

January 24, 2005

Mr. James W. Klickovich  
Alternate Authorized Account Representative  
Environmental Manager  
P.O. Box 6066  
Newark, DE 19714-6066

Re: Petition to Apply Appendix E Test Data Retroactively to Units 002001 and 003001 at the Carll's Corner Generating Station (Facility ID (ORISPL) 2379)

Dear Mr. Klickovich:

The United States Environmental Protection Agency (EPA) has reviewed the November, 17, 2004 petition under §75.66 from Conectiv Atlantic Generation, LLC (CAG), in which CAG requested to use Appendix E correlation curves developed in October, 2004 to recalculate the 2004 ozone season<sup>1</sup> nitrogen oxides (NO<sub>x</sub>) mass emissions for Units 002001 and 003001 at its Carll's Corner, New Jersey facility. CAG further requested that the Carll's Corner unit's NO<sub>x</sub> allowance accounts be "held open" until EPA approves or denies the petition.

As discussed below, EPA conditionally approves CAG's request to use data obtained from the October, 2004 emission testing to recalculate the 2004 ozone season NO<sub>x</sub> mass emissions for Units 002001 and 003001. However, EPA denies CAG's request concerning the units' NO<sub>x</sub> allowance accounts.

#### Background

Units 002001 and 003001 at CAG's Carll's Corner, New Jersey facility are simple-cycle combustion turbines that combust oil and gas. The units commenced commercial operation prior to November 15, 1990 and are therefore exempt from the Acid Rain Program, under 40 CFR §72.6(b)(1). However, the units are subject to the NO<sub>x</sub> Budget Trading Program, under N.J.A.C. 7:27-31.14(i). This regulation requires CAG to continuously monitor and report the ozone season NO<sub>x</sub> mass emissions and heat input for Units 002001 and 003001, in accordance with 40 CFR part 75, subpart H, starting in 2002. Under the NO<sub>x</sub> Budget Trading Program, CAG must hold NO<sub>x</sub> allowances in each unit's NO<sub>x</sub> allowance account, as of the NO<sub>x</sub> allowance transfer deadline, equal to the respective unit's ozone season NO<sub>x</sub> mass emissions, starting with the 2003 ozone season.

Units 002001 and 003001 each meet the definition of a "peaking unit", in §72.2. Therefore, CAG elected to use the methodology in Appendix E of Part 75 to satisfy the

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<sup>1</sup> The ozone season extends from May 1 through September 30.

monitoring and reporting requirements of the NO<sub>x</sub> Budget Program. Appendix E applies only to oil- and gas-fired peaking units and requires emission testing to be performed to develop fuel-specific correlation curves of NO<sub>x</sub> emission rate versus heat input rate. These correlation curves are used to estimate the hourly NO<sub>x</sub> emissions. CAG developed the necessary Appendix E correlation curves for Units 002001 and 003001 in May and July, 2003.

The 2004 ozone season NO<sub>x</sub> mass emissions reported by CAG for Units 002001 and 003001 were calculated using the May and July, 2003 correlation curves. However, on May 8, 2002, CAG had entered into an Administrative Consent Order (ACO) with the New Jersey Department of Environmental Protection (NJDEP), under which CAG agreed to install water injection technology on Units 002001 and 003001 to reduce the NO<sub>x</sub> emissions. The NO<sub>x</sub> emission controls were first used on April 15, 2004 and remained in service throughout the 2004 ozone season. Therefore, the May and July, 2003 correlation curves predated the installation and operation of the emission controls, and the reported NO<sub>x</sub> emission rates for the 2004 ozone season are considerably higher than the actual NO<sub>x</sub> emissions. CAG demonstrated this in October, 2004 by conducting additional Appendix E tests with the emission controls operating normally.

In view of the fact that the 2004 ozone season NO<sub>x</sub> mass emissions from Units 002001 and 003001 were significantly over-reported, CAG submitted a petition to EPA on November 17, 2004, requesting to recalculate the 2004 ozone season NO<sub>x</sub> mass emissions for these units using the October, 2004 correlation curves.

#### EPA's Determination

EPA, in consultation with NJDEP, conditionally approves CAG's request to use data from the October, 2004 Appendix E retests to recalculate the 2004 ozone season NO<sub>x</sub> mass emissions for Carll's Corner Units 002001 and 003001. EPA is approving this one-time retrospective application of Appendix E test data because CAG: (a) installed NO<sub>x</sub> emission controls on these units just prior to the 2004 ozone season; (b) operated the emission controls throughout the ozone season; and (c) demonstrated by the October, 2004 testing that actual emissions reductions have been achieved. EPA believes that CAG could (and should) have conducted the Appendix E retesting immediately following the installation of the emission controls, rather than waiting until after the ozone season. Indeed, CAG failed to explain why it did not retest on a timely basis. However, EPA also believes it is appropriate for CAG to realize some benefit from the NO<sub>x</sub> emission reductions achieved. The conditions of this approval are as follows:

- (1) The highest NO<sub>x</sub> emission rates obtained from the October, 2004 testing must be used to recalculate the 2004 ozone season NO<sub>x</sub> mass emissions for each unit, i.e., 0.234 lb/mmBtu for Unit 002001 and 0.205 lb/mmBtu for Unit 003001.
- (2) The approved NO<sub>x</sub> emission rates in paragraph (1) may only be used for hours in which the water injection rate was within the acceptable parametric limits, using the algorithm approved by NJDEP. For any hour in which the water injection rate

was outside these limits, CAG must report the NO<sub>x</sub> emission rate from the applicable May or July, 2003 correlation curve.

- (3) For all future retests of Units 002001 and 003001, CAG must abide by section 2.2 of Appendix E, which specifies that a new correlation curve for a particular type of fuel may not be used to report the NO<sub>x</sub> emission rate until the first hour in which that fuel is burned after completion of the retest. Therefore, the NO<sub>x</sub> correlation curves derived from any of the future retests may not be used retrospectively.

EPA is not approving CAG's request to use the fuel-specific correlation curves developed in October, 2004 to recalculate the 2004 ozone season NO<sub>x</sub> mass emissions for the units because EPA maintains that the requirement to first complete correlation curve testing before using the correlation curves for reporting of emissions is important and consistent with EPA's overall approach concerning quality assurance, and data validation for continuous emissions monitoring systems and other monitoring methodologies under part 75. Under that approach, the results of quality assurance testing and data validation are generally applied on a prospective, not a retrospective, basis. The rationale for this prospective approach is that the validation of data is made at the time of testing, and when a test is passed or failed, it is not known what the data quality was before the test and at what precise point in time the data became valid or invalid. Consequently, the time of the test is used as the marker for starting a period of valid or invalid data. For similar reasons, EPA believes that the same, prospective approach should be used for correlation curve testing under Appendix E. Any source, wishing to utilize the Appendix E excepted method must first develop the correlation curves, and then apply the correlation curves to hourly operation to determine NO<sub>x</sub> emission rates until re-testing is required.

Finally, EPA denies CAG's request to "hold open" the NO<sub>x</sub> allowance accounts for Units 002001 and 003001 beyond the November 30, 2004 allowance transfer deadline. The petition procedures allow for petitions for alternatives to the monitoring and reporting requirements for the NO<sub>x</sub> Budget Trading Program, not for exceptions to the NO<sub>x</sub> allowance-tracking-system and NO<sub>x</sub> allowance-holding requirements (such as the allowance transfer deadline and the limitation on NO<sub>x</sub> allowance transfers submitted after the allowance transfer deadline).

EPA notes that the allowance transfer deadline applies to NO<sub>x</sub> allowance transfers, not resubmissions of 2004 ozone season emissions data. If CAG resubmits 2004 ozone season emissions data for the units by January 31, 2005, EPA will use the resubmitted data in determining whether the units had enough NO<sub>x</sub> allowances in their allowance accounts, as of the allowance transfer deadline, to cover their emissions.

EPA's determination relies on the accuracy and completeness of CAG's November 17, 2004 petition and is appealable under Part 78. If you have any questions regarding this determination, please contact Matthew Boze of my staff, at (202) 343-9211.

Sincerely,

/s/

Sam Napolitano, Director  
Clean Air Markets Division

Attachment

cc: Ann Zownir, USEPA Region 2  
John Jenks, NJDEP  
Frederick Ballay, NJDEP-BTS  
David Langseder, Conectiv