COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 7.00 AIR POLLUTION CONTROL REGULATIONS

310 CMR 7.26 INDUSTRY PERFORMANCE STANDARDS

7.26: Industry Performance Standards

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(19) *.*.*.

(20) Environmental Results Program: Lithographic, Gravure, Letterpress, Flexographic and Screen Printing.

(a) 310 CMR 7.26(20) through (29) sets forth performance standards and recordkeeping requirements for lithographic, gravure, letterpress, flexographic and screen printing at facilities subject to 310 CMR 7.26(20) through (29) pursuant to 310 CMR 7.26(21).

(b) (Reserved)

(c) By complying with the recordkeeping requirements contained in 310 CMR 7.26(20) through (29), and with the certification requirements contained in 310 CMR 70.00: *Environmental Results Program Certification*, and by maintaining actual emissions below the levels contained in 310 CMR 7.26(20)(c)1. through 4., the owner/operator of a facility subject to 310 CMR 7.26(20) through (29) restricts the federal potential emissions of the facility to below the applicable major source thresholds. For every rolling 12-month period as defined in 310 CMR 7.26(22), the potential and actual emissions of the facility shall be less than the following limitations:

1. 50 tons of VOC or NO_x, or 100 tons of any other regulated air pollutant;

2. 10 tons of any HAP;

3. 25 tons of a combination of HAPs; and

4. Any lesser threshold for a single HAP that the EPA may establish by rule.

(21) Applicability.

(a) The provisions of 310 CMR 7.26(20) through (29) apply to the owner or operator of each facility in 310 CMR 7.26(20) with:

1. a primary 2012 North American Industry Classification System (NAICS) code of323111 "Commercial Printing (except Screen and Books", 323113 "Commercial Screen Printing", or 323117 "Books Printing"); and

2. one or more screen, lithographic, gravure, flexographic, or letterpress printing presses.

(b) The provisions of 310 CMR 7.26(20) through (29) do not apply to the owner or operator of a facility that performs lithographic, gravure, flexographic, letterpress, or screen printing with a primary 2012 NAICS code different from those listed in 310 CMR 7.26(21)(a).

(22) Definitions: The definitions found in 310 CMR 7.00 apply to 310 CMR 7.26(20) through (29). The following words and phrases shall have the following meanings as they appear in 310 CMR 7.26(20) through (29). Where a term is defined in the 310 CMR 7.00 and the definition also appears in 310 CMR 7.26(22), the definition found in 310 CMR 7.26(22) controls.

Adhesive means any substance that is used to bond one surface to another surface.

Alcohol means any of the following compounds, when used as a fountain solution additive for offset lithographic printing: ethanol, n-propanol, and isopropanol.

Alcohol Substitute means non-alcohol fountain solution additives including, but not limited to, glycol ethers or ethylene glycol.

Conforming Operation means a press or presses that meet the standards established in 310 CMR 7.26(24)(d), (25)(a) or (26)(a).

Conductive Ink means an ink which transmits electricity and is used in the production of electronic circuits.

Electron Beam Inks means inks which dry by a polymerization reaction induced by electrons from an electron beam generator.

Extreme Performance Ink or Extreme Performance Coating means an ink or coating used in screen printing on a non-porous substrate that is designed to resist or withstand any of the following: more than two years of outdoor exposure or exposure to industrial-grade

chemicals, solvents, acids, or detergents, oil products, cosmetics, temperatures exceeding 76°C (170°F), vacuum forming, embossing or molding.

Flexographic Printing means a printing system utilizing a flexible rubber or elastomeric image carrier in which the image area is raised relative to the non-image area. The image is transferred to the substrate through first applying ink to a smooth roller which in turn rolls the ink onto the raised pattern of a rubber or elastomeric pad fastened around a second roller, which then rolls the ink onto the substrate.

Gravure Printing means an intaglio printing operation in which the ink is transferred from wells on a plate to the substrate by pressure, with excess ink removed from the surface of the plate, which is supported by an impression roller, by a doctor blade.

HAP means an air contaminant listed by EPA as a HAP, pursuant to 42 U.S.C. 7401, § 112. That list is incorporated by reference herein, together with all amendments and supplements thereto.

Heatset Inks means inks used to set or fix the ink pigment and binding resins to the substrate.

Heatset Press means an offset lithographic printing press, where the solvent component of the ink is driven off with the use of heat from dryers or ovens. Thermography is not included in this definition.

Incidental Material(s) means one or more VOC containing material(s) which do not, in total, exceed 55 gallons per rolling 12 month period, and which do not comply with an applicable standard set forth in 310 CMR 7.26(20) through (29).

Large Printer means a printer that:

(a) uses a total of more than 3,000 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied, per rolling 12 month period; or

(b) after March 9, 2020, emits more than ten tons of VOC facility-wide per rolling 12 month period based on materials used before the application of air pollution control equipment.

Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol, electron beam ink and ultraviolet ink are excluded from this calculation.

Letterpress Printing means a method where the image area is raised relative to the non-image area and the ink is transferred to the substrate directly from the image surface.

Metallic Ink means an ink that contains greater than 50 grams of metal per liter (0.4 lb/gal) of ink.

Midsize Printer means a printer that:

(a) uses a total of more than 275 and no more than 3000 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied, per rolling 12 month period; or

(b) uses a total of more than 55 gallons of alcohol per rolling 12 month period and a total of no more than 3000 gallons of cleanup solution, and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied, per rolling 12 month period; or

(c) after March 9, 2020, does not meet the definition of a large printer and emits, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period from offset lithographic printing operations and related cleaning operations, or letterpress printing operations and related cleaning operations.

Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol, electron beam ink, and ultraviolet ink are excluded from this calculation.

Non-conforming Operation means a press or presses that use(s) ink, coating, or adhesive which do not meet the standards established in 310 CMR 7.26(24)(d), 310 CMR 7.26(25)(a), or 310 CMR 7.26(26)(a) at a printer who has demonstrated that it is technically or economically infeasible to use ink, coating, or adhesive that meets those standards.

Non-heatset Offset Lithographic Printing means offset lithographic printing in which the ink dries by oxidation and absorption into the substrate without the use of heat from dryers or ovens.

Offset Lithographic Printing means a planeographic method in which the image and non-image areas are on the same plane.

Plastisol Ink(s) means a dispersion of finely divided resin in a plasticizer.

Printer means the owner or operator of a facility subject to 310 CMR 7.26(20) through (29) pursuant to 310 CMR 7.26(21).

Rolling 12 Month Period means any consecutive 12 month period of time.

Screen Printing means a process where the printing ink passes through a web or a fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimensions of the imprint.

SDS means a Safety Data Sheet.

Small Printer means a printer that:

(a) does not qualify as a Very Small Printer; and

(b) 1. uses a total of no more than 275 gallons of cleanup solution and inks/coatings/ adhesives with a VOC content greater than 10% by weight as applied per rolling 12 month period; and

2. uses less than or equal to 55 gallons of alcohol per rolling 12 month period. Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol, electron beam ink and ultraviolet ink are excluded from this calculation.

Solvent means organic compounds which are used as adhesives, diluents, thinners, dissolvers, viscosity reducers, cleaning agents or for other similar uses.

Thermography means a process for simulating a raised printed surface by dusting the wet ink with a resinous material and then fusing it to the ink with heat to produce a raised effect.

Ultraviolet Inks mean inks which dry by a polymerization reaction induced by ultraviolet energy.

Very Small Printer means a printer that:

(a) is connected to municipal sewer;

(b) uses a total of no more than 55 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied per rolling 12 month period;

(c) uses no more than 55 gallons of alcohol per rolling 12 month period; and

(d) generates no more than 55 gallons of hazardous waste per rolling 12 month period.

Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol, electron beam ink and ultraviolet ink are excluded from the calculation in 310 CMR 7.26: Very Small Printer(b).

Water-based Ink/Coating/Adhesives means an ink, coating, or adhesive with a VOC content less than or equal to 10% by weight as applied.

(23) Rules for Permitted Facilities:

(a) Each printing press shall be operated on or after May 1, 1998 in compliance with thestandards and requirements set forth in 310 CMR 7.26(20) through (29) except in the following situations:

1. (Reserved)

2. if a heatset press or non-conforming operation at a facility that, based on materials used before the application of air pollution control equipment, emits no more than ten tons of VOCs facility-wide on a rolling 12 month period, is covered by a plan approval pursuant to 310 CMR 7.02(1) issued prior to May 1, 1998, then the heatset press or nonconforming operation may either be operated in compliance with that plan approval or operated in compliance with the applicable requirements set forth in 310 CMR 7.26(27)(a)1. and 2., except to the extent applicable requirements of 310 CMR 7.18 become more stringent than those in the plan approval or 310 CMR 7.26.

3. if a heatset press or non-conforming operation at a facility that, based on materials used before the application of air pollution control equipment, emits more than ten tons of VOCs facility-wide on a rolling 12 month period, is covered by a plan approval pursuant to 310 CMR 7.02(1) or a permit pursuant to 310 CMR 7.02(9), then that heatset press or non-conforming operation shall be operated in compliance with the terms and conditions of that plan approval or permit , except to the extent applicable requirements of 310 CMR 7.18 or 7.26 become more stringent than those in the plan approval or permit.

4. The following provisions take effect on March 9, 2020: 310 CMR 7.26(24)(a)1.b.,2.a.ii., (25)(b)2.b., (28)(b)5., and (c)6.

(24) Standards for Non-heatset Offset Lithographic Printing:

(a) Fountain solution standards for midsize and large printers: The following standards apply to midsize and large printers, except that they do not apply to the fountain solution in a press with a fountain solution reservoir that holds less than or equal to one gallon. Printers may calculate the percent of alcohol in fountain solution using the methodology set forth in 310 CMR 7.26(24)(a)3.:

1. For Web-fed Presses: fountain solution shall:

   a. not contain any alcohol; and

   b. contain no more than 5% alcohol substitutes by weight as applied.

2. For Sheet-fed Presses, except for a sheet-fed press with maximum sheet size of 11 by 17 inches or smaller:

   a. unrefrigerated fountain solution shall either:

      i. contain no more than 5.0% VOC by weight as applied; or
      ii. contain no more than 5% alcohol substitutes by weight as applied and contain no alcohol; and

   b. refrigerated fountain solution shall contain no more than 8% VOC by weight as applied, and shall be refrigerated to a temperature of less than 60° F.

(b) Fountain Solution Tank Standard: Fountain solution mixing and storage tanks shall be covered, except when adding or removing solution.

(c) Work Practices and Emission Limitations for Printing and Cleaning Operations.

1. Any person subject to 310 CMR 7.26(20) shall comply with the work practices of310 CMR 7.18(31)(e).

2. Cleanup solution used to clean an offset lithographic printing press shall meet at leastone of the following standards, except that these standards do not apply to incidental materials:

   a. shall not exceed 70% VOC by weight as applied, calculated pursuant to EPA test method 24; or

   b. shall have a VOC composite partial pressure of 10 mmHg or less at 20/C (68°F) (d) Adhesive standard for midsize and large printers: Adhesives shall meet the following limit for VOC content, expressed in grams VOC per liter of product as applied (pounds per gallon), less water:

Adhesive 300 (2.5)

(25) Gravure , Letterpress, and Flexographic Printing:

(a) Ink, Coating, and Adhesive Standards for Midsize and Large Printers. The following standards apply to midsize and large printers. Inks, coatings, and adhesives, except incidental materials, shall meet the following limits for VOC content, expressed in grams VOC per liter of product as applied (pounds per gallon), less water:

Ink	300 (2.5)
Coating	300 (2.5)
Adhesive	150 (1.25)

(b) Work Practices and Emission Limitations for Printing and Cleaning Operations.

1. Any person subject to 310 CMR 7.26(20) shall comply with the work practices of 310 CMR 7.18(31)(e).

2. Cleanup solution shall meet the following standards, except that these standards do not apply to incidental materials:

   a. cleanup solution shall have a VOC composite partial pressure of 25 mm Hg or less at 20°C (68°F); and

   b. cleanup solution used to clean a letterpress printing press at a midsize or large printer, as of the effective date in 310 CMR 7.26(23)(a)4., shall:

      i. have a VOC composite partial pressure of less than 10 mm Hg at 20ºC (68ºF); or
      ii. contain less than 70% VOC by weight.

(26) *.*.*.

(27) Printers with Heatset Presses or Non-conforming Operations:

(a) A printer that emits no more than ten tons of actual VOC emissions facility-wide on a rolling 12 month period based on raw material inputs may operate a heatset press(es) or nonconforming operation(s) without a plan approval or permit pursuant to 310 CMR 7.02(1) or 310 CMR 7.02(9), provided that:

1. with respect to the heatset press(es), the printer operates such presses in compliance with cleanup solution standards set forth in 310 CMR 7.26(24)(c), the fountain solution requirement for web-fed lithographic presses set forth in 310 CMR 7.26(24)(a)1., and applicable recordkeeping requirements set forth in 310 CMR 7.26(28). In addition, the printer shall calculate and keep records of actual VOC and HAP emissions per calendar month based on each VOC and each HAP containing compound used at the facility pursuant to 310 CMR 7.26(28)(c)3.

2. with respect to the non-conforming operation(s), the printer operates in compliance with applicable cleanup solution standards set forth in 310 CMR 7.26(25)(b) and 310 CMR 7.26(26)(b), and applicable recordkeeping requirements set forth in 310 CMR 7.26(28). In addition, the printer shall calculate and keep records of actual VOC and HAP emissions per calendar month based on each VOC and each HAP containing compound used at the facility pursuant to 310 CMR 7.26(28)(c)3.

(b) A printer that emits no more than ten tons of actual VOCs facility-wide on a rolling 12 month period based on approved control equipment or other enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(1) or (9), including but not limited to production and operational restrictions, may install one or more heatset presses or non-conforming operations without obtaining a plan approval or permit pursuant to 310 CMR 7.02(1) or (9) for the new press(es) or operation(s) provided that:

1. installation of the new heatset press(es) or non-conforming operation(s) will not result in more than ten tons per year (TPY) of actual VOC emissions facility-wide on a rolling 12 month period based on:

   a. raw material inputs associated with the new press(es) or operation(s); and

   b. with respect to existing heatset press(es) or non-conforming operation(s),approved control equipment or other enforceable restrictions, including but not limited to production and operational restrictions; and,

2. with respect to the new press(es) or operation(s), the printer complies with the requirements set forth in 310 CMR 7.26(27)(a)1. and 2.

(c) A printer that emits more than ten tons of actual VOCs facility-wide on a rolling 12 month period based on raw material inputs or enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(1) or (9), including but not limited to production and operational restrictions, shall, with respect to heatset press(es) or nonconforming operation(s), comply with the terms and conditions of a plan approval or permit issued pursuant to 310 CMR 7.02(1) or (9), except to the extent applicable requirements of 310 CMR 7.18 or 7.26 become more stringent than those in the plan approval or permit.

(d) Notwithstanding 310 CMR 7.26(27)(c), a printer that emits more than ten tons of actual VOCs facility-wide on a rolling 12-month period based on raw material inputs or enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(1) or (9), including but not limited to production and

operational restrictions, need not obtain a plan approval or permit pursuant to 310 CMR 7.02(1) or (9) for existing press(es) or operation(s) provided that:

1. installation of the existing heatset press(es) or non-conforming operation(s) occurred such that the actual VOC emissions facility-wide on a rolling 12 month period based on raw material inputs or enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(1) or (9) including, but not limited to, production and operational restrictions were less than or equal to ten tons per year; and,

2. such presses or operations comply with the requirements set forth in 310 CMR 7.26(27)(a)1. and 2..

(28) Recordkeeping: Each printer shall maintain records sufficient to demonstrate compliance. Such records shall be kept on-site for at least five years, and shall be made available to representatives of the Department upon request. Such records shall include, but are not limited to, the following:

(a) * * *

(b) Each midsize printer shall maintain:

1. monthly purchase or usage records sufficient to demonstrate that the printer is a midsize printer, including but not limited to records concerning cleanup solutions, inks, coatings, adhesives, electron beam inks, and incidental materials, excluding water-based inks/coatings/adhesives, electron beam inks, ultraviolet inks, plastisol inks, and inks used in non-heatset offset lithographic printing;

2. records demonstrating that cleanup solutions, inks, coatings, and adhesives are incompliance with applicable standards set forth in 310 CMR 7.26(20) through (29) according to EPA test method 24 or 24A, as applicable, or an equivalent test methodology as determined by the Department and EPA, and appropriate documentation indicating compliance with the VOC composite partial pressure as defined in 310 CMR 7.00;

3. records of the percent by weight of VOC in fountain solution as determined each time alcohol or alcohol mix is used to mix a new batch of fountain solution and each time it is added to fountain solution on-press, based on analytical data, and the proportions of the constituents mixed;

4. the daily temperature of fountain solutions required to be refrigerated pursuant to310 CMR 7.26(24)(a)2.b. when alcohol content is greater than 5% by weight;

5. records of the percent by weight of alcohol substitutes in fountain solution as determined each time alcohol substitutes are used to mix a new batch of fountain solution and each time alcohol substitutes are added to fountain solution on-press, based on analytical data, and the proportions of the constituents mixed;

6. for water-based inks/coatings/adhesives, electron beam inks, ultraviolet inks, and plastisol inks, SDSs or other records demonstrating that the ink/coating/adhesive is water-based, electron beam, ultraviolet, or plastisol as applicable; and,

7. printers using alcohol-free fountain solution on web-fed or sheetfed non-heatset offset lithographic printing presses, records (*e.g*., SDSs) demonstrating that the fountain solution constituents are alcohol-free.

(c) Each large printer shall maintain:

1. monthly purchase or usage records sufficient to demonstrate that the printer is a large printer including, but not limited to, records concerning cleanup solutions, inks, coatings, adhesives and incidental materials, excluding water based inks/coatings/adhesives, electron beam inks, ultraviolet inks, plastisol inks, and inks used in non-heatset offset lithographic printing;

2. records demonstrating that cleanup solutions, inks, coatings, and adhesives are incompliance with applicable standards set forth in 310 CMR 7.26(20) through (29) according to EPA test method 24 or 24A, as applicable, or an equivalent test methodology as determined by the Department and EPA, and appropriate documentation indicating compliance with the VOC composite partial pressure as defined in 310 CMR 7.00;

3. a calculation of actual emissions per calendar month based on all VOC and each HAP containing compound used at the facility. VOC emissions from non-heatset, nonvegetable-based inks used in lithography shall be calculated by assuming that 5% of the inks' VOCs are emitted to the atmosphere and 95% are retained in the paper. VOC emissions from heatset, non-vegetable-based inks used in lithography shall be calculated by assuming that 80% of the inks' VOCs are emitted to the atmosphere and 20% are retained in the paper. VOC emissions from vegetable-based inks used in lithography shall be calculated by assuming that none of the inks' VOCs are emitted to the atmosphere are 100% are retained in the paper. VOC emissions from cleaning materials in shop towels shall be calculated by assuming that 50% of the VOCs are emitted to the atmosphere and 50% are retained in the towels,

only if VOC composite vapor pressure of the cleaning material is less than 10 mm Hg at 20°C and cleaning materials and used ship towels are kept in closed containers.

4. the percent by weight of VOC in fountain solution as determined each time alcohol or alcohol mix is used to mix a new batch of fountain solution and each time it is added to fountain solution on-press, based on analytical data and the proportions of the constituents mixed;

5. the daily temperature of fountain solutions required to be refrigerated pursuant to310 CMR 7.26(24)(a)2.b. when alcohol content is greater than 5% by weight;

6. records of the percent by weight of alcohol substitutes in fountain solution as determined each time alcohol substitutes are used to mix a new batch of fountain solution and each time alcohol substitutes are added to fountain solution on-press, based on analytical data, and the properties of the constituents mixed.

7. for water-based inks/coatings/adhesives, ultraviolet inks, electron beam inks, and plastisol inks, MSDSs or other records demonstrating that the ink/coating/adhesive is water-based, ultraviolet, electron beam, or plastisol as applicable; and,

8. printers using alcohol-free fountain solution on web-fed or sheetfed non-heatset offset lithographic printing presses, records (*e.g.*, SDSs) demonstrating that the fountain solution constituents are alcohol-free.

(29) Compliance Certification Requirement:

(a) Beginning on September 15, 2006, each printer, except very small printers, shall submit to the Department a compliance certification on a form prescribed by the Department, in accordance with 310 CMR 70.00: *Environmental Results Program Certification* and 310 CMR 7.26(29). As part of the certification, each large printer shall submit information the Department may specify, including:

1. the nature and amounts of emissions from the facility,

2. information which may be needed to determine the nature and amounts of emissions from the facility, and

3. any other information pertaining to the facility which the Department requires.

(b) 1. If, during the course of the certification period, a printer installs a new printing press or makes operational changes which will cause a modification of its size classification, the printer shall, within 60 days of operation of the new press or actual operational changes respectively, notify the Department in writing. Such printer shall comply with 310 CMR 7.26(20) through (29) based on the applicable new size classification as soon as the new press is operating or the operational change is made.

2. If, on March 9, 2020, a printer that formerly met the definition of a very small printer or small printer meets the definition of a midsize printer or a large printer, the printer shall, on or before March 9, 2020, notify the Department in writing. Such printer shall comply with 310 CMR 7.26(20) through (29) based on the applicable new size classification on and after March 9, 2020.

(c) If, during the course of the certification period, a printer relinquishes an existing plan approval in accordance with 310 CMR 7.26(23)(a)2., then within 30 days of such change the printer shall notify the Department in writing

(30) U Boilers - Applicability. Except as provided in 310 CMR 7.26(30)(a) and (b), the provisions of 310 CMR 7.26(30) through (37) apply to any person who owns or operates a boiler installed on or after September 14, 2001, with a heat input rating equal to or greater than 10,000,000 Btu per hour but less than 40,000,000 Btu per hour. Complying with the criteria in 310 CMR 7.26(30) through (37) does not relieve the owner or operator from his or her applicability to the requirements of 40 CFR 60 Subpart Dc - Standards of Performance for Small Industrial - Commercial Steam Generating Units or 40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters.

(a) The provisions of 310 CMR 7.26(30) through (37) do not apply to any person who is an owner or operator of a facility:

1. who has secured an operating permit pursuant to 310 CMR 7.00: *Appendix C*.; however, 310 CMR 7.02(4) or (5) do apply;

2. who proposes to install a wood fuel-fired boiler with a heat input rating equal to or greater than 10,000,000 Btu per hour but less than 40,000,000 Btu per hour; however, 310 CMR 7.02(5) does apply; or

3. who installs a temporary boiler in accordance with 310 CMR 7.03(23).

(b) If the installation of the boiler(s) causes the facility to be subject to 310 CMR 7.00: *Appendix C*, or to exceed an emission cap contained in a written Department approval, or notification pursuant to 310 CMR 7.02(11), the person who is an owner or operator of the facility shall, as applicable:

1. file either a Limited Plan Application pursuant to 310 CMR 7.02(4) or Comprehensive Plan Application pursuant to 310 CMR 7.02(5) to increase the facility-wide cap or to establish an emission cap to avoid applicability to Non-Attainment Review at 310 CMR 7.00: *Appendix A*, Operating Permit and Compliance Program at 310 CMR 7.00: *Appendix C* or federal PSD(40 CFR 52.21); or

2. comply with 310 CMR 7.26(30) through (37) and comply with the requirements of Non-Attainment Review at 310 CMR 7.00: *Appendix A*, the Operating Permit and Compliance Program at 310 CMR 7.00: *Appendix C* and federal PSD (40 CFR 52.21) as applicable; or

3. comply with 310 CMR 7.26(30) through (37) and submit a notification establishing an emission cap under 310 CMR 7.02(11), or a higher emissions cap under 310 CMR 7.02(11) where the installation would otherwise violate an emissions cap pursuant to 310 CMR 7.02(11); or

4. comply with 310 CMR 7.26(30) through (37) and comply with the requirements of 310 CMR 7.02(10): *Modification of a Restricted Emission Status (RES).*

(c) Any person who is the owner/operator of a boiler installed in accordance with 310 CMR 7.26(30) shall continue to comply with 310 CMR 7.26(31) and (33) through (37) even if the facility later becomes subject to 310 CMR 7.00: *Appendix C*.

(31) Definitions. Terms used in 310 CMR 7.26(30) through (37) are defined in 310 CMR 7.00 or in 310 CMR 7.26(31). Where a term is defined in both 310 CMR 7.00 and in 310 CMR 7.26(31), the definition in 310 CMR 7.26(31) is applicable.

ADJACENT STRUCTURE means a structure that is within 5L of the stack. 5L means five times the lesser dimension (height or maximum projected width) of the structure.

AUTOMATED COMBUSTION CONTROL SYSTEM means a system that self adjusts burner/boiler operation to maximize energy efficiency. It must include at least the following capabilities: fuel/air ratio adjusted automatically, fuel flow metered/monitored, and continuous monitoring of nitrogen oxides (NOx) and carbon monoxide.

BOILER means a device that combusts any fuel and produces steam or heats water.

DISTILLATE FUEL OIL for the purposes of 310 CMR 7.26(30) means fuel oil that complies with the specifications for fuel oil numbers 1 or 2 as defined by the American Society for Testing and Materials in ASTM D396-98, "Standard Specification for Fuel Oil" dated September 1998 and has a sulfur content not to exceed 0.05% by weight or D6751 for bio-diesel and has a sulfur content not to exceed 0.0015% by weight.

INSTALL or INSTALLATION as used in 310 CMR 7.26(30) means to set an emission unit in position for use. A relocation of a previously approved boiler, provided that it is relocated within the facility or to a contiguous property, owned and operated by the same owner is not an installation.

ULTRA-LOW SULFUR DISTILLATE FUEL OIL (ULSD) means any fuel oil or other fuel, excluding used oil fuel and hazardous waste fuel, which complies with the applicable U.S. Environmental Protection Agency sulfur limits for fuel pursuant to 40 CFR 80.29, 40 CFR 80.500, and 40 CFR 80.520(a) and (b) as in effect on January 18,2001 and either complies with the specifications for fuel oil numbers 1 or 2 as defined by the American Society for Testing and Materials (ASTM) in ASTM D-396-98 or D6751 for bio-diesel.

SUPPLIER means a person or persons who manufactures, provides, assembles, or installs for use a boiler subject to 310 CMR 7.26(30) through (37) for the person who is the owner or operator.

(32) Certification.

(a) An owner or operator of a boiler subject to 310 CMR 7.26(30) shall submit to the Department an initial compliance certification form within 60 days of the date on which the boiler commences operation.

(b) Effective December 28, 2007, prior to installation and operation, a person who is an owner or operator of a boiler subject to 310 CMR 7.26(30) shall certify to the Department, in compliance with 310 CMR 70.00, that the boiler is in compliance with 310 CMR 7.26(30) through (37).

(33) Fuel of Use/Emission Limitations.

(a) Fuel of Use.

1. Only natural gas and distillate fuel oil(s) may be used, as specified in 310 CMR 7.26(33)(a)2. through (a)4. Used oil fuel and Hazardous Waste Fuel as defined under 310 CMR 30.000 cannot be burned in boilers subject to 310 CMR 7.26(30).

2. NATURAL GAS – Prior to July 1, 2009:

a. a boiler subject to 310 CMR 7.26(30) shall burn natural gas as the primary fuel of use where the boiler is located on a property adjacent to a street or sidewalk underlain by a natural gas pipeline having sufficient pressure and capacity to supply natural gas to the boiler.
b. a natural gas fired boiler may burn distillate fuel oil for a maximum of 180 days per calendar year. Total annual distillate fuel use (gallons/year) is calculated by multiplying90 days/yr x 24 hours/day x maximum firing rate (gals/hour) per boiler. Records must be established and maintained up to date in accordance with 310 CMR 7.26(36): *Recordkeeping and Reporting*.

3. DISTILLATE – Prior to July 1, 2009, a boiler subject to 310 CMR 7.26(30) may burn distillate fuel oil as the primary fuel of use when conditions for natural gas use, as specified in 310 CMR 7.26(33)(a)2., cannot reasonably be met.

4. On and after July 1, 2009, there is no restriction on the gallons of distillate fuel oil burned in a boiler subject to 310 CMR 7.26(30) through (37). The owner or operator of a boiler subject to 310 CMR 7.26(30) shall accept for delivery only natural gas or ultra-low sulfur distillate fuel oil.

5. On and after July 1, 2009, an owner or operator of a boiler subject to 310 CMR 7.26(30) shall accept for delivery only natural gas or ultra-low sulfur distillate fuel oil.

(b) Emission Limitations. Each boiler shall comply with the following emission limitations in pounds per million Btu heat input for the fuel of use.

POLLUTANT	Fuel of Use	Emission limitation (lbs. per million Btu)
Nitrogen Oxides	Natural Gas Distillate Ultra-low Sulfur Distillate Fuel Oil	0.0350 0.150
Particulate Matter	Natural Gas Distillate and Ultra-low Sulfur Distillate Fuel Oil	0.010 0.020
Carbon Monoxide	Natural Gas Distillate and Ultra-low Sulfur Distillate Fuel Oil	0.080 0.080
Volatile Organic Compounds	Natural Gas Distillate and Ultra-low Sulfur Distillate	0.030 0.030

	Fuel Oil	

(c) The sulfur dioxide emissions are limited by the sulfur content of the distillate fuel oil. The sulfur content of the distillate fuel oil is limited to 0.05% by weight and the sulfur content of the ULSD fuel oil is limited to 0.0015% by weight.

(d) The carbon monoxide emission limitation specified in 310 CMR 7.26(33)(b) does not apply to high turndown boilers while operating at less than 25% of the maximum input rating.

(e) Visible Emissions (excluding water vapor) may not exceed 10% opacity at any time during boiler operation.

(34) Operational Requirements.

(a) The boiler and appurtenances shall be operated in accordance with the manufacturer's standard operating and maintenance procedures.

(b) A boiler tune-up shall be performed annually. A boiler tune-up shall include an inspection for proper operation, any other maintenance recommended by the manufacturer, and an efficiency test. An efficiency test shall include at least a smoke spot reading, flue gas temperature measurement and a measure of carbon dioxide, oxygen, and carbon monoxide. A written record of the efficiency test and any maintenance performed shall be kept on site in accordance with the record keeping provisions contained 310 CMR 7.26(36).

(c) Fuel additives shall only be used in accordance with the manufacturer's instructions.

(35) Stack Requirements.

(a) Minimum stack height shall be 1.5 times the height of the building on which the stack is located. If the stack height is:(1) lower than 1.5 times the building height; or (2) lower than the height of an adjacent structure, an EPA Guideline air quality model shall be run to document that the operation of the applicable boiler(s) will not cause National Ambient Air Quality Standards exceedances. The air quality model documentation must be retained on site for as long as the boiler(s) are operational.

(b) Stacks shall not be equipped with rain protection of a type that restricts the vertical exhaust flow of the combustion gases as they are emitted to the ambient air. "Shanty caps", "egg beaters" and the like are prohibited.

(c) The stack shall be configured to discharge the combustion gases vertically upwards.

(36) Recordkeeping and Reporting.

(a) A recordkeeping system shall be established and implemented onsite and shall provide sufficient detail to document compliance.

(b) Recordkeeping shall include the following:

1. dates of boiler installation and first operation;

2. a monthly record of fuel type, fuel additives, fuel usage in gallons or cubic feet, and sulfur content, as certified by the fuel supplier;

3. a written record of all tune-ups, including inspections, maintenance, and results of the efficiency tests, and;

4. all purchase orders and invoices related to boiler combustion or emission rate.

(c) Documentation shall be maintained onsite that the boiler and its appurtenances, as designed and installed, will comply with the emission limitations when operated in accordance with the manufacturer's instructions. This documentation, including the manufacturer's operating instructions, shall be retained for as long as the boiler operates.

(d) All records shall be maintained up-to-date such that year-to-date information is readily available for Department examination. Records shall be kept for at least three calendar years.

(e) The person who is the owner or operator of an applicable boiler is subject to the reporting requirements of 310 CMR 7.12: *U Source Registration*.

(37) Prohibitions.

(a) Concealing of emissions is prohibited.

(b) Removal of air pollution control or monitoring equipment is prohibited.

(c) Natural draft rotary cup burners are prohibited.

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(49) *.*.*.

(50) Outdoor Hydronic Heaters - Applicability.

(a) 310 CMR 7.26(50) through (54) applies to any person who owns, operates, manufactures, supplies, distributes or sells, or any person who intends to distribute or sell, or market an outdoor hydronic heater for use in the Commonwealth of Massachusetts (Commonwealth) , except outdoor hydronic heaters rated with a heat input of one MMBtu/hr or greater that are subject to the Comprehensive Plan Application provisions at 310 CMR 7.02(5)(a)4.

(b) In addition to 310 CMR 7.26(50) through (54), Outdoor hydronic heaters may also be required to comply with other regulations governing design, manufacture and installation of boilers, including, but not limited to:

1. 522 CMR 5.00, Heating Boilers;

2. 522 CMR 6.00, Low-pressure Heating Boilers;

3. 527 CMR 4.00, Oil Burning Equipment, for outdoor hydronic heaters that are dual-fuel units; and

4. 780 CMR 6007, Solid Fuel-burning Appliances of the State Building Code.

(51) Definitions. The following words and phrases shall have the following meanings as they appear in 310 CMR 7.26(50) through (54). Where a term is defined in 310 CMR 7.00: *Definitions* and the definition also appears in 310 CMR 7.26(51) for purposes of 310 CMR 7.26(50) through (54) interpretation, the definition found in 310 CMR 7.26(51) shall govern.

At Retail means the sale by a commercial proprietor of an outdoor hydronic heater.

Clean Wood means wood that has no paint, stains, or other types of coatings, and wood that has not been treated with preservatives, including but not limited to, copper chromium arsenate, creosote, or pentachlorophenol.

Commercial-size Outdoor Hydronic Heater means a heater with a rated thermal output greater than 350,000 Btu/hr and a heat input design capacity less than one MMBtu/hr as rated by the test method identified in 310 CMR 7.26(54)(c)2.

Distribute or Sell means to distribute, sell, advertise for sale, offer for sale, lease, ship, deliver for shipment, release for shipment, or receive and (having so received) deliver or offer to deliver for use in the Commonwealth.

EPA's ETV Program means U.S. Environmental Protection Agency's Environmental Technology Verification Program.

Executive Summary means a report submitted to the Department that summarizes the results of testing compiled using tables 1, 2a and 2b, heating season and year-round weighted average, respectively, as incorporated in the EPA test method 28 for outdoor hydronic heaters for the applicable particulate matter standards.

Existing Unit or Existing Outdoor Hydronic Heater means an outdoor hydronic heater that is contracted to be paid in full, or installed and/or operated at the intended location of use prior to December 26, 2008.

Heater Efficiency means the ratio of the delivered useful heat output measured by the prescribed test method referenced in 310 CMR 7.26(54)(c)2. to the calculated heat input of the hydronic heater measured by the same test method.

Heating Season means the period beginning October 1st and ending May 15th.

Manufactured means built and operational, and subsequently ready for shipment (whether packaged or not).

Manufacturer means any person who constructs or imports into the United States an outdoor hydronic heater for use in the Commonwealth.

Model means all outdoor hydronic heaters offered for distribution or sale by a single manufacturer that are the same design and output capacity.

Opacity means the degree to which emissions other than water reduce the transmission of light and obscure the view of an object in the background.

Outdoor Hydronic Heater (OHH) or Heater means a fuel burning device:

(a) designated to burn wood or other approved solid fuels;

(b) that the manufacturer specifies for outdoor installation or installation in structures not normally occupied by humans (*e.g.*, garages); and

(c) heats building space and/or water via the distribution, typically through pipes, of a fluid heated in the device, typically water or a water/antifreeze mixture.

Operator means any person who owns or operates an outdoor hydronic heater in the Commonwealth.

Particulate Matter or PM means the total particulate matter measured in accordance with the test methods specified in 310 CMR 7.26(54)(c)2.

Residential-size Outdoor Hydronic Heater means a heater with a rated thermal output of 350,000 Btu/hr or less as rated by the test method identified in 310 CMR 7.26(54)(c)2.

Sale means the transfer of ownership or control.

Seller means any person who distributes or sells an outdoor hydronic heater for use in the Commonwealth.

Similar in All Material Respects means that the construction materials, exhaust and inlet air system, and other design features are within the allowed tolerances for components identified in 310 CMR 7.26(54)(e)1.

Startup Period means the time period beginning with flame stability after first charge of wood fuel or other approved solid fuel and is no longer than a two-hour duration. 310 CMR 7.26: Startup Period only includes initial startup where no previous coal bed exists. This does not include refueling.

(52) Requirements for Operators.

(a) On and after December 26, 2008 no person shall:

1. Purchase, install or allow the installation of an outdoor hydronic heater unless it has been certified in accordance with 310 CMR 7.26(54)(a) to meet the applicable emission standard set forth in 310 CMR 7.26(53)(a) or 310 CMR7.26(53)(b).

2. Site or install a residential-size outdoor hydronic heater that meets the emission standard at 310 CMR 7.26(53)(a), unless it is installed at least 50 feet from any

property line and 75 feet from any occupied dwelling that it is not serving at the time of installation.

3. Site or install a commercial-size outdoor hydronic heater that meets the emission standard defined in 310 CMR 7.26(53)(b), unless it is installed at least 275 feet or more from any property line and 300 feet from any occupied dwelling that it is not serving, at the time of installation, unless a variance has been granted pursuant to 310 CMR 7.26(52)3.a. through d. from the setback to the property line that allows a shorter distance than 275 feet.

a. Variance Procedure. An application for a variance from the setback to the property line shall be submitted to the Department by the owner prior to installation of the unit. The Department will not grant a variance from the required distance of 300 feet to the nearest occupied dwelling.

b. Prior to submitting an application to the Department, the applicant shall, at its sole expense, notify the following groups by certified mail of the request for a variance:

i. residents of any occupied dwelling within 500 feet of the proposed location of the unit;

ii. the board of health of the municipality in which the unit is to be located; and

iii. the board of health of the adjacent municipality if the unit is within 500 feet of an adjacent municipality.

c. Application Requirements. In the application for a variance, the owner shall:

i. Show that meeting the setback is not feasible, based solely on the size and configuration of the property on which the unit is to be installed. Feasibility shall not include consideration of cost to install the unit if the size of the property is sufficient to meet the setback.

ii. Include a detailed site plan that clearly shows the proposed location and distances of the unit relative to the applicant's property lines and the distances to all occupied dwellings or buildings within 500 feet of the unit, and the zoning of the adjacent properties;

iii. Include a copy of the notice and certified mail receipts showing the appropriate people were notified as required at 310 CMR 7.26(52)(a)3.b.

d. Criteria for Granting or not Granting the Variance.

i. Meeting the setback to the property line is not feasible based solely on the size and configuration of the property.

ii. In no case shall a variance be granted for a distance of less than 200 feet to the property line.

iii. Granting such a variance will not cause or contribute to a condition of air pollution.

e. Appeals of Determinations. The applicant or any party who is aggrieved by the decision issued by the Department may request an adjudicatory hearing on that determination in accordance with 310 CMR 1.00 and M.G.L. c. 30A.

4. Site or install an outdoor hydronic heater that meets the emission standard defined in 310 CMR 7.26(53)(a) or 310 CMR 7.26(53)(b), unless it has a permanent stack extending two feet higher than the peak of anyroof structure located within 150 feet of the outdoor hydronic heater, if the outdoor hydronic heater is installed less than 150 feet from the nearest occupied dwelling that it is not serving.

(b) Existing Units. All operators of existing outdoor hydronic heaters shall comply with the following requirements:

1. 310 CMR 7.26(52)(c) through 310 CMR 7.26(52)(j); and

2. have a permanent stack extending two feet higher than the peak of any roof structure located within 150 feet of the outdoor hydronic heater, if the outdoor hydronic heater is installed less than 150 feet from the nearest occupied dwelling that it is not serving. Such permanent stack shall be installed no later than March 1, 2009.

(c) Seasonal Limitations. No person shall cause, suffer, allow or permit the operation of an outdoor hydronic heater from May 16th to September 30th unless the outdoor hydronic heater has been certified in accordance with 310 CMR 7.26(54) to meet the emission standard set forth in 310 CMR 7.26(53)(a) or 310 CMR 7.26(53)(b) as applicable or it is on existing unit installed at least 500 feet from the nearest occupied dwelling that it is not serving.

(d) Prohibited Fuels. No person shall cause, suffer, allow or permit the burning of any of the following items in an outdoor hydronic heater:

1. Any wood that does not meet the definition of clean wood;

2. garbage;

3. tires;

4. lawn clippings, leaves, brush trimmings, or general yard waste;
5. materials containing asbestos,

6. materials containing lead, mercury, or other heavy or toxic metals;

7. materials containing plastic;

8. materials containing rubber;

9. waste petroleum products;

10. paints and paint thinners;

11. chemicals;

12. coal;

13. glossy or colored papers;

14. construction and demolition debris;

15. plywood;

16. particleboard;

17. salt water driftwood and other previously salt water saturated materials;

18. manure;

19. animal carcasses; and

20. asphalt products.

(e) Allowable Fuels. No person that operates an outdoor hydronic heater shall cause, suffer, allow or permit the use of a fuel other than the following:

1. Clean wood;

2. Wood pellets made from clean wood;

3. Home heating oil in compliance with the applicable sulfur content limit or natural gas may be used as starter fuels or substitute fuel in dual-fired outdoor hydronic heaters; and

4. Other biomass fuels as approved by the Department.

(f) Visible Emission Standard.

1. No person shall cause, suffer, allow or permit the emission of air contaminants from any residential-size outdoor hydronic heater or commercial-size outdoor hydronic heater to exceed an average of 20% opacity for two minutes in any one-hour period.

2. No person shall cause, suffer, allow or permit the emission of air contaminants from any commercial-size outdoor hydronic heater to exceed at any time 40% opacity for the first six minutes during the startup period of a new fire. For the remainder of the startup period no person shall cause or allow the emission of air contaminants from any outdoor hydronic heater to exceed a 20% opacity standard in any consecutive two minute average period. 310 CMR 7.26(52)(f)2. only applies to the initial firing of the unit where no coal bed exists and does not apply to refueling.

(g) No person shall cause, suffer, allow or permit the operation of any outdoor hydronic heater except in conformance with the manufacturer's operating and maintenance instructions.

(h) No person shall operate an outdoor hydronic heater using a rain cap unless this device is required by the manufacturer specifications.

(i) No person shall cause, suffer, allow or permit the operation of an outdoor hydronic heater in such a manner as to create a condition of air pollution as defined in 310 CMR 7.00.

(j) Enforcement. An operator of an outdoor hydronic heater shall comply with all applicable regulations, and state and local laws, including but not limited to local bylaws, regulations, and local ordinances. Operators are subject to the enforcement provisions specified at 310 CMR 7.52.

(53) Requirements for Sellers.

(a) Particulate Matter Emission Standards for Residential-size Outdoor Hydronic Heaters. On and after December 26, 2008, no person shall import, distribute or sell,

install or allow the installation of a residential-size outdoor hydronic heater for use in the Commonwealth unless it has been certified to meet a particulate matter emission limit of 0.32 lb/MMBtu heat output. In addition, within each of the burn rate categories as established in EPA test method 28 for OWHH, no individual test run shall exceed 18 grams per hour.

(b) Particulate Emission Standards Commercial-size Outdoor Hydronic Heaters. On and after December 26, 2008, no person shall import, distribute or sell, install or allow the installation of an outdoor hydronic heater for use in the Commonwealth unless it has been certified to meet a particulate matter emission standard of 0.32 lb/MMBtu heat output. In addition, within each of the burn rate categories as established in EPA test method 28 for OWHH, no individual test run shall exceed 20 grams per hour.

(c) Labeling. On and after December 26, 2008, no person shall import, distribute or sell, install or allow for installation an outdoor hydronic heater for use in the Commonwealth without meeting the labeling requirements in 310 CMR 7.26(54)(j).

(d) Notice to Buyers. No person shall distribute or sell an outdoor hydronic heater for use in the Commonwealth unless prior to any sale or lease agreement, the seller provides the buyer or lessee with a copy of 310 CMR 7.26(50) through (54), the owners manual, including operating and maintenance instructions, a written fact sheet provided by the Department and a copy of the certification as required by 310 CMR 7.26(54) of the model to be installed.

(e) Enforcement. Sellers shall comply with all applicable regulations, and state and local laws, including but not limited to local bylaws, regulations and ordinances. 310 CMR 7.26(53) is subject to the enforcement provisions specified at 310 CMR 7.52.

(54) Requirements for Manufacturers.

(a) Certification Requirement.

1. On and after December 26, 2008, no person shall import, distribute or sell, install or allow the installation of an outdoor hydronic heater for use in the Commonwealth unless the manufacturer has certified compliance with the requirements of 310 CMR 7.26(53)(a) or 310 CMR 7.26(53)(b) in accordance with the provisions of 310 CMR 7.26(54)(b). A certification submitted to the Department shall be valid for a period of five years unless revoked by the Department under 310 CMR 7.26(54)(g).

2. The date of certification shall be 30 days from the date postmarked on the envelope used to submit the certification to the Department, as required under 310 CMR 7.26(54)(b), unless the Department, within those 30 days, notifies the manufacturer that the date of certification shall be greater than 30 days.

(b) Certification Procedure. For each model, a manufacturer shall have at least one outdoor hydronic heater tested by an accredited laboratory in order to demonstrate that the model meets the applicable emission standard(s). The manufacturer shall submit an executive summary to the Department. The Department may request, at its discretion, the entire test report, including but not limited to, the raw data and notes taken at the applicable laboratory.
The certification shall include, but not be limited to, the following information that:

1. testing was conducted in accordance with EPA's test method 28 for OWHH or an alternative method approved by the Department;

2. testing was conducted by an accredited laboratory;

3. certification testing was performed for heating season use and/or year-round use;

4. testing results indicated that the outdoor hydronic heater meets the emission standards as defined in 310 CMR 7.26(53)(a) and 310 CMR 7.26(53)(b);

5. the manufacturer was not involved in conducting the testing procedures except for providing specifications and assembly drawings;

6. the accredited laboratory conducted a certification test on an outdoor hydronic heater similar in all material respects to other units of the model to be certified;

7. the test data was reviewed in accordance with EPA's ETV Program or, alternatively, an independent contractor approved by the Department who has no conflict of interest or financial gain in the outcome of the testing or by the Department in its discretion solely or in coordination with other NESCAUM state representatives; and

8. a responsible official certifies in accordance with 310 CMR 70.03(2) on forms prescribed and furnished by the Department.

(c) Testing Requirements.

1. Test Facility.

a. All emissions testing shall be conducted by an accredited, qualified, and independent testing laboratory that has no conflict of interest or financial gain in the outcome of the testing.

b. Manufacturers of outdoor hydronic heaters shall not involve themselves in the conduct of any emissions testing under 310 CMR 7.26(54)(c) or in the operation of the unit being tested, once actual testing has begun.

2. Test Method. Emission tests shall be conducted using one of the following:

a. EPA Test Method 28 OWHH; or

b. An alternative method approved by the Department.

3. Btu Rating. Testing to determine the heat output in MMBtu/hr shall be conducted according to the test method defined in 310 CMR 7.26(54)(c)2.

4. Test Protocols. If there is any deviation from the test method defined in 310 CMR 7.26(54)(c)2.a., the manufacturer of the outdoor hydronic heater shall provide the Department, or equivalent authority approved by the Department, with a test protocol for approval in accordance with the testing requirements in 310 CMR 7.26(54)(c) 45 days prior to the emission testing for certification. The Department shall approve or disapprove the proposed test protocol in writing within 30 days.

(d) Approved Test Facilities. An accredited laboratory shall conduct all of the testing, test reporting, and product inspection requirements of 310 CMR 7.26(50) through (54), but the manufacturer shall be responsible for ensuring that all information required pursuant to 310 CMR 7.26(50) through (54) is provided to the Department. Emission test reviews for certification shall be conducted by EPA's ETV Program or, alternatively, an independent contractor approved by the Department, in writing who has no conflict of interest or financial gain in the outcome of the testing. The Department may in its discretion, with reasonable notice, perform the review of testing results for certification of a model or individual outdoor hydronic heater.

1. Laboratory Accreditation Requirements. A laboratory shall be accredited:

a. by the U.S. Environmental Protection Agency (EPA) for testing wood-burning residential space heaters in accordance with 40 CFR Part 60, Subpart AAA;

b. by the American National Standards Institute (ANSI) to the International Standards Organization (ISO) Standard ISO/IEC Guide 65 General Requirements for Bodies Operating Product Certification Systems; or

c. by a nationally recognized accreditation body to ISO/IEC 17025, General Requirements for the Competence of Testing and Calibration Laboratories.

i. The nationally recognized accrediting body itself shall be accredited to, and operate under ISO Guide 58 (Calibration and Testing Laboratory Accreditation Systems – General Requirements for Operation and Recognition), and

ii. by a nationally recognized accreditation body to the American Society for Testing and Materials (ASTM) Standard Practice D7036-04; Competence of Air Emission Testing Bodies.

(e) Change in Design Parameter. A model shall require a new certification whenever any change is made in the design that is presumed to affect the particulate emission rate for that model. Changes that are presumed to affect particulate emission rates for models include, but are not limited to:

1. Tolerance changes: any change in the indicated tolerances of any of the following components is presumed to affect particulate emission rates if that change exceeds ±0.64 cm (± ¼") for any linear dimension and ±5% for any cross-sectional area relating to air introduction systems and catalyst bypass gaps unless other dimensions and cross-sectional areas are previously approved by the Department;

2. Firebox: dimensions;

3. Air Inductions Systems. cross–sectional area of restrictive air inlets, outlets and location, and method of control;

4. Baffles: dimensions and location;

5. Refractory/insulation: dimensions and location;

6. Catalyst: dimensions and location;

7. Catalyst bypass mechanism: dimensions, cross-sectional area, and location;

8. Flue gas exit: dimension and location;

9. Door and catalyst bypass gaskets: dimension and fit;

10. Outer shielding and coverings: dimension and location;

11. Fuel feed system;

12. Forced air combustion system: location and horsepower of blower motors and fan blade size.

(f) Change in Materials. A model shall require a new certification whenever any change is made in the materials that is presumed to affect the particulate emission rate for that model. Any change in the materials used, including but not limited to, the following components is presumed to affect emissions:

1. refractory/insulation;

2. door and catalyst bypass gaskets;

3. for catalyst equipped units – change in catalyst make, model or composition;

4. heat exchanger;

5. heating fluids.

(g) Revocation. Certification of an outdoor hydronic heater may be revoked by the Department for the following reasons, including but not limited to:

1. The outdoor hydronic heater does not meet the applicable particulate emission standard in 310 CMR 7.26(53)(a) or 310 CMR 7.26(53)(b) based on test data from retesting the original unit used for certification testing;

2. A finding that the certification test was not valid;

3. A finding that the unit does not comply with the labeling requirements detailed in 310 CMR 7.26(54)(j);

4. Failure to comply with recordkeeping requirements pursuant to 310 CMR 7.26(54)(l);

5. Physical examination showing that more than 20% of production units inspected are not similar in all material respects to the model used for certification testing;

6. Failure of the manufacturer to conduct a quality assurance program as detailed in 310 CMR 7.26(54)(h); or

7. Repeated field observed opacity violations of residential-size and commercial-size units and a determination by the Department that the model cannot consistently comply.

(h) Quality Assurance Program – 310 CMR 7.26(54)(h) shall only be effective if EPA's ETV Program is not the lead quality assurance verifier of outdoor hydronic heater lab certification testing procedures and emissions reporting for model/model line outdoor hydronic heater certifications. The manufacturer or its designee shall conduct a quality assurance program that, at a minimum, includes the following requirements:

1. The manufacturer or authorized representative shall have one in every 150 units produced of a model inspected to determine that the units are within applicable tolerances or to determine if there are any changes in material for all components that affect emissions as listed in 310 CMR 7.26(54)(e) and 310 CMR 7.26(54)(f). A qualified, independent third party contractor or consultant shall conduct the inspection.
2. The manufacturer or authorized representative shall be responsible for ensuring that an emission test is conducted by a qualified, independent third party testing contractor or consultant on a randomly selected unit produced of a model on the following schedule:

If certification test results were:	If yearly production per model is:	
	<500 total production	≥500 total production
>70% of the PM emission standard	When directed by the Department not to exceed one of every 500 units	Every 500 units or triennially (whichever is more frequent)
70% or less of the PM emission standard	When directed by the Department not to exceed one of every 1,000 units	Every 1,000 units or triennially (whichever is more frequent)
30% or less of the PM emission standard	Every 2,000 units	Every 2,000 units or annually (whichever is more frequent)

3. The emission test shall be conducted in conformity with 310 CMR 7.26(54)(c)2.

4. If the manufacturer uses a different material for the firebox, firebox component, or hydronic heating mechanism than the one used for certification testing, the first test shall be performed before 500 units of the modified unit are produced. The manufacturer shall submit an executive summary or if requested by the Department the entire testing results, including but not limited to, the raw data

and notes taken by the lab technicians, documenting the results of this emission test to the Department within 45 days of completion of testing.

(i) Notification by Manufacturers.

1. By April 30th each year, and as outdoor hydronic heaters are certified, manufacturers shall provide the following information in writing to any person to whom the manufacturer has distributed, intends to distribute, or actually distributes or sells outdoor hydronic heaters for use in the Commonwealth:

a. A list of all models of outdoor hydronic heaters that it manufactures for use in the Commonwealth; and

b. A list of models that have received certification to meet the particulate matter emission standards as set forth in 310 CMR 7.26(53)(a) and 310 CMR 7.26(53)(b) and the certification requirements as set forth in 310 CMR 7.26(54)(b) for use in the Commonwealth.

2. This information shall be kept by the manufacturer in accordance with 310 CMR 7.26(54)(l).

(j) Labeling Requirements. On and after December 26, 2008, manufacturers of outdoor hydronic heaters shall meet the following labeling requirement for units distributed or sold, offered for sale or leased for use in the Commonwealth:

1. Permanent Label. Every outdoor hydronic heater shall have a permanent label that shall:

a. Be made of a material expected to last the lifetime of the outdoor wood boiler.

b. Be affixed in a readily visible or accessible location.

c. Be affixed in such a manner that it cannot be removed from the outdoor wood boiler without damage to the label.

d. Display the following information on the label:

i. name and address of the manufacturer;

ii. date of manufacture;

iii. model name and number;

iv. serial number;

v. thermal output rating in Btu/h;

vi. certified emission rate in heat output expressed as lb/MMBtu

vii. certified particulate emission rate in grams per hour; and

viii. a statement as to whether the unit is certified to be used year-round or only during the heating season or both.

2. Temporary Label. All units shall have attached to them a temporary label that shall contain the following:

a. A statement indicating the certification status of the model;

b. A graphic representation of the composite particulate matter emission rate as determined in the certification test, or as determined by the Department;

c. A graphic representation of the efficiency of the model;

d. A numerical expression of the heat output range in British thermal units per hour (Btu/hr) rounded to the nearest 100 Btu/hr; and

e. Statements regarding the importance of proper operation and maintenance.

3. The temporary label shall:

a. Not be combined with any other label or information; and

b. Be attached to the unit in such a manner that it can be easily removed by the consumer.

(k) Owner's Manual. On and after December 26, 2008, each outdoor hydronic heater offered for sale or lease for use in the Commonwealth shall be accompanied by an owner's manual that shall be published by the manufacturer and contain all the following information:

1. Proper thermal output capacity for matching with the building's thermal demands;

2. Proper installation information;

3. Operation and maintenance information;

4. Wood or other approved solid fuel loading procedures;

5. List of approved solid fuels;

6. List of prohibited fuels;

7. Recommendations on wood or other approved solid fuel selection;

8. Fire starting procedures;

9. Proper use of air flow devices, if applicable;

10. Ash removal procedures;

11. For catalytic models, information pertaining to maintaining catalyst performance, maintenance procedures, procedures for determining catalyst failure or deterioration, procedures for replacement, and information on warranty rights; and

12. Persons operating this hydronic heater are responsible for operation of the hydronic heater so as not to cause a condition of air pollution as defined in 310 CMR 7.01(1).

(l) Recordkeeping. Every manufacturer of an outdoor hydronic heater shall keep records demonstrating compliance 310 CMR 7.26(54). These records shall be kept and maintained by the manufacturer. These records shall be kept on site for a period not less than five years and shall be made available to the Department within 30 days of a written request.

(m) Enforcement. A manufacturer of an outdoor hydronic heater shall comply with all applicable regulations, and state and local laws, including but not limited to local bylaws, regulations and ordinances. 310 CMR 7.26(54)(i) through (l) are subject to the enforcement provisions specified at 310 CMR 7.52.

..*. Note: EPA has not approved 310 CMR 7.26 (1) through 7.26 (19), 7.26(26), 7.26(28)(a), or 310 CMR 7.26 (38) through 7.26 (49) into the Massachusetts State Implementation Plan (SIP).