



Vermont Department of Environmental Conservation

Air Quality and Climate Division
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Montpelier, VT 05620-3802
(802) 828-1288

Agency of Natural Resources

February 4, 2014

Zachary Kelly
Earth Manufacturing, LLC
P.O. Box 310
Mountain Grove, MO 65711

SUBJECT: Phase II Certification of Earth Manufacturing, LLC Klear Sky 400 Outdoor Wood Boiler under Section 5-204 of the Vermont Air Pollution Control Regulations

Dear Mr. Kelly:

The Vermont Air Quality & Climate Division (AQCD) has completed its review of the information Earth Manufacturing, LLC submitted to this office, including the February 16, 2013 test report (Project # 018-HHW-018-1) prepared by Dirigo Laboratories, Inc. (Dirigo), regarding the Klear Sky 400 outdoor wood-fired boiler (OWB). The test results indicate that the Klear Sky 400's particulate matter emissions were 0.29 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 5.13 which is lower than the 18 grams/hour maximum set by §5-204(e)(2)(ii) of the Air Pollution Control Regulations (APCR). USEPA has reviewed the Dirigo test report and has approved the test methods and results. The test methods used by Dirigo are also acceptable under APCR §5-204. Since USEPA has approved the test results and the testing was performed by an EPA accredited laboratory, the AQCD is willing, for this particular test series, to waive the requirement in §5-204 regarding prior notice to the AQCD of the testing.

Thank you for providing this office with detailed engineering drawings and specifications for the Klear Sky 400, as required by §5-204(e)(3)(i). We will expect that all units designated with the model number Klear Sky 400 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.

Based on the AQCD's and USEPA's review of the information submitted by Earth Manufacturing, LLC and the conditions noted above concerning specifications and materials, the AQCD has determined that the Klear Sky 400 OWB complies with the Phase II emission limit in §5-204(e)(2)(ii) of the APCR and that all units with the Klear Sky 400 model designation may be distributed or sold for use in Vermont on or after the date of your receipt of this letter. This certification shall expire five (5) years after the date of its issuance, unless revoked sooner pursuant to APCR §5-204(e)(4).

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I would like to take this opportunity to remind you of a related obligation that Earth Manufacturing, LLC 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 Earth Manufacturing, LLC and specifically identify the Model E4 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 Earth Manufacturing, LLC'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,



Elaine O'Grady, Director
Air Pollution Control Division

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