

Date XX/XX/20XX	Email address	Grantee Representative Submitting Request	DOE Project Officer	State/Grantee (abbreviation of State)	Relevant SWS (must include letter(s), e.g. 4.1103.1a)	SF	MH	MF	Proposed State Standard:	Difference between proposed standard and SWS:	Specific conditions where variance will apply:	Reasoning/Justification:
10/19/2018	lmoberg@mainehousing.org	Liz Moberg	Floris Weston	ME	4.1103.2e	x			Interior holes will be patched with applicable materials to ensure a permanent air seal. The patched surfaces will have no cracks or excessive material and will meet industry standards for first-coat mud technique.	SWS specifies interior holes will be coated and patched to match original interior surface. Proposed standard specifies good seal and industry standard first-coat mud technique.	In single family homes where dense pack insulation is installed through drilled holes on interior walls.	Matching the interior surface finish in most cases is not feasible due to original paint being unavailable, color variations due to age or the presence of wallpaper. The objective, "Ensure house is returned to watertight and clean condition", can be met by patching with good workmanship.
10/19/2018	lmoberg@mainehousing.org	Liz Moberg	Floris Weston	ME	3.1001.3b 3.1003.1b, 3.1003.3b	x			Sealing will prevent air movement and will be verified using IR camera scan with blower door at 50pa when Delta T is within the range of the specific thermal imager being used. If Delta T is not sufficient, blower door test result at 50pa will be compared to an air sealing target to evaluate effective air sealing.	SWS specifies chemical smoke test to verify air sealing across attic plane. Proposed standard specifies other means in line with industry standards.	In single family homes where air sealing measures are installed in areas adjacent to attics: dropped ceilings, soffits, above closets and tubs.	Requiring chemical smoke tests during weatherization installation is not efficient or practical for MaineWAP. The objective is achieved by audit and inspection processes: Contractors are given a CFM50 target and they test out with blower doors. QCIs use IR and blower door but still <i>may</i> use chemical smoke to trouble shoot if the target is not achieved.
10/19/2018	lmoberg@mainehousing.org	Liz Moberg	Floris Weston	ME	4.1003.2a, 4.1005.5b, 4.1005.6a, 4.1101.1b, 4.1103.1a, 4.1103.2c	x			Using fill tube, 100% of each cavity will be filled to a consistent density: Cellulose material will be installed to a minimum density of 3.5 pounds per cubic foot Loose fiberglass material will be installed and will be specifically approved for air flow resistance per manufacturer's recommendation The number of bags installed will be confirmed and will match the number required on the coverage chart Insulation consistency will be verified using IR scans when Delta T is within the range of the specific thermal imager being used.	Propose to eliminate <i>only</i> chemical smoke testing from the list of specifications. SWS specifies chemical smoke test to verify consistency of dense pack cellulose. Proposed standard keeps all other methods on the list, plus clarifies parameters of IR testing.	In single family homes where dense pack insulation is installed.	Requiring chemical smoke tests during weatherization installation is not efficient or practical for MaineWAP. The objective is achieved by using all the other methods described in the specification.
11/15/2018	lmoberg@mainehousing.org	Liz Moberg	Floris Weston	ME	5.3003.2e,f,g,h, i,j 5.3003.14c,d,e 5.3104.2f,g	x			Maine Weatherization Standards 2.2.: Energy auditors shall comply with the rules of the Maine Fuel Board. These rules are reproduced below: 2.2.2b: b. Prior to performing a combustion safety and efficiency test, a limited energy auditor technician shall obtain the manufacturer's installation and operating instructions for the specific equipment to be tested.	SWS states that combustion analysis will be conducted inside the combustion appliance vent and various test data reported and acted upon. Maine WAP and the Maine Fuel Board requires any tester who is not a Maine licensed Heating Technician to have a Maine Fuel Board Limited Energy Auditor Technician License, (Oil and Gas) and in addition, to obtain a copy of the Manufacturer's installation and operating instructions (equipment manual) before performing any testing in the appliance vent of an atmospheric or fan-assisted draft combustion appliance. (For sealed combustion appliances, it is permissible to measure vent CO in undiluted flue gas in the outdoor vent, where possible, even if there is no equipment manual.)	When an operation manual for an atmospheric or fan-assisted draft combustion appliance is not obtainable.	The Maine Fuel Board has jurisdiction over combustion appliance testing: see 3.4.2 and 3.15.2 at http://www.maine.gov/sos/cec/rules/02/chaps02.htm#658 . Maine WAP field staff all carry the required licenses. Energy auditors must make every effort to obtain an equipment manual on site or on line. Occasionally a manual is not obtainable; in this case the local jurisdiction does not allow us to perform the testing outlined in specifications listed in this Variance Request. Instead, the assessment will consist of a visual inspection, CAZ pressure test, spillage test and ambient CO measurement. The auditor may order a CTE by a licensed Heating Technician if there is any concern about the heating appliance, whereby vent combustion analysis measurements are provided. In addition, to ensure safe and efficient operation of combustion heating appliances, Maine WAP policy requires a CTE for combustion heating appliances that have not been serviced by a licensed Heating Technician within the previous 12 months (for oil) to 24 months (for gas).

Date XX/XX/20XX	Email address	Grantee Representative Submitting Request	DOE Project Officer	State/Grantee (abbreviation of State)	Relevant SWS (must include letter(s), e.g. 4.1103.1a)	SF	MH	MF	Proposed State Standard:	Difference between proposed standard and SWS:	Specific conditions where variance will apply:	Reasoning/Justification:
11/15/2018	lmoberg@mainehousing.org	Liz Moberg	Floris Weston	ME	5.3003.2a,b,c 5.3003.14a 5.3104.2a,b,c,d	x			Maine Weatherization Standards 2.2.: a. A limited energy auditor technician is limited to performing combustion safety and efficiency testing on heating or water heating equipment with the appropriate license from the Maine Fuel Board. Limited energy auditor technicians may not make any adjustments to any space heating or water heating equipment.	SWS requires work to ensure that oil filter, nozzle and fuel pressure are correct per manufacturer/industry guidelines and other parts replacement, adjustments and licensed heating technician assessments. Maine Standard will omit these from the heating system specifications.	Whenever combustion appliances are present.	The local jurisdiction, the Maine Fuel Board, does not allow any person who does not have a Burner Technician License to make any adjustments to any heating systems. Maine WAP field staff carry only the Limited energy Auditor Technician License. See 3.4.2 and 3.15.2 at http://www.maine.gov/sos/cec/rules/02/chaps02.htm#658 .
11/15/2018	lmoberg@mainehousing.org	Liz Moberg	Floris Weston	ME	4.1601.1a	x			Maine Weatherization Standards 11.1.5: Active ductwork outside the thermal/pressure envelope must be repaired if damaged, sealed, and insulated. And 11.1.1: a. If possible, convert the unconditioned space where the ducts are located to a conditioned space, making sure the air and thermal barriers are effectively installed.	SWS calls for removal and replacement of low R-value flex duct. Maine Standard calls for repair, if damaged. In addition, best practice in our climate is to convert the area containing the ducts into a conditioned or better-insulated space.	In scenarios where DOE-approved software shows that removing and replacing existing low r-value ducts is not cost-effective, or if adding insulation to the walls containing the ducts has a higher SIR.	Insulated flex duct is not common in Maine's single family homes, but is occasionally found in a crawl spaces under conditioned spaces. Incurring costs to remove and replace low R-value flex ducts is unlikely to be cost effective. Alternatively, our practice is to insulate the surrounding space walls which is usually cost effective and also meets other objectives of 4.1601.1: "Minimize thermal conductance of the duct system" and "Improve comfort in rooms."
11/15/2018	lmoberg@mainehousing.org	Liz Moberg	Floris Weston	ME	2.0201.1i	x			Maine Weatherization Standards 14.8.1 The purpose of worst-case depressurization testing is to ensure the proper venting of all vented combustion devices in a dwelling. This testing must always be done before and after all other weatherization work has been completed. MaineHousing strongly encourages that testing be completed by a certified individual at the end of every work day before the workers leave the site.	SWS states combustion safety testing will be performed at the end of each workday where air sealing is performed. Maine WAP requires combustion safety testing prior to and after completion of all weatherization work. In addition, Maine WAP Standards strongly encourages that testing be completed by a certified individual at the end of every work day before the workers leave the site.	Whenever combustion appliances are present.	Due to large geographical areas across 9 regions and the dependence on private Wx Technicians who are not certified to perform combustion safety testing, Maine WAP Standards require auditors to perform combustion safety testing prior to prescribing Wx measures. QCI inspectors confirm the post Wx depressurization value and perform post Wx combustion safety testing thereby fulfilling the stated objective to ensure completed work has not adversely affected the operation of the combustion appliances.

Date XX/XX/20XX	Email address	Grantee Representative Submitting Request	DOE Project Officer	State/Grantee (abbreviation of State)	Relevant SWS (must include letter(s), e.g. 4.1103.1a)	SF	MH	MF	Proposed State Standard:	Difference between proposed standard and SWS:	Specific conditions where variance will apply:	Reasoning/Justification:
11/15/2018	lmoberg@mainehousing.org	Liz Moberg	Floris Weston	ME	2.0201.3b	x			Maine Weatherization Standards 2.2.: Energy auditors shall comply with the rules of the Maine Fuel Board. These rules are reproduced below: 2.2.2b: b. Prior to performing a combustion safety and efficiency test, a limited energy auditor technician shall obtain the manufacturer's installation and operating instructions for the specific equipment to be tested.	SWS states that CO will be tested for in undiluted flue gases of combustion appliances. Maine WAP and the Maine Fuel Board requires any tester who is not a Maine licensed Heating Technician to have a Maine Fuel Board Limited Energy Auditor Technician License, (Oil and Gas) and in addition, to obtain a copy of the Manufacturer's installation and operating instructions (equipment manual) before performing any testing in the appliance vent of an atmospheric or fan-assisted draft combustion appliance. (For sealed combustion appliances, it is permissible to measure vent CO in undiluted flue gas in the outdoor vent, where possible, even if there is no equipment manual.)	When an operation manual for an atmospheric or fan-assisted draft combustion appliance is not obtainable.	The Maine Fuel Board has jurisdiction over combustion appliance testing: see 3.4.2 and 3.15.2 at http://www.maine.gov/sos/cec/rules/02/chaps02.htm#658 . Maine WAP field staff all carry the required licenses. Energy auditors must make every effort to obtain an equipment manual on site or on line. Occasionally a manual is not obtainable; in this case the assessment will consist of a visual inspection, CAZ pressure test, spillage test and ambient CO measurement. The auditor may order a CTE by a licensed Heating Technician if there is any concern about the heating appliance, whereby vent combustion analysis measurements, including vent CO, are provided. In addition, to ensure safe and efficient operation of combustion appliances, Maine WAP policy requires a CTE for combustion appliances that have not been serviced by a licensed Heating Technician within the previous 12 months.
11/15/2018	lmoberg@mainehousing.org	Liz Moberg	Floris Weston	ME	2.0201.2f	x			Maine Weatherization Standards 10.6.1,2:2. There may be situations where the costs of a new installation or the repair of an existing installation of a solid fuel appliance may be too expensive for the Maine Weatherization Program to incur.	SWS calls for replacement of structurally damaged solid fuel heating appliances. Maine WAP allows for deferral of service when replacement cost is prohibitive.	Where replacement cost of a solid fuel heating appliance is deemed outside the scope of weatherization.	Solid fuel appliance replacements fall under Health and Safety funds. It is preferable to source CHIP or other non-WAP funding to address tasks of this magnitude when possible. In some cases it may be necessary to defer weatherization until replacement is completed with other funding.
11/15/2018	lmoberg@mainehousing.org	Liz Moberg	Floris Weston	ME	7.8103.1a	x			Maine Weatherization Standards 2.2.: Energy auditors shall comply with the rules of the Maine Fuel Board. These rules are reproduced below: 2.2.2b: b. Prior to performing a combustion safety and efficiency test, a limited energy auditor technician shall obtain the manufacturer's installation and operating instructions for the specific equipment to be tested.	SWS states that combustion analysis will be conducted inside the combustion appliance vent and various test data reported and acted upon. Maine WAP and the Maine Fuel Board requires any tester who is not a Maine licensed Heating Technician to have a Maine Fuel Board Limited Energy Auditor Technician License, (Oil and Gas) and in addition, to obtain a copy of the Manufacturer's installation and operating instructions (equipment manual) before performing any testing in the appliance vent of an atmospheric or fan-assisted draft combustion appliance. (For sealed combustion appliances, it is permissible to measure vent CO in undiluted flue gas in the outdoor vent, where possible, even if there is no equipment manual.)	When an operation manual for an atmospheric or fan-assisted draft combustion water heater is not obtainable.	The Maine Fuel Board has jurisdiction over combustion appliance testing: see 3.4.2 and 3.15.2 at http://www.maine.gov/sos/cec/rules/02/chaps02.htm#658 . Maine WAP field staff all carry the required licenses. Energy auditors must make every effort to obtain an equipment manual on site or on line. Occasionally a manual is not obtainable; in this case the assessment will consist of a visual inspection, CAZ pressure test, spillage test and ambient CO measurement. The auditor may order a CTE by a licensed Heating Technician if there is any concern about the combustion water heater. Either or both assessments would identify potential health and safety issues.