



WEST VIRGINIA SECRETARY OF STATE

MAC WARNER

ADMINISTRATIVE LAW DIVISION

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Office of West Virginia  
Secretary Of State

**NOTICE OF FINAL FILING AND ADOPTION OF A LEGISLATIVE RULE AUTHORIZED  
BY THE WEST VIRGINIA LEGISLATURE**

AGENCY: Air Quality TITLE-SERIES: 45-18  
RULE TYPE: Legislative Amendment to Existing Rule: Yes Repeal of existing rule: No  
RULE NAME: Control of Air Pollution from Combustion of Solid  
Waste  
CITE STATUTORY AUTHORITY: W. Va. Code § 22-5-4

The above rule has been authorized by the West Virginia Legislature.

Authorization is cited in (house or senate bill number) SB279

Section 64-3-1 (c) Passed On 2/11/2022 12:00:00 AM

This rule is filed with the Secretary of State. This rule becomes effective on the following date:

April 1, 2022

This rule shall terminate and have no further force or effect from the following date:

**BY CHOOSING 'YES', I ATTEST THAT THE PREVIOUS STATEMENT IS TRUE AND CORRECT.**

Yes

Jason E Wandling -- By my signature, I certify that I am the person authorized to file legislative rules, in accordance with West Virginia Code §29A-3-11 and §39A-3-2.

45CSR18

TITLE 45  
LEGISLATIVE RULE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
AIR QUALITY

SERIES 18  
CONTROL OF AIR POLLUTION FROM COMBUSTION OF SOLID WASTE

§45-18-1. General.

1.1. Scope. -- This rule adopts standards of performance, and implements the federal emission guidelines and compliance times pursuant to §§ 111(b), 111(d) and 129 of the federal Clean Air Act for the control of certain designated pollutants from the following categories of solid waste combustors, combustion units, incinerators and incineration units in West Virginia:

1.1.a. Large municipal waste combustors subject to the standards of performance promulgated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR part 60, subpart Eb;

1.1.b. Small municipal waste combustion units subject to the standards of performance promulgated by the U.S. EPA under 40 CFR part 60, subpart AAAA;

1.1.c. Hospital, medical, and infectious waste incinerators subject to the standards of performance promulgated by the U.S. EPA under 40 CFR part 60, subpart Ec, or the emission guidelines and compliance times promulgated by the U.S. EPA under 40 CFR part 60, subpart Ce and set forth in section 7 below;

1.1.d. Commercial and industrial solid waste incineration units subject to the standards of performance promulgated by the U.S. EPA under 40 CFR part 60, subpart CCCC, or the emission guidelines and compliance times promulgated by the U.S. EPA under 40 CFR part 60, subpart DDDD and set forth in section 9 below;

1.1.e. Other solid waste incineration units subject to the standards of performance promulgated by the U.S. EPA under 40 CFR part 60, subpart EEEE, and

1.1.f. Sewage sludge incineration units subject to the standards of performance promulgated by the U.S. EPA under 40 CFR part 60, subpart LLLL.

1.2. Authority. -- W. Va. Code § 22-5-4.

1.3. Filing Date. -- April 1, 2022.

1.4. Effective Date. -- April 1, 2022.

1.5. Sunset provision. -- Does not apply.

1.6. This rule codifies general procedures and criteria to implement a program of specific standards of performance, emission guidelines and compliance times for solid waste combustors, combustion units, incinerators and incineration units set forth in the Code of Federal Regulations and as listed below in Tables 45-18A, 45-18B, 45-18C, 45-18D, 45-18E, 45-18F, 45-18G, 45-18H, 45-18I, 45-18J, 45-18K, 45-18L and 45-18M.

1.7. Neither compliance with the provisions of this rule nor the absence of specific language to cover particular situations constitutes approval or implies consent or condonation of any emission that is released in any locality in such a manner or amount as to cause or contribute to statutory air pollution. Neither does it exempt nor excuse any person from complying with other applicable laws, ordinances, regulations or

orders of governmental entities having jurisdiction over the combustion of solid waste.

1.8. Incorporation by Reference. -- Federal Counterpart Regulation. The Secretary has determined that a federal counterpart regulation exists. In accordance with the Secretary's recommendation, and with limited exception, this rule incorporates by reference 40 CFR part 60, subparts Eb, Ec, AAAA, CCCC, EEEE and LLLL effective June 1, 2021.

#### §45-18-2. Definitions.

2.1. "Administrator" means the Administrator of the United States Environmental Protection Agency (U.S. EPA) or his or her designated representative.

2.2. "Air curtain incinerator" or "ACI" for the purpose of section 9 means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.

2.3. "Bag leak detection system" for the purpose of section 9 means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

2.4. "Cd" means Cadmium.

2.5. "CEMS" or "continuous emission monitoring system" for the purpose of section 9 means the total equipment that may be required to meet the data acquisition and availability requirements used to sample, condition (if applicable), analyze, and provide a record of emissions.

2.6. "CEMS data during startup and shutdown" for the purpose of section 9 means the following:

2.6.a. For incinerators and small remote incinerators: CEMS data collected during the first hours of operation of a CISWI startup from a cold start until waste is fed into the unit and the hours of operation following the cessation of waste material being fed to the CISWI during a unit shutdown. For each startup event, the length of time that CEMS data may be claimed as being CEMS data during startup must be 48 operating hours or less. For each shutdown event, the length of time that CEMS data may be claimed as being CEMS data during shutdown must be 24 operating hours or less;

2.6.b. For energy recovery units: CEMS data collected during the startup or shutdown periods of operation. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after the boiler or process heater makes useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity, whichever is earlier. Shutdown begins when the boiler or process heater no longer makes useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer makes useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in the boiler or process heater; and

2.6.c. For waste-burning kilns: CEMS data collected during the periods of kiln operation that do not include normal operations. Startup means the time from when a shutdown kiln first begins firing fuel until it begins producing clinker. Startup begins when a shutdown kiln turns on the induced draft fan and begins firing fuel in the main burner. Startup ends when feed is being continuously introduced into the kiln

for at least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first. Shutdown means the cessation of kiln operation. Shutdown begins when feed to the kiln is halted and ends when continuous kiln rotation ceases.

2.7. “Chemical recovery unit” for the purpose of section 9 means combustion units burning materials to recover chemical constituents or to produce chemical compounds where there is an existing commercial market for such recovered chemical constituents or compounds. A chemical recovery unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart. The following seven types of units are considered chemical recovery units:

2.7.a. Units burning only pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery process and reused in the pulping process;

2.7.b. Units burning only spent sulfuric acid used to produce virgin sulfuric acid;

2.7.c. Units burning only wood or coal feedstock for the production of charcoal;

2.7.d. Units burning only manufacturing byproduct streams/residue containing catalyst metals that are reclaimed and reused as catalysts or used to produce commercial grade catalysts;

2.7.e. Units burning only coke to produce purified carbon monoxide that is used as an intermediate in the production of other chemical compounds;

2.7.f. Units burning only hydrocarbon liquids or solids to produce hydrogen, carbon monoxide, synthesis gas, or other gases for use in other manufacturing processes; and

2.7.g. Units burning only photographic film to recover silver.

2.8. “CFR” or “C.F.R.” means the Code of Federal Regulations.

2.9. “Clean Air Act” (“CAA”) means the federal Clean Air Act, as amended, 42 U.S.C. § 7401, et seq.

2.10. “CMS” or “continuous monitoring system” for the purpose of section 9 means the total equipment, required under the emission monitoring sections in applicable subparts, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters. A particulate matter continuous parameter monitoring system (PM CPMS) is a type of CMS.

2.11. “Commercial and industrial solid waste incineration unit”, “CISWI”, or “CISWI unit” means any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding six months, any solid waste as that term is defined in 40 CFR part 241. If the operating unit burns materials other than traditional fuels as defined in 40 CFR § 241.2 that have been discarded, and the owner or operator does not keep and produce records as required by subdivision 9.11.u, the operating unit is a CISWI unit. While not all CISWI units will include all of the following components, a CISWI unit includes, but is not limited to, the solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the solid waste hopper (if applicable) and extends through two areas: the combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and the combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The CISWI unit includes all ash handling systems connected to the bottom ash handling system.

2.12. “HCl” means hydrogen chloride.

2.13. “Hg” means mercury.

2.14. "Hospital, medical, and infectious waste incinerator" or "HMIWI unit" means any device that combusts any amount of hospital waste or medical/infectious waste.

2.15. "Municipal waste combustor unit" or "municipal waste combustor" means any setting or equipment that combusts solid, liquid or gasified municipal solid waste including, but not limited to, field-erected incinerators (with or without heat recovery), modular incinerators (starved-air or excess-air), boilers (i.e., steam generating units), furnaces (whether suspension-fired, grate-fired, mass-fired, air curtain incinerators, or fluidized bed-fired), and pyrolysis/combustion units.

2.15.a. Municipal waste combustors do not include:

2.15.a.1. pyrolysis/combustion units located at a plastics/rubber recycling unit as specified in 40 CFR § 60.50b(m);

2.15.a.2. cement kilns firing municipal solid waste as specified in 40 CFR § 60.50b(p);

2.15.a.3. internal combustion engines, gas turbines, or other combustion devices that combust landfill gases collected by landfill gas collection systems.

2.15.b. The municipal waste combustor unit includes, but is not limited to, the municipal solid waste fuel feed system, grate system, flue gas system, bottom ash system, and the combustor water system. The municipal waste combustor boundary starts at the municipal solid waste pit or hopper and extends through:

2.15.b.1. The combustor flue gas system, which ends immediately following the heat recovery equipment or, if there is no heat recovery equipment, immediately following the combustion chamber;

2.15.b.2. The combustor bottom ash system, which ends at the truck loading station or similar ash handling equipment that transfer the ash to final disposal, including all ash handling systems that are connected to the bottom ash handling system; and

2.15.b.3. The combustor water system, which starts at the feed water pump and ends at the piping exiting the steam drum or superheater.

2.16. "NO<sub>x</sub>" means nitrogen oxides.

2.17. "Other solid waste incineration unit" or "OSWI unit" means either a very small municipal waste combustion unit or an institutional waste incineration unit. Unit types listed in 40 CFR § 60.2887 are not OSWI units. While not all OSWI units will include all of the following components, an OSWI unit includes, but is not limited to, the municipal or institutional solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The OSWI unit does not include air pollution control equipment or the stack. The OSWI unit boundary starts at the municipal or institutional waste hopper (if applicable) and extends through two areas:

2.17.a. The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and

2.17.b. The combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The OSWI unit includes all ash handling systems connected to the bottom ash handling system.

2.18. "Oxygen analyzer system" for the purposes of section 9 means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler/process heater, firebox, or other appropriate location. This definition includes oxygen trim systems and certified oxygen CEMS. The source owner or operator is responsible to install, calibrate,

maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

2.19. "Pb" means lead.

2.20. "Person" means any and all persons, natural or artificial, including the state of West Virginia or any other state, the United States of America, any municipal, statutory, public or private corporation organized or existing under the laws of this or any other state or country, and any firm, partnership or association of whatever nature.

2.21. "PM" means particulate matter.

2.22. "Secretary" means the Secretary of the Department of Environmental Protection or other person to whom the Secretary has delegated authority or duties pursuant to W. Va. Code §§ 22-1-6 or 22-1-8.

2.23. "Shutdown" for the purpose of section 9 means, for incinerators and small, remote incinerators, the period of time after all waste has been combusted in the primary chamber.

2.24. "SO<sub>2</sub>" means sulfur dioxide.

2.25. "Standard Metropolitan Statistical Area" means any areas listed in OMB Bulletin No. 93-17 entitled "Revised Statistical Definitions for Metropolitan Areas" dated June 30, 1993.

2.26. "Startup period" for the purpose of section 9 means for incinerators and small, remote incinerators, the period of time between the activation of the system and the first charge to the unit.

2.27. Other words and phrases used in this rule, unless otherwise indicated, shall have the meaning ascribed to them in 40 CFR part 60 subparts A, B, C, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ.

### **§45-18-3. Adoption of standards.**

3.1. The Secretary hereby adopts and incorporates by reference the definitions of 40 CFR part 60, subparts A and B, the standards of performance and definitions set forth in 40 CFR part 60, subparts E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ.

### **§45-18-4. Requirements for new large municipal waste combustors.**

4.1. Requirements for new LMWC units. -- The owner or operator of a new LMWC unit under subsection 4.2 shall comply with all applicable standards of performance, requirements, and provisions of 40 CFR part 60 subpart E, including any reference methods, performance specifications, and other test methods associated with Subpart E. No person shall construct or operate, or cause to be constructed or operated, a new LMWC unit that results in a violation of 40 CFR part 60, subpart E or this rule.

4.2. Applicability. -- The owner or operator of a LMWC unit that meets the following criteria is subject to the requirements for new LMWC units set forth in this section. A new LMWC unit is a LMWC unit that either:

4.2.a. Commenced construction after September 20, 1994; or

4.2.b. Commenced modification or reconstruction after June 19, 1996.

### **§45-18-5. Requirements for new small municipal waste combustion units.**

5.1. Requirements for new SMWC units. -- The owner or operator of a new SMWC unit under this section shall comply with all applicable standards of performance, requirements, and provisions of 40 CFR part 60 subpart AAAAA, including any reference methods, performance specifications, and other test methods associated with subpart AAAAA. No person shall construct or operate, or cause to be constructed or operated, a new SMWC unit that results in a violation of 40 CFR part 60, subpart AAAAA or this rule.

5.2. Applicability. -- The owner or operator of a SMWC unit that meets the following criteria is subject to the requirements for new SMWC units set forth in this section. A new SMWC unit is a SMWC unit that either:

5.2.a. Commenced construction after August 30, 1999; or

5.2.b. Commenced modification or reconstruction after June 6, 2001.

#### **§45-18-6. Requirements for new hospital, medical, and infectious waste incinerators.**

6.1. Requirements for new HMIWI units. -- The owner or operator of a new HMIWI unit under this section shall comply with all applicable standards of performance, requirements, and provisions of 40 CFR part 60, subpart Ec, including any reference methods, performance specifications, and other test methods associated with subpart Ec. No person shall construct, reconstruct, modify or operate, or cause to be constructed, reconstructed, modified or operated a new HMIWI unit that results in a violation of 40 CFR part 60, subpart Ec or this rule.

6.2. Applicability. -- The owner or operator of a HMIWI unit that meets the following criteria is subject to the requirements for new HMIWI units set forth in this section 6. A new HMIWI unit is a HMIWI unit that either:

6.2.a. Commenced construction after December 1, 2008; or

6.2.b. Commenced modification after April 6, 2010.

6.3. Physical or Operational Changes. Physical or operational changes made to an HMIWI unit to comply with the emission guidelines in section 7 below and 40 CFR part 60, subpart Ce do not qualify as a reconstruction or modification under this section 6 and 40 CFR part 60, subpart Ec.

#### **§45-18-7. Requirements for existing hospital, medical, and infectious waste incinerators.**

7.1. Requirements for existing HMIWI units. -- The owner or operator of an existing HMIWI unit under this section shall comply with the applicable emission guidelines, compliance times, requirements, and provisions of 40 CFR part 60, subpart Ce set forth in this section 7 and below in Tables 45-18A, 45-18B, 45-18C and 45-18D, including any reference methods, performance specifications, and other test methods associated with subpart Ce. No person shall reconstruct, modify or operate, or cause to be reconstructed, modified or operated, an existing HMIWI unit that results in a violation of 40 CFR part 60 subpart Ce, or this rule.

7.2. Applicability. -- HMIWI units that are designated facilities under subdivision 7.2.a are subject to the requirements for existing HMIWI units set forth herein.

7.2.a. Designated facilities. -- Except as provided in subdivisions 7.2.b through 7.2.h, the designated facility to which the emissions guidelines apply is each individual HMIWI unit in West Virginia:

7.2.a.1. For which construction was commenced on or before June 20, 1996, or for which modification was commenced on or before March 16, 1998; or

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7.2.a.2. For which construction was commenced after June 20, 1996 but no later than December 1, 2008, or for which modification is commenced after March 16, 1998 but no later than April 6, 2010.

7.2.b. A combustor is not subject to this section during periods when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned, provided the owner or operator of the combustor:

7.2.b.1. Notifies the Secretary of an exemption claim; and

7.2.b.2. Keeps records on a calendar quarter basis of the periods of time when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned.

7.2.c. Any co-fired combustor is not subject to this section if the owner or operator of the co-fired combustor:

7.2.c.1. Notifies the Secretary of an exemption claim;

7.2.c.2. Provides an estimate of the relative weight of hospital waste, medical/infectious waste, and other fuels and/or wastes to be combusted; and

7.2.c.3. Keeps records on a calendar quarter basis of the weight of hospital waste and medical/infectious waste combusted and the weight of all other fuels and wastes combusted at the co-fired combustor.

7.2.d. Units not subject to this section:

7.2.d.1. Any combustor required to have a permit under Section 3005 of the Solid Waste Disposal Act;

7.2.d.2. Any combustor which meets the applicability requirements under 40 CFR part 60, subparts Cb, Ea, or Eb (standards or guidelines for certain municipal waste combustors);

7.2.d.3. Any pyrolysis unit; and

7.2.d.4. Cement kilns firing hospital waste and/or medical/infectious waste.

7.2.e. Physical or operational changes made to an existing HMIWI unit solely for the purpose of complying with emission guidelines under this section are not considered a modification and do not result in an existing HMIWI unit becoming subject to the provisions of 40 CFR part 60, subpart Ec.

7.2.f. On or before September 15, 2000, the owner or operator of an existing HMIWI unit shall operate pursuant to a Title V permit in accordance with the requirements of 45CSR30.

7.2.g. Designated facilities under paragraph 7.2.a.1 are subject to the requirements of 40 CFR part 62, subpart XX.

7.3. Emissions guidelines.

7.3.a. The owner or operator of an existing HMIWI unit shall comply with the following emissions limits as applicable:

7.3.a.1. For a designated facility set forth in paragraph 7.2.a.1 subject to the emissions guidelines, the requirements listed below in Table 45-18A, except as provided in subdivision 7.3.b;

7.3.a.2. For a designated facility set forth in paragraph 7.2.a.1 subject to the emissions guidelines, the requirements listed in Table 45-18B, except as provided in subdivision 7.3.b;

7.3.a.3. For a designated facility set forth in paragraph 7.2.a.2, the more stringent of the requirements listed in Table 45-18B and Table 1A of 40 CFR part 60, subpart Ec.

7.3.b. The owner or operator of any small HMIWI unit constructed on or before June 20, 1996, which is located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area and which burns less than 2,000 pounds per week of hospital waste and medical/infectious waste shall comply with emissions limits in paragraphs 7.3.b.1 and 7.3.b.2, as applicable. The 2,000 pounds per week limitation does not apply during performance tests.

7.3.b.1. For a designated facility under paragraph 7.2.a.1 subject to the emissions guidelines, the requirements listed in Table 45-18C; and

7.3.b.2. For a designated facility under paragraph 7.2.a.1 subject to the emissions the requirements listed in Table 45-18D.

7.3.c. The owner or operator of any existing HMIWI unit shall comply with the following stack opacity requirements, as applicable:

7.3.c.1. For a designated facility under paragraph 7.2.a.1 subject to the emissions, the requirements in 40 CFR § 60.52c(b)(1); and

7.3.c.2. For a designated facility under paragraph 7.2.a.1 subject to the emissions guidelines and a designated facility under paragraph 7.2.a.2, the requirements in 40 CFR § 60.52c(b)(2).

7.4. Operator training and qualification guidelines. -- The owner or operator of an existing HMIWI unit shall comply with the operator training and qualification requirements specified in 40 CFR § 60.53c:

7.4.a. For a designated facility under paragraph 7.2.a.1, by July 28, 2001, and

7.4.b. For a designated facility under paragraph 7.2.a.2, at the time of initial facility start-up.

7.5. Waste management guidelines. -- The owner or operator of an existing HMIWI unit under paragraphs 7.2.a.1 and 7.2.a.2 shall comply with the waste management plan specified in 40 CFR § 60.55c within one year after the date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units under 40 CFR part 60, subpart Ce requirements.

7.6. Inspection guidelines.

7.6.a. The owner or operator of each small HMIWI unit subject to the emissions limits under subdivision 7.3.b and each HMIWI unit subject to the emissions limits under paragraphs 7.3.a.2 and 7.3.a.3 shall perform an initial equipment inspection within one year after the date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units under 40 CFR part 62, subpart XX, and the related provisions of 40 CFR part 60, subpart Ce. The initial equipment inspection shall include the following:

7.6.a.1. Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and cleaning of pilot flame sensor, as necessary;

7.6.a.2. Ensuring proper adjustment of primary and secondary chamber combustion air, and adjust as necessary;

7.6.a.3. Inspection of hinges and door latches and lubrication as necessary;

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- 7.6.a.4. Inspection of dampers, fans, and blowers for proper operation;
- 7.6.a.5. Inspection of HMIWI unit door and door gaskets for proper sealing;
- 7.6.a.6. Inspection of motors for proper operation;
- 7.6.a.7. Inspection of primary chamber refractory lining; cleaning and repairing or replacing lining as necessary;
- 7.6.a.8. Inspection of incinerator shell for corrosion and hot spots;
- 7.6.a.9. Inspection of secondary and tertiary chamber and stack, cleaning as necessary;
- 7.6.a.10. Inspection of mechanical loader, including limit switches, for proper operation, if applicable;
- 7.6.a.11. Visual inspection of waste bed (grates), and repairing or sealing, as appropriate;
- 7.6.a.12. For the burn cycle that follows the inspection, documentation that the incinerator is operating properly and making any necessary adjustments;
- 7.6.a.13. Inspection of air pollution control device(s) for proper operation, if applicable;
- 7.6.a.14. Inspection of waste heat boiler systems to ensure proper operation, if applicable;
- 7.6.a.15. Inspection of bypass stack components;
- 7.6.a.16. Ensuring proper calibration of thermocouples, sorbent feed systems and any other monitoring equipment; and
- 7.6.a.17. Generally observing that the equipment is maintained in good operating condition.

7.6.b. Within ten operating days following an equipment inspection, all necessary repairs shall be completed unless the owner or operator obtains written approval from the Secretary establishing a date whereby all necessary repairs of the designated facility shall be completed.

7.6.c. The owner or operator of each small HMIWI unit subject to the emissions limits under subdivision 7.3.b and each HMIWI unit subject to the emissions limits under paragraphs 7.3.a.2 and 7.3.a.3 shall perform an equipment inspection annually (no more than 12 months following the previous annual equipment inspection), as outlined in subdivision 7.6.a.

7.6.d. The owner or operator of each small HMIWI unit subject to the emissions limits under paragraph 7.3.b.2 and each HMIWI unit subject to the emissions limits under paragraphs 7.3.a.2 and 7.3.a.3 shall perform an initial air pollution control device inspection, as applicable, within one year following approval of the 111(d)/129 state plan revision for HMIWI units under 40 CFR part 62, subpart XX, and the related provisions of 40 CFR part 60, subpart Cc. The initial air pollution control device inspection shall include the following:

- 7.6.d.1. Inspect air pollution control device(s) for proper operation, if applicable;
- 7.6.d.2. Ensure proper calibration of thermocouples, sorbent feed systems, and any other monitoring equipment; and
- 7.6.d.3. Generally observe that the equipment is maintained in good operating condition.

7.6.e. Within ten operating days following an air pollution control device inspection under subdivision 7.6.d, the owner or operator shall complete all necessary repairs unless the owner or operator obtains written approval from the Secretary establishing a date whereby the owner or operator shall complete all necessary repairs of the designated facility.

7.6.f. The owner or operator of each small HMIWI unit subject to the emissions limits under paragraph 7.3.b.2 and each HMIWI unit subject to the emissions limits under paragraphs 7.3.a.2 and 7.3.a.3 shall perform an air pollution control device inspection, as applicable, annually (no more than 12 months following the previous annual air pollution control device inspection), as outlined in subdivision 7.6.d.

#### 7.7. Compliance, performance testing, and monitoring guidelines.

7.7.a. Except as provided in subdivision 7.7.b, the owner or operator of a HMIWI unit shall comply with the requirements for compliance and performance testing listed in 40 CFR § 60.56c, with the following exclusions:

7.7.a.1. For a designated facility under paragraph 7.2.a.1 subject to the emissions limits in paragraph 7.3.a.1, the test methods listed in 40 CFR §§ 60.56c(b)(7) and (8), the fugitive emissions testing requirements under 40 CFR §§ 60.56c(b)(14) and (c)(3), the CO CEMS requirements under 40 CFR § 60.56c(c)(4), and the compliance requirements for monitoring listed in 40 CFR §§ 60.56c(c)(5)(i) through (v), (c)(6), (c)(7), (e)(6) through (10), (f)(7) through (10), (g)(6) through (10), and (h).

7.7.a.2. For a designated facility under paragraphs 7.2.a.1 and 7.2.a.2 subject to the emissions limits in paragraphs 7.3.a.2 and 7.3.a.3, the annual fugitive emissions testing requirements under 40 CFR § 60.56c(c)(3), the CO CEMS requirements under 40 CFR § 60.56c(c)(4), and the compliance requirements for monitoring listed in 40 CFR §§ 60.56c(c)(5)(i) through (v), (c)(6), (c)(7), (e)(6) through (10), (f)(7) through (10), and (g)(6) through (10). Sources subject to the emissions limits under paragraphs 7.3.a.2 and 7.3.a.3 may, however, elect to use CO CEMS as specified under 40 CFR § 60.56c(c)(4) or bag leak detection systems as specified under 40 CFR § 60.57c(h).

7.7.b. Except as provided in paragraphs 7.7.b.1 and 7.7.b.2, the owner or operator of a small HMIWI unit subject to the emissions limits under subdivision 7.3.b shall comply with the performance testing requirements listed in 40 CFR § 60.56c. The 2,000 pounds per week limitation under subdivision 7.3.b does not apply during performance tests.

7.7.b.1. For a designated facility under paragraph 7.2.a.1 subject to the emissions limits under paragraph 7.3.b.1, the test methods listed in 40 CFR §§ 60.56c(b)(7), (8), (12), (13) (Pb and Cd), and (14), the annual PM, CO, and HCl emissions testing requirements under 40 CFR § 60.56c(c)(2), the annual fugitive emissions testing requirements under 40 CFR § 60.56c(c)(3), the CO CEMS requirements under 40 CFR § 60.56c(c)(4). The compliance requirements for monitoring listed in 40 CFR §§ 60.56c(c)(5) through (7), and (d) through (k) do not apply.

7.7.b.2. For a designated facility under paragraph 7.2.a.2 subject to the emissions limits under paragraph 7.3.b.2, the annual fugitive emissions testing requirements under 40 CFR § 60.56c(c)(3), the CO CEMS requirements under 40 CFR § 60.56c(c)(4), and the compliance requirements for monitoring listed in 40 CFR §§ 60.56c(c)(5)(i) through (v), (c)(6), (c)(7), (e)(6) through (10), (f)(7) through (10), and (g)(6) through (10) do not apply. Sources subject to the emissions limits under paragraph 7.3.b.2 may, however, elect to use CO CEMS as specified under 40 CFR § 60.56c(c)(4) or bag leak detection systems as specified under 40 CFR § 60.57c(h).

7.7.c. The owner or operator of a small HMIWI unit subject to the emissions limits under subdivision 7.3.b that is not equipped with an air pollution control device shall comply with the following compliance and performance testing requirements:

7.7.c.1. Establishment of maximum charge rate and minimum secondary chamber temperature

as site-specific operating parameters during the initial performance test to determine compliance with applicable emission limits;

7.7.c.2. Following the date on which the initial performance test is completed or is required to be completed under 40 CFR § 60.8, whichever date comes first, the small HMIWI unit shall not operate above the maximum charge rate or below the minimum secondary chamber temperature measured as three-hour rolling averages (calculated each hour as the average of the previous three operating hours) at all times. Operating parameter limits do not apply during performance tests. Operation above the maximum charge rate or below the minimum secondary chamber temperature shall constitute a violation of the established operating parameter(s).

7.7.c.3. Operation above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the PM, CO and dioxin/furan emission limits, except as provided in paragraph 7.7.c.4; and

7.7.c.4. The owner or operator of a small HMIWI unit may conduct a repeat performance test within 30 days of violation of applicable operating parameter(s) to demonstrate that the small HMIWI unit is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph shall be conducted under process and control device operating conditions duplicating as nearly as possible those that indicated a violation under paragraph 7.7.c.3;

7.7.d. The owner or operator of a HMIWI unit subject to the emissions limits under subdivisions 7.3.a and 7.3.b shall comply with the requirements for monitoring listed in 40 CFR § 60.57c, except as provided for under subdivision 7.7.e.

7.7.e. The owner or operator of a small HMIWI unit subject to the emissions limits under subdivision 7.3.b that is not equipped with an air pollution control device shall comply with the following monitoring requirements:

7.7.e.1. Installation, calibration (to manufacturer's specifications), maintenance and operation of a device for measuring and recording the temperature of the secondary chamber on a continuous basis, the output of which shall be recorded, at a minimum once every minute throughout operation;

7.7.e.2. Installation, calibration (to manufacturer's specifications), maintenance and operation of a device that automatically measures and records the date, time, and weight of each charge fed into the HMIWI unit;

7.7.e.3. The owner or operator of a HMIWI unit shall obtain monitoring data at all times during HMIWI unit operation except during periods of monitoring equipment malfunction, calibration or repair. At a minimum, the owner or operator shall obtain valid monitoring data for 75% of the operating hours per day and for 90% of the operating hours per calendar quarter that the HMIWI unit is combusting hospital waste or medical/infectious waste.

7.7.f. The owner or operator of a designated facility under paragraphs 7.2.a.1 or 7.2.a.2 subject to emissions limits under paragraphs 7.3.a.2, 7.3.a.3 or 7.3.b.2 may use the results of previous emissions tests to demonstrate compliance with the emissions limits, provided that the conditions in paragraphs 7.7.f.1 through 7.7.f.3 are met:

7.7.f.1. The designated facility's previous emissions tests were conducted using the applicable procedures and test methods listed in 40 CFR § 60.56c(b). Previous emissions test results obtained using EPA-accepted voluntary consensus standards are also acceptable.

7.7.f.2. The HMIWI unit at the designated facility is currently operated in a manner (e.g., with charge rate, secondary chamber temperature, etc.) that would be expected to result in the same or lower emissions than observed during the previous emissions test(s). The HMIWI unit may not have been

modified such that emissions would be expected to exceed (notwithstanding normal test-to-test variability) the results from previous emissions test(s).

7.7.f.3. The previous emissions test(s) were conducted in 1996 or later.

#### 7.8. Reporting and Recordkeeping Guidelines.

7.8.a. Except as provided in paragraphs 7.8.a.1 and 7.8.a.2, the owner or operator of an existing HMIWI unit shall comply with the reporting and recordkeeping requirements listed in 40 CFR §§ 60.58c(b) through (g).

7.8.a.1. For a designated facility under paragraph 7.2.a.1 subject to emissions limits under paragraphs 7.3.a.1 or 7.3.b.1, excluding 40 CFR §§ 60.58c(b)(2)(ii) (fugitive emissions), (b)(2)(viii) (NO<sub>x</sub> reagent), (b)(2)(xvii) (air pollution control device inspections), (b)(2)(xviii) (bag leak detection system alarms), (b)(2)(xix) (CO CEMS data), and (b)(7) (siting documentation).

7.8.a.2. For a designated facility under paragraphs 7.2.a.1 or 7.2.a.2 subject to emissions limits under paragraphs 7.3.a.2, 7.3.a.3 or 7.3.b.2, excluding 40 CFR §§ 60.58c(b)(2)(xviii) (bag leak detection system alarms), (b)(2)(xix) (CO CEMS data), and (b)(7) (siting documentation).

7.8.b. The owner or operator of each HMIWI unit subject to the emissions limits under subsection 7.3 shall:

7.8.b.1. As specified in subsection 7.6, maintain records of the annual equipment inspections that are required for each HMIWI unit subject to the emissions limits under paragraphs 7.3.a.2, 7.3.a.3 and subdivision 7.3.b; the annual air pollution control device inspections that are required for each HMIWI unit subject to the emissions limits under paragraphs 7.3.a.2, 7.3.a.3 and 7.3.b.2; any required maintenance; and any repairs not completed within ten days of an inspection or repair date approved by the Secretary; and

7.8.b.2. Submit an annual report containing information recorded under paragraph 7.8.b.1 no later than 60 days following the year in which data were collected. The owner or operator shall send subsequent reports no later than 12 calendar months following the previous report (once the unit is subject to permitting requirements under 45CSR30, the owner or operator shall submit these reports semiannually). The owner or operator shall sign and certify the report in accordance with subdivision 7.8.c.

7.8.c. Where reports are required to be submitted to the Secretary under the terms of a permit issued pursuant to 45CSR13, 45CSR14, 45CSR19 or 45CSR30, the owner or operator shall sign and certify the reports in accordance with the requirements of the applicable permitting rule. Where reports are required to be submitted to the Secretary under this rule, and no permit is in effect under 45CSR13, 45CSR14, 45CSR19 or 45CSR30, the facilities manager shall sign the report, which shall contain a certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

#### 7.9. Compliance times.

7.9.a. Except as provided in subdivisions 7.9.b, 7.9.c and 7.9.d, on or after July 28, 2001, the owner or operator of any existing HMIWI unit subject to the requirements of 40 CFR part 62, subpart XX, and the related provisions of 40 CFR part 60, subpart Ce, shall be in compliance with all applicable provisions of this section.

7.9.b. No later than November 28, 2000, the owner or operator of an existing HMIWI unit required to install air pollution control equipment shall submit a compliance plan and schedule subject to the approval of the Secretary that meets the following criteria:

7.9.b.1. No later than July 28, 2001, if a facility that plans to install air pollution control

equipment other than a dry scrubber followed by a fabric filter, a wet scrubber or dry scrubber followed by a fabric filter and a wet scrubber, the facility shall submit a petition for site specific operating parameters under 40 CFR § 60.56c(i) to the Administrator and the Secretary;

7.9.b.2. The facility shall obtain, no later than July 28, 2001, services of an architectural and engineering firm regarding air pollution device(s);

7.9.b.3. The facility shall order, no later than January 28, 2002, design drawings of an air pollution device(s);

7.9.b.4. The facility shall order, no later than January 28, 2002, air pollution device(s);

7.9.b.5. The facility shall initiate, no later than July 28, 2002, site preparation for installation of the air pollution device(s);

7.9.b.6. The facility shall conduct, no later than April 28, 2002, initial startup of the air pollution device(s);

7.9.b.7. The facility shall conduct, no later than April 28, 2002, initial compliance test(s) of the air pollution device(s); and

7.9.b.8. No later than September 16, 2002, the owner or operator of an existing HMIWI unit shall not allow or cause to be allowed a HMIWI unit to be operated except in compliance with all applicable provisions of this section.

7.9.c. An owner or operator of an existing HMIWI unit who submits in writing to the Secretary a request for an extension to comply beyond the compliance dates under subdivision 7.9.b, shall submit to the Secretary no later than April 28, 2001, the following information:

7.9.c.1. An analysis to support the need for an extension, including an explanation of why a time period up to three years after July 28, 2000 is not sufficient time to comply with subdivision 7.9.b;

7.9.c.2. A demonstration of the feasibility to transport the waste offsite to a commercial medical waste treatment and disposal facility on a temporary or permanent basis; and

7.9.c.3. Measurable and enforceable incremental steps of progress to be taken towards compliance with the emission limits contained in Table 45-18A, or Table 45-18C for small rural units, as applicable.

7.9.d. The Secretary will notify the owner or operator of an existing HMIWI, in writing, of his or her decision either to grant or deny the request for extension. The owner or operator shall comply with one of the following:

7.9.d.1. If the request for extension is denied, the owner or operator shall submit a compliance plan in accordance with subdivision 7.9.b no later than 30 days after denial of the request for extension, or July 28, 2001, whichever is later; or

7.9.d.2. If the request for extension is granted, the owner or operator shall submit a compliance plan and schedule commensurate with the granted extension no later than 30 days after the date the request for extension was granted.

7.9.d.3. If an extension is granted by the Secretary, the owner or operator shall comply in an expeditious manner with the 111(d)/129 plan requirements of Part 62, Subpart XX, §§ 62.12150 through 62.12152 on or before the date three years after U.S. EPA approval of the West Virginia 111(d)/129 plan (but not later than September 16, 2002), for the emissions guidelines, and on or before the date three years

after U.S. EPA approval of an amended West Virginia 111(d)/129 plan (but not later than October 6, 2014), for the emissions guidelines.

7.9.e. Except as provided in subdivisions 7.9.f, 7.9.g and 7.9.h, one year after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units, the owner or operator of any existing HMIWI unit subject to the requirements of 40 CFR part 62, subpart XX, and the related provisions of 40 CFR part 60, subpart Cc shall be in compliance with all applicable provisions of this section.

7.9.f. No later than 120 days after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units, the owner or operator of an existing HMIWI unit required to install air pollution control equipment shall submit an expeditious compliance plan and schedule subject to the approval of the Secretary that meets the following criteria:

7.9.f.1. No later than 12 months after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units, a facility that plans to install air pollution control equipment other than a dry scrubber followed by a fabric filter, a wet scrubber or dry scrubber followed by a fabric filter and a wet scrubber shall submit a petition for site specific operating parameters under 40 CFR § 60.56c(i) to the Administrator and the Secretary;

7.9.f.2. The facility shall obtain, no later than 12 months after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units, services of an architectural and engineering firm regarding air pollution device(s);

7.9.f.3. The facility shall order, no later than 18 months after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units, design drawings of an air pollution device(s);

7.9.f.4. The facility shall order, no later than 18 months after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units, air pollution device(s);

7.9.f.5. The facility shall initiate, no later than 18 months after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units, site preparation for installation of the air pollution device(s);

7.9.f.6. The facility shall conduct, no later than 30 months after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units, initial startup of the air pollution device(s);

7.9.f.7. The facility shall conduct, no later than 30 months after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units, initial compliance test(s) of the air pollution device(s); and

7.9.f.8. No later than October 6, 2014, the owner or operator of an existing HMIWI unit shall not allow or cause to be allowed a HMIWI unit to be operated except in compliance with all applicable provisions of this section.

7.9.g. An owner or operator of an existing HMIWI unit who submits in writing to the Secretary a request for an extension to comply beyond the compliance dates under subdivision 7.9.f. shall submit to the Secretary no later than nine months after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units, the following information:

7.9.g.1. An analysis to support the need for an extension, including an explanation of why a time period up to three years after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units is sufficient time to comply with this section, while one year after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units is not sufficient;

7.9.g.2. A demonstration of the feasibility to transport the waste offsite to a commercial medical waste treatment and disposal facility on a temporary or permanent basis; and

7.9.g.3. Measurable and enforceable incremental steps of progress to be taken towards compliance with the emission limits contained in Table 45-18B, or Table 45-18D for small rural units, as applicable.

7.9.h. The Secretary will notify the owner or operator of an existing HMIWI, in writing, of his or her decision either to grant or deny the request for extension. The owner or operator shall comply with one of the following:

7.9.h.1. If the request for extension is denied, the owner or operator shall submit a compliance plan in accordance with subdivision 7.9.f no later than 30 days after denial of the request for extension or one year after the effective date of U.S. EPA's approval of the 111(d)/129 state plan revision for HMIWI units, whichever is later; or

7.9.h.2. If the request for extension is granted, the owner or operator shall submit a compliance plan and schedule commensurate with the granted extension no later than 30 days after the date the request for extension has been granted; and

7.9.h.3. On or before October 6, 2014, the owner or operator shall comply with the emissions guidelines for existing HMIWI units under 40 CFR part 62, subpart XX, and the related provisions of 40 CFR part 60, subpart Ce, and not allow or cause to be allowed a HMIWI unit to be operated except in compliance with all applicable provisions of this section.

#### **§45-18-8. Requirements for new commercial and industrial solid waste incinerators.**

8.1. Requirements for new CISWI units. -- The owner or operator of a commercial and industrial solid waste incineration unit (CISWI unit) under subsection 8.2 shall comply with all applicable standards of performance, requirements, and provisions of 40 CFR part 60 subpart CCCC, including any reference methods, performance specifications, and other test methods associated with subpart CCCC. No person shall construct, reconstruct, modify or operate, or cause to be constructed, reconstructed, modified or operated a new CISWI unit that results in a violation of 40 CFR part 60 subpart CCCC or this rule.

8.2. Applicability. -- The owner or operator of a CISWI unit that meets any of the following criteria is subject to the requirements for new CISWI units set forth in section 8:

8.2.a. A CISWI unit that commenced construction after June 4, 2010; or

8.2.b. A CISWI unit that commenced reconstruction or modification after August 7, 2013; or

8.2.c. An incinerator and air curtain incinerator, that commenced construction after November 30, 1999, but no later than June 4, 2010, or that commenced reconstruction or modification on or after June 1, 2001, but no later than August 7, 2013, are considered new incineration units and remain subject to the applicable requirements of this section until such time the unit becomes subject to section 9 of this rule; and

8.2.d. The incineration unit does not meet the exemption criteria under 40 CFR § 60.2020.

8.3. Physical or Operational Changes. -- Physical or operational changes to an incineration unit primarily to comply with the emission guidelines in section 9 of this rule and 40 CFR part 60, subpart DDDD do not qualify as a reconstruction or modification under section 8.

#### **§45-18-9. Requirements for existing commercial and industrial solid waste incinerators.**

9.1. Requirements for existing CISWI units. -- The owner or operator of an existing CISWI unit shall comply with the applicable emission guidelines, compliance times, requirements, and provisions of 40 CFR part 60 subpart DDDD set forth in section 9 and Tables 45-18E, 45-18F, 45-18G, 45-18H, 45-18I, 45-18J, 45-18K, 45-18L and 45-18M, including any reference methods, performance specifications, and other test methods associated with subpart DDDD. No person shall reconstruct, modify or operate, or cause to be reconstructed, modified or operated, an existing CISWI unit that results in a violation of the requirements for existing CISWI units set forth in section 9.

## 9.2. Applicability.

9.2.a. Incineration units that meet all three criteria described in paragraphs 9.2.a.1 through 9.2.a.3 are subject to the requirements for existing CISWI units under section 9.

9.2.a.1. CISWI units and ACIs in West Virginia that commenced construction on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010 but no later than August 7, 2013;

9.2.a.2. Incineration units that meet the definition of a CISWI unit or an ACI as defined in section 2 of this rule and

9.2.a.3. Incineration units not exempt under subdivision 9.2.d below.

## 9.2.b. Physical or operational changes.

9.2.b.1. If the owner or operator of a CISWI unit or ACI makes changes that meet the definition of modification or reconstruction after August 7, 2013, the CISWI unit or ACI becomes subject to 40 CFR part 60, subpart CCCC under section 8 of this rule, and the requirements for existing CISWI units under section 9 no longer apply to that unit.

9.2.b.2. If the owner or operator of a CISWI unit or ACI makes physical or operational changes to an existing CISWI unit or ACI primarily to comply with the requirements of section 9, the requirements for new CISWI units under section 8 of this rule and 40 CFR part 60, subpart CCCC do not apply to that unit. Such changes do not qualify as modifications or reconstructions under section 8 of this rule and 40 CFR part 60, subpart CCCC.

## 9.2.c. Reserved.

9.2.d. Exemption. -- The types of units described in paragraphs 9.2.d.1 through 9.2.d.10 are exempt from the requirements of section 9, but some units are required to provide notifications.

9.2.d.1. Pathological waste incineration units. -- Incineration units burning 90% or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste are not subject to section 9 if the unit meets the requirements specified in subparagraphs 9.2.d.1.A and 9.2.d.1.B below:

9.2.d.1.A. Notify the Secretary that the unit meets these criteria; and

9.2.d.1.B. Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned and the weight of all other fuels and wastes burned in the unit.

9.2.d.2. Municipal waste combustion units. -- Incineration units that are subject to subpart Ea of 40 CFR part 60 (Standards of Performance for Municipal Waste Combustors); subpart Eb of 40 CFR part 60 (Standards of Performance for Large Municipal Waste Combustors); subpart Cb of 40 CFR part 60

(Emission Guidelines and Compliance Time for Large Municipal Combustors); subpart AAAA of 40 CFR part 60 (Standards of Performance for Small Municipal Waste Combustion Units); or subpart BBBB of 40 CFR part 60 (Emission Guidelines for Small Municipal Waste Combustion Units).

9.2.d.3. Medical waste incineration units. -- Incineration units regulated under subpart Ec of 40 CFR part 60 (Standards of Performance for Hospital, Medical, and Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or subpart Ca of 40 CFR part 60 (Emission Guidelines and Compliance Times for Hospital, Medical, and Infectious Waste Incinerators).

9.2.d.4. Small power production facilities. -- Units that meet the requirements specified in subparagraphs 9.2.d.4.A through 9.2.d.4.D below:

9.2.d.4.A. The unit qualifies as a small power-production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. § 796(17)(C));

9.2.d.4.B. The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity;

9.2.d.4.C. The owner or operator submits documentation to the Administrator and Secretary that the qualifying small power production facility is combusting homogenous waste; and

9.2.d.4.D. The owner or operator maintains the records specified in subdivision 9.11.v. below.

9.2.d.5. Cogeneration facilities. -- Units that meet the requirements specified in subparagraphs 9.2.d.5.A through 9.2.d.5.D below:

9.2.d.5.A. The unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. § 796(18)(B));

9.2.d.5.B. The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating or cooling purposes;

9.2.d.5.C. The owner or operator submits documentation to the Administrator and Secretary that the qualifying cogeneration facility is combusting homogenous waste; and

9.2.d.5.D. The owner or operator maintains the records specified in subdivision 9.11.w. below.

9.2.d.6. Hazardous waste combustion units. -- Units for which the owner or operator is required to get a permit under section 3005 of the Solid Waste Disposal Act.

9.2.d.7. Materials recovery units. -- Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters.

9.2.d.8. Sewage treatment plants. -- Incineration units regulated under subpart O of 40 CFR part 60 (Standards of Performance for Sewage Treatment Plants) and 45CSR16.

9.2.d.9. Sewage sludge incineration units. -- Incineration units combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter that are subject to subpart LLLL of 40 CFR part 60 (Standards of Performance for Sewage Sludge Incineration Units) or subpart MMMM of 40 CFR part 60 (Emission Guidelines for Sewage Sludge Incineration Units) and 45CSR16.

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9.2.d.10. Other solid waste incineration units. -- Incineration units that are subject to subpart EEEE of 40 CFR part 60 (Standards of Performance for Other Solid Waste Incineration Units) or subpart FFFF of 40 CFR part 60 (Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units) and 45CSR16.

#### 9.3. Compliance times and increments of progress.

9.3.a. For CISWI units in the incinerator subcategory and air curtain incinerators that commenced construction on or before November 30, 1999, such CISWI units shall achieve final compliance as expeditiously as practicable after approval of the West Virginia § 111(d)/129 plan but not later than December 1, 2005.

9.3.b. For CISWI units in the incinerator subcategory and air curtain incinerators that commenced construction after November 30, 1999, but on or before June 4, 2010 or that commenced reconstruction or modification on or after June 1, 2001 but no later than August 7, 2013, and for CISWI units in the small remote incinerator, energy recovery unit, and waste-burning kiln subcategories that commenced construction before June 4, 2010, such CISWI units shall achieve final compliance as expeditiously as practicable after approval of the West Virginia § 111(d)/129 plan but not later than February 7, 2018.

9.3.c. Owners and operators of existing CISWI units that have compliance schedules more than one year following the effective date of West Virginia's CAA § 111(d)/129 plan approval are subject to the increments of progress set forth in subdivision 9.3.c.

9.3.d. Reserved.

9.3.e. Increments of progress. -- The owner or operator of an existing CISWI unit that cannot achieve compliance within one year after the effective date of West Virginia § 111(d)/129 plan approval shall comply with the increments of progress set forth in Table 45-18E.

9.3.f. Notification of achievement of increments of progress shall include the following three items:

9.3.f.1. Notification that the increment of progress has been achieved;

9.3.f.2. Any items required to be submitted with each increment of progress; and

9.3.f.3. Signature of the owner or operator of the CISWI unit.

9.3.g. Notifications for achieving increments of progress shall be postmarked no later than ten business days after the compliance date for the increment.

9.3.h. If the unit fails to meet an increment of progress, the owner or operator shall submit a notification to the Secretary postmarked within ten business days after the date for that increment of progress in subdivision 9.3.e. The owner or operator shall inform the Secretary that the unit did not meet the increment and shall continue to submit reports each subsequent calendar month until the unit meets the increment of progress.

9.3.i. For control plan increment of progress, the owner or operator shall satisfy the requirements specified in subdivisions 9.3.i.1 and 9.3.i.2 below:

9.3.i.1. Submit the final control plan that includes the items described below in subparagraphs 9.3.i.1.A through 9.3.i.1.E:

9.3.i.1.A. A description of the devices for air pollution control and process changes that the owner or operator will use to comply with the emission limitations and other requirements of section 9;

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9.3.i.1.B. The type(s) of waste to be burned;

9.3.i.1.C. The maximum design waste burning capacity;

9.3.i.1.D. The anticipated maximum charge rate; and

9.3.i.1.E. If applicable, the petition for site-specific operating limits under subdivision 9.6.l; and

9.3.i.2. Maintain an onsite copy of the final control plan.

9.3.j. For the final compliance increment of progress, the owner or operator shall complete all process changes and retrofit construction of control devices as specified in the final control plan so that, if the affected CISWI unit is brought online, all necessary process changes and air pollution control devices would operate as designed.

9.3.k. If the owner or operator closes the CISWI unit but will restart it prior to the final compliance date set forth in subdivision 9.3.b, the owner or operator shall meet the increments of progress set forth in subdivision 9.3.e.

9.3.l. If the owner or operator closes the CISWI unit but will restart it after the final compliance date set forth in subdivision 9.3.b, the owner or operator shall complete emission control retrofits and meet the emission limitations and operating limits on the date the unit restarts operation.

9.3.m. If the owner or operator plans to permanently close the CISWI unit rather than comply with section 9, the owner or operator shall submit a closure notification, including the date of closure, to the Secretary by the date the final control plan is due.

9.4. Waste Management Plan. -- A waste management plan is a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.

9.4.a. The owner or operator shall submit a waste management plan to the Secretary no later than the date specified in Table 45-18E for submittal of the final control plan.

9.4.b. A waste management plan shall include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries or metals or the use of recyclable materials. The plan shall identify any additional waste management measures, and the source shall implement those measures considered practical and feasible based on the effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.

9.5. Operator training and qualification.

9.5.a. No CISWI unit shall be operated unless a fully trained and qualified CISWI unit operator is accessible, either at the facility or within one hour of travel time from the facility. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI unit operators are temporarily not accessible, the unit shall follow the procedures in subdivision 9.5.k below.

9.5.b. Operator training and qualification shall be obtained by completing an incinerator operator training course that includes, at a minimum, the elements described below:

9.5.b.1. Training on the following subjects:

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9.5.b.1.A. Environmental concerns, including types of emissions;

9.5.b.1.B. Basic combustion principles, including products of combustion;

9.5.b.1.C. Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures;

9.5.b.1.D. Combustion controls and monitoring;

9.5.b.1.E. Operation of air pollution control equipment and factors affecting performance (if applicable);

9.5.b.1.F. Inspection and maintenance of the incinerator and air pollution control devices;

9.5.b.1.G. Actions to prevent and correct malfunctions or to prevent conditions that may lead to malfunctions;

9.5.b.1.H. Bottom and fly ash characteristics and handling procedures;

9.5.b.1.I. Applicable federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards;

9.5.b.1.J. Pollution prevention; and

9.5.b.1.K. Waste management practices.

9.5.b.2. An examination designed and administered by the instructor of the incinerator operator training course; and

9.5.b.3. Written material covering the training course topics that can serve as reference material following completion of the course.

9.5.c. The operator training course shall be completed by the later of the following three dates:

9.5.c.1. The final compliance date set forth in subdivision 9.3.e;

9.5.c.2. Six months after CISWI unit startup; or

9.5.c.3. The date before an employee assumes responsibility for operating the CISWI or assumes responsibility for supervising the operation of the CISWI.

9.5.d. The owner or operator shall obtain operator qualification by completing a training course that satisfies the criteria under subdivision 9.5.b.

9.5.e. Qualification is valid from the date on which the training course was completed and the operator successfully passes the examination required under paragraph 9.5.b.2.

9.5.f. To maintain qualification, the owner or operator shall complete an annual review or refresher course covering, at a minimum, the topics described below:

9.5.f.1. Update of regulations;

9.5.f.2. Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling;

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9.5.f.3. Inspection and maintenance;

9.5.f.4. Prevention and correction of malfunctions or conditions that may lead to malfunction;  
and

9.5.f.5. Discussion of operating problems encountered by attendees.

9.5.g. The owner or operator shall renew a lapsed operator qualification by one of the methods specified below:

9.5.g.1. For a lapse of less than three years, the owner or operator shall complete a standard annual refresher course described in subdivision 9.5.f; or

9.5.g.2. For a lapse of three years or more, the owner or operator shall repeat the initial qualification requirements set forth in subdivision 9.5.d.

9.5.h. Documentation shall be available at the facility and readily accessible for all CISWI unit operators that addresses the topics described in paragraphs 9.5.h.1 through 9.5.h.10 below. The owner or operator shall maintain this information and the training records required by subdivision 9.5.j in a manner that they can be readily accessed and are suitable for inspection upon request.

9.5.h.1. Summary of the applicable standards under section 9;

9.5.h.2. Procedures for receiving, handling, and charging waste;

9.5.h.3. Incinerator startup, shutdown, and malfunction procedures;

9.5.h.4. Procedures for maintaining proper combustion air supply levels;

9.5.h.5. Procedures for operating the incinerator and associated air pollution control systems within the standards established under section 9;

9.5.h.6. Monitoring procedures for demonstrating compliance with the incinerator operating limits;

9.5.h.7. Reporting and recordkeeping procedures;

9.5.h.8. The waste management plan required under subsection 9.4;

9.5.h.9. Procedures for handling ash; and

9.5.h.10. A list of the wastes burned during the performance test.

9.5.i. The owner or operator shall establish a program for reviewing the information listed in subdivision 9.5.h with each incinerator operator.

9.5.i.1. The initial review of the information listed in subdivision 9.5.h shall be conducted by the later of the three dates specified below:

9.5.i.1.A. The final compliance date (increment 2) set forth in subdivision 9.3.e;

9.5.i.1.B. Six months after CISWI unit startup; or

9.5.i.1.C. Six months after being assigned to operate the CISWI unit.

9.5.i.2. The owner or operator shall conduct subsequent annual reviews of the information listed in subdivision 9.5.h no later than 12 months following the previous review.

9.5.j. The owner or operator shall also maintain the information specified below:

9.5.j.1. Records showing the names of CISWI unit operators who have completed review of the information in subdivision 9.5.h as required by subdivision 9.5.i, including the date of the initial review and all subsequent annual reviews;

9.5.j.2. Records showing the names of the CISWI operators who have completed the operator training requirements under subsection 9.5, met the criteria for qualification under subdivision 9.5.d, and maintained or renewed their qualification under subdivision 9.5.f or subdivision 9.5.g. Records shall include documentation of training, the dates of the initial refresher training, the dates of their qualifications, and all subsequent renewals of such qualifications; and

9.5.j.3. For each qualified operator, the phone and/or cell phone number at which they can be reached during operating hours.

9.5.k. If all qualified operators are temporarily not accessible (i.e., not at the facility and not able to be at the facility within one hour), the owner or operator shall either, depending on the length of time that a qualified operator is not accessible:

9.5.k.1. When all qualified operators are not accessible for more than eight hours, but less than two weeks, the CISWI unit may be operated by other plant personnel familiar with the operation of the CISWI unit who have completed a review of the information specified in subdivision 9.5.h within the past 12 months; however, the owner or operator shall record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under subdivision 9.12.e.; or

9.5.k.2. When all qualified operators are not accessible for two weeks or more, the owner or operator shall take both actions that are described below:

9.5.k.2.A. Notify the Secretary in writing within ten days of this deviation. In the notice, state what caused this deviation, what the owner or operator is doing to ensure that a qualified operator is accessible, and when the owner or operator anticipates that a qualified operator will be accessible; and

9.5.k.2.B. Submit a status report to the Administrator and Secretary every four weeks outlining what the owner or operator is doing to ensure that a qualified operator is accessible, stating when the owner or operator anticipates that a qualified operator will be accessible and requesting approval from the Administrator and Secretary to continue operation of the CISWI unit. The owner or operator shall submit the first status report four weeks after notification to the Administrator and the Secretary of the deviation under subparagraph 9.5.k.2.A. If the Administrator and Secretary notifies the owner or operator that the request to continue operation of the CISWI unit is disapproved, the CISWI unit may continue operation for 90 days, then shall cease operation. Operation of the unit may resume if the owner or operator meets the following requirements:

9.5.k.2.B.1. A qualified operator is accessible as required under subdivision 9.5.a; and

9.5.k.2.B.2. The owner or operator notifies the Administrator and Secretary that a qualified operator is accessible and that operations are resuming.

9.6. Emission limitations and operating limits.

9.6.a. The owner or operator shall meet the emission limitations for each CISWI unit, including bypass stack or vent, specified in Table 45-18F or Tables 45-18J through 45-18M, by the final compliance date set forth in subdivision 9.3.b. The emission limitations apply at all times the unit is operating including

and not limited to startup, shutdown or malfunction.

9.6.b. Units that do not use wet scrubbers shall maintain opacity to less than or equal to the percent opacity (three one-hour blocks consisting of ten six-minute average opacity values) specified in Table 45-18F as applicable.

9.6.c. If the owner or operator uses a wet scrubber(s) to comply with the emission limitations, the owner or operator shall establish operating limits for up to four operating parameters (as specified in Table 45-18G) as described in paragraphs 9.6.c.1 through 9.6.c.4 during the initial performance test:

9.6.c.1. Maximum charge rate, calculated using one of the two procedures below, as appropriate:

9.6.c.1.A. For continuous and intermittent units, maximum charge rate is 110% of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations; or

9.6.c.1.B. For batch units, maximum charge rate is 110% of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

9.6.c.2. Minimum pressure drop across the wet particulate matter scrubber, which is calculated as the lowest one-hour average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations; or minimum amperage to the wet scrubber, which is calculated as the lowest one-hour average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations;

9.6.c.3. Minimum scrubber liquid flow rate, which is calculated as the lowest one-hour average liquid flow rate at the inlet to the wet acid gas or particulate matter scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations; and/or

9.6.c.4. Minimum scrubber liquor pH, which is calculated as the lowest one-hour average liquor pH at the inlet to the wet acid gas scrubber measured during the most recent performance test demonstrating compliance with the hydrogen chloride (HCl) emission limitation.

9.6.d. The owner or operator shall meet the operating limits established on the date the performance test is submitted to the EPA's Central Data Exchange or postmarked in accordance with paragraph 9.12.j.2 of this rule.

9.6.e. If the owner or operator uses a fabric filter to comply with the emission limitations and does not use a particulate matter (PM) continuous parameter monitoring system (CPMS) for monitoring PM compliance, the owner or operator shall operate each fabric filter system such that the bag leak detection system alarm does not sound more than five percent of the operating time during a six-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken to initiate corrective action.

9.6.f. If the owner or operator uses an electrostatic precipitator to comply with the emission limitations and does not use a PM CPMS for monitoring PM compliance, the owner or operator shall measure the (secondary) voltage and amperage of the electrostatic precipitator collection plates during the particulate matter performance test. Calculate the average electric power value (secondary voltage × secondary current = secondary electric power) for each test run. The operating limit for the electrostatic precipitator is calculated as the lowest one-hour average secondary electric power measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

9.6.g. If the owner or operator uses activated carbon sorbent injection to comply with the emission limitations, the owner or operator shall measure the sorbent flow rate during the performance testing. The operating limit for the carbon sorbent injection is calculated as the lowest one-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the mercury emission limitations. For energy recovery units, when the unit operates at lower loads, multiply the sorbent injection rate by the load fraction, as defined in 40 CFR § 60.2875, to determine the required injection rate (e.g., for 50% load, multiply the injection rate operating limit by 0.5).

9.6.h. If the owner or operator uses selective noncatalytic reduction to comply with the emission limitations, the owner or operator shall measure the charge rate, the secondary chamber temperature (if applicable to the CISWI unit), and the reagent flow rate during the nitrogen oxides performance testing. The operating limits for the selective noncatalytic reduction are calculated as the highest one-hour average charge rate, lowest secondary chamber temperature, and lowest reagent flow rate measured during the most recent performance test demonstrating compliance with the nitrogen oxides emission limitations.

9.6.i. If the owner or operator uses a dry scrubber to comply with the emission limitations, the owner or operator shall measure the injection rate of each sorbent during the performance testing. The operating limit for the injection rate of each sorbent is calculated as the lowest one-hour average injection rate of each sorbent measured during the most recent performance test demonstrating compliance with the hydrogen chloride emission limitations. For energy recovery units, when the unit operates at lower loads, multiply the sorbent injection rate by the load fraction, as defined in 40 CFR § 60.2875, to determine the required injection rate (e.g., for 50% load, multiply the injection rate operating limit by 0.5).

9.6.j. If the owner or operator does not use a wet scrubber, electrostatic precipitator, or fabric filter to comply with the emission limitations, and if the owner or operator does not determine compliance with particulate matter emission limitation with a particulate matter CEMS, the unit shall maintain opacity to less than or equal to ten percent opacity (one-hour block average).

9.6.k. If the owner or operator uses a PM CPMS to demonstrate compliance, the owner or operator shall establish a PM CPMS operating limit and determine compliance with it according to paragraphs 9.6.k.1 through 9.6.k.5 below:

9.6.k.1. During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record all hourly average output values (milliamps, or the digital signal equivalent) from the PM CPMS for the periods corresponding to the test runs (e.g., three one-hour average PM CPMS output values for three one-hour test runs).

9.6.k.1.A. The PM CPMS shall provide a 4-20 milliamp output, or digital signal equivalent, and the establishment of its relationship to manual reference method measurements shall be determined in units of milliamps or digital bits.

9.6.k.1.B. The PM CPMS operating range shall be capable of reading PM concentrations from zero to a level equivalent to at least two times the allowable emission limit. If the PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument shall be capable of reading PM concentration from zero to a level equivalent to two times the allowable emission limit.

9.6.k.1.C. During the initial performance test or any subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values, or their digital equivalent, from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all PM CPMS output values for three corresponding Method 5 or Method 29 p.m. test runs).

9.6.k.2. If the average of the three PM performance test runs are below 75% of the facility's PM emission limit, the owner or operator shall calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS output

values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or Method 29 performance test with the procedures in paragraphs 9.6.k.1 through 9.6.k.5.

9.6.k.2.A. Determine the facility's instrument zero output with one of the following procedures:

9.6.k.2.A.1. Zero point data for in-situ instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

9.6.k.2.A.2. Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

9.6.k.2.A.3. The zero point can also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when the process is not operating, but the fans are operating or the source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

9.6.k.2.A.4. If none of the steps in parts 9.6.k.2.A.1 through 9.6.k.2.A.3 are possible, the owner or operator shall use a zero output value provided by the manufacturer.

9.6.k.2.B. The owner or operator shall determine its PM CPMS instrument average in milliamps, or the digital equivalent, and the average of the corresponding three PM compliance test runs, using Equation 1:

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n X_i, \quad \bar{y} = \frac{1}{n} \sum_{i=1}^n Y_i \quad \text{Equation 1}$$

Where:

$X_i$  = the PM CPMS data points for the three runs constituting the performance test,

$Y_i$  = the PM concentration value for the three runs constituting the performance test, and  
 $n$  = the number of data points.

9.6.k.2.C. With the instrument zero expressed in milliamps, or the digital equivalent, the three-run average PM CPMS milliamp value, or its digital equivalent, and the three-run average PM concentration from three compliance tests, determine a relationship of mg/dscm per milliamp or digital signal equivalent, with Equation 2.

$$R = \frac{Y_1}{(X_{1-z})} \quad \text{Equation 2}$$

Where:

$R$  = the relative mg/dscm per milliamp, or the digital equivalent, for the PM CPMS,

$Y_1$  = the three-run average mg/dscm PM concentration,

$X_1$  = the three-run average milliamp output or digital equivalent, from the PM CPMS, and

$z$  = the milliamp equivalent or digital signal equivalent of the instrument zero determined from subparagraph 9.6.k.2.A.

9.6.k.2.D. Determine the source specific 30-day rolling average operating limit using the mg/dscm per milliamp value, or per digital signal equivalent, from Equation 2 in Equation 3, below. This sets the operating limit at the PM CPMS output value corresponding to 75% of the emission limit.

$$O_l = z + \frac{0.75(L)}{R} \quad \text{Equation 3}$$

Where:

$O_l$  = the operating limit for the PM CPMS on a 30-day rolling average, in milliamps or their digital signal equivalent.

$L$  = the source emission limit expressed in mg/dscm,

$z$  = the instrument zero in milliamps or digital equivalent, determined from subparagraph 9.6.k.2.A, and

$R$  = the relative mg/dscm per milliamp, or per digital signal output equivalent, for the PM CPMS, from Equation 2.

9.6.k.3. If the average of the three PM compliance test runs is at or above 75% of the PM emission limit, the owner or operator shall determine the operating limit by averaging the PM CPMS milliamp or digital signal output corresponding to the three PM performance test runs that demonstrate compliance with the emission limit using Equation 4, and the owner or operator shall submit all compliance test and PM CPMS data according to the reporting requirements in paragraph 9.6.k.5.

$$O_n = \frac{1}{n} \sum_{i=1}^n X_i \quad \text{Equation 4}$$

Where:

$X_i$  = the PM CPMS data points for all runs  $i$ ,

$n$  = the number of data points, and

$O_n$  = the site-specific operating limit, in milliamps or digital signal equivalent.

9.6.k.4. To determine continuous compliance, the owner or operator shall record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. The owner or operator shall demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (e.g., milliamps or digital signal bits, PM concentration, raw data signal) on a 30-day rolling average basis.

9.6.k.5. For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report shall also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g., beta attenuation), span of the instrument's primary analytical range, milliamp or digital signal value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital signals corresponding to each PM compliance test run.

9.6.l. If the owner or operator uses an air pollution control device other than a wet scrubber, activated carbon injection, selective noncatalytic reduction, fabric filter, an electrostatic precipitator or a dry scrubber or limit emissions in some other manner, including mass balances, to comply with the emission limitations under subdivisions 9.6.a and 9.6.b, the owner or operator shall petition the Secretary for specific operating limits to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall submit the petition at least 60 days before the performance test is scheduled to begin. The owner's or operator's petition shall include the following five items:

9.6.l.1. Identification of the specific parameters the owner or operator proposes to use as additional operating limits;

9.6.l.2. A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters and

how limits on these parameters will serve to limit emissions of regulated pollutants;

9.6.1.3. A discussion of how the owner or operator will establish the upper and/or lower values for these parameters which will establish the operating limits on these parameters;

9.6.1.4. A discussion identifying the methods the owner or operator will use to measure and the instruments the owner or operator will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

9.6.1.5. A discussion identifying the frequency and methods for recalibrating the instruments the owner or operator will use for monitoring these parameters.

#### 9.7. Performance testing.

9.7.a. All performance tests shall consist of a minimum of three test runs conducted under conditions representative of normal operations.

9.7.b. The owner or operator shall document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in paragraph 9.11.b.1) and the types of waste burned during the performance test.

9.7.c. The owner or operator shall conduct all performance tests using the minimum run duration specified in Table 45-18F and Tables 45-18J through 45-18M.

9.7.d. The owner or operator shall use Method 1 of 40CFR60, appendix A to select the sampling location and number of traverse points.

9.7.e. The owner or operator shall use Method 3A or 3B of 40CFR60, appendix A for gas composition analysis, including measurement of oxygen concentration. The owner or operator shall use Method 3A or 3B of appendix A simultaneously with each method (except when using Method 9 and Method 22).

9.7.f. All pollutant concentrations, except for opacity, shall be adjusted to seven percent oxygen using Equation 5:

$$C_{adj} = C_{meas} \frac{(20.9 - 7)}{(20.9 - \%O_2)} \quad \text{Equation 5}$$

Where:

$C_{adj}$  = pollutant concentration adjusted to seven percent (7%) oxygen;

$C_{meas}$  = pollutant concentration measured on a dry basis;

$(20.9 - 7)$  = 20.9% oxygen - 7% oxygen (defined oxygen correction basis);

20.9 = oxygen concentration in air, percent; and

$\%O_2$  = oxygen concentration measured on a dry basis, percent.

9.7.g. The owner or operator shall determine dioxins/furans toxic equivalency by following the procedures in paragraphs 9.7.g.1 through 9.7.g.4 below:

9.7.g.1. Measure the concentration of each dioxin/furan tetra- through octa-isomer emitted using EPA Method 23 at 40CFR60, appendix A and 45CSR16.

9.7.g.2. Quantify isomers meeting identification criteria 2, 3, 4, and 5 in section 5.3.2.5 of

Method 23, regardless of whether the isomers meet identification criteria 1 and 7. The owner or operator shall quantify the isomers per section 9.0 of Method 23 (Note: The owner or operator may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of section 5.3.2.5 of Method 23).

9.7.g.3. For each dioxin/furan (tetra through octa-chlorinated) isomer measured in accordance with paragraphs 9.7.g.1 and 9.7.g.2, multiply the isomer concentration by its corresponding toxic equivalency factor specified in Table 45-18H.

9.7.g.4. Sum the products calculated in accordance with paragraph 9.7.g.3 to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

9.7.h. The owner or operator shall use Method 22 at 40CFR60, appendix A-7 and 45CSR16 to determine compliance with the fugitive ash emission limit in Table 45-18F or Tables 45-18J through 45-18M.

9.7.i. If the facility has an applicable opacity operating limit, the owner or operator shall determine compliance with the opacity limit using Method 9 at 40CFR60, appendix A-4 and 45CSR16, based on three one-hour blocks consisting of ten six-minute average opacity values, unless the owner or operator is required to install a continuous opacity monitoring system, consistent with subdivisions 9.9.a through 9.9.y and subdivisions 9.10.a through 9.10.t of this rule.

9.7.j. The owner or operator shall determine dioxins/furans total mass basis by following the procedures in paragraphs 9.7.j.1 through 9.7.j.3 below:

9.7.j.1. Measure the concentration of each dioxin/furan tetra- through octa-chlorinated isomer emitted using EPA Method 23 at 40CFR60, appendix A-7 and 45CSR16.

9.7.j.2. Quantify isomers meeting identification criteria 2, 3, 4, and 5 in Section 5.3.2.5 of Method 23, regardless of whether the isomers meet identification criteria 1 and 7. The owner or operator shall quantify the isomers per section 9.0 of Method 23 (Note: The owner or operator may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of Section 5.3.2.5 of Method 23).

9.7.j.3. Sum the quantities measured in accordance with paragraphs 9.7.j.1 and 9.7.j.2 to obtain the total concentration of dioxins/furans emitted in terms of total mass basis.

9.7.k. The owner or operator shall use results of performance tests to demonstrate compliance with the emission limitations in Table 45-18F or Tables 45-18J through 45-18M.

#### 9.8. Initial compliance requirements.

9.8.a. The owner or operator shall conduct a performance test, as required under subsection 9.7 and subdivisions 9.6.a and 9.6.b, to determine compliance with the emission limitations in Table 45-18F and Tables 45-18J through 45-18M, to establish compliance with any opacity operating limits in subdivisions 9.6.a through paragraph 9.6.k.5, to establish the kiln-specific emission limit in subdivision 9.9.y, as applicable, and to establish operating limits using the procedures in subdivision 9.6.c through paragraph 9.6.k.5 or subdivision 9.6.1. The owner or operator shall conduct the performance test using the test methods listed in Table 45-18F and Tables 45-18J through 45-18M and the procedures in subsection 9.7. The use of the bypass stack during a performance test shall invalidate the performance test.

9.8.b. As an alternative to conducting a performance test as required under subsection 9.7 and subdivisions 9.6.a and 9.6.b, the owner or operator may use a 30-day rolling average of the 1-hour arithmetic average CEMS data, including CEMS data during startup and shutdown, as defined in § 45-18-2, to determine compliance with the emission limitations in Table 45-18E or Tables 45-18I through 45-18L. The

owner or operator shall conduct:

9.8.b.1. a performance evaluation of each continuous monitoring system within 180 days of installation of the monitoring system; and

9.8.b.2. the initial performance evaluation prior to collecting CEMS data that will be used for the initial compliance demonstration.

9.8.c. The owner or operator shall conduct the initial performance test no later than 180 days after the final compliance date set forth in Table 45-18E.

9.8.d. If the owner or operator commences or recommences combusting a solid waste at an existing combustion unit at any commercial or industrial facility and conducted a test consistent with the provisions of section 9 while combusting the given solid waste within the six months preceding the reintroduction of that solid waste in the combustion chamber, the owner or operator does not need to retest until six months from the date of reintroduction of that solid waste.

9.8.e. If the owner or operator commences combusting or recommences combusting a solid waste at an existing combustion unit at any commercial or industrial facility and the owner or operator has not conducted a performance test consistent with the provisions of § 45-18-9 while combusting the given solid waste within the six months preceding the reintroduction of that solid waste in the combustion chamber, the owner or operator shall conduct a performance test within 60 days commencing or recommencing solid waste combustion.

9.8.f. The owner or operator shall conduct the initial air pollution control device inspection within 60 days after installation of the control device and the associated CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after the final compliance date for meeting the amended emission limitations.

9.8.g. Within ten operating days following an air pollution control device inspection, the owner or operator shall complete all necessary repairs, unless the owner or operator obtains written approval from the Secretary establishing a date whereby all necessary repairs of the designated facility shall be completed.

#### 9.9. Continuous compliance requirements.

9.9.a. General compliance with standards, considering some units may be able to switch between solid waste and non-waste fuel combustion, is specified in paragraphs 9.9.a.1 through 9.9.a.6 below:

9.9.a.1. The emission standards and operating requirements set forth in section 9 apply at all times.

9.9.a.2. If the facility ceases combusting solid waste, the owner or operator may opt to remain subject to the provisions of section 9. Consistent with the definition of CISWI unit, the owner or operator is subject to the requirements of section 9 at least six months following the last date of solid waste combustion. Solid waste combustion is ceased when solid waste is not in the combustion chamber (i.e., the solid waste feed to the combustor has been cut off for a period of time not less than the solid waste residence time).

9.9.a.3. If the facility ceases combusting solid waste, the owner or operator shall comply with any newly applicable standards on the effective date of the waste-to-fuel switch. The effective date of the waste-to-fuel switch is a date selected by the owner or operator, which shall be at least six months from the date that the facility ceased combusting solid waste, consistent with paragraph 9.9.a.2. The source shall remain in compliance with section 9 until the effective date of the waste-to-fuel switch.

9.9.a.4. If the owner or operator owns or operates an existing commercial or industrial

combustion unit that combusted a fuel or non-waste material, and the owner or operator commences or recommences combustion of solid waste, the owner or operator is subject to the provisions of section 9 as of the first day of introduction or reintroduction of solid waste to the combustion chamber, and this date constitutes the effective date of the fuel-to-waste switch. The owner or operator shall complete all initial compliance demonstrations for any § 112 CAA standards that are applicable to the facility before commencement or recommencement of combustion of solid waste. The owner or operator shall provide 30 days prior notice to the Secretary of the effective date of the waste-to-fuel switch. The notification shall identify:

9.9.a.4.A. The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

9.9.a.4.B. The currently applicable subcategory under section 9 and any 40 CFR part 63 subpart and subcategory that will be applicable after the owner or operator ceases combusting solid waste;

9.9.a.4.C. The fuel(s), non-waste material(s), and solid waste(s) the CISWI unit is currently combusting and has combusted over the past six months and the fuel(s) or non-waste materials the unit will commence combusting;

9.9.a.4.D. The date on which the owner or operator became subject to the currently applicable emission limits;

9.9.a.4.E. The date upon which the owner or operator will cease combusting solid waste and the date (if different) that the owner or operator intends for any new requirements to become applicable (i.e., the effective date of the waste-to-fuel switch), consistent with paragraphs 9.9.a.2 and 9.9.a.3.

9.9.a.5. The owner or operator shall install all air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of combusting solid waste, and the same shall be operational as of the effective date of the waste-to-fuel or fuel-to-waste switch.

9.9.a.6. The owner or operator shall install all monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste, and the same shall be operational as of the effective date of the waste-to-fuel or fuel-to-waste switch. The owner or operator shall perform all calibration and drift checks as of the effective date of the waste-to-fuel or fuel-to-waste switch. The owner or operator shall perform relative accuracy tests as of the performance test deadline for PM CEMS (if PM CEMS are elected to demonstrate continuous compliance with the particulate matter emission limits). The owner or operator need not repeat relative accuracy testing for other CEMS if the owner or operator previously performed that testing consistent with § 112 CAA monitoring requirements or monitoring requirements under section 9.

9.9.b. The owner or operator shall conduct an annual performance test for the pollutants listed in Table 45-18F or Tables 45-18J through 45-18M and opacity for each CISWI unit as required under subsection 9.7. The owner or operator shall conduct the annual performance test using the test methods listed in Table 45-18F or Tables 45-18J through 45-18M and the procedures in subsection 9.7. The owner or operator shall measure opacity using EPA Reference Method 9 at 40CFR60. If the owner or operator uses CEMS or continuous opacity monitoring systems to determine compliance, the owner or operator is not required to perform annual performance tests.

9.9.c. The owner or operator shall continuously monitor the operating parameters specified in subdivision 9.6.c through paragraph 9.6.k.5 or established under subdivision 9.6.l and as specified in subdivision 9.10.s. Operation above the established maximum or below the established minimum operating limits constitutes a deviation from the established operating limits. Three-hour block average values are used to determine compliance (except for baghouse leak detection system alarms) unless a different

averaging period is established under subdivision 9.6.1 or, for energy recovery units, where the averaging time for each operating parameter is a 30-day rolling average, calculated each hour as the average of the previous 720 operating hours. Operation above the established maximum, below the established minimum, or outside the allowable range of the operating limits specified in subdivision 9.9.a constitutes a deviation from operating limits, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests.

9.9.d. The owner or operator shall burn only the same types of waste and fuels used to establish subcategory applicability (for ERUs) and operating limits during the performance test.

9.9.e. For energy recovery units, incinerators, and small remote units, the owner or operator shall perform annual visual emissions test for ash handling.

9.9.f. For energy recovery units, the owner or operator shall conduct an annual performance test for opacity using EPA Reference Method 9 at 40CFR60 and 45CSR16 (except where particulate matter CMS or CPMS are used) and the pollutants listed in Table 45-18K.

9.9.g. For facilities using a CEMS to demonstrate compliance with the carbon monoxide emission limit, the owner or operator may demonstrate compliance with the carbon monoxide emission limit by using the CEMS in accordance with subdivision 9.10.o.

9.9.h. Coal and liquid/gas energy recovery units with annual average heat input rates greater than 250 MMBtu/hr may elect to demonstrate continuous compliance with the particulate matter emissions limit using a particulate matter CEMS according to the procedures in subdivision 9.10.n instead of the CPMS specified in subdivision 9.9.i. Coal and liquid/gas energy recovery units with annual average heat input rates less than 250 MMBtu/hr, incinerators, and small remote incinerators may also elect to demonstrate compliance using a particulate matter CEMS according to the procedures in subdivision 9.10.n instead of particulate matter testing with EPA Method 5 at 40CFR60, appendix A-3 and 45CSR16 and, if applicable, the continuous opacity monitoring requirements in subdivision 9.9.i.

9.9.i. For energy recovery units with annual average heat input rates greater than or equal to 10 MMBtu/hr but less than 250 MMBtu/hr that do not use a wet scrubber, fabric filter with bag leak detection system, an electrostatic precipitator, particulate matter CEMS, or particulate matter CPMS the owner or operator shall install, operate, certify, and maintain a continuous opacity monitoring system (COMS) according to the procedures in subdivision 9.10.m.

9.9.j. For waste-burning kilns, the owner or operator shall conduct an annual performance test for the pollutants (except mercury, and hydrogen chloride if no acid gas wet scrubber or dry scrubber is used) listed in Table 45-18L, unless the owner or operator chooses to demonstrate initial and continuous compliance using CEMS, as allowed in subdivision 9.9.u. If an acid gas wet scrubber or dry scrubber is not used, the owner or operator shall determine compliance with the hydrogen chloride emissions limit using a HCl CEMS according to the requirements in paragraph 9.9.j.1. To determine compliance with the mercury emissions limit, the owner or operator shall use a mercury CEMS or an integrated sorbent trap monitoring system according to paragraph 9.9.j.2. To determine continuing compliance with particulate matter, the owner or operator shall use a CPMS according to subdivision 9.9.x.

9.9.j.1. If the owner or operator monitors compliance with the hydrogen chloride (HCl) emissions limit by operating an HCl CEMS, the owner or operator shall do so in accordance with performance specification 15 (PS 15) of appendix B to 40CFR60, or PS 18 of appendix B to 40 CFR part 60. The owner or operator shall operate, maintain, and quality assure a HCl CEMS installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of appendix F to 40CFR60, except that the owner or operator shall replace the relative accuracy test audit requirements of Procedure 1 with the validation requirements and criteria of Sections 11.1.1 and 12.0 of PS 15. The owner or operator shall operate, maintain, and quality assure a HCl CEMS installed and certified under PS 18 according to

the quality assurance requirements in Procedure 6 of appendix F to 40CFR60. For any performance specification used, the owner or operator shall use Method 321 of appendix A to 40CFR63 as the reference test method for conducting relative accuracy testing. The span value and calibration requirements in subparagraphs 9.9.j.1.A and 9.9.j.1.B apply to all HCl CEMS used under section 9:

9.9.j.1.A. The owner or operator shall use a measurement span value for any HCl CEMS of 0–10 ppmvw unless the monitor is installed on a kiln without an inline raw mill. For kilns without an inline raw mill, the owner or operator may use a higher span value sufficient to quantify all expected emissions concentrations. The HCl CEMS data recorder output range shall include the full range of expected HCl concentration values, which would include those expected during “mill off” conditions. The owner or operator shall document corresponding data recorder range in the site-specific monitoring plan and associated records;

9.9.j.1.B. In order to quality assure data measured above the span value, the owner or operator shall use one of the three options in parts 9.9.j.1.B.1 through 9.9.j.1.B.3 below:

9.9.j.1.B.1 Include a second span that encompasses the HCl emission concentrations expected to be encountered during “mill off” conditions. This second span may be rounded to a multiple of 5 ppm of total HCl. The owner or operator shall follow requirements of the appropriate HCl monitor performance specification for this second span, except that a RATA with the mill off is not required;

9.9.j.1.B.2. Quality assure any data above the span value by proving instrument linearity beyond the span value established in subparagraph 9.9.j.1.A using the following procedure: conduct a weekly “above span linearity” calibration challenge of the monitoring system using a reference gas with a certified value greater than the highest expected hourly concentration or greater than 75% of the highest measured hourly concentration. The “above span” reference gas shall meet the requirements of the applicable performance specification and shall be introduced to the measurement system at the probe. The owner or operator shall record and report the results of this procedure as it would for a daily calibration. The “above span linearity” challenge is successful if the value measured by the HCl CEMS falls within ten percent of the certified value of the reference gas. If the value measured by the HCl CEMS during the above span linearity challenge exceeds ten percent of the certified value of the reference gas, the owner or operator shall evaluate and repair the monitoring system and meet a new “above span linearity” challenge before returning the HCl CEMS to service, or data above span from the HCl CEMS shall be subject to the quality assurance procedures established in 9.9.j.1.B.4. In this manner, the owner or operator shall normalize values measured by the HCl CEMS in this manner during the above span linearity challenge exceeding plus or minus 20% of the certified value of the reference gas using Equation 6;

9.9.j.1.B.3. Quality assure any data above the span value established in subparagraph 9.9.j.1.A using the following procedure: any time two consecutive one-hour average measured concentration of HCl exceeds the span value the owner or operator shall, within 24 hours before or after, introduce a higher, “above span” HCl reference gas standard to the HCl CEMS. The “above span” reference gas shall meet the requirements of the applicable performance specification and target a concentration level between 50% and 150% of the highest expected hourly concentration measured during the period of measurements above span and shall be introduced at the probe. While this target represents a desired concentration range that is not always achievable in practice, the owner or operator shall demonstrate its intent to meet this range by the value of the reference gas. Expected values may include above span calibrations done before or after the above-span measurement period. The owner or operator shall record and report the results of this procedure as it would for a daily calibration. The “above span” calibration is successful if the value measured by the HCl CEMS is within 20% of the certified value of the reference gas. If the value measured by the HCl CEMS is not within 20% of the certified value of the reference gas, then the owner or operator shall normalize the stack gas values measured above span as described in part 9.9.j.1.B.4. If the “above span” calibration is conducted during the period when measured emissions are above span and the owner or operator fails to collect the one data point in an hour due to the calibration duration, then the owner or operator shall determine the emissions average for that missed hour as the average of hourly averages for the hour preceding the missed hour and the hour following the missed hour.

In an hour where an owner or operator is conducting an “above span” calibration and collects one or more data points, the emissions average is represented by the average of all valid data points collected in that hour;

9.9.j.1.B.4. In the event that the “above span” calibration is not successful (i.e., the HCl CEMS measured value is not within 20% of the certified value of the reference gas), then the owner or operator shall normalize the one-hour average stack gas values measured above the span during the 24-hour period preceding or following the “above span” calibration for reporting based on the HCl CEMS response to the reference gas as shown in Equation 6. Only one “above span” calibration is needed per 24-hour period.

$$\frac{\text{Certified reference gas value}}{\text{Measured value of reference gas}} = \text{Measured stack gas} = \text{Normalized stack gas result} \quad \text{Equation 6}$$

9.9.j.2. The owner or operator shall determine compliance with the mercury emissions limit using a mercury CEMS or integrated sorbent trap monitoring system according to the following requirements:

9.9.j.2.A. The owner or operator shall operate a mercury CEMS system in accordance with performance specification 12A of 40CFR60, appendix B or an integrated sorbent trap monitoring system in accordance with performance specification 12B of 40CFR60, appendix B and the monitoring systems shall be quality assured according to procedure 5 of 40CFR60, appendix F. For the purposes of emissions calculations when using an integrated sorbent trap monitoring system, the mercury concentration determined for each sampling period shall be assigned to each hour during the sampling period. If the owner or operator chooses to comply with the production-rate based mercury limit for the waste-burning kiln, the owner or operator shall also monitor hourly clinker production and determine the hourly mercury emissions rate in pounds per million ton of clinker produced. The owner or operator shall demonstrate compliance with the mercury emissions limit using a 30-day rolling average of these one-hour mercury concentrations or mass emission rates, including CEMS data during startup and shutdown, as defined in section 2, calculated using equation 19–19 in section 12.4.1 of Method 19 of 40CFR60, appendix A–7. CEMS data during startup and shutdown, as defined in section 2, are not corrected to seven percent oxygen and are measured at stack oxygen content;

9.9.j.2.B. Owners or operators using a mercury CEMS or integrated sorbent trap monitoring system to determine mass emission rate shall install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specification 6 of 40CFR60, appendix B and conduct an annual relative accuracy test of the continuous emission rate monitoring system according to section 8.2 of PS 6; and

9.9.j.2.C. The owner or operator of a waste-burning kiln shall demonstrate initial compliance by operating a mercury CEMS or integrated sorbent trap monitoring system while the raw mill of the in-line kiln/raw mill is operating under normal conditions and including at least one period when the raw mill is off.

9.9.k. If the owner or operator uses an air pollution control device to meet the emission limitations in section 9, the owner or operator shall conduct an initial and annual inspection of the air pollution control device. The inspection shall include, at a minimum, the following:

9.9.k.1. Inspect air pollution control device(s) for proper operation; and

9.9.k.2. Develop a site-specific monitoring plan according to the requirements in subdivision 9.9.i. This requirement also applies to the owner or operator if the owner or operator petitions the Administrator for alternative monitoring parameters under 40 CFR § 60.13(i).

9.9.1. For each CMS required in this section, the owner or operator shall develop and submit to the Secretary for approval a site-specific monitoring plan according to the requirements of this subdivision that addresses subparagraphs 9.9.1.1.A through 9.9.1.1.F below.

9.9.1.1. The owner or operator shall submit this site-specific monitoring plan at least 60 days before the initial performance evaluation of the continuous monitoring system.

9.9.1.1.A. Installation of the continuous monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

9.9.1.1.B. Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems;

9.9.1.1.C. Performance evaluation procedures and acceptance criteria (e.g., calibrations);

9.9.1.1.D. Ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR § 60.11(d);

9.9.1.1.E. Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR § 60.13; and

9.9.1.1.F. Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 CFR §§ 60.7(b), (c) introductory text, (c)(1), (c)(4), (d), (e), (f), and (g).

9.9.1.2. The owner or operator shall conduct a performance evaluation of each continuous monitoring system in accordance with the site-specific monitoring plan.

9.9.1.3. The owner or operator shall operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.

9.9.m. If the owner or operator has an operating limit that requires the use of a flow monitoring system, the owner or operator shall meet the requirements in subdivision 9.9.1 and paragraphs 9.9.m.1 through 9.9.m.4 below:

9.9.m.1. Install the flow sensor and other necessary equipment in a position that provides a representative flow;

9.9.m.2. Use a flow sensor with a measurement sensitivity at full scale of no greater than two percent;

9.9.m.3. Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances; and

9.9.m.4. Conduct a flow monitoring system performance evaluation in accordance with the monitoring plan at the time of each performance test, but no less frequently than annually.

9.9.n. If the owner or operator has an operating limit that requires the use of a pressure monitoring system, the owner or operator shall meet the requirements in subdivision 9.9.1 and paragraphs 9.9.n.1 through 9.9.n.6 below:

9.9.n.1. Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop);

9.9.n.2. Minimize or eliminate pulsating pressure, vibration, and internal and external

corrosion;

9.9.n.3. Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of one percent of the pressure monitoring system operating range, whichever is less;

9.9.n.4. Perform checks at the frequency outlined in the site-specific monitoring plan to ensure pressure measurements are not obstructed (e.g., check for pressure tap plugging daily);

9.9.n.5. Conduct a performance evaluation of the pressure monitoring system in accordance with the monitoring plan at the time of each performance test, but no less frequently than annually; and

9.9.n.6. If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with the monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in the monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

9.9.o. If the owner or operator has an operating limit that requires a pH monitoring system, the owner or operator shall meet the requirements in subdivision 9.9.1 and paragraphs 9.9.o.1 through 9.9.o.4 below:

9.9.o.1. Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH;

9.9.o.2. Ensure the sample is properly mixed and representative of the fluid to be measured;

9.9.o.3. Conduct a performance evaluation of the pH monitoring system in accordance with the monitoring plan at least once each process operating day; and

9.9.o.4. Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with the monitoring plan at the time of each performance test, but no less frequently than quarterly.

9.9.p. If the owner or operator has an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator, the owner or operator shall meet the requirements in subdivision 9.9.1 and paragraphs 9.9.p.1 and 9.9.p.2 below:

9.9.p.1. Install sensors to measure (secondary) voltage and current to the precipitator collection plates; and

9.9.p.2. Conduct a performance evaluation of the electric power monitoring system in accordance with the monitoring plan at the time of each performance test, but no less frequently than annually.

9.9.q. If the owner or operator has an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper or hopper flow measurement device), the owner or operator shall meet the requirements in subdivision 9.9.1 and paragraphs 9.9.q.1 through 9.9.q.2 below:

9.9.q.1. Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate; and

9.9.q.2. Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with the monitoring plan at the time of each performance test, but no less frequently than

annually.

9.9.r. If the owner or operator elects to use a fabric filter bag leak detection system to comply with the requirements of section 9, the owner or operator shall install, calibrate, maintain, and continuously operate a bag leak detection system as specified in subdivision 9.9.1 and paragraphs 9.9.r.1 through 9.9.r.5 below:

9.9.r.1. Install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute particulate matter loadings for each exhaust stack, roof vent or compartment (e.g., for a positive pressure fabric filter) of the fabric filter;

9.9.r.2. Use a bag leak detection system certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of ten milligrams per actual cubic meter or less;

9.9.r.3. Conduct a performance evaluation of the bag leak detection system in accordance with the monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (refer to 40 CFR § 60.17);

9.9.r.4. Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor; and

9.9.r.5. Use a bag leak detection system equipped with a system that will sound an alarm when it detects an increase in relative particulate matter emissions over a preset level. The alarm shall be located where it is observed readily by plant operating personnel.

9.9.s. For facilities using a CEMS to demonstrate initial and continuous compliance with the sulfur dioxide emission limit, the owner or operator may demonstrate compliance with the sulfur dioxide emission limit by using the CEMS specified in subdivision 9.10.1 to measure sulfur dioxide. The owner or operator shall operate the sulfur dioxide CEMS according to the procedures and methods specified in subdivision 9.9.s. For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for inlet sulfur dioxide CEMS should be no greater than 20% of the mean value of the reference method test data in terms of the units of the emission standard, or five parts per million dry volume absolute value of the mean difference between the reference method and the CEMS, whichever is greater.

9.9.s.1. During each relative accuracy test run of the CEMS required by performance specification 2 in appendix B of 40CFR60, the owner or operator shall collect sulfur dioxide and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified below:

9.9.s.1.A. For sulfur dioxide, EPA Reference Method 6 or 6C, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see 40 CFR § 60.17); and

9.9.s.1.B. For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B at 40CFR60, appendix A-2, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see 40 CFR § 60.17), as applicable.

9.9.s.2. The span value of the CEMS at the inlet to the sulfur dioxide control device shall be 125% of the maximum estimated hourly potential sulfur dioxide emissions of the unit. The span value of the CEMS at the outlet of the sulfur dioxide control device shall be 50% of the maximum estimated hourly potential sulfur dioxide emissions of the unit.

9.9.s.3. The owner or operator shall conduct accuracy determinations quarterly and calibration drift tests daily in accordance with Procedure 1 in appendix F of 40CFR60.

9.9.t. For facilities using a CEMS to demonstrate initial and continuous compliance with the

nitrogen oxides emission limit, the owner or operator may demonstrate compliance with the nitrogen oxides emission limit by using the CEMS specified in subdivisions 9.10.a through 9.10.t to measure nitrogen oxides. The owner or operator shall operate the nitrogen oxides CEMS according to the procedures and methods specified in paragraphs 9.9.t.1 through 9.9.t.4 below:

9.9.t.1. During each relative accuracy test run of the CEMS required by performance specification 2 of appendix B of 40CFR60, the owner or operator shall collect nitrogen oxides and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in subparagraphs 9.9.t.1.A and 9.9.t.1.B below:

9.9.t.1.A. For nitrogen oxides, EPA Reference Method 7 or 7E of 40CFR60, appendix A-4; and

9.9.t.1.B. For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B at 40CFR60, appendix A-2, or as an alternative ANSI/ASME PTC 19.10-1981 (refer to 40 CFR § 60.17), as applicable;

9.9.t.2. The span value of the CEMS shall be 125% of the maximum estimated hourly potential nitrogen oxide emissions of unit;

9.9.t.3. Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with Procedure 1 in appendix F of 40CFR60; and

9.9.t.4. The owner or operator of an affected facility may request that it determine compliance with the nitrogen oxides emission limit using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. If the owner or operator selects carbon dioxide for use in diluent corrections, the owner or operator shall establish the relationship between oxygen and carbon dioxide levels during the initial performance test according to the procedures and methods specified in subparagraphs 9.9.t.4.A through 9.9.t.4.C below. The owner or operator may reestablish this relationship during performance compliance tests. The owner or operator shall:

9.9.t.4.A. Use the fuel factor equation in Method 3B to determine the relationship between oxygen and carbon dioxide at a sampling location, and use Method 3A, 3B or, as an alternative, ANSI/ASME PTC 19.10-1981 (refer to 40 CFR § 60.17), as applicable, to determine the oxygen concentration at the same location as the carbon dioxide monitor;

9.9.t.4.B. Take samples for at least 30 minutes in each hour. Each sample shall represent a one-hour average;

9.9.t.4.C. Perform a minimum of three runs.

9.9.u. For facilities using a CEMS or an integrated sorbent trap monitoring system for mercury to demonstrate initial and continuous compliance with any of the emission limits of section 9, the owner or operator shall complete the requirements in paragraphs 9.9.u.1 and 9.9.u.2:

9.9.u.1. Demonstrate compliance with the appropriate emission limit(s) using a 30-day rolling average of one-hour arithmetic average emission concentrations, including CEMS or an integrated sorbent trap monitoring system data during startup and shutdown, as defined in section 2 of this rule, calculated using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40CFR60, appendix A-7.

9.9.u.1.A. Calculate the 1-hour arithmetic averages for CEMS using the data points required under 40 CFR §60.13(e)(2). The 1-hour arithmetic averages used to calculate the 30-day rolling average emission concentrations shall be corrected to 7 percent oxygen (dry basis) except for CEMS or integrated sorbent trap monitoring system data during startup and shutdown.

9.9.u.1.B. Measure the integrated sorbent trap monitoring system or CEMS data during

startup and shutdown, as defined in section 2, at stack oxygen content. This data shall not be corrected to 7 percent oxygen; and

9.9.u.2. Operate all CEMS and integrated sorbent trap monitoring systems in accordance with the applicable procedures under appendices B and F of 40CFR60.

9.9.v. Use of the bypass stack at any time is an emissions standards deviation for PM, HCl, Pb, Cd, Hg, NO<sub>x</sub>, SO<sub>2</sub>, and dioxin/furans.

9.9.w. For energy recovery units with a design heat input capacity of 100 MMBtu/hr or greater that do not use a carbon monoxide CEMS, the owner or operator shall install, operate, and maintain an oxygen analyzer system as defined in section 2 according to the procedures in paragraphs 9.9.w.1 through 9.9.w.4 below:

9.9.w.1. Install the oxygen analyzer system by the initial performance test date as specified in subdivision 9.6.c through paragraph 9.6.k.5;

9.9.w.2. Operate the oxygen trim system in compliance with paragraph 9.9.w.3 at all times;

9.9.w.3. Maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen is not below the lowest hourly average oxygen concentration measured during the most recent carbon monoxide (CO) performance test; and

9.9.w.4. Calculate and record a 30-day rolling average oxygen concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 of appendix A7 of 40CFR60.

9.9.x. For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, the owner or operator shall install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs 9.9.x.1 through 9.9.x.8 below. For other energy recovery units, the owner or operator may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure). As stated above, the owner shall:

9.9.x.1. Install, calibrate, operate, and maintain the PM CPMS according to the procedures in approved site-specific monitoring plan developed in accordance with subdivision 9.9.1 and subparagraphs 9.9.x.1.A through 9.9.x.1.C;

9.9.x.1.A. The owner or operator shall base the operating principle of the PM CPMS on in-stack or extractive light scatter, light scintillation, beta attenuation or mass accumulation of the exhaust gas or representative sample. The owner or operator shall express the reportable measurement output from the PM CPMS as milliamps or the digital signal equivalent;

9.9.x.1.B. The PM CPMS shall have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes; and

9.9.x.1.C. The PM CPMS shall be capable of detecting and responding to particulate matter concentrations increments no greater than 0.5 mg/actual cubic meter.

9.9.x.2. During the initial performance test or any subsequent performance test that demonstrates compliance with the PM limit, adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in subdivision 9.6.c through paragraph 9.6.k.5 of this rule;

9.9.x.3. Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours and express the PM CPMS output as milliamps or the digital signal equivalent;

9.9.x.4. Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps);

9.9.x.5. Collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in subparagraph 9.9.x.1.B, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in the site-specific monitoring plan;

9.9.x.6. Use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing compliance with the operating limit except:

9.9.x.6.A. Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions (report any such periods in the annual deviation report); or

9.9.x.6.B. Any data collected during periods when the monitoring system is out of control as specified in the site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control or required monitoring system quality assurance or quality control activities conducted during out-of-control periods (report emissions or operating levels and report any such periods in the annual deviation report); or

9.9.x.6.C. Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in section 2.

9.9.x.7. Record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with the site-specific monitoring plan; and

9.9.x.8. For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, the owner or operator shall:

9.9.x.8.A. Within 48 hours of the deviation, visually inspect the air pollution control device;

9.9.x.8.B. If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

9.9.x.8.C. Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit. Within 45 days of the deviation, the owner or operator shall re-establish the CPMS operating limit. The owner or operator is not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under subdivision 9.9.x.

9.9.x.8.D. PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of section 9.

9.9.y. When there is an alkali bypass or an in-line coal mill that exhausts emissions through a separate stack(s), the combined emissions are subject to the emission limits applicable to waste-burning kilns. To determine the kiln-specific emission limit for demonstrating compliance, the owner or operator

shall:

9.9.y.1. Calculate a kiln-specific emission limit using Equation 7:

$$C_{ks} = \frac{\left( (Emission\ limit \times (Q_{ab} + Q_{cm} + Q_{ks})) - (Q_{ab} \times C_{ab}) - (Q_{cm} \times C_{cm}) \right)}{Q_{ks}} \text{Equation 7}$$

$C_{ks}$  = Kiln stack concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O<sub>2</sub>)

$Q_{ab}$  = Alkali bypass flow rate (volume/hr)

$C_{ab}$  = Alkali bypass concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O<sub>2</sub>)

$Q_{cm}$  = In-line coal mill flow rate (volume/hr)

$C_{cm}$  = In-line coal mill concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O<sub>2</sub>)

$Q_{ks}$  = Kiln stack flow rate (volume/hr)

9.9.y.2. Measure particulate matter concentration downstream of the in-line coal mill and measure all other pollutant concentrations either upstream or downstream of the in-line coal mill; and

9.9.y.3. For purposes of determining the combined emissions from kilns equipped with an alkali bypass or that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS or PM CPMS on the alkali bypass stack or inline coal mill stack, the owner or operator may use the results of the initial and subsequent performance test to demonstrate compliance with the relevant emissions limit. The owner or operator shall conduct a performance test on an annual basis (no later than 13 calendar months following the previous performance test).

9.9.z. Timing of performance tests and control device inspections. The owner or operator shall:

9.9.z.1. Conduct annual performance tests no later than 13 calendar months following the previous performance test;

9.9.z.2. Conduct the air pollution control device inspections on an annual basis (but no more than 12 months following the previous annual air pollution control device inspection) and complete the air pollution control device inspection as described in subdivisions 9.8.e and 9.8.f above;

9.9.z.3. Conduct annual performance tests according to the schedule specified in paragraph 9.9.z.1, with the following exceptions:

9.9.z.3.A. The owner or operator may conduct a repeat performance test at any time to establish new values for the operating limits, as specified in subdivision 9.9.aa. New operating limits become effective on the date the owner operator submits the performance test report to the EPA's Central Data Exchange or postmarked, per the requirements of paragraph 9.12.j.2. The Secretary may request a repeat performance test at any time;

9.9.z.3.B. The owner or operator shall repeat the performance test within 60 days of a process change, as defined in section 2 and;

9.9.z.3.C. The owner or operator may conduct performance tests less often if the following conditions are met. For at least two consecutive performance tests, the results from the performance tests demonstrate the emission level for the pollutant is no greater than the emission level specified in part 9.9.z.3.C.1 or 9.9.z.3.C.2; there is not a change in the operation of the affected source or air pollution control equipment that could increase emissions; and the owner or operator is not required to conduct a performance test for the pollutant in response to a request by the Secretary in part 9.9.z.3.A or a process change in

subparagraph 9.9.z.3.B. If these conditions are met, the owner or operator is not required to conduct a performance test for that pollutant for the next two years. The owner or operator shall conduct a performance test for the pollutant no later than 37 months from the previous performance test for the pollutant. If the emission level for the CISWI unit continues to meet the emission level specified in part 9.9.z.3.C.1 or 9.9.z.3.C.2, the owner or operator may conduct performance tests for the pollutant every third year if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. Each such performance test shall be conducted no later than 37 months from the previous performance test.

9.9.z.3.C.1. For particulate matter, hydrogen chloride, mercury, carbon monoxide, nitrogen oxides, sulfur dioxide, cadmium, lead, and dioxins/furans, the emission level equal to 75 percent of the applicable emission limit in Table 45-18F or Tables 45-18J through 45-18M, as applicable; and

9.9.z.3.C.2. For fugitive emissions, visible emissions (of combustion ash from the ash conveying system) for two percent of the time during each of the three one-hour observation periods.

9.9.z.3.D. If the owner or operator is conducting less frequent testing for a pollutant as provided in subparagraph 9.9.z.3.C, and a subsequent performance test for the pollutant indicates that the CISWI unit does not meet the emission level specified in parts 9.9.z.3.C.1 or 9.9.z.3.C.2, as applicable, the owner or operator shall conduct annual performance tests for the pollutant according to the schedule specified in paragraph 9.9.z.3 until the facility qualifies for less frequent testing for the pollutant as specified in subparagraph 9.9.z.3.C.

9.9.aa. Repeat performance test to establish new operating limits.

9.9.aa.1. The owner or operator may conduct a repeat performance test at any time to establish new values for the operating limits. The Secretary may request a repeat performance test at any time.

9.9.aa.2. The owner or operator shall repeat the performance test if the feed stream is different than the feed streams used during any performance test used to demonstrate compliance.

9.10. Monitoring equipment and parameters.

9.10.a. If the owner or operator is using a wet scrubber to comply with the emission limitation under subdivisions 9.6.a and 9.6.b, the owner or operator shall install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the value of the operating parameters used to determine compliance with the operating limits listed in Table 45-18G. These devices (or methods) shall measure and record the values for these operating parameters at the frequencies indicated in Table 45-18G at all times, except as specified in paragraph 9.10.u.1.

9.10.b. If the owner or operator uses a fabric filter to comply with the requirements of section 9 and does not use a PM CPMS or PM CEMS for monitoring PM compliance, the owner or operator shall install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs 9.10.b.1 through 9.10.b.8 below:

9.10.b.1. Install and operate a bag leak detection system for each exhaust stack of the fabric filter;

9.10.b.2. Each bag leak detection system shall be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations;

9.10.b.3. The bag leak detection system shall be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of ten milligrams per actual cubic meter or less;

9.10.b.4. The bag leak detection system sensor shall provide output of relative or absolute

particulate matter loadings;

9.10.b.5. The bag leak detection system shall be equipped with a device to continuously record the output signal from the sensor;

9.10.b.6. The bag leak detection system shall be equipped with an alarm system that will alert automatically when it detects an increase in relative particulate matter emission over a preset level. The alarm shall be located where it is observed easily by plant operating personnel;

9.10.b.7. For positive pressure fabric filter systems, a bag leak detection system shall be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector shall be installed downstream of the fabric filter; and

9.10.b.8. Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

9.10.c. If the owner or operator is using something other than a wet scrubber, activated carbon, selective non-catalytic reduction, an electrostatic precipitator or a dry scrubber to comply with the emission limitations under subdivisions 9.6.a and 9.6.b, the owner or operator shall install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in subdivision 9.6.1.

9.10.d. If the owner or operator uses activated carbon injection to comply with the emission limitations in section 9, the owner or operator shall measure the minimum sorbent flow rate once per hour.

9.10.e. If the owner or operator uses selective noncatalytic reduction to comply with the emission limitations, the owner or operator shall complete the following:

9.10.e.1. Following the date on which the initial performance test is completed or is required to be completed under subsection 9.7, whichever date comes first, ensure that the affected facility does not operate above the maximum charge rate or below the minimum secondary chamber temperature (if applicable to the CISWI unit) or the minimum reagent flow rate measured as three-hour block averages at all times.

9.10.e.2. Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature and below the minimum reagent flow rate simultaneously constitute a violation of the nitrogen oxides emissions limit.

9.10.f. If the owner or operator uses an electrostatic precipitator to comply with the emission limits of section 9 and the owner or operator does not use a PM CPMS for monitoring PM compliance, the owner or operator shall monitor the secondary power to the electrostatic precipitator collection plates and maintain the three-hour block averages at or above the operating limits established during the mercury or particulate matter performance test.

9.10.g. For waste-burning kilns not equipped with a wet scrubber or dry scrubber, the owner or operator shall install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions discharged to the atmosphere as specified in subdivision 9.9.j and record the output of the system. The owner or operator may substitute use of a HCl CEMS for conducting the HCl initial and annual testing with EPA Method 321 at 40CFR63, appendix A. To demonstrate continuous compliance with the hydrogen chloride emissions limit for units other than waste-burning kilns not equipped with a wet scrubber or dry scrubber, a facility may substitute use of a hydrogen chloride CEMS for conducting the hydrogen chloride initial and annual performance test. For units equipped with a hydrogen chloride CEMS, the owner or operator is not required to monitor minimum hydrogen chloride sorbent flow rate, minimum scrubber liquor pH, and minimum injection rate.

9.10.h. To demonstrate continuous compliance with the particulate matter emissions limit, a facility may substitute use of either a particulate matter CEMS or a particulate matter CPMS for conducting the particulate matter annual performance test. For units equipped with a particulate matter CEMS, the owner or operator is not required to use other CMS monitoring for PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure). The owner or operator may also substitute use of a particulate matter CEMS for conducting the PM initial performance test.

9.10.i. To demonstrate initial and continuous compliance with the dioxin/furan emissions limit, a facility may substitute use of a continuous automated sampling system for the dioxin/furan initial and annual performance test. The owner or operator shall record the output of the system and analyze the sample according to EPA Method 23 at 40CFR60, appendix A-7. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to dioxin/furan from continuous monitors is published in the Federal Register. The owner or operator who elects to continuously sample dioxin/furan emissions instead of sampling and testing using EPA Method 23 at 40CFR60, appendix A-7, shall install, calibrate, maintain, and operate a continuous automated sampling system and shall comply with the requirements specified in 40 CFR §§ 60.58b(p) and (q). A facility may substitute continuous dioxin/furan monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the dioxin/furan emission limit.

9.10.j. To demonstrate initial and continuous compliance with the mercury emissions limit, a facility may substitute use of a mercury CEMS or an integrated sorbent trap monitoring system for the mercury initial and annual performance test. The owner or operator who elects to continuously measure mercury emissions instead of sampling and testing using EPA Method 29 or 30B at 40CFR60, appendix A-8, ASTM D6784-02 (Reapproved 2008), or an approved alternative method for measuring mercury emissions, shall install, calibrate, maintain, and operate the mercury CEMS or integrated sorbent trap monitoring system and shall comply with performance specification 12A or performance specification 12B of appendix B to 40CFR60, respectively, and quality assurance procedure 5 of appendix F to 40CFR60. If an owner or operator uses an integrated sorbent trap monitoring system to calculate emissions, the mercury concentration determined for each sampling period shall be assigned to each hour during the sampling period. For units equipped with a mercury CEMS or an integrated sorbent trap monitoring system, the owner or operator is not required to monitor the minimum sorbent flow rate if activated carbon sorbent injection is used solely for compliance with the mercury emission limit. An owner or operator of a waste-burning kiln shall install, calibrate, maintain, and operate a mercury CEMS or an integrated sorbent trap monitoring system as specified in subdivision 9.9.j.

9.10.k. To demonstrate initial and continuous compliance with the nitrogen oxides emissions limit, a facility may substitute use of a CEMS for the nitrogen oxides initial and annual performance test to demonstrate compliance with the nitrogen oxides emissions limits. For units equipped with a nitrogen oxides CEMS, the owner or operator is not required to monitor the charge rate, secondary chamber temperature and reagent flow for selective noncatalytic reduction. The owner or operator shall:

9.10.k.1. Install, calibrate, maintain, and operate a CEMS for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system. The owner or operator shall follow the requirements under performance specification 2 of appendix B of 40CFR60, the Quality Assurance Procedure 1 of appendix F of 40CFR60, and the procedures under 40 CFR § 60.13 for installation, evaluation, and operation of the CEMS.

9.10.k.2. Determine compliance with the emission limit for nitrogen oxides based on the 30-day rolling average of the hourly emission concentrations using CEMS outlet data in accordance with subdivision 9.9.u.

9.10.l. To demonstrate initial and continuous compliance with the sulfur dioxide emissions limit, the owner or operator may substitute use of a CEMS for the sulfur dioxide initial and annual performance test.

9.10.1.1. The owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system. The owner or operator shall follow the requirements under performance specification 2 of appendix B of 40CFR60, the Quality Assurance requirements of Procedure 1 of appendix F of 40CFR60, and the procedures under 40 CFR § 60.13 for installation, evaluation, and operation of the CEMS.

9.10.1.2. The owner or operator may demonstrate compliance with the sulfur dioxide emission limit based on the 30-day rolling average of the hourly arithmetic average emission concentrations using CEMS outlet data in accordance with subdivision 9.9.u.

9.10.m. For energy recovery units over 10 MMBtu/hr but less than 250 MMBtu/hr annual average heat input rates that do not use a wet scrubber, fabric filter with bag leak detection system, an electrostatic precipitator, or particulate matter CEMS, or particulate matter CPMS, the owner or operator shall install, operate, certify, and maintain a continuous opacity monitoring system according to the procedures in paragraphs 9.10.m.1 through 9.10.m.5 by the compliance date specified in subdivisions 9.6.a. and 9.6.b. Energy recovery units that use a particulate matter CEMS to demonstrate initial and continuing compliance according to the procedures in subdivision 9.10.n are not required to install a continuous opacity monitoring system and shall perform the annual performance tests for opacity consistent with subdivision 9.9.f. The owner or operator shall:

9.10.m.1. Install, operate, and maintain each continuous opacity monitoring system according to performance specification 1 at 40CFR60, appendix B;

9.10.m.2. Conduct a performance evaluation of each continuous opacity monitoring system according to the requirements in 40 CFR § 60.13 and according to performance specification 1 at 40CFR60, appendix B;

9.10.m.3. As specified in 40 CFR § 60.13(c)(1), for each continuous opacity monitoring system, complete a minimum of one cycle of sampling and analyzing for each successive ten-second period and one cycle of data recording for each successive six-minute period;

9.10.m.4. Reduce the continuous opacity monitoring system data as specified in 40 CFR § 60.13(h)(1); and

9.10.m.5. Determine and record all the six-minute averages (and one-hour block averages as applicable) collected.

9.10.n. For coal and liquid/gas energy recovery units, incinerators, and small remote incinerators, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who continuously monitors particulate matter emissions instead of conducting performance testing using EPA Method 5 at 40CFR60, appendix A-3 or monitors with a particulate matter CPMS according to subdivision 9.10.r shall install, calibrate, maintain, and operate a PM CEMS and shall comply with the requirements specified in paragraphs 9.10.n.1 through 9.10.n.10.

9.10.n.1. The owner or operator shall install, evaluate, and operate the PM CEMS per the requirements of performance specification 11 of appendix B of 40CFR60 and the quality assurance requirements of procedure 2 of appendix F of 40CFR60 and §60.13.

9.10.n.2. The owner or operator shall complete the initial performance evaluation no later than 180 days after the final compliance date for meeting the amended emission limitations, as specified under subsection 9.7 or within 180 days of notification to the Secretary of use of the continuous monitoring system if the owner or operator was previously determining compliance by Method 5 at 40CFR60, appendix A-3 performance tests, whichever is later.

9.10.n.3. The owner or operator of an affected facility may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established according to the procedures and methods specified in subparagraphs 9.9.t.4.A through C.

9.10.n.4. The owner or operator of an affected facility shall conduct an initial performance test for particulate matter emissions. If the owner or operator elects to demonstrate compliance using the PM CEMS and the initial performance test has not yet been conducted, the owner or operator shall determine initial compliance using the CEMS specified in subdivision 9.10.n to measure particulate matter. The owner or operator shall calculate a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown, as defined in section 2, using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40CFR60, appendix A-7.

9.10.n.5. The owner or operator shall determine continuous compliance with the particulate matter emission limit based on the 30-day rolling average calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40CFR60, appendix A-7 from the 1-hour arithmetic average of the CEMS outlet data.

9.10.n.6. At a minimum, the owner or operator shall obtain valid continuous monitoring system hourly averages as specified in subdivision 9.10.u.

9.10.n.7. The 1-hour arithmetic averages required under paragraph 9.10.n.5 shall be expressed in milligrams per dry standard cubic meter corrected to 7 percent oxygen (or carbon dioxide)(dry basis) and shall be used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in section 2, shall not be corrected to 7 percent oxygen, and shall be measured at stack oxygen content. The owner or operator shall calculate the 1-hour arithmetic averages using the data points required under 40CFR § 60.13(e)(2).

9.10.n.8. The owner or operator shall use all valid CEMS data in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph 9.10.n.6 are not met.

9.10.n.9. The owner or operator shall operate the CEMS according to performance specification 11 in appendix B of 40CFR60.

9.10.n.10. The owner or operator shall conduct quarterly and yearly accuracy audits and daily drift, system optics, and sample volume checks in accordance with Procedure 2 in appendix F of 40CFR60.

9.10.o. To demonstrate initial and continuous compliance with the carbon monoxide emissions limit, a facility may substitute use of a CEMS for the carbon monoxide initial and annual performance test to demonstrate compliance with the carbon monoxide emissions limits.

9.10.o.1. The owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged to the atmosphere and record the output of the system. The owner or operator shall follow the requirements under performance specification 4A or 4B of appendix B of 40CFR60, the quality assurance procedure 1 of appendix F of 40CFR60, and the procedures under 40CFR § 60.13 for installation, evaluation, and operation of the CEMS.

9.10.o.2. The owner or operator shall determine compliance with the carbon monoxide emission limit based on the 30-day rolling average of the hourly arithmetic average emission concentrations, including CEMS data during startup and shutdown, using CEMS outlet data per subdivision 9.9.u.

9.10.p. The owner or operator of an affected source with a bypass stack shall install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of the

bypass stack including date, time, and duration.

9.10.q. For energy recovery units with a heat input capacity of 100 MMBtu/hr or greater that do not use a carbon monoxide CEMS, the owner or operator shall install, operate, and maintain the continuous oxygen monitoring system according to the procedures in paragraphs 9.10.q.1 through 9.10.q.4.

9.10.q.1. The owner or operator shall install the oxygen analyzer system by the initial performance test date specified in section 9.6;

9.10.q.2. The owner or operator shall operate the oxygen trim system in compliance with paragraph 9.10.q.3 at all times;

9.10.q.3. The owner or operator shall maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen according to paragraph 9.10.q.4 is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test; and

9.10.q.4. The owner or operator shall calculate and record a 30-day rolling average oxygen concentration using equation 19-19 in section 12.4.1 of EPA Reference Method 19 of appendix A-7 of 40CFR60.

9.10.r. For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, the owner or operator shall install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs 9.10.r.1 through 9.10.r.8 below. For other energy recovery units, the owner or operator may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure). The owner or operator shall:

9.10.r.1. Install, calibrate, operate, and maintain the PM CPMS according to the procedures in the approved site-specific monitoring plan developed in accordance with subdivision 9.9.1 and subparagraphs 9.10.r.1.A through 9.10.r.1.C:

9.10.r.1.A. The owner or operator shall base the operating principle of the PM CPMS on in-stack or extractive light scatter, light scintillation, beta attenuation or mass accumulation of the exhaust gas or representative sample. The owner or operator shall express the reportable measurement output from the PM CPMS as milliamps or the digital signal equivalent;

9.10.r.1.B. The PM CPMS shall have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes; and

9.10.r.1.C. The PM CPMS shall be capable of detecting and responding to particulate matter concentrations increments no greater than 0.5 mg/actual cubic meter.

9.10.r.2. During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in subdivisions 9.6.c through 9.6.k;

9.10.r.3. Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours and express the PM CPMS output as milliamps or the digital signal equivalent; and

9.10.r.4. Calculate the arithmetic 30-day rolling average of all the hourly average PM CPMS output collected during all energy recovery unit or waste burning kiln operating hours data (milliamps or digital bits).

9.10.r.5. The owner or operator shall collect data using the PM CPMS at all times the energy

recovery unit or waste-burning kiln is operating and at the intervals specified in subparagraph 9.10.r.1.B, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in the site-specific monitoring plan.

9.10.r.6. The owner or operator shall use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing compliance with the operating limit, except that the owner or operator shall not use the following in these calculations:

9.10.r.6.A. Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions (report any such periods in the annual deviation report); or

9.10.r.6.B. Any data collected during periods when the monitoring system is out of control as specified in the site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control or required monitoring system quality assurance or quality control activities conducted during out of control periods (report emissions or operating levels and report any such periods in the annual deviation report); or

9.10.r.6.C. Any PM CPMS data recorded during periods of CEMS data during startup and shutdown.

9.10.r.7. The owner or operator shall record and make available to the Secretary upon request results of PM CPMS system performance audits, as well as the dates and periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with the site-specific monitoring plan.

9.10.r.8. For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, the owner or operator shall:

9.10.r.8.A. Within 48 hours of the deviation, visually inspect the air pollution control device;

9.10.r.8.B. If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value;

9.10.r.8.C. Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify the operation of the emission control device(s). Within 45 days of the deviation, the owner or operator shall re-establish the CPMS operating limit. The owner or operator is not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this subparagraph; and

9.10.r.8.D. PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of section 9.

9.10.s. If the owner or operator uses a dry scrubber to comply with the emission limits of section 9, the owner or operator shall monitor the injection rate of each sorbent and maintain the three-hour block averages at or above the operating limits established during the hydrogen chloride performance test.

9.10.t. If the owner or operator is required to monitor clinker production because the owner or operator complies with the production-rate based mercury limit for the waste-burning kiln, the owner or

operator shall:

9.10.t.1. Determine the hourly clinker production by one of the two methods below:

9.10.t.1.a. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The owner or operator shall maintain the system of measuring hourly clinker production within  $\pm 5$  percent accuracy, or

9.10.t.1.b. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The owner or operator shall maintain the system of measuring feed within  $\pm 5$  percent accuracy. Calculate the hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. Update this ratio monthly. If this ratio changes at clinker reconciliation, the owner or operator shall use the new ratio going forward, but the owner or operator does not have to retroactively change clinker production rates previously estimated.

9.10.t.2. Determine the accuracy of the system of measuring hourly clinker production (or feed mass flow if applicable) before the final compliance date established in subdivision 9.3.b and during each quarter of source operation.

9.10.t.3. Conduct accuracy checks in accordance with the procedures outlined in the site-specific monitoring plan per subdivision 9.9.1.

9.10.u. Monitoring data. -- For each continuous monitoring system required or optionally allowed under subdivisions 9.10.a through 9.10.t, the owner or operator shall monitor and collect data according to the following:

9.10.u.1. The owner or operator shall operate the monitoring system and collect data at all required intervals at all times compliance is required, except for periods of monitoring system malfunctions or out of control periods, repairs associated with monitoring system malfunctions or out of control periods (as specified in paragraph 9.12.e.15), and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The owner or operator is required to affect monitoring system repairs in response to monitoring system malfunctions or out of control periods and to return the monitoring system to operation as expeditiously as practicable.

9.10.u.2. The owner or operator may not use data recorded during the monitoring system malfunctions, repairs associated with monitoring system malfunctions or out of control periods or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system.

9.10.u.3. Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out of control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation of the monitoring requirements.

9.11. Recordkeeping requirements. -- The owner or operator shall maintain the items (as applicable) as specified in subdivisions 9.11.a, 9.11.b, and subdivisions 9.11.e through 9.11.w for a period of at least five years:

9.11.a. Calendar date of each record;

9.11.b. Records of the data described in paragraphs 9.11.b.1 through 9.11.b.7:

9.11.b.1. The CISWI unit charge dates, times, weights, and hourly charge rates;

9.11.b.2. Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable;

9.11.b.3. Pressure drop across the wet scrubber system every 15 minutes of operation or amperage to the wet scrubber every 15 minutes of operation, as applicable;

9.11.b.4. Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable;

9.11.b.5. For affected CISWI units that establish operating limits for controls other than wet scrubbers under subdivisions 9.6.f through 9.6.i or subdivision 9.6.l, the owner or operator shall maintain data collected for all operating parameters used to determine compliance with the operating limits. For energy recovery units using activated carbon injection or a dry scrubber, the owner or operator shall also maintain records of the load fraction and corresponding sorbent injection rate records; and

9.11.b.6. If the owner or operator uses a fabric filter to comply with the emission limitations, the owner or operator shall record the date, time, and duration of each alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. The owner or operator shall also record the percent of operating time during each six-month period that the alarm sounds, calculated as specified in subdivision 9.6.e.

9.11.b.7. If the owner or operator monitors clinker production in accordance with subdivision 9.10.t:

9.11.b.7.a. Hourly clinker rate produced if clinker production is measured directly;

9.11.b.7.b. Hourly measured kiln feed rates and calculated clinker production rates if clinker production is not measured directly;

9.11.b.7.c. 30-day rolling averages for mercury in pounds per million tons of clinker produced; and

9.11.b.7.d. The initial and quarterly accuracy of the system of measuring hourly clinker production (or feed mass flow).

9.11.c. Reserved.

9.11.d. Reserved.

9.11.e. Identification of calendar dates and times for which data show a deviation from the operating limits in Table 45-18G or a deviation from other operating limits established under subdivisions 9.6.f through 9.6.i or subdivision 9.6.l, with a description of the deviations, reasons for the deviations, and a description of corrective actions taken;

9.11.f. The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations;

9.11.g. Records showing the names of CISWI unit operators who have completed review of the information in subdivision 9.5.h as required by subdivision 9.5.i, including the date of the initial review and

all subsequent annual reviews;

9.11.h. Records showing the names of the CISWI operators who have completed the operator training requirements under subdivisions 9.5.a and 9.5.b, met the criteria for qualification under subdivisions 9.5.d and 9.5.e, and maintained or renewed their qualification under subdivisions 9.5.f or 9.5.g. Records shall include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications;

9.11.i. For each qualified operator, the phone and/or cell phone number at which he or she can be reached during operating hours;

9.11.j. Records of calibration of any monitoring devices as required under subdivisions 9.10.a through 9.10.r;

9.11.k. Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment;

9.11.l. The information listed in subdivision 9.5.h;

9.11.m. A daily log of the quantity of waste burned and the types of waste burned (always required);

9.11.n. Records of the annual air pollution control device inspections that are required for each CISWI unit subject to the emissions limits in Table 45-18F or Tables 45-18J through 45-18M and records of any required maintenance and any repairs not completed within ten days of an inspection or the timeframe established by the Secretary;

9.11.o. For continuously monitored pollutants or parameters, document and keep records of the following parameters measured using continuous monitoring systems. If emissions are monitored with a CEMS, the owner or operator shall indicate which data are CEMS data during startup and shutdown:

9.11.o.1. All six-minute average levels of opacity;

9.11.o.2. All one-hour average concentrations of sulfur dioxide emissions;

9.11.o.3. All one-hour average concentrations of nitrogen oxides emissions;

9.11.o.4. All one-hour average concentrations of carbon monoxide emissions;

9.11.o.5. All one-hour average concentrations of particulate matter emissions;

9.11.o.6. All one-hour average concentrations of mercury emissions;

9.11.o.7. All one-hour average concentrations of HCl CEMS outputs;

9.11.o.8. All one-hour average percent oxygen concentrations; and

9.11.o.9. All one-hour average PM CPMS readings or particulate matter CEMS outputs.

9.11.p. Records indicating use of the bypass stack, including dates, times, and durations;

9.11.q. If the owner or operator chooses to stack test less frequently than annually, consistent with paragraph 9.9.z.3, the owner or operator shall keep annual records that document that the emissions in the previous stack test(s) were less than 75% of the applicable emission limit and document that there was no change in source operations, including fuel composition and operation of air pollution control equipment

that would cause emissions of the relevant pollutant to increase within the past year;

9.11.r. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment;

9.11.s. Records of all required maintenance performed on the air pollution control and monitoring equipment;

9.11.t. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR § 60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation;

9.11.u. For operating units that combust non-hazardous secondary materials that the Secretary has determined are not solid waste pursuant to 40 CFR § 241.3(b)(1), records which document how the secondary material meets each of the legitimacy criteria under 40 CFR § 241.3(d)(1); if the owner or operator combusts a fuel that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR § 241.3(b)(4), records as to how the operations that produced the fuel satisfies the definition of processing in 40 CFR § 241.2 and each of the legitimacy criteria in 40 CFR § 241.3(d)(1); if the fuel received a non-waste determination pursuant to the petition process submitted under 40 CFR § 241.3(c), records that document how the fuel satisfies the requirements of the petition process; for operating units that combust nonhazardous secondary materials as fuel per 40 CFR § 241.4, records documenting that the material is a listed non-waste under 40 CFR § 241.4(a);

9.11.v. Records of the criteria used to establish that the unit qualifies as a small power production facility under Section 3(17)(C) of the Federal Power Act (16 U.S.C. § 796(17)(C)) and that the waste material the unit is proposed to burn is homogeneous;

9.11.w. Records of the criteria used to establish that the unit qualifies as a cogeneration facility under Section 3(18)(B) of the Federal Power Act (16 U.S.C. § 796(18)(B)) and that the waste material the unit is proposed to burn is homogeneous; and

9.11.x. The owner or operator shall have all records available onsite in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Secretary.

#### 9.12. Reporting requirements.

9.12.a. The owner or operator shall comply with the reporting requirements provided in Table 45-18I.

9.12.b. The owner or operator shall submit a waste management plan no later than the date specified in Table 45-18E for submittal of the final control plan.

9.12.c. The owner or operator shall submit the information specified in paragraphs 9.12.c.1 through 9.12.c.3 no later than 60 days following the initial performance test, with all reports signed by the facilities manager:

9.12.c.1. The complete test report for the initial performance test results obtained under subdivision 9.8.a, as applicable;

9.12.c.2. The values for the site-specific operating limits established in subdivision 9.6.c through paragraph 9.6.k.5 or subdivision 9.6.l; and

9.12.c.3. Documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by subdivision 9.10.b, if the owner or operator is using a

fabric filter to comply with the emission limitations.

9.12.d. The owner or operator shall submit an annual report no later than 12 months following the submission of the information in subdivision 9.12.c and no more than every 12 months thereafter. If the unit is subject to Title V permitting requirements under 45CSR30, the owner or operator may be required by the permit to submit these reports more frequently.

9.12.e. The owner or operator shall include the items listed in paragraphs 9.12.e.1 through 9.12.e.16 below in the annual report required under subdivision 9.12.d:

9.12.e.1. Company name and address;

9.12.e.2. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report;

9.12.e.3. Date of report and beginning and ending dates of the reporting period;

9.12.e.4. The values for the operating limits established pursuant to subdivision 9.6.c through paragraph 9.6.k.5 or subdivision 9.6.l;

9.12.e.5. A statement that there was no deviation from the emission limitations or operating limits during the reporting period, if the facility has not experienced a deviation from any applicable emission limitation or operating limit;

9.12.e.6. The highest recorded three-hour average and the lowest recorded three-hour average (30-day average for energy recovery units), as applicable, for each operating parameter recorded for the calendar year being reported;

9.12.e.7. Information recorded under paragraph 9.11.b.6 and subdivisions 9.11.c through 9.11.e for the calendar year being reported;

9.12.e.8. If a performance test was conducted during the reporting period, the process unit tested, the pollutant tested and the performance test date. The owner or operator shall not submit the performance test report later than the date of submittal of the annual report and shall follow the procedure specified in subparagraph 9.12.j.2.A;

9.12.e.9. A statement that the facility met the requirements of paragraph 9.9.z.1 or 9.9.z.2, and, therefore, was not required to conduct a performance test during the reporting period, if the facility met the requirements of paragraph 9.9.z.1 or 9.9.z.2, and the owner or operator did not conduct a performance test during the reporting period;

9.12.e.10. Documentation of periods when all qualified CISWI unit operators were unavailable for more than eight hours, but less than two weeks;

9.12.e.11. A record including the number, duration, and brief description for each type of malfunction that occurred during the reporting period and that caused or may have caused an exceedance of any applicable emission limitation, if the facility experienced a malfunction during the reporting period, as well as a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with 40 CFR § 60.11(d), including actions taken to correct a malfunction;

9.12.e.12. For each deviation from an emission or operating limitation that occurs for a CISWI unit for which the owner or operator is not using a CMS to comply with the emission or operating limitations in section 9, the annual report shall contain the following information:

9.12.e.12.A. The total operating time of the CISWI unit at which the deviation occurred

during the reporting period; and

9.12.e.12.B. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

9.12.e.13. If there were periods during which the continuous monitoring system, including the CEMS, was out of control as specified in paragraph 9.12.e.15, the annual report shall contain the following information for each deviation from an emission or operating limitation occurring for a CISWI unit for which the owner or operator is using a continuous monitoring system to comply with the emission and operating limitations in section 9:

9.12.e.13.A. The date and time that each malfunction started and stopped;

9.12.e.13.B. The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks;

9.12.e.13.C. The date, time, and duration that each continuous monitoring system was out of control, including start and end dates and hours and descriptions of corrective actions taken;

9.12.e.13.D. The date and time that each deviation started and stopped and whether each deviation occurred during a period of malfunction or during another period;

9.12.e.13.E. A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period;

9.12.e.13.F. The total duration of the deviations during the reporting period categorized according to each of the following attributed causes: control equipment problems, process problems, other known causes, and other unknown causes;

9.12.e.13.G. A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total operating time of the CISWI unit at which the continuous monitoring system downtime occurred during that reporting period;

9.12.e.13.H. An identification of each parameter and pollutant that was monitored at the CISWI unit;

9.12.e.13.I. A brief description of the CISWI unit;

9.12.e.13.J. A brief description of the continuous monitoring system;

9.12.e.13.K. The date of the latest continuous monitoring system certification or audit; and

9.12.e.13.L. A description of any changes in continuous monitoring system, processes or controls since the last reporting period.

9.12.e.14. If there were periods during which the continuous monitoring system, including the CEMS, was not out of control as specified in paragraph 9.12.e.15, a statement that there were not periods during which the continuous monitoring system was out of control during the reporting period;

9.12.e.15. A continuous monitoring system is out of control if any of the following occur:

9.12.e.15.A. The zero (low-level), mid-level (if applicable) or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard;

9.12.e.15.B. The continuous monitoring system fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit or linearity test audit; or

9.12.e.15.C. The continuous opacity monitoring system calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard; and

9.12.e.16. For energy recovery units, include the annual heat input and average annual heat input rate of all fuels being burned in the unit to verify which subcategory of energy recovery unit applies.

9.12.f. Deviation from the operating limits or emission limitations.

9.12.f.1. The owner or operator shall submit a deviation report if any recorded three-hour average (30-day average for energy recovery units or for PM CPMS) parameter level is above the maximum operating limit or below the minimum operating limit established under section 9, if the bag leak detection system alarm sounds for more than five percent of the operating time for the six-month reporting period, if a performance test was conducted that deviated from any emission limitation, if a 30-day average measured using a CEMS deviated from any emission limitation.

9.12.f.2. The owner or operator shall submit the deviation report by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data collected during the second half of the calendar year (July 1 to December 31).

9.12.g. In each report required under subdivision 9.12.f, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in section 9, the owner or operator shall include the items described in paragraphs 9.12.g.1 through 9.12.g.4 below:

9.12.g.1. The calendar dates and times the unit deviated from the emission limitations or operating limit requirements;

9.12.g.2. The averaged and recorded data for those dates;

9.12.g.3. Durations and causes of the following:

9.12.g.3.A. Each deviation from emission limitations or operating limits and corrective actions; and

9.12.g.3.B. Bypass events and corrective actions;

9.12.g.4. A copy of the operating limit monitoring data during each deviation and any test report that documents the emission levels, the process unit tested, the pollutant tested and the date that the performance test was conducted. The owner or operator shall not submit the performance test report later than the submittal date of the deviation report according to the subparagraph 9.12.j.2.A.

9.12.h. Deviation from the requirement to have a qualified operator accessible. -- If no qualified operator is accessible for two weeks or more, the owner or operator shall take the actions in paragraphs 9.12.h.1 and 9.12.h.2 below:

9.12.h.1. Submit a notification of the deviation within ten days that includes the three items in subparagraphs 9.12.h.1.A through 9.12.h.1.C below:

9.12.h.1.A. A statement of what caused the deviation;

9.12.h.1.B. A description of what the owner or operator is doing to ensure that a qualified operator is accessible; and

9.12.h.1.C. The date when the owner or operator anticipates that a qualified operator will be available;

9.12.h.2. Submit a status report to the Administrator and Secretary every four weeks that includes the three items in subparagraphs 9.12.h.2.A through 9.12.h.2.C below:

9.12.h.2.A. A description of what the owner or operator is doing to ensure that a qualified operator is accessible;

9.12.h.2.B. The date when the owner or operator anticipates that a qualified operator will be accessible; and

9.12.h.2.C. A request for approval from the Administrator to continue operation of the CISWI unit.

9.12.h.3. If the Administrator shuts down the unit under the provisions of paragraph 9.12.h.2 due to the owner's or operator's failure to provide an accessible qualified operator, the owner or operator shall notify the Administrator and Secretary that the unit is resuming operation once a qualified operator is accessible.

9.12.i. Other notifications and reports.

9.12.i.1. The owner or operator shall submit notifications as provided by 40 CFR § 60.7 and 45CSR16.

9.12.i.2. If the owner or operator ceases combusting solid waste but continues to operate, the owner or operator shall provide 30 days prior notice of the effective date of the waste-to-fuel switch, consistent with subdivision 9.9.a. The notification shall identify:

9.12.i.2.A. The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

9.12.i.2.B. The currently applicable subcategory under section 9 of this rule, and any 40CFR63 subpart and subcategory that will be applicable after the unit ceases combusting solid waste;

9.12.i.2.C. The fuel(s), non-waste material(s), and solid waste(s) the CISWI unit is currently combusting and has combusted over the past six months, and the fuel(s) or non-waste materials the unit will commence combusting;

9.12.i.2.D. The date on which the unit became subject to the currently applicable emission limits; and

9.12.i.2.E. The date upon which the unit will cease combusting solid waste and the date (if different) that the owner or operator intends for any new requirements to become applicable (i.e., the effective date of the waste to fuel switch), consistent with subparagraphs 9.12.i.2.B and 9.12.i.2.C.

9.12.j. Form of reports.

9.12.j.1. The owner or operator shall submit initial, annual, and deviation reports electronically or in paper format, postmarked on or before the submittal due dates. Beginning on April 16, 2021 or once the reporting form has been available in Compliance and Emissions Data Reporting Interface (CEDRI) for one year, whichever is later, the owner or operator shall submit subsequent reports on or before the submittal dates to the EPA via the CEDRI, which can be accessed through the EPA's Central Data Exchange (CDX) on EPA's website. The owner or operator shall use the appropriate electronic report in CEDRI or an

alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI website. The owner or operator shall submit the reports by the deadlines specified in this subpart, regardless of the method by which the owner or operator submits the report.

9.12.j.2. Submit results of performance tests and CEMS performance evaluation tests as follows:

9.12.j.2.A. Within 60 days after the date of completing each performance test as required by section 9, the owner or operator shall submit the results of the performance tests following the procedure specified in either part 9.12.j.2.A.1 or 9.12.j.2.A.2 below:

9.12.j.2.A.1. For data collected using test methods supported by the EPA's electronic reporting tool (ERT) at the time of the test, as listed on the EPA's ERT website, the owner or operator shall submit the results of the performance test to the EPA via the CEDRI, which can be accessed through the EPA's CDX website. The owner or operator shall submit performance test data in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the XML schema listed on the EPA's ERT website. If the owner or operator claims that some of the performance test information being submitted is confidential business information (CBI), the owner or operator shall submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The owner or operator shall clearly mark the electronic media as CBI and mail it to the address listed on EPA's website. The owner or operator shall submit the same ERT or alternate file with the CBI omitted to the EPA via the EPA's CDX as described earlier in this paragraph; and

9.12.j.2.A.2. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test, the owner or operator shall submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR § 60.4.

9.12.j.2.B. Within 60 days after the date of completing each CEMS performance evaluation test as defined and required by section 9, the owner or operator shall submit the performance evaluation results following the procedures specified in either part 9.12.j.2.B.1 or 9.12.j.2.B.2 below:

9.12.j.2.B.1. For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation, the owner or operator shall submit the performance evaluation results to the EPA via the CEDRI. The owner or operator shall submit the performance evaluation data in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT website. If the owner or operator claims that some of the performance evaluation information being submitted is CBI, the owner or operator shall submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The owner or operator shall clearly mark the electronic storage media as CBI and mail it to the appropriate address listed on EPA's ERT website. The owner or operator shall submit the same ERT or alternate file with the CBI omitted to the EPA via the EPA's CDX as described earlier in this paragraph; and

9.12.j.2.B.2. For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation, the owner or operator shall submit the performance evaluation results to the Administrator at the appropriate address listed in 40 CFR § 60.4.

9.12.j.3. If the owner or operator is required to electronically submit a report through the Compliance and Emissions Data Reporting Interface (CEDRI) in the EPA's Central Data Exchange (CDX), and due to a planned or actual outage of either the EPA's CEDRI or CDX systems within the period of time

beginning five business days prior to the date that the submission is due, the owner or operator will be or is precluded from accessing CEDRI or CDX and submitting a required report within the time prescribed, the owner or operator may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. The owner or operator shall submit notification to the Administrator in writing as soon as possible following the date the owner or operator first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting. The owner or operator shall provide to the Administrator a written description identifying the date, time and length of the outage; a rationale for attributing the delay in reporting beyond the regulatory deadline to the EPA system outage; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which the owner or operator propose to report, or if the owner or operator have already met the reporting requirement at the time of the notification, the date the owner or operator reported. In any circumstance, the report shall be submitted electronically as soon as possible after the outage is resolved. The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

9.12.j.4. If the owner or operator is required to electronically submit a report through CEDRI in the EPA's CDX and a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due, the owner or operator may assert a claim of force majeure for failure to timely comply with the reporting requirement. For the purposes of this paragraph, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents the owner or operator from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage). If the owner or operator intends to assert a claim of force majeure, the owner or operator shall submit notification to the Administrator in writing as soon as possible following the date the owner or operator first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting. The owner or operator shall provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which the owner or operator propose to report, or if the owner or operator have already met the reporting requirement at the time of the notification, the date the owner or operator reported. In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs. The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

9.12.k. Changes to reporting dates. -- If the Secretary agrees, the owner or operator may change the semiannual or annual reporting dates by following the procedures set out in 40 CFR § 60.19(c).

#### 9.13. Requirements for air curtain incinerators (ACIs).

9.13.a. Description. -- An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology, such as mass burn, modular, and fluidized bed combustors.

9.13.b. Air curtain incinerators that burn only the materials listed in paragraphs 9.13.b.1 through 9.13.b.3 below are only required to meet the requirements under subsections 9.3 and 13.3.

9.13.b.1. 100% wood waste;

9.13.b.2. 100% clean lumber; or

9.13.b.3. 100% mixture of only wood waste, clean lumber, and/or yard waste.

9.13.c. Increments of progress. -- If the owner or operator plans to achieve compliance more than one year following the effective date of West Virginia's state plan approval by the federal EPA, the owner or operator shall meet the increments of progress specified below:

9.13.c.1. Submit a final control plan; and

9.13.c.2. Achieve final compliance.

9.13.d. Table 45-18E specifies compliance dates for each of the increments of progress.

9.13.e. Notifications of achievement. -- The owner or operator shall include the information in paragraphs 9.3.e.1 through 9.3.e.3 in the notification of achievement of increments of progress:

9.13.e.1. Notification that the owner or operator has achieved the increment of progress;

9.13.e.2. Any items required to be submitted with each increment of progress (refer to subdivision 9.13.h); and

9.13.e.3. Signature of the owner or operator of the incinerator.

9.13.f. Notifications for achieving increments of progress shall be postmarked no later than ten business days after the compliance date for the increment.

9.13.g. Failure to meet an increment of progress. -- If the owner or operator fails to meet an increment of progress, the owner or operator shall submit a notification to the Secretary postmarked within ten business days after the date for that increment of progress in Table 45-18E. The owner or operator shall inform the Secretary that the increment of progress was not met, and the owner or operator shall continue to submit reports each subsequent calendar month until the increment of progress is met.

9.13.h. For the control plan increment of progress, the owner or operator shall satisfy the two requirements specified below:

9.13.h.1. Submit the final control plan, including a description of any devices for air pollution control and any process changes that the owner or operator will use to comply with the emission limitations and other requirements of section 9; and

9.13.h.2. Maintain an onsite copy of the final control plan.

9.13.i. For the final compliance increment of progress, the owner or operator shall complete all process changes and retrofit construction of control devices as specified in the final control plan so that, if the affected incinerator is brought online, all necessary process changes and air pollution control devices would operate as designed.

9.13.j. Closure and restart.

9.13.j.1. If the owner or operator closes the incinerator but will reopen it prior to the final compliance date, the owner or operator shall meet the increments of progress specified in subdivision 9.13.c.

9.13.j.2. If the owner or operator closes the incinerator but will restart it after the final compliance date, the owner or operator shall complete emission control retrofits and meet the emission limitations on the date the incinerator restarts operation.

9.13.k. Permanent closure. -- If the owner or operator plans to close the incinerator rather than comply with section 9, the owner or operator shall submit a closure notification, including the date of closure, to the Secretary by the date the final control plan is due.

9.13.l. Emission limitations for air curtain incinerators. -- After the date the initial stack test is required or completed (whichever is earlier), the owner or operator shall meet the limitations in paragraphs 9.13.l.1 and 9.13.l.2:

9.13.l.1. Maintain opacity to less than or equal to ten percent opacity (as determined by the average of three one-hour blocks consisting of ten six-minute average opacity values), except as described in paragraph 9.13.l.2.; and

9.13.l.2. Maintain opacity to less than or equal to 35 percent opacity (as determined by the average of three one-hour blocks consisting of ten six-minute average opacity values) during the startup period that is within the first 30 minutes of operation.

9.13.m. Opacity monitoring for air curtain incinerators. -- The owner or operator shall:

9.13.m.1. Use Method 9 of appendix A of 40CFR60 to determine compliance with the opacity limitation;

9.13.m.2. Conduct an initial test for opacity as specified in 40 CFR § 60.8 no later than 180 days after the final compliance date; and

9.13.m.3. Conduct annual tests no more than 12 calendar months following the date of the initial opacity test.

9.13.n. Recordkeeping and reporting requirements for air curtain incinerators. -- The owner or operator shall:

9.13.n.1. Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Secretary approves another format, for at least five years;

9.13.n.2. Make all records available to the Secretary;

9.13.n.3. Submit an initial report no later than 60 days following the initial opacity test, which includes the information specified in subparagraphs below:

9.13.n.3.A. The types of materials the owner or operator plans to combust in the air curtain incinerator; and

9.13.n.3.B. The results (as determined by the average of three one-hour blocks consisting of ten six-minute average opacity values) of the initial opacity tests;

9.13.n.4. Submit annual opacity test results to the Secretary within 12 months following the previous report; and

9.13.n.5. Submit initial and annual opacity test reports to the Secretary as electronic or paper copy on or before the applicable submittal date and keep a copy onsite for a period of five years.

9.14. Authority. -- The following authorities are retained by the Administrator and are not transferred or delegated to the Secretary:

9.14.a. Approval of alternatives to the emission limitations in Table 45-18F and Tables 45-18J through 45-18M and operating limits established under subdivisions 9.6.c through 9.6.l;

- 9.14.b. Approval of major alternatives to test methods;
- 9.14.c. Approval of major alternatives to monitoring;
- 9.14.d. Approval of major alternatives to recordkeeping and reporting;
- 9.14.e. The requirements in subdivision 9.6.1 of this rule;
- 9.14.f. The requirements in subparagraph 9.5.k.2.B of this rule;
- 9.14.g. Approval of alternative opacity emission limits in subdivisions 9.6.a and 9.6.b of this rule and under 40 CFR §§ 60.11(c)(6) through (c)(8);
- 9.14.h. Performance test and data reduction waivers under 40 CFR §§ 60.8(b)(4) and (5); and
- 9.14.i. Approval of an alternative to any electronic reporting to the EPA required by section 9.

**§45-18-10. Requirements for new other solid waste incineration units.**

10.1. Requirements for new OSWI units. -- The owner or operator of another solid waste incineration unit (OSWI unit) under subsection 10.2 shall comply with all applicable standards of performance, requirements, and provisions of 40 CFR part 60, subpart EEEE, including any reference methods, performance specifications, and other test methods associated with subpart EEEE. No person shall construct or operate, or cause to be constructed or operated, a new OSWI unit that results in a violation of 40 CFR part 60, subpart EEEE or this rule.

10.2. Applicability. -- The owner or operator of an OSWI unit that meets the following criteria is subject to the requirements for new OSWI units set forth in section 10. A new OSWI unit is an OSWI unit that either:

- 10.2.a. Commenced construction after December 9, 2004; or
- 10.2.b. Commenced modification or reconstruction after June 16, 2006.

**§45-18-11. Requirements for new sewage sludge incinerators.**

11.1. Requirements for new SSI units. -- The owner or operator of a SSI unit under subsection 11.2 shall comply with all applicable standards of performance, requirements, and provisions of 40 CFR part 60, subpart LLLL, including any reference methods, performance specifications, and other test methods associated with subpart LLLL. No person shall construct, reconstruct, modify or operate, or cause to be constructed, reconstructed, modified or operated, a new SSI unit that results in a violation of 40 CFR part 60, subpart LLLL or this rule.

11.2. Applicability. -- The owner or operator of a SSI unit that meets the following criteria is subject to the requirements for new SSI units set forth in section 11. A new SSI unit is a SSI unit that either:

- 11.2.a. Commenced construction after October 14, 2010; or
- 11.2.b. Commenced modification after September 21, 2011.

**§45-18-12. Secretary.**

12.1. Any and all references in 40 CFR part 60, subparts Ce, Eb, Ec, AAAA, CCCC, EEEE, and LLLL to "the Administrator" are amended to be the "Secretary", except in the following references, which shall

remain “Administrator”:

12.1.a. Where the federal regulations specifically provide that the Administrator shall retain authority and not transfer such authority to the Secretary;

12.1.b. Where provisions occur which refer to:

12.1.b.1. Alternate means of emission limitations;

12.1.b.2. Alternate control technologies;

12.1.b.3. Innovative technology waivers;

12.1.b.4. Alternate test methods;

12.1.b.5. Alternate monitoring methods;

12.1.b.6. Waivers/adjustments to recordkeeping and reporting;

12.1.b.7. Applicability determinations;

12.1.b.8. The requirements of 40 CFR § 60.56c(i) establishing operating parameters when using controls other than those listed in 40 CFR § 60.56c(d);

12.1.b.9. Alternative methods of demonstrating compliance under 40 CFR § 60.8; and

12.1.b.10. Performance test and data reduction waivers under 40 CFR § 60.8(b).

12.1.c. Where the context of the regulation clearly requires otherwise.

#### **§45-18-13. Permits.**

13.1. The owner or operator of existing HMIWI units shall operate pursuant to a Title V permit in accordance with the requirements of 45CSR30.

13.2. The owner or operator of a new HMIWI unit shall submit to the Secretary a complete application for a Title V permit in accordance with the requirements of 45CSR30 within twelve (12) months after commencing operation.

13.3. The owner or operator of an existing CISWI unit or air curtain incinerator subject to section 9 shall operate pursuant to a permit issued under § 129(e) of the CAA and 45CSR30.

13.4. The owner or operator of a new CISWI unit shall operate pursuant to a CAA Title V permit in accordance with the requirements of 45CSR30.

13.5. The owner or operator of a new OSWI unit shall submit a complete application for a Title V permit in accordance with the requirements of 45CSR30 within twelve (12) months after commencing operation; Provided, that the Secretary may require a new OSWI unit to apply for and obtain a Title V permit prior to this date, as specified in 40 CFR § 60.2967(b).

13.6. The owner or operator of a new SSI unit shall apply for and obtain a Title V permit in accordance with the requirements of 45CSR30, unless the unit meets the relevant requirements for and exemption set forth in 40 CFR § 60.4780.

13.7. Nothing contained in this rule shall be construed or inferred to mean that permit requirements in

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accordance with applicable rules shall be in any way limited or inapplicable, including but not limited to the permitting requirements under 45CSR13, 45CSR14, 45CSR19, 45CSR25 and 45CSR30.

#### §45-18-14. Exemptions.

14.1. The exemption provisions under 40 CFR part 60, subparts Eb, Ec, AAAA, CCCC, EEEE, and LLLL are incorporated in this rule.

14.2. Temporary air curtain incinerators approved by the Secretary under the requirements of 45CSR6 that are operated for the disposal of only on-site land clearing debris (as defined in 45CSR6) are exempt from the requirements of this rule.

14.3. Temporary incinerators approved by the Secretary under the requirements of 45CSR6 that are operated for the disposal of animal or poultry remains and related pathological waste are exempt from the requirements of this rule.

14.4. Pathological waste incineration units. -- Any institutional waste incineration unit, very small municipal waste combustion unit, incinerator or combustor is exempt from the requirements of this rule: provided, that:

14.4.a. The unit burns 90% or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste or chemotherapeutic waste;

14.4.b. The owner or operator of the unit keeps records on a calendar quarter basis of the periods of time when only pathological waste, low-level radioactive waste or chemotherapeutic waste is incinerated;

14.4.c. The unit is subject to the requirements of 45CSR6 or 45CSR25; and

14.4.d. The owner or operator of the unit notifies the Administrator and the Secretary that the unit meets these criteria.

14.5. Any incinerator or combustor subject to 40 CFR part 60, subparts Cb, Cc, E, Ea, O, WWW, BBBB, FFFF or MMMM is exempt from the requirements of this rule.

14.6. Any incinerator or combustor subject to 42 U.S.C. § 6925, 45CSR25, and 33CSR20 is exempt from the requirements of this rule.

14.7. Any combustor subject to 40 CFR part 63, subpart EEE is exempt from the requirements of this rule.

#### §45-18-15. Effect of the rule.

15.1. Nothing in this rule shall be construed to allow or permit the installation, establishment or construction of a new municipal or commercial solid waste facility utilizing incineration technology for the purpose of solid waste incineration in violation of W.Va. Code § 22-15-19.

#### §45-18-16. Inconsistency between rules.

16.1. In the event of any inconsistency between this rule and any other rule of the Division of Air Quality, the inconsistency shall be resolved by the determination of the Secretary, and the determination shall be based upon the application of the more stringent provision, term, condition, method or rule.

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TABLE 45-18A

Emissions limits for small, medium, and large HMIWI at designated facilities as set forth in 45CSR§ 18-7.2.a.1.

Pollutant	Units (7 percent oxygen, dry basis)	Emissions Limits			Averaging Time <sup>1</sup>	Compliance Method <sup>2</sup>
		HMIWI Size				
		Small	Medium	Large		
Particulate matter	Milligrams per dry standard cubic meter (mg/dscm) (grains per dry standard cubic foot (gr/dscf))	115 (0.05)	69 (0.03)	34 (0.015)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 5 of appendix A-3 of 40CFR60, or EPA Reference Method 26A or 29 of appendix A-8 of 40CFR60.
Carbon monoxide	Parts per million by volume (ppmv)	40	40	40	3-run average (1-hour minimum sample time per run)	EPA Reference Method 10 or 10B of appendix A-4 of 40CFR60.
Dioxins/furans	Nanograms per dry standard cubic meter total dioxins/furans (ng/dscm) (grains per billion dry standard cubic feet (gr/109dscf)) or ng/dscm TEQ (gr/109dscf)	125 (55) or 2.3 (1.0)	125 (55) or 2.3 (1.0)	125 (55) or 2.3 (1.0)	3-run average (4-hour minimum sample time per run)	EPA Reference Method 23 of appendix A-7 of 40CFR60.
Hydrogen chloride	ppmv or percent reduction	100 or 93%	100 or 93%	100 or 93%	3-run average (1-hour minimum sample time per run)	EPA Reference Method 26 or 26A of appendix A-8 of 40CFR60.
Sulfur dioxide	ppmv	55	55	55	3-run average (1-hour minimum sample time per run)	EPA Reference Method 6 or 6C of appendix A-4 of 40CFR60.
Nitrogen oxides	ppmv	250	250	250	3-run average (1-hour minimum sample time per run)	EPA Reference Method 7 or 7E of appendix A-4 of 40CFR60.
Lead	mg/dscm (grains per thousand dry standard cubic feet (gr/10 <sup>3</sup> dscf)) or percent reduction	1.2 (0.52) or 70%	1.2 (0.52) or 70%	1.2 (0.52) or 70%	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of appendix A-8 of 40CFR60.
Cadmium	mg/dscm (gr/10 <sup>3</sup> dscf) or percent reduction	0.16 (0.07) or 65%	0.16 (0.07) or 65%	0.16 (0.07) or 65%	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of appendix A-8 of 40CFR60.
Mercury	mg/dscm (gr/10 <sup>3</sup> dscf) or percent reduction	0.55 (0.24) or 85%	0.55 (0.24) or 85%	0.55 (0.24) or 85%	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of appendix A-8 of 40CFR60.

<sup>1</sup>Except as allowed under 40 CFR § 60.56c(c) for HMIWI equipped with CEMS.

<sup>2</sup>Does not include CEMS and approved alternative non-EPA test methods allowed under 40 CFR § 60.56c(b).

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TABLE 45-18B

Emissions limits for small, medium, and large HMIWI at designated facilities as set forth in 45CSR§§ 18-7.2.a.1 and 7.2.a.2.

Pollutant	Units (7 percent oxygen, dry basis)	Emissions Limits			Averaging Time <sup>1</sup>	Compliance Method <sup>2</sup>
		HMIWI Size				
		Small	Medium	Large		
Particulate matter	Milligrams per dry standard cubic meter (mg/dscm) (grains per dry standard cubic foot (gr/dscf))	66 (0.029)	46 (0.020)	25 (0.011)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 5 of appendix A-3 of 40CFR60, or EPA Reference Method 26A or 29 of appendix A-8 of 40CFR60.
Carbon monoxide	Parts per million by volume (ppmv)	20	5.5	11	3-run average (1-hour minimum sample time per run)	EPA Reference Method 10 or 10B of appendix A-4 of 40CFR60.
Dioxins/furans	Nanograms per dry standard cubic meter total dioxins/furans (ng/dscm) (grains per billion dry standard cubic feet (gr/10 <sup>9</sup> dscf)) or ng/dscm TEQ (gr/10 <sup>9</sup> dscf)	16 (7.0) or 0.013 (0.0057)	0.85 (0.37) or 0.020 (0.0087)	9.3 (4.1) or 0.054 (0.024)	3-run average (4-hour minimum sample time per run)	EPA Reference Method 23 of appendix A-7 of 40CFR60.
Hydrogen chloride	ppmv	44	7.7	6.6	3-run average (1-hour minimum sample time per run)	EPA Reference Method 26 or 26A of appendix A-8 of 40CFR60.
Sulfur dioxide	ppmv	4.2	4.2	9.0	3-run average (1-hour minimum sample time per run)	EPA Reference Method 6 or 6C of appendix A-4 of 40CFR60.
Nitrogen oxides	ppmv	190	190	140	3-run average (1-hour minimum sample time per run)	EPA Reference Method 7 or 7E of appendix A-4 of 40CFR60.
Lead	mg/dscm (grains per thousand dry standard cubic feet (gr/10 <sup>3</sup> dscf))	0.31 (0.14)	0.018 (0.0079)	0.036 (0.016)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of appendix A-8 of 40CFR60.
Cadmium	mg/dscm (gr/10 <sup>3</sup> dscf)	0.017 (0.0074)	0.013 (0.0057)	0.0092 (0.0040)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of appendix A-8 of 40CFR60.
Mercury	mg/dscm (gr/10 <sup>3</sup> dscf)	0.014 (0.0061)	0.025 (0.011)	0.018 (0.0079)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of appendix A-8 of 40CFR60.

<sup>1</sup>Except as allowed under 40 CFR § 60.56c(c) for HMIWI equipped with CEMS.

<sup>2</sup>Does not include CEMS and approved alternative non-EPA test methods allowed under 40 CFR § 60.56c(b).

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**TABLE 45-18C**  
**Emissions limits for small HMIWI which meet the criteria under 45CSR§ 18-7.3.b.1.**

<b>Pollutant</b>	<b>Units</b> (7 percent oxygen, dry basis)	<b>HMIWI Emissions Limits</b>	<b>Averaging Time<sup>1</sup></b>	<b>Compliance Method<sup>2</sup></b>
Particulate matter	mg/dscm (gr/dscf)	197 (0.086)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 5 of appendix A-3 of 40CFR60, or EPA Reference Method 26A or 29 of appendix A-8 of 40CFR60.
Carbon monoxide	ppmv	40	3-run average (1-hour minimum sample time per run)	EPA Reference Method 10 or 10B of appendix A-4 of 40CFR60.
Dioxins/furans	ng/dscm total dioxins/furans (gr/109dscf) or ng/dscm TEQ (gr/109dscf)	800 (350) or 15 (6.6)	3-run average (4-hour minimum sample time per run)	EPA Reference Method 23 of appendix A-7 of 40CFR60.
Hydrogen chloride	ppmv	3,100	3-run average (1-hour minimum sample time per run)	EPA Reference Method 26 or 26A of appendix A-8 of 40CFR60.
Sulfur dioxide	ppmv	55	3-run average (1-hour minimum sample time per run)	EPA Reference Method 6 or 6C of appendix A-4 of 40CFR60.
Nitrogen oxides	ppmv	250	3-run average (1-hour minimum sample time per run)	EPA Reference Method 7 or 7E of appendix A-4 of 40CFR60.
Lead	mg/dscm (gr/10 <sup>3</sup> dscf)	10 (4.4)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of appendix A-8 of 40CFR60.
Cadmium	mg/dscm (gr/10 <sup>3</sup> dscf)	4 (1.7)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of appendix A-8 of 40CFR60.
Mercury	mg/dscm (gr/10 <sup>3</sup> dscf)	7.5 (3.3)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of appendix A-8 of 40CFR60.

<sup>1</sup>Except as allowed under 40 CFR § 60.56c(c) for HMIWI equipped with CEMS.

<sup>2</sup>Does not include CEMS and approved alternative non-EPA test methods allowed under 40 CFR § 60.56c(b).

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**TABLE 45-18D**  
**Emissions limits for small HMIWI which meet the criteria under 45CSR§ 18-7.3.b.2.**

<b>Pollutant</b>	<b>Units</b> (7 percent oxygen, dry basis)	<b>HMIWI Emissions Limits</b>	<b>Averaging Time<sup>1</sup></b>	<b>Compliance Method<sup>2</sup></b>
Particulate matter	mg/dscm (gr/dscf)	87 (0.038)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 5 of appendix A-3 of 40CFR60, or EPA Reference Method 26A or 29 of appendix A-8 of 40CFR60.
Carbon monoxide	ppmv	20	3-run average (1-hour minimum sample time per run)	EPA Reference Method 10 or 10B of appendix A-4 of 40CFR60.
Dioxins/furans	ng/dscm total dioxins/furans (gr/109dscf) or ng/dscm TEQ (gr/109dscf)	240 (100) or 5.1 (2.2)	3-run average (4-hour minimum sample time per run)	EPA Reference Method 23 of appendix A-7 of 40CFR60.
Hydrogen chloride	ppmv	810	3-run average (1-hour minimum sample time per run)	EPA Reference Method 26 or 26A of appendix A-8 of 40CFR60.
Sulfur dioxide	ppmv	55	3-run average (1-hour minimum sample time per run)	EPA Reference Method 6 or 6C of appendix A-4 of 40CFR60.
Nitrogen oxides	ppmv	130	3-run average (1-hour minimum sample time per run)	EPA Reference Method 7 or 7E of appendix A-4 of 40CFR60.
Lead	mg/dscm (gr/10 <sup>3</sup> dscf)	0.50 (0.22)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of appendix A-8 of 40CFR60.
Cadmium	mg/dscm (gr/10 <sup>3</sup> dscf)	0.11 (0.048)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of appendix A-8 of 40CFR60.
Mercury	mg/dscm (gr/10 <sup>3</sup> dscf)	0.0051 (0.0022)	3-run average (1-hour minimum sample time per run)	EPA Reference Method 29 of appendix A-8 of 40CFR60.

<sup>1</sup>Except as allowed under 40 CFR § 60.56c(c) for HMIWI equipped with CEMS.

<sup>2</sup>Does not include CEMS and approved alternative non-EPA test methods allowed under 40 CFR § 60.56c(b).

**TABLE 45-18E**

**Increments of progress and compliance schedules for existing CISWI units**

<b>Comply with these increments of progress</b>	<b>By no later than<sup>a</sup></b>
Increment 1. -- The owner or operator of an existing CISWI unit shall submit a final control plan to the Secretary as expeditiously as practicable after approval of the West Virginia § 111(d)/129 plan.	February 7, 2016
Increment 2. -- The owner or operator of an existing CISWI unit shall achieve final compliance as expeditiously as practicable after approval of the West Virginia § 111(d)/129 plan.	February 7, 2018; or three years after the effective date of West Virginia § 111(d)/129 plan approval. <sup>b</sup>

<sup>a</sup> Site-specific schedules can be used at the discretion of the Secretary.

<sup>b</sup> The date can be no later than 3 years after the effective date of state plan approval or December 1, 2005 for CISWI units that commenced construction on or before November 30, 1999. The date can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018 for CISWI units that commenced construction on or before June 4, 2010.

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**TABLE 45-18F**

**Emission limits for existing commercial and industrial solid waste incinerators that apply before February 7, 2018<sup>b</sup>**

<b>Air pollutant</b>	<b>Emission limit <sup>a</sup></b>	<b>Averaging time</b>	<b>Performance test methods</b>
Cadmium	0.004 milligrams per dry standard cubic meter.	3-run average (1-hour minimum sample time per run).	Performance test (Method 29 of 40CFR60, appendix A)
Carbon monoxide	157 parts per million by dry volume.	3-run average (1-hour minimum sample time per run).	Performance test (Method 10, 10A, or 10B, of 40CFR60, appendix A)
Dioxins/furans (toxic equivalency basis)	0.41 nanograms per dry standard cubic meter.	3-run average (1-hour minimum sample time per run).	Performance test (Method 23 of 40CFR60, appendix A)
Hydrogen chloride	62 parts per million by dry volume.	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run).	Performance test (Method 26 or 26A of 40CFR60, appendix A-8)
Lead	0.04 milligrams per dry standard cubic meter.	3-run average (1-hour minimum sample time per run).	Performance test (Method 29 of 40CFR60, appendix A)
Mercury	0.47 milligrams per dry standard cubic meter.	3-run average (1-hour minimum sample time per run).	Performance test (Method 29 or 30B of 40CFR60, appendix A-8) or ASTM D6784-02 (reapproved 2008)
Nitrogen oxides	388 parts per million by dry volume.	3-run average (1-hour minimum sample time per run).	Performance test (Method 7 or 7E of 40CFR60, appendix A-4)
Opacity	10 percent	Three 1-hour blocks consisting of ten 6-minute average opacity values.	Performance test (Method 9 of 40CFR60, appendix A-4)
Particulate matter	70 milligrams per dry standard cubic meter.	3-run average (1-hour minimum sample time per run).	Performance test (Method 5 or 29 of 40CFR60, appendix A)
Sulfur dioxide	20 parts per million by dry volume.	3-run average (1-hour minimum sample time per run).	Performance test (Method 6 or 6C of 40CFR60, appendix A)

<sup>a</sup>All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions.

<sup>b</sup>Applies only to incinerators subject to the CISWI standards through a state plan prior to June 4, 2010. The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

**TABLE 45-18G**  
**Operating limits for wet scrubbers**

For these operating parameters	You shall establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	Data recording	Averaging time
Charge rate	Maximum charge rate	Continuous	Every hour	Daily (batch units). 3-hour rolling (continuous and intermittent units) <sup>a</sup>
Pressure drop across the wet scrubber or amperage to wet scrubber	Minimum pressure drop or amperage	Continuous	Every 15 minutes	3-hour rolling <sup>a</sup>
Scrubber liquor flow rate	Minimum flow rate	Continuous	Every 15 minutes	3-hour rolling <sup>a</sup>
Scrubber liquor pH	Minimum pH	Continuous	Every 15 minutes	3-hour rolling <sup>a</sup>

<sup>a</sup> Calculated each hour as the average of the previous 3 operating hours.

**TABLE 45-18H**  
**Toxic equivalency factors**

<b>Dioxin/Furan isomer</b>	<b>Toxic equivalency factor</b>
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.001
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.5
1,2,3,7,8-pentachlorinated dibenzofuran	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.001

**TABLE 45-18I**  
**Summary of reporting requirements for existing CISWI units<sup>a</sup>**

Report	Due date	Contents	Reference
Waste Management Plan	No later than the date specified in Table 45-18E for submittal of the final control plan	Waste management plan.	subdivision 9.12.b
Initial Test Report	No later than 60 days following the initial performance test	Complete test report for the initial performance test. The values for the site-specific operating limits. Installation of bag leak detection systems for fabric filters.	subdivision 9.12.c
Annual Report	No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report.	Name and address. Statement and signature by responsible official. Date of report. Values for the operating limits. Highest recorded 3-hour average and the lowest 3-hour average, as applicable (or 30-day average, if applicable), for each operating parameter recorded for the calendar year being reported. If a performance test was conducted during the reporting period, the results of the test. If a performance test was not conducted during the reporting period, a statement that the requirements of paragraph 9.9.z.3 were met. Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks. If you are conducting performance tests once every 3 years consistent with paragraph 9.9.z.3, the date of the last 2 performance tests, a comparison of the emission level you achieved in the last 2 performance tests to the 75 percent emission limit threshold required in paragraph 9.9.z.3 and a statement as to whether there have been any operational changes since the last performance test that could increase emissions. Any malfunction, deviation, or continuous monitoring system out of control periods information as specified in 9.12.e.11 through 9.12.e.15. Fuel input information for energy recovery unit subcategory verification as specified in 9.12.e.16.	subdivisions 9.12.d and 9.12.e
Emission Limitation or Operating Limit Deviation Report.	By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year.	Dates and times of deviation. Averaged and recorded data for those dates. Duration and causes of each deviation and the corrective actions taken. Copy of operating limit monitoring data and any test reports. Dates, times and causes for monitor downtime incidents.	subdivisions 9.12.f and 9.12.g.
Qualified Operator Deviation Notification	Within 10 days of deviation	Statement of cause of deviation. Description of efforts to have an accessible qualified operator.	paragraph 9.12.h.1

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		The date a qualified operator will be accessible.	
Qualified Operator Deviation Status Report	Every 4 weeks following deviation	Description of efforts to have an accessible qualified operator. The date a qualified operator will be accessible. Request for approval to continue operation.	paragraph 9.12.h.2
Qualified Operator Deviation Notification of Resumed Operation	Prior to resuming operation	Notification that you are resuming operation.	paragraph 9.12.h.3

<sup>a</sup> This table is only a summary, see the referenced subdivisions and paragraphs for the complete requirements.

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TABLE 45-18J

Emission limits for existing commercial and industrial solid waste incinerators that apply on and after February 7, 2018<sup>a</sup>

Air pollutant	Emission limit <sup>b</sup>	Averaging time <sup>c</sup>	Performance test methods <sup>c</sup>
Cadmium	0.0026 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 of 40CFR60, appendix A-8). Use ICPMS for the analytical finish.
Carbon monoxide	17 parts per million by dry volume.	3-run average (1-hour minimum sample time per run).	Performance test (Method 10 at 40CFR60, appendix A-4).
Dioxins/furans (total mass basis)	4.6 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 23 at 40CFR60, appendix A-7).
Dioxins/furans (toxic equivalency basis)	0.13 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 23 of 40CFR60, appendix A-7).
Hydrogen chloride	29 parts per million by dry volume.	3-run average (For Method 26, collect a minimum volume of 60 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run).	Performance test (Method 26 or 26A of 40CFR60, appendix A-8).
Lead	0.015 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 of 40CFR60, appendix A-8). Use ICPMS for the analytical finish.
Mercury	0.0048 milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008), collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40CFR60, appendix A).	Performance test (Method 29 or 30B of 40CFR60, appendix A-8) or ASTM D6784-02 (Reapproved 2008).
Nitrogen oxides	53 parts per million by dry volume.	3-run average (for Method 7E, 1-hour minimum sample time per run).	Performance test (Method 7 or 7E of 40CFR60, appendix A-4).
Particulate matter filterable	34 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 5 or 29 of 40CFR60, appendix A-3 or appendix A-8).
Sulfur dioxide	11 parts per million by dry volume.	3-run average (1-hour minimum sample time per run).	Performance test (Method 6 or 6C of 40CFR60, appendix A-4).
Fugitive ash	Visible emissions for no more than 5% of the hourly observation period.	Three 1-hour observation periods.	Visible emission test (Method 22 at 40CFR60, appendix A-7).

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<sup>a</sup> The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>b</sup> All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, the owner or operator shall meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>c</sup> In lieu of performance testing, the owner or operator may use a CEMS or, for mercury, an integrated sorbent trap monitoring system, to demonstrate initial and continuing compliance with an emissions limit, as long as the owner or operator complies with the CEMS or integrated sorbent trap monitoring system requirements applicable to the specific pollutant in 9.9.a through 9.9.z and 9.10.a through 9.10.t. As prescribed in 9.9.u, if the owner or operator uses a CEMS or integrated sorbent trap monitoring system to demonstrate compliance with an emissions limit, the averaging time is a 30-day rolling average of 1-hour arithmetic average emission concentrations.

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**TABLE 45-18K**  
**Emission limits that apply to energy recovery units after February 7, 2018 <sup>a</sup>**

Air pollutant	Emission limitation <sup>b</sup>		Averaging time <sup>c</sup>	Performance test methods <sup>c</sup>
	Liquid/Gas	Solids		
Cadmium	0.023 milligrams per dry standard cubic meter.	Biomass - 0.0014 milligrams per dry standard cubic meter. Coal - 0.0017 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 of 40CFR60, appendix A-8). Use ICPMS for the analytical finish.
Carbon monoxide	35 parts per million by dry volume.	Biomass - 260 parts per million dry volume. Coal - 95 parts per million dry volume.	3-run average (1-hour minimum sample time per run).	Performance test (Method 10 at 40CFR60, appendix A-4).
Dioxins/furans (total mass basis)	2.9 nanograms per dry standard cubic meter.	Biomass - 0.52 nanograms per dry standard cubic meter. Coal - 5.1 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 at 40CFR60, appendix A-7).
Dioxins/furans (toxic equivalency basis)	0.32 nanograms per dry standard cubic meter.	Biomass - 0.12 nanograms per dry standard cubic meter. Coal - 0.075 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 of 40CFR60, appendix A-7).
Hydrogen chloride	14 parts per million by dry volume.	Biomass- 0.20 parts per million dry volume. Coal - 58 parts per million dry volume.	3-run average (for Method 26, collect a minimum of 120 liters; for Method 26A, collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 26 or 26A of 40CFR60, appendix A-8).
Lead	0.096 milligrams per dry standard cubic meter.	Biomass - 0.014 milligrams per dry standard cubic meter. Coal - 0.057 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 of 40CFR60, appendix A-8). Use ICPMS for the analytical finish.

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Mercury	0.0024 milligrams per dry standard cubic meter.	Biomass- 0.0022 milligrams per dry standard cubic meter. Coal - 0.013 milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008), collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40CFR60, appendix A.	Performance test (Method 29 or 30B of 40CFR60, appendix A-8) or ASTM D6784-02 (Reapproved 2008).
Nitrogen oxides	76 parts per million by dry volume.	Biomass - 290 parts per million dry volume. Coal - 460 parts per million dry volume.	3-run average (for Method 7E, 1-hour minimum sample time per run).	Performance test (Method 7 or 7E of 40CFR60, appendix A-4).
Particulate matter filterable	110 milligrams per dry standard cubic meter.	Biomass - 11 milligrams per dry standard cubic meter. Coal - 130 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 5 or 29 of 40CFR60, appendix A-3 or appendix A-8).
Sulfur dioxide	720 parts per million by dry volume.	Biomass - 7.3 parts per million dry volume. Coal - 850 parts per million dry volume.	3-run average (1-hour minimum sample time per run).	Performance test (Method 6 or 6C of 40CFR60, appendix A-4).
Fugitive ash	Visible emissions for no more than 5% of the hourly observation period.	Visible emissions for no more than 5% of the hourly observation period.	Three 1-hour observation periods.	Visible emission test (Method 22 at 40CFR60, appendix A-7).

<sup>a</sup> The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>b</sup> All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, the owner or operator shall meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>c</sup> In lieu of performance testing, the owner or operator may use a CEMS or, for mercury, an integrated sorbent trap monitoring system, to demonstrate initial and continuing compliance with an emissions limit, as long as the owner or operator complies with the CEMS or integrated sorbent trap monitoring system requirements applicable to the specific pollutant in 9.9.a through 9.9.y and 9.10.a through 9.10.t. As prescribed in 9.9.u, if the owner or operator uses a CEMS or integrated sorbent trap monitoring system to demonstrate compliance with an emissions limit, the averaging time is a 30-day rolling average of 1-hour arithmetic average emission concentrations.

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**TABLE 45-18L**  
**Emission limits that apply to waste-burning kilns after February 7, 2018<sup>a</sup>**

Air pollutant	Emission limit <sup>b</sup>	Averaging time <sup>c</sup>	Performance test methods <sup>c, d</sup>
Cadmium	0.0014 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 of 40CFR60, appendix A-8).
Carbon monoxide	110 (long kilns)/790 (preheater-precalciner) parts per million dry volume.	3-run average (1-hour minimum sample time per run).	Performance test (Method 10 at 40CFR60, appendix A-4).
Dioxins/furans (total mass basis)	1.3 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 at 40CFR60, appendix A-7).
Dioxins/furans (toxic equivalency basis)	0.075 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters).	Performance test (Method 23 of 40CFR60, appendix A-7).
Hydrogen chloride	3.0 parts per million dry volume.	3-run average (collect a minimum volume of 1 dry standard cubic meter) or 30-day rolling average if HCL CEMS is being used.	If a wet or dry scrubber is used, performance test (Method 321 at 40CFR63, appendix A) or HCL CEMS if a wet scrubber or dry scrubber is not used, as specified in subdivision 9.9.j.
Lead	0.014 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters).	Performance test (Method 29 of 40CFR60, appendix A-8).
Mercury	0.011 milligrams per dry standard cubic meter or 58 pounds/million tons of clinker.	30-day rolling average.	Mercury CEMS or integrated sorbent trap monitoring system (performance specification 12A or 12B, respectively, of appendix B and procedure 5 of appendix F of 40CFR60), as specified in subdivision 9.9.j.
Nitrogen oxides	630 parts per million by dry volume.	3-run average (for Method 7E, 1-hour minimum sample time per run).	Performance test (Method 7 or 7E of 40CFR60, appendix A-4).
Particulate matter filterable	13.5 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 5 or 29 at 40CFR60, appendix A-3 or appendix -8).
Sulfur dioxide	600 parts per million by dry volume.	3-run average (for Method 6, collect a minimum of 20 liters; for Method 6C, 1-hour minimum sample time per run).	Performance test (Method 6 or 6C of 40CFR60, appendix A-4).

<sup>a</sup> The date specified in the State Plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>b</sup> All emission limitations are measured at 7 percent oxygen (except for CEMS and integrated sorbent trap monitoring system data during startup and shutdown), dry basis at standard conditions. For dioxins/furans, the owner or operator shall meet either the total mass basis limit or the toxic equivalency basis limit.

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<sup>c</sup> In lieu of performance testing, the owner or operator may use a CEMS or, for mercury, an integrated sorbent trap monitoring system, to demonstrate initial and continuing compliance with an emissions limit, as long as the owner or operator complies with the CEMS or integrated sorbent trap monitoring system requirements applicable to the specific pollutant in 9.9.a through 9.9.y and 9.10.a through 9.10.t. As prescribed in 9.9.u, if the owner or operator uses a CEMS or integrated sorbent trap monitoring system to demonstrate compliance with an emissions limit, the averaging time is a 30-day rolling average of 1-hour arithmetic average emission concentrations.

<sup>d</sup> Alkali bypass and in-line coal mill stacks are subject to performance testing only, as specified in paragraph 9.9.y.3. They are not subject to the CEMS, integrated sorbent trap monitoring system, or CPMS requirements that otherwise may apply to the main kiln exhaust.

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**TABLE 45-18M**  
**Emission limits that apply to small, remote incinerators after February 7, 2018<sup>a</sup>**

Air pollutant	Emission limit <sup>b</sup>	Averaging time <sup>c</sup>	Performance test methods <sup>c</sup>
Cadmium	0.95 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 29 of 40CFR60, appendix A-8).
Carbon monoxide	64 parts per million dry volume.	3-run average (1-hour minimum sample time per run).	Performance test (Method 10 at 40CFR60, appendix A-4).
Dioxins/furans (total mass basis)	4400 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 23 at 40CFR60, appendix A-7).
Dioxins/furans (toxic equivalency basis)	180 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 23 of 40CFR60, appendix A-7).
Fugitive ash	Visible emissions for no more than 5% of the hourly observation period.	Three 1-hour observation periods.	Visible emission test (Method 22 at 40CFR60, appendix A-7).
Hydrogen chloride	300 parts per million dry volume.	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run).	Performance test (Method 26 or 26A at 40CFR60, appendix A-8).
Lead	2.1 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 29 of 40CFR60, appendix A-8). Use ICPMS for the analytical finish.
Mercury	0.0053 milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008), collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40CFR60, appendix A).	Performance test (Method 29 or 30B at 40CFR60, appendix A-8) or ASTM D6784-02 (Reapproved 2008).
Nitrogen oxides	190 parts per million by dry volume.	3-run average (for Method 7E, 1-hour minimum sample time per run).	Performance test (Method 7 or 7E of 40CFR60, appendix A-4).
Particulate matter (filterable)	270 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter).	Performance test (Method 5 or 29 at 40CFR60, appendix A-3 or appendix A-8).

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Sulfur dioxide	150 parts per million dry volume.	3-run average (for Method 6, collect a minimum of 20 liters per run; for Method 6C, 1-hour minimum sample time per run).	Performance test (Method 6 or 6C of 40CFR60, appendix A-4).
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<sup>a</sup> The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

<sup>b</sup> All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, the owner or operator shall meet either the total mass basis limit or the toxic equivalency basis limit.

<sup>c</sup> In lieu of performance testing, the owner or operator may use a CEMS or, for mercury, an integrated sorbent trap monitoring system, to demonstrate initial and continuing compliance with an emissions limit, as long as the owner or operator complies with the CEMS or integrated sorbent trap monitoring system requirements applicable to the specific pollutant in 9.9.a through 9.9.z and 9.10.a through 9.10.5. As prescribed in 9.9.u, if the owner or operator uses a CEMS or integrated sorbent trap monitoring system to demonstrate compliance with an emissions limit, the averaging time is a 30-day rolling average of 1-hour arithmetic average emission concentrations.