



State of New Jersey

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Original signed by Assistant Director Preczewski on 10/2/09

TO: AQPP Permit Evaluators

FROM: John Preczewski, Assistant Director, Air Quality Permitting Program

SUBJECT: E85 and N.J.A.C. 7:27-16 Applicability

DATE: October 2, 2009

This memorandum provides guidance on how E85 refueling dispensers should be evaluated for air pollution control permit applications. E85 is a fuel blend of 85 % ethanol and 15 % gasoline that can be used in vehicles specifically designed to use this blend. Typically, these vehicles may also use regular gasoline.

E85 is a blend of volatile organic compounds (VOC). Its use is regulated pursuant to N.J.A.C. 7:27-16 "Control and Prohibition of Air Pollution by Volatile Organic Compounds." Although gasoline is a component of the blend, E85 does not fall under the definition of "gasoline" which N.J.A.C. 7:27-16.1 defines as, "any petroleum distillate or petroleum distillate/oxygenated blend having a Reid vapor pressure of four pounds per square inch (207 millimeters of mercury) absolute or greater, and commonly or commercially known or sold as gasoline." E85 is not commercially known or sold as gasoline. Gasoline is a petroleum derived liquid mixture, while E85 contains mostly ethanol. All cars that are able to burn gasoline can run on a blend of gasoline with an ethanol content of up to 10%. This blend is sold as gasoline to the public. However, E85 cannot be distributed and sold as "gasoline" since vehicles must be specifically designed for its use.

E85 is subject to N.J.A.C. 7:27-16.4 "VOC Transfer Operations, Other Than Gasoline," and not N.J.A.C. 7:27-16.3 "Gasoline Transfer Operations." Consequently, pursuant to N.J.A.C. 7:27-16, only Stage I controls, involving the transfer of E85 into any receiving vessel, and not Stage II controls, involving the transfer of E85 into a vapor laden vehicular fuel tank, will be required. In addition, the AQPP has concluded that the installation of Stage II controls should not be considered when evaluating compliance with other sections of N.J.A.C. 7:27. The basis for this conclusion is as follows:

1. The Federal Clean Air Act requires that all passenger cars manufactured after 2000 have onboard refueling vapor recovery (ORVR) installed. <http://www.fueleconomy.gov/feg/byfueltype.htm> shows no vehicles which can use E85 as being manufactured prior to 2000. ORVR, which captures refueling emissions using a carbon canister, should assist in minimizing VOC emissions when E85 is pumped into vehicles.
2. The California Air Resources Board (ARB) issued Executive Order G-70-212, which allowed E85 dispensing facilities to continue to operate without Stage II equipment until ARB certifies the equipment. ARB also concluded that E85 dispensing facilities operating without Stage II would have no impact on ozone attainment.
3. The New York Department of Environmental Conservation has issued a number of Stage II variances for E85 dispensing facilities due to technical and economic infeasibility. The predicted low throughputs and the cost of the Stage II systems resulted in a cost per ton was well beyond the “reasonably available.”
4. The vapor pressure of gasoline is 33% higher than that of E85. This will result in fewer emissions from the use of E85.

Although Stage II controls will not be required, compliance with all other applicable regulations must be demonstrated before an APC permit application can be issued for E85 dispensing equipment. Also, please note that E85 dispensing facilities do not qualify for General Permit GP-004, “Storage and Transfer of Service Station Fuels at Gasoline Dispensing Facilities.”