees with the commenter that a 12-hour shift is more typical for MWC operators. The EPA revised §60.1195(a) and (b) of Subpart AAAA and §60.1685(a) and (b) of Subpart BBBB to reflect a 12-hour shift, rather than an 8-hour shift. The EPA revised the recordkeeping requirements in §60.1410(l) of Subpart AAAA and §60.1885(l) of Subpart BBBB so that they apply when all chief facility operators and certified shift supervisors are offsite for more than 12 hours. In addition, EPA revised the regulation to clarify the boundary limits in §60.1685 of Subpart BBBB and §60.1195 of Subpart AAAA as "12 hours or less" and "2 weeks or less".

Comment: Two commenters (IV-D-27, IV-G-02) suggested that EPA revise the NSPS and footnote b of Table 5 of Subpart BBBB to be consistent with the long term CO analysis memorandum in Docket No. A-98-18. The proposed footnote b to table 5 states that all averages are block averages, however, according to the memorandum in the docket (item II-B-8), EPA established the

200 ppm limit as a 24-hour geometric mean average concentration (rather than an arithmetic average). One commenter (IV-G-02) requested that EPA add a footnote to the NSPS (Table 2 of Subpart AAAAA) that applies to “Fluidized bed, mixed fuel, (wood/refuse-derived fuel)” and “Mass burn rotary waterwall,” and reads: “c. 24-hour daily block geometric average concentration.”

Response: The EPA revised Table 2 of Subpart AAAAA to add the combustor type, fluidized bed, mixed fuel (wood/refuse-derived fuel), with a CO emission limit of 200 ppm and a 24-hour geometric mean averaging time. This revision is consistent with the CO analysis memo in Docket No. A-98-18. The averaging time and method for mass burn rotary waterwall is correct as published and is consistent with the final 1995 NSPS, which are being reinstated.

3.3.6 Size Categories of New Municipal Waste Combustor Units

Comment: One commenter (IV-D-25, IV-D-22) stated that there is no health or technological basis for EPA’s decision to subcategorize the new MWC units based on overall facility size. The commenter (IV-D-25, IV-D-22) recommended that EPA reconsider the proposed subcategories and emission limits based on actual operating data. The commenter (IV-D-25, IV-D-22) provided data to support its recommendation. The commenter (IV-D-25, IV-D-22) stated that the technology currently exists for all sizes of small MWC units to easily achieve the most stringent of the proposed levels for all pollutants.

Response: The EPA agrees that the subcategorization could be done in different ways. However, in the 1995 NSPS (40 CFR part 60, Subpart Eb), the EPA elected to use an aggregate plant capacity of 250 tons per day to subcategorize small MWC units. The EPA believes that approach is a valid way to subcategorize, and notes that Section 129 allows such subcategorization. In the litigation of the 1995 MWC rule, the court indicated subcategorization by unit location was a valid approach. Because the purpose of this rulemaking is to reestablish the 1995 NSPS for new small MWC units with combustion capacities of 35 to 250 tons per day of MSW, EPA is retaining the subcategorization used in the 1995 NSPS.

3.4 PERFORMANCE TEST METHODS AND MONITORING

3.4.1 Continuous Monitoring

Comment: Four commenters (IV-G-01, IV-G-02, IV-G-07, IV-F-1f) requested that EPA consider removing or revising the SO₂ monitoring requirements for all small MWC facilities because the costs for SO₂ CEMS are not reasonable relative to the amount of SO₂ emitted from small MWC units. Two commenters (IV-G-01, IV-G-07) claimed that municipal solid waste is a low sulfur fuel and removing the SO₂ monitoring would be consistent with EPA policy for other low-sulfur fuels. One commenter (IV-G-02) requested that EPA allow Class C facilities to use a work-practice monitoring requirement similar to that for activated carbon, but applied to acid gas control reagent utilization, in place of a requirement to use an SO₂ CEM. A fourth commenter (IV-F-1f) stated that the CEMS QA/QC and recordkeeping and reporting requirements for both SO₂ and CO are onerous for Class C facilities relative to the CO and SO₂ emissions from these facilities.

Response: The EPA believes that the SO₂ and CO monitoring contained in the proposed rule is reasonable for known applications and the final rules retain those requirements. However, the general provisions to part 60 (40 CFR part 60, Subpart A) allow the Administrator to approve alternative or equivalent monitoring proposals, such as parameter monitoring for a control device, on a case-by-case basis.

Comment: One commenter (IV-D-07) recommended that EPA allow for measuring unit load using alternative technologies that exhibit equivalent accuracy. The commenter (IV-D-07) believes that load level control through steam flow measurement is appropriate, but the ASME Power Test Code referenced in the proposal is specific to only one method of flow measurement: an orifice or nozzle used in conjunction with a differential pressure measuring device. The commenter (IV-D-07) noted that ASME PTCs do not address other technologies for flow measurement. The commenter (IV-D-07) requested that flexibility be provided for those MWC units that use other methods of measurement (e.g., annubar, vortex shedder, mag meters).

Response: The general provisions to part 60 (40 CFR part 60, Subpart A) allow the Administrator to approve alternative or equivalent monitoring proposals on a case-by-case basis. The owner or operator may apply for a site-specific alternative monitoring requirement.

Comment: One commenter (IV-D-07) recommended that the requirement for visual opacity determination be waived if a properly certified and maintained continuous opacity monitoring system

(COMS) is in service. The commenter (IV-D-07) stated that EPA Reference Method 9 is a poor substitute for a calibrated COMS. The commenter (IV-D-07) believes the requirement to measure opacity by both performance testing using Method 9 as well as COMS will result in additional testing expense without any corresponding benefit.

Response: Opacity measurement by EPA Reference Method 9 is the means for enforcement of the opacity standards. However, the general provisions to part 60 (40 CFR part 60, Subpart A) allow the Administrator to approve alternative test methods or waive testing on a case-by-case basis.

Comment: One commenter (IV-D-20) claimed that at their MWC plant, two MWC units discharge flue gases to the same heat recovery steam generator (boiler) and the plant is unable to comply with the requirement for steam flow monitoring on an individual MWC unit basis as required in §60.1320 of Subpart AAAA because of the use of common heat recovery equipment. For this plant, the steam flow is indicative of total facility steam flow rather than individual combustion unit steam flow. In addition, the commenter (IV-D-20) stated that another MWC plant is unable to comply with the requirement for continuous monitoring of the regulated emission parameters, on a per unit basis, as required in §§60.1225 and 60.1230 of Subpart AAAA and §§60.1715 and 60.1720 of Subpart BBBB or routine performance testing of regulated emission parameters, due to the lack of separate heat recovery equipment for each combustion unit. The commenter (IV-D-20) requested that the requirements for individual steam flow monitoring, continuous emissions monitoring and performance testing on individual combustion units be revised to include provisions for common steam generation and air pollution control systems with multiple combustion units. The commenter (IV-D-20) requested that these proposed revisions be made for both existing and new waste combustion facilities. The revisions are necessary for new facilities because the commenter (IV-D-20) has developed new facility designs that employ common steam generation equipment with multiple combustion units to aid in dampening fluctuations in heat release. According to the commenter (IV-D-20), common air pollution control equipment is usually used when common heat recovery equipment is used.

Response: The general provisions to part 60 (40 CFR part 60, Subpart A) allow the Administrator to approve alternative or equivalent monitoring proposals on a case-by-case basis.

3.4.2 Test Methods

Comment: Several commenters (IV-D-14, IV-D-05, IV-D-09, IV-G-06, IV-F-1g) requested that EPA clarify the accuracy of the EPA test methods used to demonstrate compliance with the emission limits. Some commenters (IV-D-14, IV-D-09, IV-F-1g) were concerned that uncertainty in the test methods could lead to a higher risk of noncompliance for facilities, especially if States adopt more stringent standards than the NSPS. Another commenter (IV-D-09) suggested that uncertainty in the test methods could lead to a lack of enforcement of the standards.

Response: The test methods are adequate to use in application of the MWC regulations. The development of the test methods is not part of this rulemaking. The adequacy of the test methods was addressed in establishment of the test methods and was done as a separate rulemaking. The EPA proposed and accepted comments on the test methods in that rulemaking. Questions submitted about the accuracy of the test methods have been forwarded to the EPA emission measurement laboratory for evaluation outside this rulemaking (see Section 3.8.3 of 1995 BID).

Comment: Three commenters (IV-G-06, IV-D-01, IV-F-1f) stated that the standards must better address uncertainty in the emission measurement methods. One commenter (IV-G-06) suggested a way to revise the equations in §60.1460 of the NSPS and §60.1935 of the emission guidelines for determining percent reductions for Hg and HCl to better account for measurement uncertainty. Two commenters (IV-D-01, IV-F-1f) also stated that the test methods for Pb, Cd, Hg and dioxins/furans emissions have too much uncertainty and cannot be used for determining compliance with the emission limits. One commenter (IV-F-1f) also stated that EPA must account for both process variability and measurement uncertainty in setting emission limits. Finally, two commenters (IV-D-01, IV-F-1f) stated that Section 129(c) of the CAA requires that emission standards must be based on test methods validated on solid waste combustion units.

Response: The EPA believes that all methods specified in the NSPS are valid for use on MWC units. The docket contains several reports that identify method validation studies conducted on these methods on MWC units and similar sources. In addition, the emissions data on which the standards are based are the same measurement methods that will be used to determine compliance. Process variations and emission variations result in emission data variation and all emission measurement methods have some uncertainty. The proposed emission limits account for all of these factors (process variation, emission variation, and measurement uncertainty). Additionally, these test

methods and calculation procedures are the same as those included in the 1995 standards (see Section 3.8.3 of 1995 BID).

Comment: Two commenters (IV-G-06, IV-F-1f) noted that the likelihood of a violation increases as the number of limits in the standard increases and as the number of units at a plant increases. The commenters were concerned that the emission limits are based on individual achievement of the limits and not simultaneous achievement of all the limits. The commenters suggested that the language of §60.1215 of the NSPS be revised so that small exceedances of the limits are not considered violations if subsequent testing indicates compliance or if the exceedance is within the measurement uncertainty of the test methods. One commenter (IV-F-1f) also asked EPA to solicit comments on determining measurement uncertainty using EPA Method 301 and at the proposed regulatory limits, and on demonstrating compliance with multiple limits that were set based on data from individual emission tests.

Response: The proposed limits include a consideration for measurement uncertainty and process variability and are simultaneously achievable. Allowances for small exceedances, as suggested by the commenters, are not needed. The EPA has already accepted comments on the test methods and the achievability of the emission limits. The EPA sees no need to solicit additional comments.

Comment: One commenter (IV-D-07) asked EPA to clarify the compliance testing schedule. The commenter (IV-D-07) stated that §60.1795(b) appears to require dioxin testing on an annual basis whereas §60.1795(a) states that stack testing can occur each 36 months if all stack tests for a given pollutant show emission levels that are less than the limit for the unit in question. The commenter (IV-D-07) supports stack testing at a reasonable frequency and considers annual stack testing, without some relief provision recognizing proper operation or superior performance, is unreasonable. The commenter (IV-D-07) supports the proposed frequency for stack testing if §60.1795(a) applies to all of the tests required under §60.1785, including dioxins/furans testing.

Response: All Class I and II units must do stack tests for dioxins/furans annually (§60.1285); however, the regulation does allow for reduced testing for Class I and II units (§60.1305). For Class I, reduced testing of dioxins/furans is allowed for MWC units that have demonstrated levels of dioxins/furans less than or equal to 7 nanograms per dry standard cubic meter for 2 consecutive years (§60.1305 (b)). For Class II units, two reduced testing options are available. (1) Similar to the reduced testing described above, reduced testing of dioxins/furans is allowed for MWC units that have

demonstrated levels of dioxins/furans less than or equal to 7 nanograms per dry standard cubic meter for 2 consecutive years. (2) Reduced testing of all pollutants is allowed for Class II MWC units that have demonstrated compliance with all pollutants, including dioxins/furans, over 3 consecutive years (§60.1305(b)). These sections of the NSPS have been edited to make these provisions more clear.

Comment: One commenter (IV-F-1f) stated that the annual retest language (§60.1295 of NSPS) should be changed to require annual retesting, either within 13 months or within 54 weeks. The commenter (IV-F-1f) pointed out that the current retest language can create a rollback or ratchet effect, where you actually have less than twelve months to retest. The commenter (IV-F-1f) stated that the language could be interpreted as meaning within 12 months from the day the last test was finished, not 12 months from the month it was finished.

Response: The EPA agrees with the commenter that the current requirement to test within 12 months of the last test could imply that annual stack tests must be no later than 12 months apart. Because it may be difficult to schedule tests exactly 12 months apart, the testing schedule would be compressed so it was more frequent than annual testing. The NSPS has been revised to require annual stack tests to be no later than 13 months apart to allow some flexibility in the annual scheduling tests.

Comment: Three commenters (IV-G-01, IV-G-07, IV-F-1f) support maintaining a 3-hour minimum sampling time for dioxin and furan test runs. The commenters (IV-G-01, IV-G-07) believe a 4-hour minimum sampling time will not add significantly to the accuracy of the test results and will add extra costs for testing and impose an additional burden on the stack test team. The commenters (IV-G-01, IV-G-07) stated that the extra sampling hours easily add an additional day to a dioxins/furans stack test. One commenter (IV-G-01) noted that 3 runs of 4 hours each takes well over 12 hours to complete without errors. The other commenter (IV-G-07) stated that adding an additional day to a dioxins/furans stack test could skew the test results and create another potential for error to the test.

Response: The EPA is keeping the requirement for a 4-hour sampling time for the dioxins/furans test method in the NSPS. However, facility operators have the option of applying to the Administrator for approval to use a shorter sampling time on a case-by-case basis, under the general provisions (40 CFR part 60, Subpart A). The test method sections of the NSPS has been revised to clarify that facility operators may apply to the Administrator for approval of alternative or equivalent test methods or modifications of the final test methods.

Comment: One commenter (IV-G-06) recommended modifying §60.1935(a) of the MWC rule to eliminate the problem of public misperception of adverse environmental consequences associated with inappropriately inflated emitted concentrations during startup and shutdown due to the mathematical effects of the oxygen correction factor. The commenter (IV-G-06) acknowledges the EPA's recognition in the hazardous waste combustor (HWC) proposal that the concentration correction to 7 percent oxygen becomes very large and essentially meaningless during start-up and shutdown. However, the commenter (IV-G-06) disagrees with the approach in the HWC MACT standard that requires the facility to identify (in their startup, shutdown, malfunction plan) an oxygen correction factor to use during periods of start up and shut down.

Response: The commenter refers to sections of the emission guidelines, however, there are parallel provisions in the NSPS. The EPA sees no need to modify the oxygen correction factor for startup and shutdown periods. The NSPS do not regulate emissions during these periods and do not require recording or reporting emissions during these events.

Comment: One commenter (IV-F-1f) presented an alternative dry sorbent injection test procedure that uses Method 19 to determine removal efficiency along with CEMS. The commenter (IV-F-1f) stated that the proposed rule has some undefined terms that are defined in Method 19. The commenter (IV-F-1f) presented a test procedure that gives two baselines and a control, which allows you to determine control efficiency as one measures the concentration when the sorbent is injected versus when it is not injected, and make an uncertainty correction based on the dual train results. The commenter (IV-F-1f) stated that the unit should be considered in compliance if both data sets meet the standard.

Response: The EPA is not modifying the current test procedures for determining removal efficiency for HCl and SO₂. However, owners and operators have the option of applying to the Administrator for approval to use alternative test methods on a case-by-case basis, under the general provisions (40 CFR part 60, Subpart A).

Comment: One commenter (IV-F-1f) stated that they have not found a way of flue gas sampling at the point before their dry sorbent injection system. The commenter (IV-F-1f) stated that the injection location is at the bottom of a u-bend and the temperature is too high (650°F) to keep any extractive or in situ system working. Therefore, they must determine the uncontrolled state by turning off the dry sorbent injection system. The commenter (IV-F-1f) stated that in order to get accurate

measurements of uncontrolled emissions, the dry sorbent injection system needs to be turned off for at least 12 hours prior to the test. The commenter (IV-F-1f) stated that the HWC MACT rule stipulates that work practice limits are waived during testing. The commenter (IV-F-1f) requested that a similar requirement be added to this rule. The commenter (IV-F-1f) stated that this would avoid the situation where a State will not allow the pollution control equipment to be turned off to determine if the efficiency limits are being met.

Response: Facility owners can comply with either the HCl and SO₂ reduction requirements or the HCl and SO₂ concentration limits. If they must turn off the acid gas control system (e.g., the dry sorbent injection system) to measure HCl or SO₂ removal efficiency, the operator can complete testing before the compliance date for their facility without violating the emission standards. After the compliance date, facility operators can use a parametric method for determining removal efficiency. In addition, the docket for the large MWC rulemaking contains a paper (Docket A-89-08, IV-B-22) describing this procedure. Facility operators already have the option of applying to the Administrator for approval to use parametric monitoring or alternative test methods on a case-by-case basis, under the general provisions (40 CFR part 60, Subpart A).

3.5 STARTUP, SHUTDOWN, AND MALFUNCTION

Comment: One commenter (IV-D-13) stated that there is no rationale for limiting the startup, shutdown, and malfunction period to 3 hours. The commenter (IV-D-13) requested that EPA clarify what is meant in §60.1710(b). The commenter (IV-D-13) questioned whether the section means that the unit can never shut down for over 3 hours, or whether the shutdown process cannot last longer than 3 hours. Another commenter (IV-D-18) believes that the startup period should be expanded to 8 hours (or to at least 5 hours) to reflect actual startup times. Another commenter (IV-D-10) suggested that EPA change the startup time to 4 hours because 3 hours may not always be enough time. The commenter (IV-D-10) noted that most small MWC units do not have auxiliary burners for quick startup. The commenter (IV-D-10) noted that startup of a MWC unit after installation of refractory and stoker failure are just two events when a startup or shutdown could go beyond 3 hours.

Response: The commenter refers to sections of the emission guidelines, however, there are parallel provisions in the NSPS. The regulatory text has been edited to make the intent of §60.1710 clear. A maximum of 3 hours of test data can be dismissed from calculations during periods of startup,

shutdown or malfunction. For startup, shutdown or malfunction periods longer than 3 hours, emissions data cannot be discarded from calculations and all provisions under §60.11(d) to minimize emissions are in full force. The EPA believes that the 3-hour period included in the proposal is appropriate for startup, shutdown, or malfunction and it is maintained in the final regulations. The 3-hour period does not begin until waste is fed to the grate and stops when waste is no longer fed to the grate.

3.6 LEGAL CONSIDERATIONS

Comment: One commenter (IV-D-23) stated that EPA's failure to include standards for MWC units with capacities of less than 35 megagrams per day would be unlawful. The commenter (IV-D-23) cited the CAA, which requires EPA to promulgate emission standards for all units combusting municipal waste (42 U.S.C. 7429(a)(1)). The commenter (IV-D-23) stated that there is no basis for EPA's decision not to include standards for units with capacities of less than 35 Mg per day (64 FR 47236) in this rulemaking. The commenter (IV-D-23) states that, accordingly, the regulations for small MWC will violate the CAA if they do not include standards for such units.

Response: The EPA is reestablishing the 1995 regulations for small MWC units. Those regulations included a lower size cutoff. This does not mean that EPA will not develop regulations for units smaller than 35 tons per day. The EPA considers MWC units smaller than 35 tons per day to be a separate subcategory of small MWC units. Section 129(a)(2) of the CAA specifically authorizes EPA to distinguish among sizes of units within a category in establishing standards. The EPA is not addressing requirements for MWC units smaller than 35 tons per day in this rulemaking.

Comment: One commenter (IV-D-23) stated that EPA's failure to establish numerical emission limits for NO_x for Class II MWC units violates the CAA. The commenter (IV-D-23) cited Section 129(a)(4) of the CAA that says performance standards applicable to solid waste incineration units "shall specify numerical emission limitations for the following substances or mixtures: particulate matter (total and fine), opacity (as appropriate), sulfur dioxide, hydrogen chloride, oxides of nitrogen, carbon monoxide, lead, cadmium, mercury, and dioxins and dibenzofurans." Because the proposed rule does not specify numerical emission limitations for oxides of nitrogen for Class II units, it would violate the CAA. The commenter (IV-D-23) noted that EPA did not explain why the proposed standards do not specify numerical emission limitations for NO_x, but merely cited the preamble to the 1995 regulations (59 FR 48228). The commenter (IV-D-23) stated that EPA's failure to comply with

the CAA in promulgating standards for large MWC units does not excuse its failure to comply with the CAA in promulgating standards for small MWC units. The commenter (IV-D-23) stated that the CAA requires the EPA to promulgate these standards and no EPA explanation can alter this requirement.

Response: The commenter correctly points out that Section 129 of the CAA requires NO_x limits. This means that emission limits for these pollutants must be specified even if the best controlled similar source (MACT performance level) does not control NO_x. None of the Class II units has NO_x controls and MACT does not require NO_x control. However, in the final rule, EPA has added a “no control” NO_x emission limit of 500 ppmv for all new Class II units. The 500 ppmv emission limit is consistent with the “no control” NO_x limit as proposed for the NSPS on September 20, 1994 (59 FR 48225).

This final limit is not intended to result in NO_x emissions control, and the final NSPS for Class II MWC units does not include any associated NO_x monitoring, testing, recordkeeping, or reporting requirements. The 500 ppmv limit represents an emission level with adequate margin to accommodate the variability in NO_x emission levels from an uncontrolled MWC unit. Test data in the docket indicate that this level is achievable for all combustor types.

Comment: One commenter (IV-D-23) stated that the omission of CO limits (and an explanation) constitute a violation of the CAA. The commenter (IV-D-23) noted that the proposed rule does not specify numerical emission standards for CO, except for a limited subcategory of fluidized bed combustion units that co-fire wood and RDF. The commenter stated that the failure to specify numerical CO emission limits constitutes a missed opportunity to reduce dioxins/furans emissions since CO levels are indicative of good combustion and good combustion reduces dioxins/furans levels.

Response: The commenter is mistaken and has missed part of the regulations. Table 2 of Subpart AAAA (64 FR 47304) and Table 5 of Subpart BBBB (64 FR 47271) list the proposed CO emission limits for new and existing small MWC units, respectively. All small MWC units are subject to CO limits in the proposed and final regulations. The CO limits are listed in Table 2 of Subpart AAAA.

Comment: One commenter (IV-D-23) stated that EPA’s failure to establish numerical emission limits for polychlorinated biphenyls (PCBs) violates the CAA. The commenter (IV-D-23) cited Section 112(c)(6) of the CAA, which requires EPA to assure that source categories accounting for 90 percent of all PCB emissions are subject to MACT standards “with respect to” PCBs. The commenter (IV-D-23) cited EPA as stating that MWC units account for more than half of the

aggregate emissions of PCBs (63 FR 17838 and 17849, April 10, 1998). The commenter (IV-D-23) argues that EPA cannot possibly meet the requirements of Section 112(c)(6) without subjecting MWC units, including the small MWC subcategory, to MACT standards for PCBs. The commenter also pointed out that EPA has acknowledged in its final Great Waters determination under Section 112(m)(6) of the CAA, that “Section 112(c)(6) requires that EPA identify and list for regulation sources to assure that at least 90 percent of the aggregate emissions of each of seven pollutants are subject to Section 112(d) standards” (63 FR 14090, March 24, 1998). The commenter (IV-D-23) stated that therefore, the small MWC regulations will violate the CAA if they do not include PCB standards.

Response: The commenter cited Section 112(c)(6) of the CAA. However, the small MWC regulations were developed under Section 129 of the CAA. Section 129 does not require regulation of PCB from small MWC. The EPA does not believe that Congress intended that the solid waste incineration units required to be regulated under section 129 of the CAA be subject to section 112(c)(6) of the CAA. Section 129(a)(4) of the CAA requires EPA to establish numerical emission limitations for a specified list of pollutants. Had Congress intended to require that PCB emissions from solid waste incineration units be specifically controlled, EPA believes Congress would have included PCB in the list of pollutants for which numerical emission limitations are required. Congress did not do so. The control technologies used to comply with the small MWC regulations will, nevertheless, result in reductions in PCB. Adding specific emission limits for PCB is not required and would not result in further reduction in PCB emissions from small MWC. PCB emission limits are, therefore, not included in the final regulations.

Comment: One commenter (IV-D-23) stated that EPA’s failure to establish final emission standards that reflect the reductions achievable through pollution prevention measures violates the CAA. The commenter (IV-D-23) cited Section 129(a)(2) and (a)(3) of the CAA and believes that these requirements must be read together and that if any measure, including a pre-combustion measure, is necessary to obtain the maximum reduction that is achievable, EPA must require it. The commenter (IV-D-23) believes that failing to evaluate the effectiveness and achievability of measures identified by EPA or advocated by commenters is arbitrary and capricious (AT&T corp. V. FCC, 86 F.2d 242, 247 (D.C. Cir. 1996)).

The commenter (IV-D-23) advocates eliminating or reducing metals and chlorinated plastics in the waste stream at small MWC facilities. The commenter (IV-D-23) believes that this is an achievable beyond-the-floor measure that would reduce metals emissions beyond the floor requirements, and reduction of chlorinated plastics would reduce dioxin and hydrogen chloride emissions. The commenter (IV-D-23) states that it is feasible both technically and economically for MWC owners or operators to separate metals or require their customers to do so. The commenter (IV-D-23) states that feed limits are particularly appropriate for mercury, lead, and cadmium, which are known to be significant adverse “non-air quality health and environmental impacts.” Another commenter (IV-D-07) recommended that EPA take a lead role in pollution prevention through product formulation controls, which is an initiative that is fundamental to the protection of our soil, air, and water. The commenter (IV-D-07) believes that it would be most prudent to control toxic metals at the source where control is highly efficient and cost effective. The commenter (IV-D-07) stated that there has been no comprehensive national effort to control toxic metals at the true source, the mines and markets that produce and distribute them.

Response: Commenter IV-D-23 raised the same issue in its litigation of the regulations for Hospital/Medical/Infectious Waste Incinerators (HMIWI). In the Sierra Club decision (*Sierra Club v. EPA*, 167 F.3d 658, 663 (D.C. Cir. 1999)) for the HMIWI rule, the court rejected the commenter’s claim. In that litigation, the court said that “[i]n the absence of any type of quantification of benefits or costs, the Administrator had no basis for finding that, ‘taking into account the cost,’ emissions reductions from pollution prevention programs were ‘achievable’ as the statute uses the word.” As in the HMIWI rule, EPA does not have evidence that allows quantification of the relevant reduction achievable through pollution prevention measures (e.g., including control of consumer products). However, EPA has included the following pollution prevention measures in the regulations. New small MWC units subject to the NSPS must prepare a materials separation plan, which identifies a goal and an approach for separating certain components of municipal solid waste prior to combustion and making them available for recycling. In addition, new and existing small MWC units must maintain a specified load level and maintain a specified temperature at the inlet of the PM control device. These operating requirements help assure good combustion, which prevents pollution (see Section 4.2 of 1995 BID).

Comment: One commenter (IV-D-23) stated that EPA’s failure to consider non-air quality health and environmental impacts in setting final emission standards would violate the CAA. The

commenter (IV-D-23) cited Section 129(a)(2) of the CAA, which requires EPA to set standards that “reflect the maximum degree of reduction in emissions of air pollutants... that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable...” The commenter (IV-D-23) stated that although EPA stated that it considered non-air quality health and environmental impacts in setting final emission standards (64 FR 47237), there is no evidence that it did so for the proposed Class A and Class B small MWC units. The commenter (IV-D-23) believes that, for both Class A and B MWC units, EPA neither discussed nor considered non-air quality health and environmental impacts in deciding whether to establish more stringent emission standards.

Response: Commenter IV-D-23 raised the same issue in its litigation of the regulations for Hospital/Medical/Infectious Waste Incinerators (HMIWI). In the Sierra Club decision (*Sierra Club v. EPA*, 167 F.3d 658, 663 (D.C. Cir. 1999)) for the HMIWI rule, the court rejected the commenter’s claim, finding that they had failed to demonstrate that the factors they present are “non-air quality health and environmental impacts” within the meaning of Section 129. The commenter has provided no additional information in support of their claim. EPA has fully considered what it deems to be the potential non-air quality health and environmental impacts resulting from implementation of the regulations. For example, EPA evaluated the increase in solid waste and wastewater resulting from implementation of the regulations.

Comment: One commenter (IV-D-23) stated that EPA’s failure to comply with the MACT floor requirements of Section 129 of the CAA would violate the CAA. The commenter (IV-D-23) cited Section 129 of the CAA, which states “the degree of reduction in emissions that is deemed achievable for new units in a category shall not be less stringent than the emissions control that is achieved in practice by the best controlled similar unit, as determined by the Administrator.” The commenter (IV-D-23) stated that EPA must first identify the best controlled similar unit for each pollutant and then must determine the emissions control that unit has achieved. The commenter (IV-D-23) believes that EPA did not comply with this approach, but instead EPA stated that technologies represent the MACT floor. The commenter (IV-D-23) stated that EPA may not use technologies as the basis for MACT floors without a demonstration that the performance of these technologies accurately reflects the actual performance of the best controlled similar unit (*Sierra Club v. EPA*, 167 F.3d 658, 665 (D.C. cir. 1999)) (*Sierra Club*). The commenter (IV-D-23) stated that even

if EPA could use the performance of technologies as the basis of the MACT floors, it did not do so in a permissible way.

Response: The court stated in its Sierra Club HMIWI decision, “...EPA would be justified in setting the floors at a level that is a reasonable estimate of the performance of the ‘best controlled similar unit’ under the worst reasonably foreseeable circumstances.” The court also (correctly) speculated that “[p]erhaps considering all units with the same technology is justifiable because the best way to predict the worst reasonably foreseeable performance of the best unit with the available data is to look at other units’ performance.” This is precisely why EPA used the “best technology” approach to determine the MACT floors for new units.

Because MACT must be achievable and there is inherent variation in emissions over time and among MWC units, even when the MWC units and control devices are well designed, operated, and maintained, the floor emission levels are set at levels that are demonstrated to be achievable by the population of MWC units with the best technology (see Sections 3.4.1 and 3.11 of the 1995 BID).

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4.0 COMMENTS ON THE EMISSION GUIDELINES

4.1 SELECTION OF SOURCE CATEGORY

Comment: One commenter (IV-G-03) recommended that EPA include a definition of medical waste in the emission guidelines. The commenter (IV-G-03) noted that medical waste is excluded from the definition of “municipal solid waste,” but the emission guidelines does not include a definition of medical waste.

Response: The EPA added a reference to the HMIWI definition of medical/infectious waste to the emission guidelines (§60.1940).

Comment: One commenter (IV-G-03) requested that EPA clarify, as it did in the rules for HMIWI (62 FR 48347, September 15, 1997), that emissions from crematoriums and disposal of pathological waste, or waste from agricultural operations will be covered in a future rulemaking.

Response: The emission guidelines apply only to units combusting municipal solid waste (MSW) and the EPA believes the applicability of the MWC rules is clear as written. Other rules will address the combustion of other wastes and no other clarification is needed in this rulemaking.

Comment: One commenter (IV-G-03) recommended that EPA include a definition of “clean wood” in the rules for small MWC units. The commenter (IV-G-03) noted that the requirements that apply to air curtain incinerators are unclear because the definition of “clean wood” has not been included in the regulation. The commenter (IV-G-03) provided a definition consistent with the definition of “clean wood” in the large MWC unit NSPS (40 CFR 60.51b).

Response: Section 60.1940 of the emission guidelines already contains a definition of “clean wood.” This definition is the same definition of “clean wood” that is used in the emission guidelines for large MWC units and no change is necessary (see Section 3.1 of 1995 BID).

4.2 SELECTION OF DESIGNATED FACILITIES

Comment: One commenter (IV-G-03) requested that EPA clarify whether the emission guidelines apply to units that commenced construction after August 30, 1999, but before the final rule is published. The commenter (IV-G-03) noted that the proposed emission guidelines apply to units that commenced construction before August 30, 1999 and the NSPS applies to units that commenced construction after the final rule is published.

Response: No change is necessary for the emission guidelines; however, §60.1015(a)(1) of the NSPS has been corrected in the final rule. The NSPS applies to MWC units that commenced construction after August 30, 1999 or commenced reconstruction or modification at least 6 months after the date the final rule is published. The emission guidelines apply to small MWC units that commenced construction on or before August 30, 1999.

Comment: One commenter (IV-D-06) recommended that bushes, shrubs, and clippings from bushes and shrubs should be included in the definition of clean wood and should not be subject to the requirements under the proposed NSPS or emission guidelines. The commenter (IV-D-06) noted that there seems to be a very fine distinction between clean wood and certain yard waste. In the proposed rules (§60.1465 of Subpart AAAA and §60.1940 of Subpart BBBB), clean wood includes tree stumps (whole or chipped), and tree limbs (whole or chipped); yard waste includes bushes, shrubs and clippings from bushes and shrubs. The commenter (IV-D-06) believes that it would be very difficult to distinguish between this type of yard waste (bushes, shrubs, and clippings from bushes and shrubs) and clean wood, especially if the material is chipped. The commenter (IV-D-06) stated that the difficulty in enforcing this regulation necessitates a change.

Response: The proposed definitions of yard waste and clean wood waste are the same as the emission guidelines promulgated for large MWC units in 1995 and reflect the comments taken on those definitions at that time. The final emission guidelines for small MWC units reinstate the 1995 standards and use the same definitions to be consistent with the 1995 emission guidelines for large MWC units.

Comment: One commenter (IV-D-06) believes that it is unnecessary to develop a federal regulation that covers air curtain incinerators. The commenter (IV-D-06) noted that in North Dakota and in many other States, air curtain incinerators are already subject to opacity limitations when burning yard wastes. The commenter (IV-D-06) believes that the proposed rule would only discourage use of air curtain incinerators for burning certain types of yard waste and clean wood and may cause more

pollution by encouraging open burning. The commenter (IV-D-06) stated that air curtain incinerators that are used to burn clean wood and certain yard waste provide a cleaner method of disposal than open burning and help eliminate this material from solid waste landfills.

Response: The EPA is required by Section 129 of the CAA to regulate emissions from air curtain incinerators. The EPA believes it is unlikely that regulating air curtain incinerators will lead to more open burning.

Comment: One commenter (IV-G-03) recommended that EPA reorganize the air curtain incinerator requirements so that the exemption from particular requirements of the MWC emission guidelines are more clear.

Response: The EPA agrees with the commenter and has reorganized the exemptions for air curtain incinerators. The sections of the final emission guidelines (§60.1920) applying to air curtain incinerators reiterate the exemptions contained in §60.1555(k) of the emission guidelines. The EPA believes that these changes will help clarify which exemptions and emission limits apply to air curtain incinerators.

Comment: One commenter (IV-D-08) requested clarification of the applicability of the emission guidelines (§60.1550). The commenter (IV-D-08) noted that sections I and II of the preamble describe the emission guidelines defining small MWC units as having capacities of 35 to 250 tons per day. The commenter (IV-D-08) notes that, however, the emission guidelines require State plans to address Class A and B units that have plant combustion capacity greater than 250 tons per day. The commenter (IV-D-08) states that since Class A and B units appear to have no upper capacity limit, they seem to be large MWC units.

Response: The EPA believes the commenter misread the applicability section of Subpart BBBBB (§60.1550). The proposed emission guidelines (40 CFR part 60, Subpart BBBBB) and associated State plans apply to each small MWC unit, which is defined as an MWC unit with a combustion design capacity of 35 to 250 tons per day. MWC units greater than 250 tons per day are covered by the large MWC unit emission guidelines (40 CFR part 60, Subpart Cb), associated State plans, and the large MWC unit Federal plan (40 CFR part 62, Subpart FFF). MWC plants with multiple small units could have an aggregate plant capacity larger than 250 tons per day, but because all units are less than 250 tons per day, the units would be subject to Subpart BBBBB.

Comment: Two commenters (IV-G-02, IV-F-1f) requested that EPA clarify the definition of “modification or modified municipal waste combustion unit” (§60.1940) to specifically exclude expenditures made to comply with the rule. Additionally, one commenter (IV-G-02) believes that a facility owner should not be penalized if modifications intended to comply with the rule are undertaken more than 6 months prior to promulgation. One commenter (IV-G-02) suggested that EPA expand the parenthetical expression in the definition of “modification or modified municipal waste combustion unit” to read “(not including the cost of land and air pollution control and monitoring equipment and systems).”

Response: Section 1550(c) of the emission guidelines (40 CFR part 60, Subpart BBBB) states that if you make a physical or operational change to an existing municipal waste combustion unit primarily to comply with your State plan, then the NSPS (40 CFR part 60, Subpart AAAA) does not apply to that affected facility. This is consistent with the definition of MWC unit in §60.1940 of Subpart BBBB, which states that the MWC unit does not include air pollution control equipment. Therefore, modification to equipment that falls outside the definition of a combustion unit would not need to be apportioned to the MWC unit when considering modification/reconstruction (see Section 3.3 of 1995 BID).

Comment: One commenter (IV-D-18) suggested that EPA modify the rule to clarify that multiple MWC units will not be treated as a single MWC unit merely because multiple MWC units share some components (§60.1940). Based on EPA’s distinction in the proposed rule between MWC units and plants, the commenter (IV-D-18) believes that EPA did not intend for multiple units with shared components to be classified as a single MWC unit for the purpose of determining applicability under this rule.

Response: The EPA agrees that it does not intend for multiple units with shared components to be classified as a single MWC unit for the purpose of determining applicability under this rule. The emission guidelines (40 CFR part 60, Subpart BBBB) and associated State plans apply to each small MWC unit as it is defined in §60.1940 of Subpart BBBB and no regulation change is necessary (see Section 3.3 of 1995 BID).

Comment: One commenter (IV-D-18) requested that EPA clarify whether its MWC units would be classified as modular excess-air units or mass burn refractory units. The commenter (IV-D-18) suggested that EPA define “field-erected.” The commenter (IV-D-18) noted that its MWC

units were purchased and assembled as modular units and have since been significantly rebuilt. The commenter provided a list of significant changes made to the units.

Response: This is a very site-specific question and the commenter should contact its EPA Regional Office for a final applicability determination. The commenter operates three Class II MWC units and with the exception of carbon monoxide (CO), Class II units have the same emission limits regardless of combustor type.

Comment: One commenter (IV-D-18) recommended that EPA raise the lower size limit cutoff to 39 tpd (§60.1550) to be consistent with the 1994 proposed and 1995 final rule (40 CFR part 60, Subpart Cb). The commenter (IV-D-18) noted that all of EPA's analyses regarding the prior rule were based on 35 Mg/day, which is roughly 39 tpd. The commenter (IV-D-18) noted that nothing in the proposed rule for small MWC units indicates that EPA has made any new analyses based on the new lower production rate of 35 tpd. The commenter (IV-D-18) believes that this change could affect EPA's determination of emission standards and MACT limits, as well as the economic costs associated with the proposed rule.

Response: The MACT floor analysis and economic impact analysis for the small MWC unit emission guidelines are based on the lower size cutoff of 35 tpd on an individual unit capacity basis (Docket No. A-98-18). The EPA investigated a new lower size cutoff and determined that a lower size cutoff of 35 tpd would have the least impact on the number of sources affected by the NSPS and emission guidelines (Docket No. A-98-18). The 1995 MWC rulemaking was based on a 39 tpd cutoff, based on aggregate plant capacity, not individual unit capacity.

4.3 SELECTION OF MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

4.3.1 General Comments on Emission Levels

Comment: One commenter (IV-D-25, IV-D-22) recommended that the subcategories should be consolidated into one class of small MWC units with one set of limits for new and existing facilities. The commenter (IV-D-25, IV-D-22) stated that this can be achieved using technologies that are currently available and operating in the U.S. and abroad. The commenter (IV-D-25, IV-D-22) stated that combining classes would greatly simplify the rule and place it more in line with emission limits currently in place in other heavily industrialized countries. The commenter (IV-D-25) stated that, based

on the availability of technology, the limits for all metals (i.e., cadmium and lead), particulate matter, HCl and SO₂ for existing units should be established at the levels proposed for new units.

Response: Section 129 requires that separate regulations must be developed for new MWC units and existing MWC units and specifies different criteria for determining the MACT floors for new versus existing units. Section 129 allows different emission limits for new versus existing sources. The EPA believes the subcategorization and emission limits in the final regulations for new and existing MWC units have been determined appropriately.

Comment: Several commenters (IV-D-12, IV-D-26, IV-D-25, IV-D-22) believe that the emission guidelines for the proposed Class B incinerators are not stringent enough and should be revised to be as stringent as those for the proposed Class A incinerators. Two commenters (IV-D-12, IV-D-26) stated that stricter emission standards have, and will continue to lead to more efficient and cheaper technology. The commenters (IV-D-12, IV-D-26) believe that the science of emission controls is market driven and that the (air pollution control) market should be driven toward the more strict proposed Class A emission standards. Two commenters (IV-D-28, IV-D-26) do not believe that a less stringent dioxin emission limit for the proposed Class B units is justified. One commenter (IV-D-25, IV-D-22) stated that the technology currently exists for all classes of small MWC units to easily achieve the most stringent (Class A) of the proposed levels for all pollutants. The commenter (IV-D-25, IV-D-22) stated that this is especially true for the proposed Class B and C emission limits. The commenter (IV-D-25, IV-D-22) stated that based on available technology the organics emissions limits for the proposed Class B and C units should be as stringent as those established for the proposed Class A units.

One commenter (IV-G-06) believes that the proposed Class B SO₂ and HCl emission limits are too stringent and that these emission limits should be revised to equal the proposed Class C emission limits. The commenter (IV-G-06) stated that both classes of units are controlled using the same technology and both classes burn similar waste streams. Therefore, the commenter (IV-G-06) concluded that the expected concentrations of SO₂ and HCl for both classes should be the same.

Several commenters (IV-D-21, H2, IV-F-1c, IV-F-1d), representing three separate waste-to-energy facilities, stated that their MWC units currently do not meet the proposed Class A emission limits. Commenters (H2, IV-F-1c, IV-F-1d) stated that these plants would be required to add a spray dryer in order to meet the proposed Class A SO₂ and HCl emission limits. Other commenters

(IV-D-27, IV-G-15) stated that their fluidized bed combustion units would not be able to comply with many of the proposed Class A emission limits, especially the limits for PM and HCl, without post-combustion control.

Response: Section 129 of the CAA allows the EPA, at its discretion, to establish different emission limits for different subcategories. In the final emission guidelines, the proposed Classes A and B have been combined into one subcategory with one set of emission limits. The final Class I comprises the proposed Class A and B units. Class I are small MWC units located at plants with an aggregate plant capacity greater than 250 tons per day of MSW. The EPA believes there is no longer a technical need for having separate Class A and B designations (Docket No. A-98-18). Class C units, which are renamed Class II units in the final emission guidelines, remain a separate subcategory, as in the 1995 emission guidelines, with their own set of emission limits. The subcategorization in the final emission guidelines is consistent with the 1995 rulemaking (40 CFR part 60, Subpart Cb) and EPA believes that this subcategorization is valid.

Comment: Several commenters (IV-D-14, IV-D-28, IV-D-05, IV-D-15, IV-D-26, IV-D-09) believe that, because of the dilution of flue gas, the proposed Class B emission limits should be set more stringent than the proposed Class A emission limits, not less stringent. These commenters (IV-D-14, IV-D-28, IV-D-05, IV-D-15, IV-D-26, IV-D-09) believe that if a proposed Class B refractory type incinerator produces 50 percent more flue gas than a proposed Class A unit, then it would release more pollution on a mass basis. One commenter (IV-D-14) believes that MWC units in the proposed Class B would be able to meet the emission limits by dilution of the flue gas. Another commenter (IV-D-28) recommended that the emission limits should be either designated as a limit on the total mass released or as a concentration corrected for the dilution. The commenter (IV-D-28) believes that it would be possible for a proposed Class B MWC plant to release over 500 percent more mass of dioxins than a proposed Class A plant.

Response: In these final emission guidelines, the proposed Classes A and B have been combined into a single Class I subcategory (small MWC units located at plants with an aggregate plant capacity greater than 250 tons per day of MSW), with one set of emission limits. The EPA believes there is no longer a technical need for having Class A and B limits and that flow rates for the two types of MWC units are, in fact, similar (Docket No. A-98-18). The subcategorization in the final emission guidelines is consistent with the 1995 rulemaking (40 CFR part 60, Subpart Cb) and the EPA believes

that this subcategorization remains valid. Because there is no technical difference and because the purpose of this rulemaking is to reestablish emission guidelines for existing small MWC units with combustion capacities of 35 to 250 tons per day of MSW, EPA is retaining the subcategorization used in the 1995 emission guidelines.

Comment: One commenter (IV-D-08) stated that all of the emission limits, except acid gases and lead, are more stringent than the recent emission guidelines for hospital, medical, infectious waste incinerators (HMIWI). The commenter (IV-D-08) also stated that the Class C unit emission limits should be no less stringent than the large size HMIWI emission limits.

Response: The EPA agrees that small MWC units and HMIWI units are similar in some respects, however, these are different source categories and must be addressed in separate rulemakings. There is no technical or legal basis for these two source categories to have the same limits. The small MWC rules and the HMIWI rules are technology based standards and different source categories will lead to different MACT floors and MACT emission limits for each source category. The goal of this rulemaking is to reestablish the 1995 emission guidelines for small MWC units.

Comment: One commenter (IV-D-25) recommended that the percent reduction option for SO₂ and HCl be eliminated and compliance be based on achieving the specified emission limit at the stack.

Response: The percent reduction option for meeting the SO₂ and HCl emission limits was included in the 1995 emission guidelines (40 CFR part 60, Subpart Cb). The MACT standards are based on achievable performance levels of control technologies, and as documented in the support for the 1995 rules, all MWC units with the MACT acid gas control technologies can meet either the specified percent reductions or the outlet concentration level. However, either the percent reduction or the outlet concentration level alone might not be achievable in all cases, because variations in inlet concentration can affect the achievable percent reduction or outlet concentration levels. The goal of this rulemaking is to reestablish emission guidelines for small MWC units; therefore, EPA is retaining the percent reduction option for meeting the SO₂ and HCl emission limits.

4.3.2 Municipal Waste Combustor Organics

Comment: One commenter (IV-D-25) questioned why EPA was proposing dioxin limits (which do not require compliance for 3 to 5 years) at levels that are up to 12 times higher than currently required in other areas. The commenter (IV-D-25) pointed out that in Europe and Japan dioxin limits for existing facilities have been set as low as 0.1 ng TEQ/Nm³ (~10 ng/Nm³ on a total mass basis, according to the commenter's conversion).

Response: The final MWC emission guidelines are technology based standards required by Section 129 of the CAA. The standards for small MWC units are set at the demonstrated performance levels of the best-performing MWC units based on EPA's judgement and do not have to be identical to regulations in different countries. These demonstrated performance levels are the same demonstrated performance levels contained in the 1995 emission guidelines (40 CFR part 60, Subpart Cb). Additionally, it is difficult to directly compare non-U.S. and U.S. test data due to difference in test methods, QA standards, reporting methods, and compliance policies. Given these differences, the EPA chose to principally rely on the reasonably large pool of performance and permit data from domestic plants in making this determination (see Section 3.4.1 of 1995 BID).

Comment: One commenter (IV-D-25) stated that there is no technical basis for allowing a higher organics emission limit for a unit when an ESP is installed in the system. The commenter (IV-D-25) requested that EPA include only one organics emission limit for the proposed Class A units.

Response: The dioxins/furans levels proposed for both ESP and FF-based systems are more stringent than the MACT floor, and are the same as those in the 1995 promulgated rule. Test data have shown that MWC units equipped with an SD/FF/CI air pollution control system achieve better dioxins/furans emission reductions than SD/ESP/CI systems. The preamble for the 1995 rule (60 FR 65401) explains the rationale for selecting the MACT standards including the SD/FF-based and SD/ESP-based emission limits, considering factors specified in Section 129 such as the cost of achieving the emission reductions. The purpose of this rulemaking is to reestablish emission guidelines for small MWC units and EPA is retaining the proposed format for the dioxins/furans emission limit, consistent with the 1995 rulemaking (see Section 7.5.2 of 1995 BID).

4.3.3 Municipal Waste Combustor Metals (other than Mercury) and Particulate Matter

Comment: One commenter (IV-D-18) reasoned that, since the rule has limits for mercury, lead and cadmium, there is no need for a PM limit. The commenter (IV-D-18) stated that, if the EPA retained the PM limit, it should be raised to 180 mg/dscm.

Response: Section 129(a)(2) of the CAA requires an emission limit for PM and eliminating the emission limit for PM is not an option. Furthermore, a PM limit of 180 mg/dscm suggested by the commenter is not possible because the MACT floors for PM for all classes of small MWC units are at levels lower than 180 mg/dscm, and Section 129 does not allow standards that are less stringent than the MACT floor (see Section 7.5.3 of 1995 BID).

4.3.4 Nitrogen Oxides Emission Limit

Comment: One commenter (IV-D-25) stated that, based on current technology, all units, regardless of size or design, should be required to control oxides of nitrogen. The commenter (IV-D-25) stated that, at a minimum, NO_x limits should be established at a level based on the equivalent of a 50 percent reduction for all MWC units. The commenter (IV-D-25) asserted that this level of control is easily achievable with currently available technology and is being demonstrated on small MWC units in Europe and Japan as well as on many types of small combustion processes in the U.S. One commenter (IV-F-1g) requested that EPA apply the large unit nitrogen oxide emission limit to the small rotary waterwall units. The commenter (IV-F-1g) pointed out that large MWC units under the 1995 emission guidelines (Subpart Cb) are subject to a nitrogen oxide emission limit of 180 ppmv (corrected to 7 percent oxygen) for the rotary waterwall units, whereas small MWC units under the current emission guidelines (Subpart BBBB) would be required to meet a 171 ppmv limit for nitrogen oxide (corrected to 7 percent oxygen). Two commenters (IV-D-03, IV-G-03) requested that EPA establish nitrogen oxide limits for the proposed Class A small MWC units for the emissions guidelines that are no more restrictive than the nitrogen oxide emission limits for large MWC units. One commenter (IV-D-03) disagreed with setting a single nitrogen oxide emissions limit for all types of small MWC units within the proposed Class A. Both commenters (IV-D-03, IV-G-03) believe that the standards appear to be more stringent for certain units than the emission standards set in 1995 for large MWC units (see Section 7.6.2 of 1995 BID).

Response: The final Subpart BBBB includes NO_x emission limits for Class I units based on combustor type. (The final Class I comprises the proposed Class A and B units.) The EPA recalculated NO_x MACT floor levels by combustor type (Docket No. A-98-18). The combustor types are the same as those used for the MWC units in the 1995 rules, except modular starved air and modular excess air are now identified, rather than placed in an “other” category.

The 1999 proposal included a single NO_x emission limit of 171 ppm. The final NO_x emission limits, based on combustor type, range from 170 to 380 ppm for Class I units, which are essentially the same as the 1995 emission limits, with three exceptions. For mass burn rotary combustors, fluidized bed combustors (FBC), and modular excess air combustors (MOD/EA), the new MACT floors are lower than the 1995 MACT floor and the final NO_x limit for three combustor types are more stringent (170 ppm vs 250 ppm for mass burn rotary, 220 ppm vs 240 ppm for FBC, and 190 ppm vs 200 ppm for MOD/EA). Additionally, there is a new NO_x limit of 350 ppm for mass burn refractory units. The EPA rounded the final MACT floor to two significant figures before setting the MACT limits as previously done in setting the 1995 NO_x standards. Available NO_x test data indicate the final emission limits have been achieved by these combustor types. The EPA analyses for the 1995 regulation, data contained in background information documents, data in the docket, and comments submitted by air pollution control vendors indicate that the limits are achievable for all Class I units of all combustor types (A-98-18).

Comment: Two commenters (IV-D-03, IV-F-1g) requested that emissions averaging and trading for nitrogen oxide limits be permitted for the emission guidelines for small MWC units. The commenter (IV-D-03) believes that allowing large MWC plants this option in Subpart Cb, but not allowing plants with small MWC units this option, imposes an unfair restriction on small plants.

Response: NO_x averaging would greatly increase the complexity of the small MWC rule. Additionally, NO_x averaging was not used by any States in their State plans implementing the 1995 emission guidelines for large MWC units. Consequently, NO_x averaging was not added to the final emission guidelines for small MWC units. Although NO_x averaging is not included in the final guidelines, a State plan can include emissions averaging if it is demonstrated to be as protective as the guidelines. Thus, under authority of Section 129, a State could develop and submit a NO_x emissions averaging plan as long as it demonstrates the plan is as protective as the guidelines.

4.3.5 Good Combustion Practices

Comment: One commenter (IV-G-04) requested that EPA amend the operator training course requirement so that it only applies to employees with responsibilities that affect how a municipal waste combustion unit operates. The commenter (IV-G-04) believes that not all of the positions listed in the proposed §60.1655 exist at the commenter's facility or affect the operation of the commenter's MWC units. In addition, the commenter (IV-G-04) believes that it seems an unnecessary administrative and recordkeeping burden to require MWC operators to train employees in areas where the employee has no operating responsibility or control.

Response: The EPA is retaining the operator training course requirement in §60.1655 as proposed. The EPA believes it is important for all personnel affecting the operation of the plant to understand the interrelationship between different operations and how they affect emissions. The training requirements in §60.1655 are the same as those in the 1995 regulations that are reestablished by this rulemaking.

Comment: One commenter (IV-D-10) requested that EPA amend §60.1675 to allow alternative plans for site-specific examinations for operator full certification that ensure operator qualifications at a reasonable cost. The commenter (IV-D-10) noted that the costs of a site-specific examination through the ASME is \$5,000 or more per operator, if the operator passes the first time. The commenter (IV-D-10) believes that a small MWC facility could use these financial resources more productively to serve the public. The commenter (IV-D-10) provided the following amendment to §60.1675: "The Administrator may approve alternate plans for site-specific examinations for operator full certification that ensures operator qualifications at a reasonable cost."

Response: The EPA is retaining the operator certification provisions in §60.1675 as proposed. However, under the general provisions (40 CFR part 60, Subpart A), the Administrator can approve alternative plans for operator certification. The operator must apply to the Administrator with a proposal for an alternative plan for operator certification. Until the alternative is approved, however, the operator needs to comply with the training requirements as written.

Comment: One commenter (IV-D-18) recommended that the full certification requirement for Class C (renamed Class II in final emission guidelines) shift supervisors be deleted (§60.1675). The commenter (IV-D-18) believes that this requirement is excessive, especially for a small, Class C facility.

The commenter (IV-D-18), who is located in Texas, believes that sending multiple employees to the east coast is unnecessarily expensive for the operator of a Class C facility.

Response: The EPA believes that operator certification is important and is not removing the operator certification requirement for any class of small MWC units. However, an operator may apply to the Administrator with a proposal for an alternative plan for operator certification. Until the alternative is approved, however, the operator needs to comply with the training requirements as written.

Comment: One commenter (IV-G-05) questioned the operator substitution requirement in §60.1195 of Subpart AAAA and §60.1685 of Subpart BBBB. The commenter (IV-G-05) has commenced the certification of supervisors and control room operators in an effort to avoid shut down of the facility and requested clarification or amendment to the rule before completing the process.

Response: The commenter (IV-G-05) misread the requirements for operator substitution. The commenter later submitted a letter (IV-G-17) withdrawing the original comment letter.

Comment: Three commenters (IV-G-05, IV-F-1g, IV-G-14) requested that EPA revise §60.1685 to reflect the typical work schedule for operators, which is a 12-hour shift. One commenter (IV-D-03) noted that this change would mean that when certified operators are offsite for less than 12 hours (rather than 8 hours), the provisionally certified control room operator may function in his/her place; and when provisionally certified operators have to substitute for fully certified operators for 12 hours or more, the substitution must be documented. The commenter (IV-D-03) also requested that EPA clarify the boundary limits of §60.1685.

Response: The EPA agrees with the commenter that a 12-hour shift is more typical for MWC operators. The EPA revised §60.1195(a) and (b) of Subpart AAAA and §60.1685(a) and (b) of Subpart BBBB to reflect a 12-hour shift, rather than an 8-hour shift. The EPA revised the recordkeeping requirements in §60.1410(l) of Subpart AAAA and §60.1885(l) of Subpart BBBB so that they apply when all chief facility operators and certified shift supervisors are offsite for more than 12 hours. In addition, EPA revised the regulation to clarify the boundary limits in §60.1685 of Subpart BBBB and §60.1195 of Subpart AAAA as "12 hours or less" and "2 weeks or less".

Comment: One commenter (IV-D-11) requested that EPA amend §60.1685 to provide criteria on why a corrective action may be approved or disapproved. The commenter stated that in the absence of any such criteria, the 90-day operation limit after disapproval should be extended to 6-12

months. The commenter (IV-D-11) believes that the 90-day shutdown provision may not allow sufficient time to meet the certified operator, shift supervisor, or chief facility operator requirement.

Response: The EPA believes that the requirements are adequate and no change is needed. The Administrator can approve an operating extension as long as the facility operator is making progress towards filling the position with a certified operator.

Comment: One commenter (IV-D-18) recommended that EPA delete the temperature requirement at the inlet of the PM control device (§60.1690). The commenter (IV-D-18) believes this requirement is redundant and unnecessarily restrictive because the use of a carbon injection system will minimize any increase in dioxins/furans resulting from high temperatures in the ESP. The commenter (IV-D-18) needs the ability to allow slight increases in temperature at the inlet to the ESP to ensure adequate combustion of municipal waste.

Response: The EPA believes that monitoring the temperature at the inlet to the PM control device is important to ensure that conditions that promote dioxins/furans formation do not occur. Therefore, EPA is not deleting this requirement (see Section 3.5.6 of 1995 BID).

Comment: Two commenters (IV-D-27, IV-G-02) suggested that EPA revise footnote b of Table 5 of Subpart BBBB to be consistent with the long term CO analysis memorandum in Docket No. A-98-18. The proposed footnote b to table 5 states that all averages are block averages, however, according to the memorandum in the docket (item II-B-8), EPA established the 200 ppm limit as a 24-hour geometric mean average concentration (rather than an arithmetic average). One commenter (IV-G-02) requested that EPA add a footnote to Table 5 of Subpart BBBB that applies to “Fluidized bed, mixed fuel, (wood/refuse-derived fuel)” and “Mass burn rotary waterwall,” and reads: “c. 24-hour daily block geometric average concentration.”

Response: The EPA corrected Table 5 to Subpart BBBB to clarify that the averaging time for Fluidized bed, mixed fuel, (wood/refuse-derived fuel) should read “24-hour geometric mean” and footnote b should read “Block averages. See §60.1940 for definitions.” This was an inadvertent error and the correction is consistent with the CO analysis memo in Docket No. A-98-18. The averaging time and method for mass burn rotary waterwall is correct as published and is consistent with the final 1995 emission guidelines, which are being reinstated.

Comment: One commenter (IV-D-16) requested that EPA provide additional operating practice requirements based on the compliance assurance monitoring (CAM) rule. The commenter

(IV-D-16) noted that any standard or other requirement governing solid waste incineration, under Section 129 of the CAA, is an applicable requirement for Title V. The commenter (IV-D-16) noted that to promote consistency among the various State Title V permits, it would be beneficial if the EPA could propose operating requirements for commonly used MWC metal, PM, and acid gas controls. These operating requirements would have to satisfy the requirements of the CAM.

Response: Compliance with the requirements of the CAM rule (40 CFR 64.1 through 64.10) is beyond the scope of this rulemaking. However, the small MWC emission guidelines already include operating requirements for commonly used MWC metal, PM, and acid gas controls.

Comment: One commenter (IV-D-16) recommended that EPA should check to make sure that the proposed operating requirements for dioxins/furans and mercury are consistent with other rules for similar source types. The commenter (IV-D-16) noted that 40 CFR part 60, Subpart EEE or the Hazardous Waste Incinerator MACT specifies operating requirements for carbon injection, including carbon injection rate, carrier fluid flowrate or pressure drop, and carbon specification. The commenter (IV-D-16) recommended that EPA consider if carbon injection rate, as proposed, is sufficient to provide assurance of compliance with the dioxins/furans and mercury standards.

Responses: The EPA could have developed several different control device operating requirements to limit dioxins/furans and mercury emissions. The proposed requirements are the same as the 1995 requirements and the EPA believes they are adequate to limit dioxins/furans and mercury emissions. The operating requirements that are contained in other rules are beyond the scope of this specific rulemaking.

Comment: One commenter (IV-D-18) believes that the proposed CO limit of 50 ppmv, based on a 4-hour average, for modular starved air and modular excess air MWC units should be raised to 100 ppmv. The commenter noted that the CO limits for mass burn type MWC units is 100 ppmv and argued that the same reasoning supporting a 100 ppmv limit for mass burn MWC units applies to the modular MWC units. The commenter noted that EPA's data for modular MWC unit included CO spikes over 100 ppmv and CO levels from their own modular MWC units were generally below 30 ppmv with occasional spikes over 50 ppmv.

Response: The proposed CO limits are the same as those that were included in the 1995 MWC regulations, which are being reestablished by this rulemaking. The CO limits in the 1995

regulations were supported by the data collected and available in 1995 and EPA judged the CO limits to be achievable. Therefore, the final CO limits are the same as the proposed CO limits.

Comment: One commenter (IV-D-27) suggested that EPA add a footnote to the CO limit in Table 5 of Subpart BBBB to state that the CO limit does not apply during any period longer than one hour when the unit is combusting fuel with an RDF content of less than 30 percent on heat input basis. The commenter believes this exemption would be in line with the exemption for “co-fired” units (§60.1555(g)) and the 1995 BID. The commenter (IV-D-27) suggested that this approach would address situations where their wood/RDF-fired unit will burn only wood for a portion of each day and could have trouble meeting the CO limits during this period.

Response: The format of the current CO limits is the same as the format in the final 1995 regulations. The EPA believes that the CO format is still valid for this rulemaking, which reinstates the 1995 regulations, and no change is necessary. The regulation already addresses co-fired units (§§60.1555 and 60.1940).

4.3.6 Size Categories of Existing MWC Units

Comment: One commenter (IV-G-04) expressed support for the subcategories and the rationale for selecting the subcategories. Another commenter (IV-D-15) did not support the proposed Class A, B, and C subcategories and recommended that EPA either combine the proposed classes of existing small MWC units and promulgate regulations for them as one category or promulgate regulations for subcategories based on aggregate plant capacity of 250 tons per day.

One commenter (IV-D-25, IV-D-22) stated that there is no health or technological basis for EPA’s decision to subcategorize the existing MWC units based on overall facility size. The commenter (IV-D-25, IV-D-22) recommended that EPA reconsider the proposed subcategories and emission limits based on actual operating data. The commenter (IV-D-25, IV-D-22) provided data to support its recommendation. The commenter (IV-D-25, IV-D-22) stated that the technology currently exists for all sizes of small MWC units to easily achieve the most stringent of the proposed levels for all pollutants. Another commenter (IV-G-03) recommended that EPA should not subcategorize based on aggregate capacity, but should subcategorize based on type (refractory or non-refractory).

Response: The EPA agrees that the subcategorization could be done in different ways. However, in the 1995 NSPS and emission guidelines (40 CFR part 60, Subparts Eb and Cb), the EPA

elected to use an aggregate plant capacity of 250 tons per day to subcategorize small MWC units. The EPA believes that approach is one valid way to subcategorize, and notes that Section 129 allows subcategorization based on size. Because the purpose of this rulemaking is to reestablish the 1995 NSPS and emission guidelines for new and existing small MWC units with combustion capacities of 35 to 250 tons per day of MSW, EPA is retaining the subcategorization used in the 1995 NSPS and emission guidelines (i.e., Class I and Class II).

4.3.7 Classes of Existing MWC Units

Comment: One commenter (IV-G-04) expressed support for the subcategories and the rationale for selecting the subcategories. One commenter (IV-G-03) did not support subcategories based on aggregate plant capacity and recommended that EPA subcategorize based on type of unit, either non-refractory or refractory. Other commenters (IV-D-05, IV-D-15, IV-D-21) disputed the technical differences between the proposed Class A (non-refractory) and Class B (refractory). Other commenters (IV-G-06, IV-D-27, IV-D-21, IV-D-17, IV-G-15, IV-G-13, IV-F-1d, IV-F-1e) requested that EPA either reclassify specific MWC units or create a new subcategory for specific MWC units based on the type or design of the units.

Several commenters (IV-D-05, IV-D-15, IV-D-21) stated that the difference between flue gas per ton of MSW is not a valid reason to set the proposed Class B emission limits higher than Class A. Another commenter (IV-D-17) stated that there is no apparent benefit for distinguishing between the proposed Class A and B. Two commenters (IV-D-14, IV-D-17) believe that the proposed Class B units can apply a similar control technology as the proposed Class A and should be able to achieve the proposed Class A emission levels regardless of flow rate. One commenter (IV-D-21) stated that EPA has inappropriately distinguished the proposed Class A and B units on the basis of a technological difference (refractory vs. nonrefractory) that is without significance, and has ignored other, more radical technological differences that result in actual differences in emission characteristics and control alternatives. The commenter (IV-D-21) stated that EPA's analysis of the combustion characteristics that make up the population of the proposed Class B is erroneous (referenced II-B-9) and based on outdated data (referenced 1969 publication titled "Municipal-Scale Incinerator Design and Operation").

Several commenters (IV-D-21, IV-D-17, IV-F-1d, IV-F-1e) stated that rotary waterwall MWC combustor types should be included in the proposed Class B or in a separate class. One commenter (IV-D-21) stated that rotary waterwall combustors are also inappropriately categorized in the proposed Class A because they are a completely different technology than other units in the proposed Class A. Several commenters (IV-D-21, IV-F-1a, H2, IV-F-1c) provided background information on two waste-to-energy facilities. Four commenters (IV-D-21, IV-D-17, IV-F-1d, IV-F-1e, IV-F-1g) stated that the O'Connor rotary waterwall combustion technology, on which these two waste-to-energy facilities are based, has distinguishing characteristics that would provide a rational basis for categorizing units utilizing this technology separately from the current assortment of facilities in the proposed Class A. Two commenters (IV-D-21, IV-F-1d) described the design characteristics of the O'Connor rotary waterwall combustion technology to show that there are distinct differences between them and other types of combustors that are currently grouped under the proposed Class A in the emission guidelines. Commenters IV-D-21, IV-D-17, IV-F-1d, and IV-F-1e provided documentation to support their requests.

Two commenters (IV-D-27, IV-G-06) requested that EPA reclassify RDF/fluidized bed combustors as Class B units. One commenter (IV-D-27) initially requested that EPA create a new subcategory for RDF/wood-burning fluidized bed combustors or, alternatively, reclassify these units as Class B units. The same commenter (IV-G-15) later stated that placing these combustors in either the proposed Class A or the proposed Class B would be inequitable. The commenter (IV-G-15) requested that EPA create a separate subcategory for RDF/fluidized bed combustors and provided information to support the request.

One commenter (IV-G-06) stated that RDF/fluidized bed units are Class B refractory units and, therefore, have been improperly classified as Class A nonrefractory units in the inventory. The commenter (IV-G-06) stated that these units are characterized by much higher excess air levels than typically found in non-refractory MWC units and the structure is protected by refractory and not closely spaced steel tubes that have water continuously flowing through them.

Another commenter (IV-D-20) requested that EPA create a new subcategory for Inclined Fluidized Bed (IBF), irrespective of aggregate plant capacity. Commenters IV-G-06, IV-D-27, IV-D-20, and IV-G-15 provided documentation to support their requests.

Response: The EPA agrees that the subcategorization could be done in different ways. In the final emission guidelines, the proposed Classes A and B have been combined into Class I (small MWC units located at plants with an aggregate plant capacity greater than 250 tons per day of MSW). Class C units (small MWC units located at plants with an aggregate plant capacity less than or equal to 250 tons per day of MSW) remain as proposed, except they are renamed as Class II in the final emission guidelines. The EPA believes there is no longer a technical need for having Class A and B separate and that flow rates for these types of MWC units are, in fact, similar (Docket No. A-98-18). This subcategorization is consistent with the 1995 NSPS and emission guidelines (40 CFR part 60, Subparts Eb and Cb) and EPA believes that this subcategorization is a valid way to subcategorize. Because the purpose of this rulemaking is to reestablish the 1995 emission guidelines for existing small MWC units with combustion capacities of 35 to 250 tons per day of MSW, EPA is retaining the subcategorization used in the 1995 NSPS and emission guidelines.

4.4 IMPACTS OF MUNICIPAL WASTE COMBUSTOR EMISSION GUIDELINES

Comment: One commenter (IV-F-1g) urged EPA to consider the significant cost of retrofitting the proposed Class A facilities in the same manner as they did the units in the proposed Class B. Another commenter (IV-D-07) stated that the EPA should have analyzed and considered the environmental benefits of combustion when setting the stringency of the emission limits, which the commenter (IV-D-07) stated are far below the MACT floor and will discourage combustion. One commenter (IV-G-07) expressed concern that the new rules and regulations go beyond the necessary requirements and force major retrofit projects and added costs for small MWC facilities to operate in compliance.

Commenters (IV-D-21, IV-F-1a, H2, IV-F-1c, IV-F-1e) representing two separate waste-to-energy facilities, stated that adding a spray dryer system to their facilities would be cost prohibitive. Commenters (H2, IV-F-1c, IV-F-1e) stated that these plants, which already have DSI control, would be required to add a spray dryer in order to meet the proposed Class A SO₂ and HCl emission limits in the emission guidelines. Commenters (H2, IV-F-1c, IV-F-1e) stated that, in addition, there would be adverse environmental impacts if their facilities were forced to close due to the regulation. Four commenters (IV-F-1a, IV-F-1b, IV-F-1c, IV-F-1e) stated that the costs of adding a spray dryer to each small MWC plant exceed the environmental benefits of a small decrease in SO₂ and HCl

emissions. Several commenters (IV-G-07, IV-D-17, IV-F-1b, IV-F-1c) added that the control costs associated with the regulation would drive their tipping fees up to the point where they would no longer be able to compete in the marketplace.

One commenter (IV-D-27) stated that EPA has performed no economic analysis for RDF/wood-burning FB units for any purpose - not for initial categorization, nor for setting limitations more stringently than the MACT floor. Two commenters (IV-D-27, IV-G-13) questioned how EPA can meet its rulemaking obligations under the CAA without performing such analyses.

One commenter (IV-F-1e) asserted that EPA's economic analysis indicates that facility closure and landfilling of waste is a potential and acceptable consequence of the economic impact of these regulations. The commenter (IV-F-1e) stated that this seems inconsistent with EPA's longstanding hierarchy of solid waste management priorities.

Response: The proposed and final subcategories are based on technical considerations. These are technology based standards as required by Section 129 of the CAA. Section 129 does not allow consideration of cost in establishing subcategories or setting the maximum achievable control technology (MACT) floor. Cost and other impacts are considered only in determining whether to require a control alternative more stringent than the MACT floor. The small MWC standards are set at the demonstrated performance levels of the controls an MWC unit would require to meet the MACT floor. These demonstrated performance levels are the same demonstrated performance levels contained in the 1995 emission guidelines (40 CFR part 60, Subpart Cb), which is SD/FF for small MWC units located at plants with an aggregate plant capacity greater than 250 tons per day of MSW and DSI/FF for small MWC units located at plants with an aggregate plant capacity less than or equal to 250 tons per day of MSW. Less control is not allowed under Section 129 of the CAA. The EPA believes that the regulations for both the large and small MWC strike the correct balance between cost to retrofit air pollution controls and emission reductions in making decisions of whether to require more stringent control than the MACT floor (see Sections 7.5 and 7.6 of 1995 BID).

Comment: One commenter (IV-D-11) stated that EPA failed to consider that because DSI systems do not contain flue gas cooling, small MWCs will need to add flue gas cooling to reduce temperatures to achieve the mercury limit using CI. The commenter (IV-D-11) stated that the addition of the flue gas cooling systems will come at considerable cost.

Response: The emission reduction potential of a DSI air pollution control system depends on sorbent feed rate, type of PM control device, and flue gas temperature. The performance and cost of a DSI system is documented in “Municipal Waste Combustors - Background Information for Proposed Guidelines for Existing Facilities” (EPA-450/3-89-27e). The cost of adding temperature control is already included in the cost of retrofitting a DSI-type of system that would be needed to meet the dioxins/furans and other emission limits, and is therefore not included in the cost of retrofitting a CI system (see Section 7.6.1 of 1995 BID).

4.5 PERFORMANCE TEST METHODS AND MONITORING PROVISIONS FOR MUNICIPAL WASTE COMBUSTOR EMISSIONS

4.5.1 Continuous Monitoring

Comment: Four commenters (IV-G-01, IV-G-02, IV-G-07, IV-F-1f) requested that EPA consider removing or revising the SO₂ monitoring requirements for all small MWC facilities because the costs for SO₂ CEMS are not reasonable, relative to the amount of SO₂ emitted from small MWC units. Two commenters (IV-G-01, IV-G-07) claimed that municipal solid waste is a low sulfur fuel and removing the SO₂ monitoring would be consistent with EPA policy for other low-sulfur fuels. One commenter (IV-G-02) requested that EPA allow Class II facilities to use a work-practice monitoring requirement similar to that for activated carbon, but applied to acid gas control reagent utilization, in place of a requirement to use an SO₂ CEM. A fourth commenter (IV-F-1f) stated that the CEMS QA/QC and recordkeeping and reporting requirements for both SO₂ and CO are onerous for Class II facilities relative to the CO and SO₂ emissions from these facilities.

Response: The EPA believes that the SO₂ and CO monitoring contained in the proposed rule is reasonable for known applications and the final rules retain those requirements. However, the general provisions to part 60 (40 CFR part 60, Subpart A) allow the Administrator to approve alternative or equivalent monitoring proposals, such as parameter monitoring for a control device, on a case-by-case basis. The final rule clarifies that this flexibility exists for case-by-case application of alternative monitoring.

Comment: Two commenters (IV-D-07, IV-G-14) recommended that EPA allow for measuring unit load using alternative technologies that exhibit equivalent accuracy. The commenter (IV-D-07) believes that load level control through steam flow measurement is appropriate, but the ASME Power Test Code referenced in the proposal is specific to only one method of flow

measurement: an orifice or nozzle used in conjunction with a differential pressure measuring device. The commenter (IV-D-07) noted that ASME PTCs do not address other technologies for flow measurement. The commenter (IV-D-07) requested that flexibility be provided for those MWC units that use other methods of measurement (e.g., annubar, vortex shedder, mag meters).

Response: The general provisions to part 60 (40 CFR part 60, Subpart A) allow the Administrator to approve alternative or equivalent monitoring proposals on a case-by-case basis. The final rule clarifies that this flexibility exists.

Comment: One commenter (IV-D-07) recommended that the requirement for visual opacity determination be waived if a properly certified and maintained continuous opacity monitoring system (COMS) is in service. The commenter (IV-D-07) stated that EPA Reference Method 9 is a poor substitute for a calibrated COMS. The commenter (IV-D-07) believes the requirement to measure opacity by both performance testing using Method 9 as well as COMS will result in additional testing expense without any corresponding benefit.

Response: Opacity measurement by EPA Reference Method 9 is the means for enforcement of the opacity standards. However, the general provisions to part 60 (40 CFR part 60, Subpart A) allow the Administrator to approve alternative test methods or waive testing on a case-by-case basis.

Comment: Three commenters (IV-G-04, IV-D-20, IV-D-18) noted that some MWC facilities with multiple combustion units share common steam generating and heat recovery systems. Therefore, these facilities are unable to comply with the requirement for steam flow monitoring on an individual unit basis, as required in §60.1810 of Subpart BBBB, because of the use of common heat recovery equipment. For the plant, the steam flow is indicative of total facility steam flow rather than individual combustion unit steam flow. In addition, one commenter (IV-D-20) noted that common air pollution control equipment is usually used when common heat recovery equipment is used. In this case, the facility cannot comply on a per-unit-basis with the continuous parameter monitoring requirements in §§60.1715 and 60.1720 of Subpart BBBB, or routine performance testing of regulated emission parameters. The commenter (IV-D-20) requested that the requirements for individual steam flow monitoring, continuous emissions monitoring, and performance testing be revised to include provisions for common steam generation and air pollution control systems with multiple combustion units. Another commenter (IV-G-04) asked EPA to confirm whether the steam load monitoring requirements in §60.1810(b) apply, instead of §60.1810(a), in cases where multiple units share a common steam

generator or heat recovery system. The final commenter (IV-D-18) asked the EPA to revise §60.1810 to clarify that steam load in these situations can be monitored just downstream from the steam drum just prior to the steam generator.

Response: The general provisions to part 60 (40 CFR part 60, Subpart A) allow the Administrator to approve alternative or equivalent monitoring proposals on a case-by-case basis. The final rule clarifies that this flexibility exists.

Comment: One commenter (IV-G-06) provided input on EPA's efficiency measurement method reported in the docket (Docket No. A-89-08, IV-B-22). First the commenter (IV-G-06) stated that the recommended mathematical model must consider both reagent feed rate and the concentration of the co-contaminant. According to the commenter (IV-G-06), these considerations are necessary because both sulfur dioxide and hydrogen chloride are controlled by sorbent injection and consume a portion of the reagent. The commenter (IV-G-06) believes that the model would be better if it used the reciprocal of penetration versus terms that are proportional to reagent stoichiometry and perhaps the squares and cross product of these terms rather than the efficiency and reagent flow rate.

Response: The procedure contained in the docket for determining SO₂ reduction efficiency is only a supporting document and was not part of the proposed rule. Facilities that cannot measure SO₂ or HCl concentrations at the control device inlet can apply for approval of alternative methods for measuring or monitoring SO₂ or HCl reduction efficiency under the general provisions (40 CFR part 60 Subpart A). Those alternative methods can include the commenter's suggested changes to the EPA procedure included in the docket.

Comment: One commenter (IV-G-04) asked for clarification as to whether the span values in Table 7 of Subpart BBBB are minimum span values or if they are intended to reflect full span of the instrument. This commenter (IV-G-04) stated that if they are intended as full span values, they do not appear to be consistent with the referenced performance specifications (a table pertaining to this comment was submitted with this comment).

Response: The span values indicated in the table are the span values expressed as a percentage of the hourly potential maximum concentration. However, on a case-by-case basis, the owner or operator can deviate from the span values in the table by applying to the Administrator for approval of alternative span values.

Comment: One commenter (IV-D-10) pointed out that a considerable cost is incurred each time an emission test contractor has to be mobilized to the facility. This commenter (IV-D-10) stated that the requirements under the proposed emission guidelines, in accordance with Appendix F of 40 CFR, would require on-site emission testing for quarterly relative accuracy testing of CEMs. The commenter (IV-D-10) claims that quarterly calibration gas audits and relative accuracy audits for CEMs would be substantially less costly without negative operational effects of harm to the environment.

Response: The commenter apparently has misunderstood the Appendix F requirements. For most CEMS, Appendix F does not mandate quarterly stack testing for relative accuracy. For most CEMS, one stack test per year, and three cylinder gas audits are used to determine relative accuracy.

Comment: In reference to §60.1690(c) and (d), one commenter (IV-D-11) suggested that there should not be an absolute carbon usage limit because the total amount of carbon actually used and the actual continuous feedrate can not be determined with sufficient accuracy to warrant an enforcement action. This commenter (IV-D-11) explained that any total quarterly usage amount must include the “live inventory” (i.e. actual carbon contained in the storage silo or bulk bags) and not just the amount purchased and delivered. However, determining the absolute or remaining weight of the live inventory is difficult. This commenter (IV-D-11) proposed that the absolute quarterly usage total be omitted and that such information should only be a recordkeeping requirement and not used for enforcement action. This commenter (IV-D-11) also added that in addition to the requirement to report times when the feedrate was not maintained, an additional check would be to require periodic feeder or feedrate monitor calibration on a quarterly basis consistent with the CEM quarterly audits.

In addition, two commenters (IV-G-01, IV-G-07) noted that Minnesota has approved plans that requires shift supervision and daily calibration of carbon injection feed rate, including quarterly reporting to the State. The commenters (IV-G-01, IV-G-07) believe that to require additional carbon usage information is irrelevant and duplicative. Another commenter (IV-G-14) suggested making carbon/lime ratio and slurry density the reportable parameter.

Response: Under the general provisions (40 CFR part 60 Subpart A), facilities can apply for approval of alternative or equivalent methods for monitoring carbon feed rate. Because of variation in plant and system configuration, it is not possible to anticipate all conceivable situations in the standards.

The EPA believes it is better for facility operators to address site-specific issues on a case-by-case basis.

Comment: One commenter (IV-D-11) recommended that §60.1720 be clarified to allow a CO monitor to be located downstream of air pollution control equipment as long as the diluent monitor (CO₂ or O₂) is located with it, which would be consistent with the Subpart Cb implementation guidance. The commenter (IV-D-11) alleges that this would improve reliability and reduce maintenance and CEM costs without sacrificing emission accuracy.

Response: Under the general provisions (40 CFR part 60 Subpart A), facilities can apply for approval of alternative or equivalent methods for monitoring CO, including alternative placement of the CO and diluent monitors. This alternative has already been approved for some large MWC units. The final rule clarifies that this flexibility exists.

Comment: One commenter (IV-D-18) stated that the continuous emissions monitoring requirement for SO₂ contained in §60.1720 of the proposed emission guidelines is unnecessarily redundant and should be deleted. The commenter (IV-D-18) claimed that the additional data acquired through the use of a CEMS would not provide any additional useful operational information because of the problems of attempting to adjust the injection system to respond to fluctuations in SO₂ levels. The commenter (IV-D-18) believes that if stack tests and parameter monitoring are sufficient for monitoring hydrogen chloride, then they are sufficient for monitoring SO₂. In conclusion, the commenter (IV-D-18) suggested that a requirement to monitor some other parameter, like the sorbent feed rate for a DSI/ESP system, would provide better information on the operation of an acid-gas control system.

Response: Under the general provisions (40 CFR part 60 Subpart A), facilities can apply for approval of alternative or equivalent methods for monitoring SO₂ emissions, including parametric monitoring in place of an SO₂ CEM. The final rule clarifies that this flexibility exists.

Comment: For the proposed emission guidelines, one commenter (IV-D-26) proposed that EPA include parametric monitoring parameters to ensure compliance with other standards besides dioxins/furans and mercury. This commenter (IV-D-26) suggested that the EPA develop guidelines for continuous parametric monitoring of cadmium, lead, particulates, and hydrogen chloride. This commenter (IV-D-26) noted that because continuous parametric monitoring will be required under Title V, it is desirable for monitoring to be consistent from State to State, rather than each State developing some different format. In addition, the new guidelines should be made consistent with other MACT

standards, such as the hazardous waste incinerator rule, which specifies the requirement for dioxin control not only in regards to the carbon injection rate (as in the MWC guidelines), but also in relation to carrier fluid flow rate/pressure drop and carbon specifications.

Response: The proposed monitoring requirements are based on the available air pollution control device and monitoring technology. The States are free to include more stringent requirements in the State plans implementing the guidelines if they see fit to do so. Continuous parametric monitoring of Cd, Pb, and PM is not needed because the control technology basis for the rule (fabric filtration) operates in a continuous manner. Parametric monitoring is not needed for HCl because HCl and SO₂ are controlled by the same technology and the rule requires monitoring of SO₂ emissions.

The carbon injection monitoring requirements for Hg control are the same as those that were in the 1995 regulations and are sufficient to ensure control of other pollutants, such as dioxins/furans, that are also affected by this technology. The EPA sees no need for additional monitoring requirements.

Comment: One commenter (IV-D-15) requested that EPA require continuous emissions monitoring for all regulated pollutants, including dioxins/furans, metals, volatile organic compounds, and other toxics. The commenter (IV-D-15) believes that otherwise, there is no way of knowing what the emission levels are on days when there is no stack test. The commenter (IV-D-15) believes that if there were continuous monitoring for all pollutants, then sources would be less likely to challenge the stack test methods. The commenter (IV-D-15) believes that States would be more likely to enforce Notices of Violations if the State had continuous monitoring data, rather than relying on stack test results that are challenged by sources.

Response: The proposed monitoring requirements are based on the continuous emission and parametric monitoring systems that are now available and are adequate to ensure compliance. No CEMS are available for dioxins/furans and metals (see Section 3.8.2 of 1995 BID).

Comment: Regarding CO monitoring, one commenter (IV-G-10) suggested that EPA change the definition of response time to exclude sample extraction, conditioning and sample transport time but only include analyzing and recording time. The commenter's (IV-G-10) main concern is the 90-second response time requirement. The commenter (IV-G-10) believes that the requirement may have been included in PS4A as a "roll over" from the hazardous waste combustion monitoring requirement, where CO is used for automatic waste feed shutoff. According to the commenter (IV-G-10), for MWC units, CO monitors are not included in the automatic combustion control loop nor required for waste feed

shutoff. The commenter (IV-G-10) stated that CO monitors provide data that operators use to make manual adjustments to minimize CO and meet Ea/Eb/Cb/proposed BBBB limits under the GCP requirements. The commenter (IV-G-10) believes that for MWC applications, CO monitors do not need rapid response times. In addition, the commenter (IV-G-10) states that due to the construction sequence for installing new APC equipment to meet the Subpart BBBB requirements, new extractive type CEMS would have to be installed in remote areas of the plant. According to the commenter (IV-G-10), this results in relatively long sample transport times and makes meeting the PS4A response time impossible. The commenter (IV-G-10) notes that most, if not all, CO monitors are extractive systems to provide the necessary sensitivity and accuracy at typical low MWC CO levels.

Response: The comments submitted on the CEMS response time for CO measurement under revised PS4A are outside the scope of this small MWC rulemaking. However, the recent rulemaking to update PS4A (signed by the Administrator on January 10, 2000) addressed comments received on that PS4A rulemaking. In that PS4A rulemaking, the response time includes the time for gas sample analysis and data reporting by the CEMS, and excludes the time required for gas sample extraction, conditioning, or delivery to the CEMS as requested by the commenter.

Comment: The commenter (IV-G-10) also believes that the high-level scale requirement should be removed and replaced with a requirement that existing MWC units, which experience spikes, would operate with a single scale that could accommodate higher emissions. The commenter (IV-G-10) believes that new MWC units could still be required to have the second high level scale.

The commenter (IV-G-10) recommended that the alternative relative accuracy criterion should be changed to 5 ppm mean difference, rather than the current interpretation of 5 ppm as the sum of the absolute values of the mean difference and confidence coefficient. According to the commenter (IV-G-10), the NESCAUM CEM guidance document for MWCs jointly developed by the States and EPA in 1990 used the mean difference only criterion. The commenter (IV-G-10) believes this criterion was specifically developed to address the difficulties in getting two different measurement systems to agree at low levels.

Response: The comments submitted on the CEMS high-level CO scale requirements and the CEMS relative accuracy requirement under revised PS4A are outside the scope of this small MWC rulemaking. The recent rulemaking to update PS4A (signed by the Administrator on January 10, 2000) addressed comments received on that PS4A rulemaking.

Comment: One commenter (IV-D-18) suggested that EPA remove the COMS requirement, or alternatively, that EPA add language to the rule clarifying that COMS data is to be used as operational data rather than compliance data. The commenter (IV-D-18) believes that COMS are not appropriate tools for measuring compliance with opacity limits, even at a 10 percent opacity limit. The commenter (IV-D-18) believes that COMS do not accurately measure opacity during all situations and that they are not appropriate for determining compliance. The commenter (IV-D-18) questioned why EPA is requiring the reporting of “exceedances” based on COMS data, if compliance with the opacity limit is going to be determined based on stack tests.

Response: The EPA agrees with the commenter and revised the reporting requirements in §60.1900 to indicate that COMS readings that are above the opacity standard are not violations. Opacity limit violations can only be determined by Method 9 opacity tests and not by COMS data (see Section 3.8.2 of 1995 BID).

4.5.2 Comments on Test Methods

Comment: Several commenters (IV-D-14, IV-D-05, IV-D-09, IV-G-06, IV-F-1g) requested that EPA clarify the accuracy of the EPA test methods used to demonstrate compliance with the emission limits. Some commenters (IV-D-14, IV-D-09, IV-F-1g) were concerned that uncertainty in the test methods could lead to a higher risk of noncompliance for facilities, especially if states adopt more stringent standards than the emission guidelines. One commenter (IV-D-09) suggested that uncertainty in the test methods, particularly that for dioxins/furans, could lead to a lack of enforcement of the standards.

One commenter (IV-D-05) asked the EPA to clarify whether the emission limits already include a margin of error to account for “imperfection” (i.e., uncertainty) in the emission measurements and variation in emissions. The commenter (IV-D-05) asked the EPA to clarify that States and regulated facilities cannot add a margin of error to the emission limits to account for uncertainty in emission measurements and variation in emissions.

Response: The test methods are adequate to use in application of the MWC regulations. The development of the test methods is not part of this rulemaking. The adequacy of the test methods was addressed in establishment of the test methods and was done in a separate rulemaking. The EPA proposed and accepted comments on the test methods in separate rulemaking actions. Questions

submitted about the accuracy of the test methods, have been forwarded to the EPA emission measurement laboratory for evaluation outside this rulemaking.

The proposed emission limits already include a margin of error to account for uncertainty in the emission measurements and normal variation in emissions. The proposed standards are clear that compliance is based only on the average emissions measured during a compliance test.

Comment: Three commenters (IV-G-06, IV-D-01, IV-F-1f) stated that the standards must better address uncertainty in the emission measurement methods. One commenter (IV-G-06) suggested a way to revise the equations in §60.1460 of the NSPS and §60.1935 of the emission guidelines for determining percent reductions for Hg and HCl to better account for measurement uncertainty. Two commenters (IV-D-01, IV-F-1f) also stated that the test methods for Pb, Cd, Hg and dioxins/furans emissions have too much uncertainty and cannot be used for determining compliance with the emission limits. One commenter (IV-F-1f) also stated that EPA must account for both process variability and measurement uncertainty in setting emission limits. Finally, two commenters (IV-D-01, IV-F-1f) stated that section 129(c) of the CAA requires that emission standards must be based on test methods validated on solid waste combustion units.

Response: The EPA believes that all methods specified in the emission guidelines are valid for use on MWC units. The docket contains several reports that deal with method validation studies conducted on these methods on MWC units and similar sources. In addition, the emissions data on which the standards are based are the same measurement methods that will be used to determine compliance. Process variations and emission variations result in emission data variation and all emission measurement methods have some uncertainty. The proposed emission limits account for all of these factors (process variation, emission variation, and measurement uncertainty). Additionally, these test methods and calculation procedures are the same as those included in the 1995 standards (see Section 3.8.3 of 1995 BID).

Comment: Two commenters (IV-G-06, IV-F-1f) noted that the likelihood of a violation increases as the number of limits in the standard increases and as the number of units at a plant increases. The commenters were concerned that the emission limits are based on individual achievement of the limits and not simultaneous achievement of all the limits. The commenters suggested that the language of §60.1705 of the emission guidelines be revised so that small exceedances of the limits are not considered violations if subsequent testing indicates compliance or if the exceedance is

within the measurement uncertainty of the test methods. One commenter also asked EPA to solicit comments on determining measurement uncertainty using EPA Method 301 and at the proposed regulatory limits, and on demonstrating compliance with multiple emission limits.

Response: The proposed limits include a consideration for measurement uncertainty and process variability and are simultaneously achievable. Allowances for small exceedances, as suggested by the commenters, are not needed. The EPA has already accepted comments on the test methods and the achievability of the emission limits. The EPA sees no need to solicit additional comments. In addition, because MACT must be achievable and there is inherent variation in emissions over time and among MWC units, even when the MWC units and control devices are well designed, operated, and maintained, the floor emission levels are set at the levels that are demonstrated to be achievable by the population of MWC units with the best technology.

Comment: One commenter (IV-D-07) asked EPA to clarify the compliance testing schedule. The commenter (IV-D-07) stated that §60.1795(b) appears to require dioxin testing on an annual basis whereas §60.1795(a) states that stack testing can occur each 36 months if all stack tests for a given pollutant show emission levels that are less than the limit for the unit in question. The commenter (IV-D-07) supports stack testing at a reasonable frequency and considers annual stack testing, without some relief provision recognizing proper operation or superior performance, is unreasonable. The commenter (IV-D-07) supports the proposed frequency for stack testing if §60.1795(a) applies to all of the tests required under §60.1785, including dioxins/furans testing.

Response: All Class I and II units must do stack tests for dioxins/furans annually (§60.1775); however, the regulation does allow for reduced testing for Class I and II units (§60.1795). For Class I, reduced testing of dioxins/furans is allowed for MWC units that have demonstrated levels of dioxins/furans less than or equal to 15 nanograms per dry standard cubic meter for 2 consecutive years (§60.1795(b)). For Class II units, two reduced testing options are available. (1) Similar to the reduced testing described above, reduced testing of dioxins/furans is allowed for MWC units that have demonstrated levels of dioxins/furans less than or equal to 30 nanograms per dry standard cubic meter for 2 consecutive years. (2) Reduced testing of all pollutants is allowed for Class II MWC units that have demonstrated compliance with all pollutants, including dioxins/furans, over 3 consecutive years (§60.1795(a)). These sections of the emission guidelines have been edited to make these provisions more clear.

Comment: One commenter (IV-F-1f) stated that the annual retest language (§60.1785 of emission guidelines and §60.1295 of NSPS) should be changed to require annual retesting, either within 13 months or within 54 weeks. The commenter (IV-F-1f) pointed out that the current retest language can create a rollback or ratchet effect, where you actually have less than twelve months to retest. The commenter (IV-F-1f) stated that the language could be interpreted as meaning within 12 months from the day the last test was finished, not 12 months from the month it was finished.

Response: The EPA agrees with the commenter that the current requirement to test within 12 months of the last test could imply that annual stack tests must be no later than 12 months apart. Because it may be difficult to schedule tests exactly 12 months apart, the testing schedule would be compressed so it was more frequent than annual testing. The emission guidelines (§60.1785 and §60.1795) have been revised to require annual stack tests to be no later than 13 months apart to allow some flexibility in the annual scheduling tests.

Comment: Three commenters (IV-G-01, IV-G-07, IV-F-1f) requested that EPA require only a 3-hour minimum sampling time for dioxin and furan test runs. The commenters (IV-G-01, IV-G-07, IV-F-1f) believe a 4-hour minimum sampling time will not add significantly to the accuracy of the test results and will add extra costs for testing and impose an additional burden on the stack test team. The commenters (IV-G-01, IV-G-07) stated that the extra sampling hours easily add an additional day to a dioxins/furans stack test. One commenter (IV-G-01) noted that 3 runs of 4 hours each takes well over 12 hours to complete without errors. Another commenter (IV-G-07) stated that adding an additional day to a dioxins/ furans stack test could skew the test results and create another potential for error to the test. The third commenter (IV-F-1f) stated that the 4-hour sampling time does not reflect the latest analytical technology.

Response: The EPA is keeping the requirement for a 4-hour sampling time for the dioxins/furans test method in the emission guidelines. However, facility operators have the option of applying to the Administrator for approval to use a shorter sampling time on a case-by-case basis, under the general provisions (40 CFR part 60, Subpart A). The test method section of the emission guidelines has been revised to clarify that facility operators may apply to the Administrator for approval of alternative or equivalent test methods or modifications of the final test methods.

Comment: One commenter (IV-G-06) recommended modifying §60.1935(a) of the MWC rule to eliminate the problem of public misperception of adverse environmental consequences

associated with inappropriately inflated emitted concentrations during startup and shutdown due to the mathematical effects of the oxygen correction factor. See the general provisions for requirements during such periods.

Response: The EPA sees no need to modify the oxygen correction factor for startup and shutdown periods. The emission guidelines do not regulate emissions during these periods and do not require recording or reporting emissions during these events.

Comment: One commenter (IV-F-1f) presented an alternative dry sorbent injection test procedure that uses Method 19 to determine removal efficiency along with CEMS. The commenter (IV-F-1f) stated that the proposed rule has some undefined terms that are defined in Method 19. The commenter's (IV-F-1f) method gives two baselines and a control, which allows you to determine control efficiency as you measure the concentration when the sorbent is injected versus when it is not injected, and make an uncertainty correction based on the dual train results. The commenter (IV-F-1f) stated that the unit should be considered in compliance if both data sets meet the standard.

Response: The EPA is not modifying the current test procedures for determining removal efficiency for HCl and SO₂. However, owners and operators have the option of applying to the Administrator for approval to use alternative test methods on a case-by-case basis, under the general provisions (40 CFR part 60 Subpart A). The final rule clarifies that this flexibility exists.

Comment: Four commenters (IV-G-04, IV-G-06, IV-D-27, IV-F-1f) stated that it is impossible to measure and monitor acid gas (SO₂ and HCl) emissions at the inlets to certain acid gas control systems, such as dry sorbent injection systems or furnace sorbent injection systems. Therefore, they must turn off the sorbent injection system to measure uncontrolled emissions for use in determining acid gas removal efficiency. One commenter (IV-G-04) also noted that this problem exists for determining Hg emission reduction efficiency. In some cases, the sorbent injection system must be turned off for up to 12 hours before the test and during this time the facility cannot comply with the acid gas emission limits. Two of the commenters (IV-G-04, IV-G-06) also noted that they cannot install an SO₂ monitor at the control device inlet in these situations to continuously monitor SO₂ reduction efficiency. The commenters (IV-G-04, IV-G-06, IV-D-27, IV-F-1f) proposed amending the monitoring requirements at §60.1720(e) and the emission reduction efficiency equations at §60.1935 to allow facility operators to use a parametric method to measure and monitor acid gas or Hg reduction efficiency.

Three of the commenters (IV-G-06, IV-D-27, IV-F-1f) also asked EPA to allow a waiver of the acid gas emission limits during testing so facility operators turn off the acid gas control system and collect the uncontrolled data needed to determine reduction efficiency. The commenters noted that the hazardous waste combustion NESHAP (40 CFR part 60, Subpart EEE) contains a waiver of emission reduction efficiency and concentration limits during compliance testing and model calibration.

Response: Facility owners and operators can comply with either the HCl and SO₂ reduction requirements or the HCl and SO₂ concentration limits. If they must turn off the acid gas control system (e.g., the dry sorbent injection system) to measure HCl or SO₂ removal efficiency, the operator can complete testing before the compliance date for their facility without violating the emission standards. After the compliance date, facility operators can use a parametric method for determining removal efficiency. The docket for the large MWC rulemaking contains a paper (Docket No. A-89-09, IV-B-22) describing this procedure. Facility operators already have the option of applying to the Administrator for approval to use parametric monitoring or alternative test methods on a case-by-case basis, under the general provisions (40 CFR part 60, Subpart A). These alternative methods can include the changes to the equations in §60.1920 suggested by the commenters. The final emission guidelines clarify that this flexibility exists.

Comment: One commenter (IV-D-05) requested that EPA make it clear that for a garbage incinerator there is not a normal distribution in emissions because the waste stream varies. The commenter (IV-D-05) noted that measurements made on different days cannot really be compared and assumed to represent a normal distribution. The commenter (IV-D-05) questioned if sampling using multiple nozzles within a couple of inches of one another could eliminate the variations caused by the waste stream. The commenter (IV-D-05) noted that air is more likely to flow up the stack in some sort of spiral so even simultaneous sampling with multiple nozzles does not measure the same actual emissions.

Response: The emission limits, sampling, measurement, and monitoring methods and requirements in the proposed rule address the commenter's concerns about variability in emissions, including variability over time in the waste stream and cyclonic gas flow in the stack.

Comment: One commenter (IV-G-10) requested that both Method 26 and 26A be allowed for hydrogen chloride testing. The commenter (IV-G-10) conducts hydrogen chloride testing using Method 26A in a non-isokinetic mode (single-point constant rate sampling). According to the

commenter (IV-G-10), Method 26A eliminates the problems caused by the heated glass stopcock and makes it much easier to maintain temperature to prevent water condensation and hydrogen chloride scrubbing. In addition, the commenter (IV-G-10) noted that Method 26A can also be combined with Method 5 to reduce testing costs.

Response: The EPA revised Table 8 of subpart BBBB to add Method 26A as an alternative test method to Method 26.

Comment: One commenter (IV-D-15) recommended that if EPA cannot require continuous monitoring for pollutants such as dioxins/furans, then EPA should require more frequent testing. The commenter (IV-D-15) stated that the process of relying on annual stack test data is full of holes, particularly the uncertainty of knowing the emission rates on the other 362 or so days of the year. The commenter (IV-D-15) also believes that if there were more frequent stack tests, then enforcement issues would not drag on for longer than necessary.

Response: The requirements for annual testing and continuous emissions or parametric monitoring are the same as those in the 1995 rules for small MWC units, which are reinstated by the proposed rules. The technology and requirements are appropriate for ensuring continuous compliance with the emission standards. The States can require more frequent testing if they see fit to do so.

Comment: Two commenters (IV-D-15, IV-D-10) recommended that EPA require stack testing at different times of the year, not just testing on an annual basis. One commenter (IV-D-15) stated that if EPA required testing during the winter when yard waste and green waste is minimal, then EPA would probably catch the source at its worst emission levels of the year. The commenter (IV-D-15) believes that to assume emissions in January (when there is minimal green waste) are comparable to emissions in September is wrong, irrational, and not supported by adequate logic and facts. The second commenter (IV-D-10) recommended requiring testing each calendar year, but occurring at least every 15 months. The commenter (IV-D-10) stated that this requirement would allow flexibility to the small municipal waste combustor for seasonal rotation and other scheduling aspects.

Response: Stack testing must be conducted by 180 days after the compliance date. Therefore, the stack test date could occur at any time of year. The EPA is not modifying the testing or monitoring schedule; however, States may require more frequent testing if they see fit to do so.

Comment: One commenter (IV-G-04) agrees with the rationale of crediting a facility for a good track record of compliance monitoring and believes that such credit is appropriate regardless of the subcategory in which the facility falls. This commenter (IV-G-04) recommended that EPA amend §60.1795 by adding a condition (c) similar to condition (a) that would provide some additional relief from the financial burden of stack testing to owners and operators of municipal waste combustor plants.

Response: The testing schedule in the proposed standards is the same as that contained in the 1995 regulations for small MWC plants, which are reinstated by today's action. The general provisions (40 CFR part 60, Subpart A) allow facility operators to obtain approval for alternative or equivalent testing schedules. It is not necessary to change the testing schedule as proposed by the commenter.

4.6 ENFORCEMENT, REPORTING, AND RECORDKEEPING PROVISIONS

4.6.1 Enforcement

Comment: Two commenters (IV-D-09, IV-D-05) advised EPA to make the small MWC regulations as clear and airtight as possible so that the regulations would be easier to enforce. One commenter (IV-D-09) stated that EPA should provide all the necessary backup information so that States do not have to fail to enforce the new regulations for lack of science. If EPA will provide the evidence (and clarification on the accuracy of stack test methods, as well as other objections that sources in various States have raised, the commenter (IV-D-05) believes it will maximize the chance that these new regulations will actually be enforced.

Response: All of the data supporting these standards and the selection of test methods are already contained in the public docket for this rulemaking and earlier rulemakings for MWC emission standards.

Comment: One commenter (IV-D-19) believes that there should be substantial penalties and fines for violations. The commenter (IV-D-19) stated that without them, the rule will have no teeth and no effect. The commenter (IV-D-19) also requested that EPA streamline the appeals process so that sources do not tie up enforcement actions in endless appeals.

Response: The subjects of fines, penalties, and the appeals process for violations are outside the scope of this rulemaking.

Comment: One commenter (IV-D-09) requested that EPA clarify what constitutes compliance for the benefit of the public and for the benefit of State agencies in enforcing these regulations. One

commenter (IV-D-05) believes that States need some clarification about the assumptions behind the stack testing process in order to calculate days of compliance or noncompliance, and to calculate penalties.

Response: States have enforcement discretion based on stack test results and continuous emissions and parameter monitoring data. That discretion is outside the scope of this rulemaking.

Comment: One commenter (IV-D-05) believes that passing a stack test does not demonstrate that a source was in compliance the rest of the year. The commenter (IV-D-05) believes that the emissions on the day of the stack test are probably the best of any time during the year considering the importance of passing the test, the ability to set up the test 45 days in advance, and the ability of the source to control many of the operating parameters (including waste stream).

Response: The EPA believes that the requirements for stack testing and continuous emissions or parameter monitoring are sufficient to ensure continuous compliance. The monitoring provisions ensure that air pollution controls and the combustion process are operated in the same way between stack tests as they are during stack tests.

Comment: One commenter (IV-D-05) requested clarification on the meaning of “for 2 consecutive years” in §60.1795. Paragraph (b) allows an owner or operator to test less frequently if the MWC unit(s) has demonstrated emission levels less than the respective limit for 2 consecutive years. The commenter (IV-D-05) questioned if it means there was a stack test that tested in compliance during 2 consecutive years.

Response: The phrase referred to by the commenter (“two consecutive years”) means two consecutive annual compliance tests. The facility operator must still comply with the continuous monitoring requirements during the period when they are allowed to skip the annual compliance tests.

Comment: One commenter (IV-D-05) asked if there is a proven relationship between inlet temperature at the air pollution control device and dioxin emissions for various types of municipal waste combustors. The commenter (IV-D-05) also asked if a historical relationship between inlet temperature and dioxin emissions is a reason to disregard a stack test report that indicates a source was in violation. The commenter (IV-D-05) requested that EPA provide the States with guidance on the relationship between inlet temperature and dioxin emissions.

Response: A relationship exists between air pollution control device inlet temperature and dioxins/furans emissions, but it is not strong enough to waive the requirement for an annual compliance test or to disregard a stack test that indicates a violation of the emission standard.

Comment: One commenter (IV-G-06) recommended the EPA modify the sentence in §60.1615 of the emission guidelines that reads: “You must submit a signed copy of the contract to initiate onsite construction...” to read: “You must submit a signed copy of the contract, but not the documents incorporated by reference or any attachments, to initiate onsite construction...” The commenter (IV-G-06) states that turnkey contracts, the way most of these modifications will be made, include a complete copy of the procurement specifications and contractor’s proposal, and this information may be proprietary in nature and provides the EPA no useful purpose.

Response: The commenter’s suggestion seems to be a reasonable way to protect proprietary information and reduce the paperwork submitted to EPA. The EPA made the suggested change to the emission guidelines.

4.6.2 Recordkeeping and Requirements

Comment: One commenter (IV-D-13) was unable to find the section of 40 CFR part 60, Subpart A related to submission of the initial report as required in §60.1870 of the emission guidelines. The commenter (IV-D-13) requested that the section provide a full reference.

Response: The EPA agrees with the commenter and added the exact citation for the section of the general provisions to the language in the emission guidelines. The initial semi-annual compliance report must be post-marked no later than 30 calendar days after the end of the first 6 month reporting period, as specified in §60.7(c).

4.7 LEGAL CONSIDERATIONS

Comment: One commenter (IV-D-23) stated that EPA’s failure to include standards for MWC with capacities of less than 35 megagrams per day would be unlawful. The commenter (IV-D-23) cited the CAA, which requires EPA to promulgate emission standards for all units combusting municipal waste (42 U.S.C. 7429(a)(1)). The commenter (IV-D-23) stated that there is no basis for EPA’s decision not to include standards for units with capacities of less than 35 Mg per

day (64 FR 47236) in this rulemaking. The commenter (IV-D-23) states that, accordingly, the regulations for small MWC will violate the CAA if they do not include standards for such units.

Response: The EPA is reestablishing the 1995 regulations for small MWC units. Those regulations included a lower size cutoff. This does not mean that EPA will not develop regulations for units smaller than 35 tons per day. The EPA considers MWC units smaller than 35 tons per day to be a separate subcategory of small MWC units. Section 129(a)(2) of the CAA specifically authorizes EPA to distinguish among sizes of units within a category in establishing standards. The EPA is not addressing requirements for MWC units smaller than 35 tons per day in this rulemaking.

Comment: One commenter (IV-D-23) stated that EPA's failure to establish numerical emission limits for NO_x for the proposed Class C MWC units violates the CAA. The commenter (IV-D-23) cited Section 129(a)(4) of the CAA that says performance standards applicable to solid waste incineration units "shall specify numerical emission limitations for the following substances or mixtures: particulate matter (total and fine), opacity (as appropriate), sulfur dioxide, hydrogen chloride, oxides of nitrogen, carbon monoxide, lead, cadmium, mercury, and dioxins and dibenzofurans." Because the proposed rule does not specify numerical emission limitations for oxides of nitrogen for the proposed Class B or Class C units, it would violate the CAA. The commenter (IV-D-23) noted that EPA did not explain why the proposed standards do not specify numerical emission limitations for NO_x, but merely cited the preamble to the 1995 regulations (59 FR 48228). The commenter (IV-D-23) stated that EPA's failure to comply with the CAA in promulgating standards for large MWC units does not excuse its failure to comply with the CAA in promulgating standards for small MWC units. The commenter (IV-D-23) stated that the CAA requires the EPA to promulgate these standards and no EPA explanation can alter this requirement.

Response: The commenter correctly points out that Section 129 of the CAA requires NO_x limits. This means that emission limits for these pollutants must be specified even if the MACT selected for a subcategory of facilities does not control that particular pollutant. The MACT floor and MACT for Class C (renamed Class II) units is "no control." None of the Class II units has NO_x controls, and the technical feasibility and performance of selective non-catalytic reduction (SNCR) controls for existing Class II modular starved air combustors is uncertain as described in the 1994 preamble. Therefore, in the final rule, EPA has added a "no control" NO_x emission limit of 500 ppmv for all Class

II units. The 500 ppmv emission limit is consistent with the “no control” NO_x limit as proposed for the emission guidelines on September 20, 1994 (59 FR 48255).

This final limit is not intended to result in NO_x emissions control, and the final emission guidelines for Class II MWC units do not include any associated monitoring, testing, recordkeeping, or reporting requirements. The 500 ppmv limit represents an emission level adequate to accommodate the variability in NO_x emission levels. Test data in the docket indicate that the 500 ppm level is achievable for all combustor types.

Comment: One commenter (IV-D-23) stated that the omission of CO limits (and an explanation) constitute a violation of the CAA. The commenter (IV-D-23) noted that the proposed rule does not specify numerical emission standards for CO, except for a limited subcategory of fluidized bed combustion units the co-fire wood and RDF. The commenter stated that the failure to specify numerical CO emission limits constitutes a missed opportunity to reduce dioxins/furans emissions since CO levels are indicative of good combustion and good combustion reduces dioxins/furans levels.

Response: The commenter is mistaken and has missed part of the regulations. Table 2 of Subpart AAAA (64 FR 47304) and Table 5 of Subpart BBBB (64 FR 47271) list the proposed CO emission limits for new and existing small MWC units, respectively. All small MWC units are subject to CO limits in the proposed and final regulations. The CO limits are listed in Table 5 of subpart BBBB.

Comment: One commenter (IV-D-23) stated that EPA’s failure to establish numerical emission limits for polychlorinated biphenyls (PCBs) violates the CAA. The commenter (IV-D-23) cited Section 112(c)(6) of the CAA, which requires EPA to assure that source categories accounting for 90 percent of all PCB emissions are subject to MACT standards “with respect to” PCBs. The commenter (IV-D-23) cited EPA as stating that MWC units account for more than half of the aggregate emissions of PCBs (63 FR 17838 and 17849, April 10, 1998). The commenter (IV-D-23) argues that EPA cannot possibly meet the requirements of Section 112(c)(6) without subjecting MWC units, including the small MWC subcategory, to MACT standards for PCBs. The commenter also pointed out that EPA has acknowledged in its final Great Waters determination under Section 112(m)(6) of the CAA, that “Section 112(c)(6) requires that EPA identify and list for regulation sources to assure that at least 90 percent of the aggregate emissions of each of seven pollutants are subject to Section 112(d) standards” (63 FR 14090, March 24, 1998). The commenter

(IV-D-23) stated that therefore, the small MWC regulations will violate the CAA if they do not include PCB standards.

Response: The commenter cited Section 112(c)(6) of the CAA. However, the small MWC regulations were developed under Section 129 of the CAA. Section 129 does not require regulation of PCB from small MWC. The EPA does not believe that Congress intended that the solid waste incineration units required to be regulated under section 129 of the CAA be subject to section 112(c)(6) of the CAA. Section 129(a)(4) of the CAA requires EPA to establish numerical emission limitations for a specified list of pollutants. Had Congress intended to require that PCB emissions from solid waste incineration units be specifically controlled, EPA believes Congress would have included PCB in the list of pollutants for which numerical emission limitations are required. Congress did not do so. The control technologies used to comply with the small MWC regulations will, nevertheless, result in reductions in PCB. Adding specific emission limits for PCB is not required and would not result in further reduction in PCB emissions from small MWC. PCB emission limits are, therefore, not included in the final regulations.

Comment: One commenter (IV-D-23) stated that EPA's failure to establish final emission standards that reflect the reductions achievable through pollution prevention measures would violate the CAA. The commenter (IV-D-23) cited Section 129(a)(2) and (a)(3) of the CAA and believes that these requirements must be read together and that if any measure, including a pre-combustion measure, is necessary to obtain the maximum reduction that is achievable, EPA must require it. The commenter (IV-D-23) believes that failing to evaluate the effectiveness and achievability of measures identified by EPA or advocated by commenters is arbitrary and capricious (*AT&T corp. v. FCC*, 86 F.2d 242, 247 (D.C. Cir. 1996)).

The commenter (IV-D-23) advocates eliminating or reducing metals and chlorinated plastics in the waste stream at small MWC facilities. The commenter (IV-D-23) believes that this is an achievable beyond-the-floor measure that would reduce metals emissions beyond the floor requirements, and reduction of chlorinated plastics would reduce dioxin and hydrogen chloride emissions. The commenter (IV-D-23) states that it feasible both technically and economically for MWC owners or operators to separate metals or require their customers to do so. The commenter (IV-D-23) states that feed limits are particularly appropriate for mercury, lead, and cadmium, which are known to be significant adverse "non-air quality health and environmental impacts." Another commenter (IV-D-07) recommended that

EPA take a lead role in pollution prevention through product formulation controls, which is an initiative that is fundamental to the protection of our soil, air, and water. The commenter (IV-D-07) believes that it would be most prudent to control toxic metals at the source where control is highly efficient and cost effective. The commenter (IV-D-07) stated that there has been no comprehensive national effort to control toxic metals at the true source, the mines and markets that produce and distribute them.

Response: Commenter IV-D-23 raised the same issue in its litigation of the regulations for Hospital/Medical/Infectious Waste Incinerators (HMIWI). In the Sierra Club decision (*Sierra Club V. EPA*, 167 F.3d 658, 663 (D.C. Cir. 1999)) for the HMIWI rule, the court rejected the commenter's claim. In that litigation, the court said that "[i]n the absence of any type of quantification of benefits or costs, the Administrator had no basis for finding that, 'taking into account the cost,' emissions reductions from pollution prevention programs were 'achievable' as the statute uses the word." As in the HMIWI rule, EPA does not have evidence that allows quantification of the relevant reduction achievable through pollution prevention measures (e.g., including control of consumer products). However, EPA has included the following pollution prevention measures in the regulations. New MWC units subject to the NSPS must prepare a materials separation plan, which identifies a goal and an approach for separating certain components of municipal solid waste prior to combustion and making them available for recycling. In addition, new and existing small MWC units must maintain a specified load level and maintain a specified temperature at the inlet of the PM control device. These operating requirements help assure good combustion, which prevents pollution (see Section 3.10 of 1995 BID).

Comment: Two commenters (IV-D-23, IV-G-06) stated that EPA's failure to consider non-air quality health and environmental impacts in setting final emission standards would violate the CAA. The commenter (IV-D-23) cited Section 129(a)(2) of the CAA, which requires EPA to set standards that "reflect the maximum degree of reduction in emissions of air pollutants... that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable..." The commenter (IV-D-23) stated that although EPA stated that it considered non-air quality health and environmental impacts in setting final emission standards (64 FR 47237), there is no evidence that it did so for the proposed Class A and Class B small MWC units. The commenter (IV-D-23) believes that, for both

Class A and B MWC units, EPA neither discussed nor considered non-air quality health and environmental impacts in establishing more stringent emission standards based on these impacts.

Response: Commenter IV-D-23 raised the same issue in its litigation of the regulations for Hospital/Medical/Infectious Waste Incinerators (HMIWI). In the Sierra Club decision (*Sierra Club v. EPA*, 167 F.3d 658, 663 (D.C. Cir. 1999)) for the HMIWI rule, the court rejected the commenter's claim, finding that they had failed to demonstrate that the factors they present are "non-air quality health and environmental impacts" within the meaning of Section 129. The commenter has provided no additional information in support of their claim. EPA has fully considered what it deems to be the potential non-air quality health and environmental impacts resulting from implementation of the regulations. For example, EPA evaluated the increase in solid waste and wastewater resulting from implementation of the regulations.

Comment: One commenter (IV-D-23) stated that EPA's failure to comply with the MACT floor requirements of Section 129 of the CAA would violate the CAA. Three commenters (IV-D-23, IV-D-16, IV-D-26) cited a court decision (*Sierra Club v. EPA*, 167 F.3d 658, 663 (D.C. Cir. 1999)) (*Sierra Club*), which requires EPA to set floors that reflect the actual performance of the best performing units. Commenters (IV-D-23, IV-D-16) noted that under the *Sierra Club* decision, EPA may only use permit and regulatory data to establish floors if those data allow a reasonable inference as to the performance of the top 12 percent of units. Additionally, the commenters (IV-D-23, IV-D-16, IV-D-26) noted that EPA may only use uncontrolled data if there is a reasonable basis for believing that some of the best performing 12 percent of units are uncontrolled and if the specific uncontrolled data that EPA uses give a reasonable representation of the performance of those units in its averaging.

One commenter (IV-D-23) stated that EPA has attempted to base the small MWC MACT floors on permit and regulatory data, but failed to prove that those data reflect the actual performance of the best units. The commenter (IV-D-23) contends that none of the supporting documentation demonstrates that the permit and regulatory data reflect the actual performance of the best units. Therefore, the commenter (IV-D-23) stated that EPA's use of regulatory and permit data to set floors for the small MWC category is arbitrary, capricious, and unlawful. In addition, commenters (IV-D-23, IV-D-16, IV-D-26) believe that it is not reasonable to use uncontrolled emission values in the MACT floor calculation because the commenters believe that some of the best performing 12 percent of units employ controls.

One commenter (IV-D-23) stated that it is irrational to attempt to fill the data gaps with “uncontrolled default emission values” data that do not even purport to represent the actual performance of the best performing 12 percent of units. The commenter (IV-D-23) contends that EPA has not provided any basis to believe that Class A units that are not subject to permit or regulatory limits for dioxin do not employ any emissions controls that reduce their dioxin emissions. The commenter (IV-D-23) states that the data that EPA provides indicate that at least two Class A units do employ some emissions controls to meet other permit requirements (indicating that Class A units are subject to permit requirements for other pollutants). Therefore, the commenter (IV-D-23) claimed that EPA’s assumption that the best performing units emit uncontrolled levels of dioxin is unfounded.

Two other commenters (IV-D-16, IV-D-26) believe that some of the best performing 12 percent of units are controlled. Based on the Sierra Club court decision, two commenters (IV-D-16, IV-D-26) believe that the use of uncontrolled data in the HCl floor calculation for Class B MWC units is not reasonable because, based on the 1994 proposal preamble (59 FR 48228) and background documents, it is implied that 12 percent of the polled number of units do control for HCl with DSI. One commenter (IV-D-16) noted that the Cd, Pb, and Hg standards are more stringent than the floor and have been demonstrated to be achievable by DSI/ESP. The commenter (IV-D-16) suggested that EPA should also base the HCl standard on DSI/ESP because this control system is already the basis for Class B Cd, Pb, and Hg standards. The commenter (IV-D-16) believes that unless EPA can demonstrate that 12 percent of the Class B population does not have HCl controls and that data are not available to characterize HCl emissions from DSI/ESP, it is not appropriate to use the current floor for the HCl emission standard. In addition, the commenter (IV-D-16) believes that EPA should provide specific justification for the use of uncontrolled data in the calculation of floors that are used as a basis for emission standards for Class A, B and C MWC units.

Response: The EPA used a permit approach to determine the MACT floors in the 1995 emission guidelines (40 CFR part 60, Subpart Cb) and believes that using the permit approach is appropriate for this rulemaking. Permit limits and regulatory limits provide a reasonable estimate of the actual performance of the best performing units under the worst reasonably foreseeable circumstances, making this approach consistent with the court opinion in the Sierra Club case. Permit limits include a margin for compliance and must be achievable. In circumstances where permit limits were higher than EPA’s uncontrolled emission factor, the uncontrolled emission factor was used in the MACT floor

calculation rather than the actual permit limit. To demonstrate that EPA's approach on small MWC is valid, EPA calculated the MACT floors for small MWC using a technology-based approach which is described in a technical memorandum entitled "Determination of Maximum Achievable Control Technology (MACT) (Technology basis)" that is in the docket. The resulting MACT floors reflect the same technology as would be needed to meet the proposed and final MACT floors. Consequently, EPA has not modified the MACT floor calculation procedure for this source category. The purpose of this regulatory action is to reestablish the regulations that were vacated in 1995. The EPA is using the same procedure used in the 1995 regulations to calculate the MACT floors.

Comment: One commenter (IV-G-06) believes that the correct inventory for the EPA to use to establish the number of units to be included in the MACT inventory is the one that existed no later than November 15, 1992. In a separate statement, this same commenter (IV-F-1f) stated that EPA appropriately stopped data acquisition on the time lines that are imbedded in the law and appropriately used the information available to establish the emission limitations. In addition, the commenter (IV-F-1f) agreed that EPA appropriately used the current (1998) inventory to determine the benefits, costs, and cost effectiveness of the rule. Another commenter (IV-D-18) suggested that EPA use an inventory more current than the 1995 inventory. The commenter (IV-D-18) believes that the number of units in the category has changed significantly since the 1995 final emission guidelines, and therefore, the emission limitations no longer reflect "the average emission limitations achieved by the best performing 12 percent of units in the category" because the inventory has changed significantly since 1995.

Response: The EPA agrees that different cutoff dates could have been used to calculate the MACT floors for existing small MWC units. The purpose of this rulemaking is to reestablish emission guidelines for small MWC units. Therefore, for this rulemaking, the EPA believes that it is appropriate to use the same inventory it used to develop the 1995 emission guidelines (40 CFR part 60, Subpart Cb) with the following minor changes consistent with the court's opinion in the Davis County litigation (Davis County Solid Waste Management and Recovery District v. EPA, 108 F. 3d 1454, D.C. Cir. 1997). Before calculating the MACT floors for the proposed and final classes of existing small MWC units, EPA removed large MWC units (MWC units greater than 250 tons per day), consistent with the court's opinion. In addition, the EPA revised the lower size cutoff for the

subcategory of small MWC units not being addressed in this rulemaking from 40 tpd on an aggregate plant capacity basis to 35 tpd on an individual unit capacity basis (see Docket No. A-98-18).

Comment: One commenter (IV-D-23) stated that EPA's failure to make emissions data for the proposed Class A, B and C units available is unlawful. The commenter (IV-D-23) cited Section 307 of the CAA, which requires the EPA, no later than the date of proposal, to include in the docket (A) factual data on which the proposed rule is based, and (B) the methodology used in obtaining the data and in analyzing the data. The commenter (IV-D-23) stated that EPA based some MACT floors on "uncontrolled default emission values" that were based on emissions test data and AP-42 emission factors. The commenter (IV-D-23) also stated that, in basing the MACT floor on AP-42 emission factors and test data, EPA did not do any of the following: (1) provide the test data it used; (2) show how that test data reflect the performance of any small MWC units; (3) show how it combined the test data with AP-42 emission factors for any given pollutant; or, (4) why that combination reflects the actual performance of units not subject to permit and regulatory limits.

One commenter (IV-D-05) requested that EPA explain the uncontrolled default emission value based on AP-42 and how it was determined. One commenter (IV-D-23) claimed that EPA has violated Section 307 of the CAA by not providing the test data, or the emission factors, or indicating how it obtained and analyzed those data and emission factors. The commenter (IV-D-23) stated that because EPA has not made emissions data for the proposed Class A, B or C small MWC units available, it is impossible for the public to determine what the actual floors (calculated in accordance with Section 129 of the CAA) would be. The commenter (IV-D-23) stated that EPA must immediately place in the docket all emissions test data, all emission factors, and an explanation of how those emissions data and test factors were obtained and analyzed. The commenter (IV-D-23) also stated that EPA must provide the public with the opportunity to comment on this information before promulgating a final rule.

Response: Detailed memoranda that show all of the data and assumptions used in calculating the MACT floors are available in Docket A-98-18. These memoranda are easily identifiable by searching the docket index. In addition, Docket No. A-98-18 incorporates by reference Docket Nos. A-89-08 and A-90-45, which contain supporting information for the emission guidelines and NSPS. All emissions data referenced in the memoranda and considered by EPA in developing the

emission guidelines and NSPS are included in these dockets. These data were in the docket(s) at the time of proposal in August 1999.

Comment: Two commenters (IV-D-05, IV-D-09) requested that EPA set emission limits for hydrogen fluorides and any other pollutants that EPA is authorized to regulate under the CAA. One commenter (IV-D-09) claims that there are many more pollutants coming out of MWC units than are covered in the proposed MWC regulations.

Response: The small MWC regulations were developed under Section 129 of the CAA. Section 129 does not require regulation of hydrogen fluorides from small MWC. However, the control technologies used to comply with the small MWC regulations will result in reductions in hydrogen fluorides. Adding specific emission limits for hydrogen fluorides would not result in further reduction in hydrogen fluorides emissions from small MWC units and hydrogen fluorides emission limits are not included in the final regulations.

4.8 COMPLIANCE SCHEDULES

Comment: One commenter (IV-D-04) recommended changing the emission guidelines to make it clear that closure is always an option for compliance with the regulation. The commenter (IV-D-04) provided a modification to the regulation.

Response: The EPA revised §60.1535 of Subpart BBBB to make it clear that ceasing operation is an option for compliance with Subpart BBBB. However, closure agreements are not required for small MWC units. This is consistent with the 1995 rule requirements for small MWC units. If the owner or operator chooses to continue to operate (i.e., not close) a small MWC unit that does not meet all of the requirements imposed by the State or Federal plan after the compliance date, then that MWC unit will be considered out of compliance.

Comment: One commenter (IV-D-05) recommended that EPA accelerate the timetable for enforcement of these regulations, especially for those units that could be relatively easily and inexpensively retrofitted with a carbon injection system. The commenter (IV-D-05) believes that there is no reason to give the MWC units 5 years to comply. The commenter (IV-D-05) believes that a faster timetable for compliance and implementation would get the States to act more quickly.

Response: Section 129 of the CAA allows up to 5 years after promulgation of these emission guidelines to achieve final compliance and the EPA will continue to allow up to 5 years to achieve final

compliance (§60.1535(a)(1)). However, the State plan may include a compliance schedule of less than 5 years. The EPA agrees that owners or operators of some small MWC units could achieve final compliance in less than 5 years, however, this is a site-specific consideration and may be addressed in the State plan.

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5.0 MISCELLANEOUS COMMENTS ON MUNICIPAL WASTE COMBUSTOR EMISSIONS GUIDELINES

5.1 DETERMINING MWC UNIT CAPACITY

Comment: One commenter (IV-D-10) suggested that the exact formula for determining the capacity of a MWC unit be included in the rule (§60.1935). The commenter (IV-D-10) provided a new paragraph (d) for §60.1935 that requires the reference of ASME PTC 33. The commenter (IV-D-10) also suggested that the rule offer owners or operators the option of submitting alternative efficiency determinations to the Administrator that are based on ASME performance test codes.

Response: The EPA agrees that determining the capacity of an MWC unit could be done in different ways. However, the EPA is not revising the regulation to include the commenter's suggestion. The purpose of this rulemaking is to reestablish emission guidelines for small MWC units and EPA is promulgating the emission guidelines as proposed.

5.2 STATE PLANS

Comment: One commenter (IV-D-13) requested that EPA make it clear that States are allowed to deviate from the language used in the model rule (as provided in §60.1575).

Response: As stated in §60.1570, States are allowed to deviate from the language used in the model rule as long as the State demonstrates that the alternative language is as protective as the model rule.

Comment: One commenter (IV-G-03) recommended that States be given a reasonable amount of time to submit plans under Section 129 of the CAA to implement emission guidelines after publication of the final rule. The commenter (IV-G-03) believes that a minimum of 24 months is necessary in order to meet with interested parties and to complete the State's regulatory process.

Response: The EPA is not revising §60.1505(b) of Subpart BBBB because the emission guidelines are developed in accordance with Section 129 of the CAA. Consistent with

Section 129(b)(2) of the CAA, the State must submit a State plan within 1 year of promulgation of the emission guidelines.

5.3 FEDERAL REGISTER PRINTING ERROR

Comment: Several commenters (IV-D-08, IV-D-25, IV-G-03) noticed that the emission standards for acid gases and fugitive ash are missing from Table 2 of Subpart BBBB.

Response: The emission limits for HCl, NO_x, and SO₂ were correctly printed in the preamble to the proposed rule. However, because of a publication error, the emission limits for HCl, NO_x, SO₂, and fugitive ash were omitted from Table 2 of Subpart BBBB. All emission limits are included in the final rule.

5.4 PUBLIC HEARING REQUIREMENT

Comment: One commenter (IV-D-13) requested that EPA remove §62.1515(a)(6), which requires a transcript of the public hearing as part of a State plan. The commenter (IV-D-13) states that there is no rationale for this new requirement. The commenter (IV-D-13) cited 40 CFR 60.23(e) of Subpart B, which requires the record of the public hearing to include a list of witnesses together with the text of each presentation. The commenter (IV-D-13) also cited 40 CFR 60.23(f), which requires a certification of the hearing, a list of witnesses and their organization affiliations, and a brief written summary of each presentation or written submission. The commenter (IV-D-13) states that obtaining a hearing transcript is expensive, labor-intensive, and no more informative than meeting the requirements in 40 CFR 60.23(e) and (f).

Response: The EPA agrees that it may be more expensive to obtain a hearing transcript. Therefore, EPA revised §60.1515(a)(6) to be consistent with the requirements of 40 CFR 60.23(f). The EPA notes, however, that 40 CFR 60.23(e) requires the State to prepare and maintain a record of each hearing, including a list of witnesses and the text of each presentation.

Comment: One commenter (IV-D-13) requested that EPA make it clear in §60.1515(a)(9) of Subpart BBBB, which requires the State plan to include a demonstration of the State's legal authority to carry out the Section 111(d) and Section 129 State plan, that the provisions of §60.25(d) of Subpart B apply in this case. Subpart B requires each State plan to include legally enforceable procedures for

requiring owners and operators to provide information to the State for the purpose of determining whether the facility is in compliance with the State plan.

Response: Consistent with 40 CFR 60.25(d) of Subpart B, §60.1515(a)(9) of Subpart BBBB requires the State plan to include a demonstration of the State's legal authority to carry out the Section 111(d) and Section 129 State plan. No regulation change is necessary.

5.5 IMPLEMENTATION

Comment: One commenter (IV-D-13) is concerned that it appears with regard to this proposed rule that EPA is significantly changing the role of EPA and the States in the implementation of Section 111(d) programs, imposing additional administrative requirements, and thus discouraging States from adopting the program.

Response: The State plans for small MWC units must be developed to satisfy the requirements of both Section 111(d) and Section 129 of the CAA. Where conflicts arise, Section 129 takes precedent. Under the CAA, the requirements of Section 129 are intended to be more restrictive than the requirements of Section 111(d).

5.6 TITLE V PERMITS

Comment: One commenter (IV-G-03) recommended that EPA clarify when Title V permits are required. The commenter (IV-G-03) notes that although Section 129 of the CAA requires MWC units subject to either a NSPS or a State plan implementing an emission guideline to operate pursuant to a Title V permit, neither the emission guidelines nor the NSPS indicates the schedule on which these permits must be obtained. The commenter (IV-G-03) believes that it is inappropriate not to exempt an MWC unit from the Title V requirements if the unit qualifies to be exempt from the State plan as provide in §60.1555, even if its owner or operator fails to notify EPA that the unit qualifies to be exempt from the State plan as provided in §60.1555.

Response: Section 1555 of Subpart BBBB applies only to the emission guidelines (40 CFR part 60, Subpart BBBB), does not address Title V requirements and has not been revised. Title V is not addressed in this rulemaking because it is an independent EPA program outside the scope of this rulemaking.

5.7 DELEGATION

Comment: One commenter (IV-D-13) requested that Subpart BBBB be amended throughout to substitute “State authority” for “Administrator.” The commenter (IV-D-13) is concerned that EPA is asking the States to write a regulation that is chiefly administered by EPA with respect to discretionary authority to the total exclusion of the States. The commenter (IV-D-13) believes that if the State adopts a State regulation that gives the Administrator the authority as set forth in the model rule found in Subpart BBBB, the State will not have the authority to make these decisions for Section 111(d) sources unless EPA somehow transfers the authority back to the State. The commenter (IV-D-13) also states that in this proposal, EPA makes it clear that a Section 111(d) program should be operated similar to a delegated program.

Response: The EPA believes the commenter misread the regulation. The definitions section of Subpart BBBB (§60.1940) clearly states that the term “Administrator” used throughout the regulation means the Administrator of the United States EPA or the Administrator of a State Air Pollution Control Agency. In addition, State plans for small MWC units must be developed to satisfy the requirements of both Section 111(d) and Section 129 of the CAA. Where conflicts arise, Section 129 takes precedent. Under the CAA, the requirements of Section 129 are intended to be more restrictive than the requirements of Section 111(d).

6.0 ADMINISTRATIVE REQUIREMENTS

6.1 EXECUTIVE ORDER 12866

Comment: One commenter (IV-D-21) believes that the obligation to determine the significance of the regulatory action and submit it for OMB review is not discharged merely because EPA submitted an earlier iteration of the rule for review - the obligation applies to each regulatory action. In addition, the commenter (IV-D-21) believes that EPA erred in considering only the financial effect on the economy in determining whether the proposed rule is “significant.” The commenter (IV-D-21) stated that the proposed rule will have a dramatic and adverse effect on the ability of local governments to effectively manage waste in their communities.

Response: As stated in the preamble to the proposed rule (64 FR 47244), EPA conducted a regulatory flexibility analysis for the emission guidelines and EPA concludes that the emission guidelines will not have a significant economic impact on a substantial number of small entities, pursuant to the provisions of 5 U.S.C. 605(b). The EPA recognizes that large expenditures will be required to retrofit small MWC units to meet the emission guidelines; however, this impact is not considered to be a “significant impact on a substantial number of small entities” according to the Regulatory Flexibility Act/Small Business Regulatory Enforcement Fairness Act, and therefore, EPA is not required to submit the rule to OMB for review.

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16. ABSTRACT This background information document contains summaries of the public comments that EPA received on the August 30, 1999 proposal to reestablish new source performance standards and emission guidelines for small municipal waste combustion units. This document also contains EPA's responses to those comments. This summary of comments and responses serves as the basis for revisions made to the new source performance standards and emission guidelines between proposal and promulgation.		
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