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October 14, 2008

Mr. B. Keith Overcash, Director
Division of Air Quality
Department of Environment and Natural Resources
Parker-Lincoln Building
1641 Mail Service Center
Raleigh, NC 27699-1641

Dear Mr. Overcash:

At the request of the North Carolina Department of Environment and Natural Resources, on July 3, 2008, Duke Energy Carolinas, LLC voluntarily provided a maximum achievable control technology assessment (MACT) for hazardous air pollutant emissions ("HAPs") from the Cliffside Steam Station Unit 6 ("CSS6"), which is currently under construction. We understand that DAQ requested this voluntary assessment to resolve uncertainty over the applicability of the federal Section 112(g) requirements as a result of the vacatur of the Clean Air Mercury Rule. Your letter of June 2, 2008, specifically questioned the applicability of the Section 112 requirements to a ***major*** source of HAPS.[1] During the course of this voluntary, MACT-like assessment, Duke Energy has provided additional information to DAQ to support the agency's review and to evaluate and understand better the ability to control HAPs associated with CSS6. As we have said all along, we were confident that CSS6 will have the best available controls, and we stand by the design of the plant and the conclusions reached in issuing our construction permit.

We are pleased to report that the control systems we have designed for CSS6 will result in HAPs that will be *below* the applicable major-source thresholds that trigger case-by-case MACT determinations. Therefore, Duke Energy is submitting a revised HAPs emissions determination with documentation for your review to demonstrate that no MACT or MACT-like requirements – whether mandatory or voluntary – apply to this

[1] "However, there is a debate whether a major source *whose construction was permitted and begun prior to the D.C. Circuit's decision and mandate*, but whose construction will be completed for the most part after the date of mandate, is subject to the requirements of §112(g)" NCDENR Letter from Keith Overcash to Rick Roper, June 2, 2008, pp 1-2.

minor source of HAPs. Our position remains, as we advised you in June, that Section 112(g) does not apply to a unit such as CSS6, which began construction in accordance with all applicable regulations and prior to the vacatur of CAMR. But aside from this fact, our calculations demonstrate that the CSS6 is not a *major* source of HAPs, which means that Section 112(g) does not apply regardless of when construction commenced.

We believe this demonstration further supports the efforts of DAQ to confirm that CSS6 is among the cleanest coal-fired facilities in the nation, and it is a tribute to CSS6 and its unique pollution control equipment that a coal-fired unit of its size would be so well-controlled that it is a minor source of HAPs.

1. Confirmation That CSS6 Is Minor Source of HAP Emissions.

In our original MACT assessment submitted on July 3, we assumed a removal rate for acid gases of 98% based on knowledge available at that time. Your staff indicated that since Session Law 2006-255, which provides an exemption to 15A NCAC 2D.0530, requires installation of advanced control technology designed to remove ninety-nine percent (99%) of sulfur dioxide ("SO_2"), CSS6 should achieve 99% removal of acid gases. In response to these questions and suggestions from your staff, Duke has reevaluated the ability of the air emission control equipment on Unit 6 to remove acid gases, and in particular, hydrochloric acid and hydrofluoric acid. The attached calculations, a recent report on emissions controls at our newly scrubbed Marshall Steam Station, and the letter from our air emission control equipment vendor, ALSTOM, demonstrate that emissions of HCl and HF will be far lower than originally projected. The highest emissions of an individual HAP and total emissions of HAPs from Unit 6 will be less than the applicable thresholds (10 tons per year ("tpy") for an individual HAP and 25 tpy for the total of all HAPs) that would trigger a MACT assessment. More specifically:

- Recent data show that Duke Energy's Marshall Steam Station achieved 99.9% removal of acid gases using a wet flue gas desulfurization ("WFGD") system manufactured by ALSTOM. (Attachment 1.) The Cliffside system, however, includes not only a more advanced ALSTOM WFGD system, but also a separate dry FGD system designed specifically to remove acid gases, as well as a fabric filter/baghouse that further removes acid gases.
- Duke Energy has reviewed coal quality and has refined its calculation of non-acid gas HAPs and other HAPs and has determined the total HAPs are less than the 25 tpy threshold and are less than 10 tpy for any single HAP. (Attachment 2.)

- A letter report from ALSTOM confirms the high removal efficiency of the air emissions control equipment at CSS6. (Attachment 3.)

We are providing revised emission source information (Forms A1 and B) for CSS6. (Attachment 4.)

2. Conclusions to be Drawn From this Information.

Simply put, CSS6 is an 800 MW coal-fired power plant being constructed with such stringent environmental controls that is a minor, not a major source, of HAP emissions. This information confirms that (1) CSS6, with its unique dual scrubber system is one of the best controlled, if not the best controlled, coal-fired unit in the country; and (2) HAP emissions from CSS6 are so low, it is not subject to MACT.

EPA's regulations limit the scope of § 112(g)'s applicability at existing HAP sources to the construction or reconstruction of a major-emitting process unit – *i.e.*, "a new process or production unit which in and of itself emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year (tpy) of any combination of HAPs." 40 C.F.R. § 63.41 (definition of "construct a major source"); *accord* 15A NCAC 2D .1112(c)(4). In turn, the term "process or production unit" is defined to mean "any collection of structures and/or equipment, that processes assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product. A single facility may contain more than one process or production unit." 40 C.F.R. § 63.41 (definition of "process or production unit"); *accord* 15A NCAC 2D .1112(c)(13). Thus, CSS6 constitutes a "process or production unit." This means that § 112(g) applies only if potential HAP emissions from CSS6 exceed the 10/25 tpy major source thresholds, which the data show they do not.

In the preamble to its final § 112(g) regulations, EPA unambiguously explained that a minor source of HAP, such as CSS6, is not subject to MACT:

> [I]f a source keeps its emissions below the threshold limits for a major source through enforceable limits, it will not meet the definition of "Construct a Major Source" under section 112(g), and thus will not have to apply new source MACT. For example, if a plant to be constructed will have uncontrolled emissions of a HAP of 40 tons/year, it would normally be subject to new source MACT under section 112(g). The owners are, however, able to install emission controls achieving a 75 percent reduction in emissions of the HAP in question. By imposing on themselves this control system and making their emissions limit

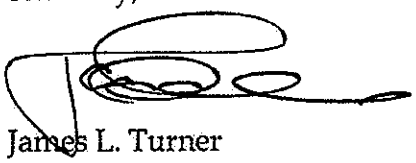
> and operating conditions enforceable, as a practical matter they can keep their PTE below the major source threshold of 10 tons/year. Such a source would not be subject to section 112(g)...

61 Fed. Reg. 68388 (Dec. 27, 1996) (footnote omitted). At least one permit for a proposed EGU contains limitations to confirm its minor status and exemption from MACT applicability. This is the permit for the Big Stone II unit in South Dakota. As proposed for adoption by the South Dakota Board of Minerals and Environment, the Big Stone II permit has limits on HAPs of 9.5 tons per year of any one HAP and 23.8 tons per year of any combination of HAPs to stay below the major source thresholds. Compliance is to be determined by stack tests, mass balances, emissions factors or other approved methods. The permit provides expressly for an exception from the case-by-case MACT requirement based on the unit-wide HAP limitations. A case-by-case MACT analysis as if construction had not begun is required if those limitations are relaxed or exceeded.

For these reasons, we believe the voluntary MACT-like assessment can and should conclude with the determination that CSS6 is a minor source and that MACT does not apply. Duke Energy will be seeking an amendment to our permit to include federally enforceable limits as a minor source of HAP emissions and so conclude this voluntary process.

Please call me if you have any questions. Thank you for your assistance in this process.

Sincerely,



James L. Turner

cc: Dr. Donald van der Vaart