From: Bradley, Chris
To: Cascio, Tom
Cc: Read, David; Bradley, Chris
Subject: RE: UF Cogen - Comments on Draft AC Permit No. 0010001-015-AC
Date: Thursday, August 21, 2014 9:26:01 AM

Good morning Tom –

Thank you for the update and the Department's consideration of DEF's comment on this air construction permit; the consideration is appreciated.

Best regards,

Chris Bradley
Duke Energy Florida, Inc.

From: Cascio, Tom [mailto:Tom.Cascio@dep.state.fl.us]
Sent: Thursday, August 21, 2014 8:54 AM
To: Bradley, Chris
Cc: Read, David
Subject: FW: UF Cogen - Comments on Draft AC Permit No. 0010001-015-AC

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Hi Chris – we discussed this issue internally and will accommodate your request via a permitting note in the Title V permit stating that the curves are on file with the compliance authority and that there have been no issues related to heat input limits using these curves in the past.

Tom

From: Bradley, Chris [mailto:Chris.Bradley@duke-energy.com]
Sent: Wednesday, August 20, 2014 2:25 PM
To: Cascio, Tom
Cc: Read, David; Nemec, Patty; P. E. Andrew D. Bass (abass@ectinc.com); Bradley, Chris
Subject: UF Cogen - Comments on Draft AC Permit No. 0010001-015-AC

Mr. Tom Cascio, Engineering Specialist IV
Office of Permitting & Compliance
Division of Air Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 5500
Tallahassee, Florida 32399-2400

RE: Comments on Draft UF Cogen Air Construction (AC) Revision Permit
Permit No: 0010001-015-AC
University of Florida Co-generation Facility

Facility ID No: 0010001
Alachua County

Good afternoon Tom;

Duke Energy (DE) and ECT are requesting that Appendix HI and all references to Appendix HI be deleted from the permit because the facility has demonstrated that the heat input was not increased as a result of the project and it is believed the curve is not required to demonstrate compliance with any emission limiting standards and the appendix is obsolete.

Condition B.3

B.3 Permitted Capacity.

a. *Combustion Turbine*. The heat input to the combustion turbine shall not exceed the values defined by the manufacturer's performance curve of heat input rate vs. compressor inlet temperature. The maximum heat input limits are based on the lower heating value (LHV) of natural gas, 100% load and ambient conditions of 60% relative humidity and 14.7 psia. The maximum heat input rates will vary depending upon ambient conditions, the combustion turbine characteristics and the demand.
~~*{Permitting Note: The maximum design heat input rate to the combustion turbine is 480 MMBtu/hour for a compressor inlet temperature of 59°F. See the turbine manufacturer's performance curve of heat input vs. compressor inlet temperature curve in Appendix HI – Heat Input Rate vs. Compressor Inlet Temperature.}*~~

After an inquiry with the FDEP DEF understands the original request was rejected because the Department believes that Appendix HI is required to demonstrate compliance. However, the CT/HRSG must comply with the emission standards included in Conditions B.8, B.9, B.10, B.11 and B.12 of the current TV air operating permit 0010001-013-AV. DEF believes the emission limiting standards delineated in the referenced conditions do not require a heat input curve in order to demonstrate or ensure compliance with the standards. Specifically,

- Compliance with the CT/HRSG NOx emission standards is demonstrated employing a certified NOx CEMS.
- Compliance with the SO_2 emission standard the facility utilizes 40 CFR Part 75, Appendix D and burning natural gas that does not exceed 2 grains of sulfur per 100 SCF.
- Compliance with the CO emission standard is demonstrated by performing an annual stack test.
- To ensure compliance with the PM emission standard the CT/HRSG only combusts natural gas.
- To ensure compliance with the VE standard the facility performs an annual VE test.

In addition any changes to the CT/HRSG that are outside those authorized by the permit (See Condition B.1) would require a permit application or determination from the FDEP/DARM.

DEF would also like to add that the Department recently issued Permit No. 1010373-012-AC (PSD-FL-402A) to expand the Shady Hills Generating Station by constructing two new simple-cycle combustion turbines. In the submission the applicant requested a revision of Permit No. 1010373-009-AC/PSD-FL-280A for the existing units to move the maximum heat input rates in the specific conditions to the emissions unit descriptions as a design heat input rate in order to be consistent with the following provisions specific for the new units. The language in the Shady Hills' permit

condition the applicant requested be moved to the Description Section of the permit was very similar to the UF Cogen permit condition language.

In short DEF again respectfully requests that the maximum heat input rates included in Specific Condition B.3 of Permit No. 0010001-013-AV be moved to the Emissions Unit Description Section and noted as a design heat input rate or, at a minimum, Appendix HI and any reference to it be deleted from the UF Cogen Title V permit.

Respectfully,

Chris Bradley
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