

Vermont Department of Environmental Conservation

Agency of Natural Resources

Air Quality and Climate Division Davis Building, 2<sup>nd</sup> Floor One National Life Drive Montpelier, VT 05620-3802 (802) 828-1288

January 13, 2015

Mr. Frank Saeli Econoburn Boilers, LLC 2 Central Avenue Brocton, NY 14716

SUBJECT: Phase II Certification of Econoburn Boilers, LLC Model EBW200-170 Outdoor Wood Boiler under Section 5-204 of the Vermont Air Pollution Control Regulations

Dear Mr. Saeli:

The Vermont Air Quality & Climate Division (AQCD) has completed its review of the information Econoburn Boilers, LLC (Econoburn) submitted to this office, including the June 13, 2014 test report prepared by Brookhaven National Laboratory (BNL), regarding the Model EBW200-170 outdoor wood-fired boiler (OWB). The test was conducted according to the BNL partial thermal storage test method (A Test Method for Certification of Cord Wood-Fired Hydronic Heating Appliances with Partial Thermal Storage: Measurement of Particulate Matter (PM) and Carbon Monoxide (CO) Emissions and Heating Efficiency of Wood-Fired Hydronic Heating Appliances with Partial Thermal Storage). The AQCD has reviewed the BNL report and approves the use of this test method. The AQCD's authority to accept the use of alternative emission test methods for the purpose of OWB certification is included in the Air Pollution Control Regulations §5-204(e)(3)(iv)(C).

The test results indicate that the Model EBW200-170 particulate matter emissions were 0.162 lbs/million BTUs of heat output (year round weighted average), which is lower than Vermont's Phase II emission limit of 0.32 lbs/million BTUs of heat output. In addition, the test results indicate that the highest grams/hour emission rate for any individual test run was 6.68 which is lower than the 18 grams/hour maximum set by §5-204(e)(2)(ii) of the Air Pollution Control Regulations (APCR). Since the AQCD has approved the test method and the testing was conducted at an EPA test laboratory, the AQCD is willing, for this particular test series, to waive the requirement in §5-204 regarding 30 days prior notice to the AQCD of the testing.

Thank you for providing this office with detailed engineering drawings and specifications for the Model EBW200-170, as required by \$5-204(e)(3)(i). We will expect that all units designated as the EBW200-170 will have the same specifications, within acceptable manufacturing tolerances, and that any components of these units that may affect emissions will be composed of the same materials as those in the tested unit. Please let me know immediately if this assumption is not accurate.

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To preserve, enhance, restore, and conserve Vermont's natural resources, and protect human health, for the benefit of this and future generations.

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Based on the AQCD's review of the information submitted by Econoburn and the conditions noted above concerning specifications and materials, the AQCD has determined that the Econoburn Model EBW200-170 OWB complies with the Phase II emission limit in §5-204(e)(2)(ii) of the APCR and that all units with the EBW200-170 model designation may be distributed or sold for use in Vermont on or after the date of your receipt of this letter. A requirement of this certification is that each EBW200-170 distributed or sold for installation in Vermont must include an external water storage tank with a volume of at least 379 gallons (equivalent to the volume of water used during the test of this OWB). This certification shall expire five (5) years after the date of its issuance, unless revoked sooner pursuant to APCR §5-204(e)(4).

I would like to take this opportunity to remind you of a related obligation that Econoburn has under APCR §5-204(e)(5), "Notification by Manufacturers". When an OWB model is certified, this subsection requires the manufacturer to give written notification, within 30 days of receiving the certification, to its dealers and others who sell or may be selling your OWBs for use in Vermont. This notice should list all the OWB models being sold by Econoburn and specifically identify the Model EBW200-170 as having been approved to be distributed or sold for use in Vermont. Please provide a copy of this written notice and a list of the addressees and their locations to this office when the mailing is completed.

Thank you for Econoburn's interest in reducing the air contaminant emissions from OWBs. If you have any questions about this letter, please contact me or John Wakefield of my staff at (802) 828-1288.

Sincerely,

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Heidi Hales, Director Air Quality & Climate Division

cc: Amanda Aldridge, USEPA, OAQPS, RTP, NC Lisa Rector, NESCAUM

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