December 21, 2007

Mr. Mitchell C. Griggs
Designated Representative
Duke Energy Carolinas, LLC
P.O. Box 1006- Mail Code EC10C
Charlotte, NC 28201-1006

Re: Petition for an Alternative Mercury Monitoring Certification Deadline for Units 1, 2, 3, 4, and 5 at the Allen Generating Station (Facility ID (ORISPL) 2718)

Dear Mr. Griggs:

The United States Environmental Protection Agency (EPA) has reviewed the October 31, 2007 petition submitted under 40 CFR 75.80(h)(1) by Duke Energy (Duke), in which Duke requested an alternative mercury monitoring system certification deadline for Units 1, 2, 3, 4, and 5 at the Allen Generating Station. EPA approves the petition, with conditions, as discussed below.

Background

Duke owns and operates five coal-fired boilers, Units 1, 2, 3, 4, and 5, at the Allen Generating Station (Allen), located in Belmont, North Carolina. All five units currently have their own individual stacks. The units are subject to the emission monitoring and reporting requirements of the Clean Air Mercury Regulation (CAMR). The owner or operator of an existing unit subject to CAMR is required to install and certify a continuous mercury (Hg) monitoring system, no later than January 1, 2009. Units 1, 2, 3, 4, and 5 are also subject to the Acid Rain Program.

Duke intends to install flue gas desulfurization (FGD) systems to control SO_2 emissions from Allen Units 1, 2, 3, 4, and 5, with a co-benefit of reducing Hg emissions. One common stack will be built to accommodate Units 1, 2, and 5, and a second common stack will be constructed for Units 3 and 4. The existing stacks will be used as bypass stacks during startup, shutdown, and malfunction conditions and when maintenance is performed on the FGD. The projected in-service dates for the FGD systems and new stacks are shown in the table below:

Unit	Monitored Location	FGD Commissioning/Start Up Date
1	Common Stack 1	February 2009
2		February 2009
5		March 2009

3	Common	November 2009
4	Stack 2	October 2009

Due to the timing of the FGD installations and new stack constructions, CAMR requires Duke to certify Hg monitoring systems on all five of the existing stacks by January 1, 2009 and then to meet a second Hg monitoring system certification deadline on the new stacks, when construction of these stacks is completed and the FGDs become operational. The second deadline results from the requirement that Duke must install and certify a Hg monitoring system on each new common stack within 90 unit operating days or 180 calendar days (whichever comes first) after emissions first exit to the atmosphere through the new stack.

In the October 31, 2007 petition, Duke requested that the January 1, 2009 monitor certification deadline be extended to coincide with the monitor certification deadlines associated with the FGD installations and construction of the new stacks. According to Duke, EPA should consider extending the January 1, 2009 monitor certification deadline, because certifying Hg monitoring would be very costly and would provide no environmental benefit. Duke proposed to report Hg emissions data in 2009 using the Hg low mass emissions (HgLME) methodology described in 40 CFR 75.81(c) through (f).

EPA's Determination

EPA conditionally approves Duke's petition for an extension of the January 1, 2009 Hg monitoring certification deadline for Allen Units 1, 2, 3, 4, and 5. Under the following unique circumstances, EPA has concluded that the January 1, 2009 Hg monitoring certification deadline should be conditionally extended:

- First, Duke is constructing FGD systems (including new stacks) that will reduce SO_2 and Hg emissions from the units. If Duke were to install continuous Hg monitoring systems by January 1, 2009 on each of the existing stacks, Duke would also be required to install continuous Hg monitoring systems on the new stacks after completing construction of the FGD systems.

- Second, Duke states that construction of the FGD systems will be completed in 2009.

- Third, the requirement for Hg emissions reductions under CAMR begins in 2010. Not only will Hg emissions data recorded during calendar year 2009 not be used to determine compliance with CAMR, but also, due to the future installation of FGD systems and the need to install and operate continuous Hg monitoring systems in new locations on new stacks, any continuous Hg monitoring systems installed on the existing stacks, and any pre-2010 Hg emissions data from such monitoring systems on the existing stacks, would not be representative of the units' Hg monitoring systems and Hg emissions in 2010 and thereafter.

EPA concludes that requiring Hg monitoring systems to be installed and certified on the existing stacks of Units 1, 2, 3, 4, and 5 by January 1, 2009 would serve little or no purpose under CAMR. The Agency is therefore approving, with conditions, an extension of that certification deadline to whichever one of the following dates occurs first: (a) December 31, 2009; (b) 90 unit operating days after the date on which emissions first exit to the atmosphere through the new stacks or FGD systems; or (c) 180 calendar days after the date on which emissions first exit to the atmosphere through the new stacks or FGD systems.

However, although EPA is extending the January 1, 2009 Hg monitor certification deadline for Allen Units 1, 2, 3, 4, and 5, Duke must still report Hg mass emissions using the HgLME monitoring methodology, and heat input data using the existing monitoring systems under the Acid Rain Program for these units in 2009. Although the HgLME methodology is not intended for use by units such as Allen Units 1, 2, 3, 4, and 5 that have annual Hg mass emissions greater than 29 lbs, allowing the HgLME methodology to be used for 2009 is a reasonable alternative for getting emissions data that are required under CAMR, but that will not be used to determine whether the Hg emissions reductions required under CAMR (i.e., the reductions required in 2010 and thereafter) are met. In this case, Hg emissions data reported in 2009 using the HgLME methodology will not compromise the integrity of CAMR. Therefore, the conditions of this approval are as follows:

(1) On or before December 31, 2008, Duke shall perform Hg emission testing on Allen Units 1, 2, 3, 4, and 5, as described in 40 CFR 75.81(c)(1). A minimum of three test runs is required for each unit, while coal is being combusted. Each unit shall be in operation at typical, normal load levels during the tests;

(2) From the results of these emission tests, Duke shall determine a default Hg emission factor, in $\mu g/m^3$, at standard conditions, for each unit. The default emission factor shall be the greater of: (a) the highest Hg concentration from any test run; or (b) 0.50 $\mu g/m^3$;

(3) In 2009, for each hour of operation of Units 1, 2, 3, 4, and 5 in which the flue gases exit to the atmosphere through the existing stacks, Duke shall use the appropriate default Hg concentration from paragraph (2) above to calculate the hourly Hg mass emissions in ounces for each unit. These calculations shall be performed according to section 9.1.3 in Appendix F to 40 CFR Part 75. All Hg emissions from the units shall be accounted for. For any hour that quality-assured data from the stack gas flow rate monitors are unavailable, the appropriate missing data procedures from 40 CFR Part 75, Subpart D shall be used;

(4) Notwithstanding paragraph (3) above, Duke shall, upon request from the North Carolina Department of the Environment and Natural Resources (NCDENR):

(a) Perform additional Hg emission testing in 2008 and/or 2009 on the existing stacks, as described in 40 CFR 75.81(d)(4); and

(b) Determine a new default Hg concentration from each retest, as described in paragraph (2) above, using the new default value for reporting purposes under 40 CFR Part 75.

Duke shall notify EPA upon receipt of a request for retesting from the NCDENR. Duke shall also provide test notifications to EPA and to the NCDENR, at least 21 days in advance of the scheduled date for each retest. Absent a request from the NCDENR for retesting, the periodic retests described in 40 CFR 75.81(d)(4) are not required.

(5) In 2009, Duke shall comply with the applicable recordkeeping and reporting requirements in 40 CFR 75.84 for Allen Units 1,2, 3, 4, and 5;

(6) Starting on the date and hour when emissions first exit to the atmosphere through the new stacks serving Allen Units 1, 2, 3, 4, and 5, Duke shall begin reporting emissions data from the new stacks for all parameters. In addition, because the Allen Station is being reconfigured from unit-level to common-stack monitoring and reporting in a staged (i.e., stepwise) manner, Duke shall contact the Clean Air Markets Division of EPA for special reporting instructions before making any quarterly electronic data report submittals for 2009;

(7) For the monitoring systems installed on the new stacks, Duke shall follow the applicable monitor certification and data validation guidelines in Questions 16.14 through 16.16 in the "Part 75 Emissions Monitoring Policy Manual". For the purposes of this approval, those general guidelines are extended to include Hg monitoring systems;

(8) Duke shall install and certify continuous Hg monitoring systems at the new common stack serving Allen Units 1, 2, and 5 and at the new common stack for Allen Units 3 and 4 by whichever one of the following dates occurs first: (a) December 31, 2009; or (b) 90 unit operating days after the date on which emissions first exit to the atmosphere through the new stack or FGD system; or (c) 180 calendar days after the date on which emissions first exit to the atmosphere through the new stack or FGD system;

(9) If, after completion of the Allen FGD project, Duke opts to use any of the existing stacks as a bypass stack, Duke shall report the maximum potential Hg concentration (MPC) (as defined in section 2.1.7.1 of Appendix A to 40 CFR

Part 75) for each hour in which the effluent gases are routed through a bypass stack, unless and until Duke installs and certifies a continuous Hg monitoring system on that stack; and

(10) If, for a particular stack, the monitoring system certification deadline in paragraph (8) above is not met, Duke shall report the maximum potential Hg concentration, as defined in section 2.1.7.1 of Appendix A to 40 CFR part 75, beginning with the first unit operating hour following the deadline and continuing until all certification tests of the required Hg monitoring system have been successfully completed.

EPA's determination relies on the accuracy and completeness of the information provided by Duke Energy in the October 31, 2007 petition and is appealable under 40 CFR Part 78. If you have any questions about this determination, please contact Venu Ghanta at (202) 343-9009. Thank you for your continued cooperation.

Sincerely,

/s/
Sam Napolitano, Director
Clean Air Markets Division

cc: David McNeal, EPA Region IV
Dennis Igboko, NCDENR
Venu Ghanta, CAMD