From: Velasco, Robert A.
To: McWade, Tammy
Subject: RE: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit
Date: Friday, July 12, 2013 4:14:27 PM
Attachments: image001.png

Subsection B.4 below should state "Magnesium oxide."

Best Regards,

(Rob) Robert A. Velasco, P.E., BCEE, QEP
EHS Air Programs
Tampa Electric Company
P.O. Box 111
Tampa, FL 33601
Phone: (813) 228-4232
Cell: (813) 417-9524
Fax: (813) 228-1308
www.tampaelectric.com/environmental/

From: McWade, Tammy [mailto:Tammy.McWade@dep.state.fl.us]
Sent: Friday, July 12, 2013 4:12 PM
To: Velasco, Robert A.
Subject: RE: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

Hi Rob,

In response to the following change in your Title V permit:

Section III, Subsection A, A.4 - Methods of Operation, A4 c.(3), page 9 of 105.

c(3) Supplemental Material Injection. The following materials may be injected as needed for boiler conditioning and energy recovery purposes:

(a) Magnesium oxide, limestone, and fluxing agents such as iron ore may be injected as needed for boiler conditioning. ~~Supplemental injection of liquid magnesium oxide as needed to reduce upper furnace pluggage.~~

~~(b) Fluxing. Supplemental injection of iron ore to assist in lowering the ash fusion temperature.~~

(b~~e~~) ~~Fly Ash.~~ Reinjection of on-site generated ~~Unit 4~~ flyash for energy recovery.

~~(d) Limestone. Mixed with the fuel in-feed as needed to optimize coal blend.~~

c(3) Supplemental Material Injection. The following materials may be injected as needed for boiler conditioning and energy recovery purposes:

(a) Magnesium ~~oxide~~, limestone, and fluxing agents such as iron ore may be injected as needed for boiler conditioning~~. Supplemental injection of liquid magnesium oxide as needed to reduce upper furnace pluggage.~~

~~(b) Fluxing. Supplemental injection of iron ore to assist in lowering the ash fusion temperature.~~

(b~~e~~) ~~Fly Ash.~~ Reinjection of on-site generated ~~Unit 4~~ flyash for energy recovery.

~~(d) Limestone. Mixed with the fuel in-feed as needed to optimize coal blend.~~

I was re-activating a specific condition in Air Construction Permit 0570039-053-AC to allow on-site fly ash to be re-injected into Units 1 – 4 since the permit expired and the Title V permit did not reflect the correct authorization. This permit only addresses fuels fired in Units 1 - 4. Therefore, I did not include the whole condition. It appears that you want to consolidate part of this condition in the Title V permit. It would be better to have these changes made during the Title V renewal process. Let me know if this can be addressed then.

Thank you,

Tammy T. McWade
Engineer Specialist III
Florida Department of Environmental Protection
Division of Air Resource Management (DARM)
Office of Permitting and Compliance (OPC)
Phone: 850/717-9086
GIC: 59586

From: Velasco, Robert A. [mailto:RAVelasco@tecoenergy.com]
Sent: Friday, July 12, 2013 2:31 PM
To: McWade, Tammy
Subject: RE: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

Tammy:

Thanks for the extension. When complete, can I obtain a word copy of the public notice.

Best Regards,

(Rob) Robert A. Velasco, P.E., BCEE, QEP
EHS Air Programs

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From: McWade, Tammy [mailto:Tammy.McWade@dep.state.fl.us]
Sent: Friday, July 12, 2013 12:19 PM
To: Velasco, Robert A.
Subject: RE: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

Thanks Rob!

I am also extending the expiration of this permit to 1/1/2016 to allocate enough time to revise the Title V air operating permit during its renewal.

Tammy T. McWade
Engineer Specialist III
Florida Department of Environmental Protection
Division of Air Resource Management (DARM)
Office of Permitting and Compliance (OPC)
Phone: 850/717-9086
GIC: 59586

From: Velasco, Robert A. [mailto:RAVelasco@tecoenergy.com]
Sent: Friday, July 12, 2013 10:30 AM
To: McWade, Tammy
Subject: RE: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

Tammy:

Thanks for revising the draft permit. I have no additional comments regarding the revised draft permit. The suggested edits regarding the fly ash error as shown below for Units 1 – 3 and Unit 4.

Section III, Subsection A, A.4 - Methods of Operation, A4 c.(3), page 9 of 105.

c(3) Supplemental Material Injection. The following materials may be injected as needed for boiler conditioning and energy recovery purposes:

(a) Magnesium oxide, limestone, and fluxing agents such as iron ore may be injected as needed for boiler conditioning. ~~Supplemental injection of liquid magnesium oxide as needed to reduce upper furnace pluggage.~~

~~(b) Fluxing. Supplemental injection of iron ore to assist in lowering the ash fusion temperature.~~

(b~~c~~) ~~Fly Ash.~~ Reinjection of on-site generated ~~Unit 4~~ flyash for energy recovery.

~~(d) Limestone. Mixed with the fuel in-feed as needed to optimize coal blend.~~

Section III, Subsection B, B.4 - Methods of Operation, B.4 c(3), page 22 of 105

c(3) Supplemental Material Injection. The following materials may be injected as needed for boiler conditioning and energy recovery purposes:

(a) Magnesium ~~oxide~~, limestone, and fluxing agents such as iron ore may be injected as needed for boiler conditioning~~. Supplemental injection of liquid magnesium oxide as needed to reduce upper furnace pluggage.~~

~~(b) Fluxing. Supplemental injection of iron ore to assist in lowering the ash fusion temperature.~~

(b~~c~~) ~~Fly Ash.~~ Reinjection of on-site generated ~~Unit 4~~ flyash for energy recovery.

~~(d) Limestone. Mixed with the fuel in-feed as needed to optimize coal blend.~~

Best Regards,

(Rob) Robert A. Velasco, P.E., BCEE, QEP
EHS Air Programs
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From: McWade, Tammy [mailto:Tammy.McWade@dep.state.fl.us]
Sent: Friday, July 12, 2013 9:51 AM
To: Velasco, Robert A.
Subject: RE: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

Hi Rob,

The revised draft permit is attached for your review.

I did change the condition regarding the reinjection of on-site fly ash. However, I am still looking

into the error made to the Title V permit. Can you send me a request to fix the error in the language.

Thank you,

Tammy T. McWade
Engineer Specialist III
Florida Department of Environmental Protection
Division of Air Resource Management (DARM)
Office of Permitting and Compliance (OPC)
Phone: 850/717-9086
GIC: 59586

From: Velasco, Robert A. [mailto:RAVelasco@tecoenergy.com]
Sent: Wednesday, July 10, 2013 8:22 PM
To: McWade, Tammy; Arif, Syed
Cc: Burrows, Byron T.
Subject: Re: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

Tammy:

The SCR is operates whenever the temperature is high enough. In general, the SCR typically operates most of the time during startup, all the time during shutdown, and usually operates during flame stabilization provided the temperature is high enough.

I hope this clarifies your request.

(Rob) Robert A. Velasco, P.E., BCEE, QEP
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From: McWade, Tammy [mailto:Tammy.McWade@dep.state.fl.us]
Sent: Wednesday, July 10, 2013 02:09 PM
To: Velasco, Robert A.
Subject: RE: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

Hi Rob,

Regarding the following requested change:

Permitted Capacity 3b(2)(Low load operation on natural gas). The annual heat input rate does not include natural gas fired during the startup/shutdown/flame stabilization operation.

During startup/shutdown/flame stabilization is the SCR operating?

Tammy T. McWade
Engineer Specialist III
Florida Department of Environmental Protection
Division of Air Resource Management (DARM)
Office of Permitting and Compliance (OPC)
Phone: 850/717-9086
GIC: 59586

From: Velasco, Robert A. [mailto:RAVelasco@tecoenergy.com]
Sent: Wednesday, July 10, 2013 12:26 PM
To: McWade, Tammy
Cc: Arif, Syed; Burrows, Byron T.
Subject: RE: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

Tammy:

Based on our discussion on July 9th, TEC agrees with the FDEP (Department) regarding the following changes to the draft permit:

- Authorized Fuels. Units 1 - 4 are authorized to reinject on-site generated flyash residual for energy recovery.
- Permitted Capacity 3b(2)(Low load operation on natural gas). The annual heat input rate does not include natural gas fired during the startup/shutdown/flame stabilization operation.
- Testing Requirements. Emissions of VOC shall be tested on the first available Unit when firing coal during normal operation prior to the conversion to natural gas igniters and once again on the same after the conversion is complete. Also, if the tests show that VOC emission factor is higher VOC emissions emitted from on Units 1 – 4, a construction permit will be submitted to revise the allowable annual heat input rates to escape PSD.
- Records and Reports. Annual heat input rate not hours should be tracked for PSD purposes. The daily reporting requirements are consistent with the current Title V permit requirements.
    - Record daily the monthly natural gas heat input ~~hours of operation~~ when each unit is co-firing coal and natural gas during normal operation;

- Record daily the monthly natural gas heat input hours of operation when each unit is firing natural gas during low-load operation;

- Record daily the natural gas heating value, which shall be obtained from the natural gas transmission company and kept on file and made available to the Department upon request;

- Actual Emissions Reporting: TEC agrees that there is no change necessary regarding Conditions 10a.

TEC does take exception to the requirement of "annual heat input rates during any consecutive 12 month period" pursuant to Conditions 3b(1), 3b(2), 9d, and 9e. TEC believes the "annual heat input rates during any calendar year" is sufficient to demonstrate compliance for several reasons:

1. Annual calendar year is consistent with the established reporting period of the Annual Operating Report (AOR);

2. Annual heat input for coal is already reported on monthly and annual basis to the Public Service Commission for compliance purposes. The heat input data for natural gas usage will be reported in the same manner as coal;

3. "Consecutive 12 month period" is not consistent with the PSD applicability requirements pursuant to Rule 62-212 F.A.C. The PSD consecutive 24 month period in a 5 year period does not agree with a "consecutive 12 month period";

4. "Consecutive 12 month period" is not consistent with the annual reporting requirements pursuant to Rule 62-210.370, F.A.C., which requires the permittee to monitor any PSD pollutant for a period of 5 calendar years. For consistency with Rule 62-210.370, F.A.C., the annual heat input should be based on a calendar year basis;

5. "Consecutive 12 month period" and "annual calendar year" are considered statistically the equivalent and will provide the same compliance objectives. For example, the annual input rates for Unit 4 were evaluated from 2005 to 2010 using the T-test procedure pursuant to 40 FR 58420. The results show the "Consecutive 12 month" and "annual calendar year" are statistical methodologies (t'>t) at the 95% confidence interval (see calculations attached). Therefore, the "annual calendar year" methodology is equally appropriate for compliance purposes;

6. VOC testing will establish an accurate emission factor to calculate actual VOC emission rates;

7. Variance between the "Consecutive 12 month period" and "annual calendar year" methodologies is well within the estimate 10% error of propagation assuming 5% error for the heat input and 5% error for the emission factor determination; and

8. Finally, there is no regulatory requirement that mandates reporting of the annual heat input rate during "any consecutive 12 month period."

Thus, TEC believes the Department should authorize the annual heat input rates on a calendar year basis to demonstrate compliance. We request a pre-draft copy of the permit to the confirm these

changes prior to submitting the public notice.

Best Regards,

(Rob) Robert A. Velasco, P.E., BCEE, QEP
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www.tampaelectric.com/environmental/

From: McWade, Tammy [mailto:Tammy.McWade@dep.state.fl.us]
Sent: Wednesday, July 10, 2013 11:51 AM
To: Velasco, Robert A.
Subject: RE: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

Hi Rob,

As per our conversation yesterday, I spoke to Syed Arif regarding the recordkeeping requirements demonstrating compliance with the annual heat input rates when firing natural gas. The requirement to record the natural annual heat input rates will need to be based on a 12-month rolling total; therefore will remain unchanged.

Please continue with the public notice. Any changes made to the draft permit will be addressed in the final determination. You may resubmit comments during the comment period or I can accept the requested changes you already provided.

If you have any questions or comments please give me a call or email.

Thank you,

Tammy T. McWade
Engineer Specialist III
Florida Department of Environmental Protection
Division of Air Resource Management (DARM)
Office of Permitting and Compliance (OPC)
Phone: 850/717-9086
GIC: 59586

From: Velasco, Robert A. [mailto:RAVelasco@tecoenergy.com]
Sent: Tuesday, July 09, 2013 2:40 PM
To: McWade, Tammy
Subject: RE: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

I'm in a meeting until 3:30 PM. I'll call you afterwards.

Best Regards,

(Rob) Robert A. Velasco, P.E., BCEE, QEP
EHS Air Programs
Tampa Electric Company
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Tampa, FL 33601
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From: McWade, Tammy [mailto:Tammy.McWade@dep.state.fl.us]
Sent: Tuesday, July 09, 2013 2:34 PM
To: Velasco, Robert A.
Subject: RE: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

Hi Rob,

When you have a few minutes please give me a call so we can go over the requested changes in the draft permit.

Thank you,

Tammy T. McWade
Engineer Specialist III
Florida Department of Environmental Protection
Division of Air Resource Management (DARM)
Office of Permitting and Compliance (OPC)
Phone: 850/717-9086
GIC: 59586

From: Velasco, Robert A. [mailto:RAVelasco@tecoenergy.com]
Sent: Monday, July 08, 2013 1:14 PM
To: McWade, Tammy
Cc: Arif, Syed; Burrows, Byron T.
Subject: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

Tammy:

Attached are requested changes to clarify the permit requirements for draft permit 0570039-065-AC. Please review and comment regarding our requested changes. [Note: permit was converted to word for redline edits and the formatting may be garbled].

Best Regards,

(Rob) Robert A. Velasco, P.E., BCEE, QEP
EHS Air Programs
Tampa Electric Company
P.O. Box 111
Tampa, FL 33601
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Cell: (813) 417-9524
Fax: (813) 228-1308
www.tampaelectric.com/environmental/

From: Scearce, Lynn [mailto:Lynn.Scearce@dep.state.fl.us]
Sent: Tuesday, July 02, 2013 10:34 AM
To: Burrows, Byron T.
Cc: Velasco, Robert A.; Boatwright, Kelley M.; Mulkey, Cindy; 'Alisa Coe'; forney.kathleen@epa.gov; ceron.heather@epa.gov; McWade, Tammy; Arif, Syed; Friday, Barbara; Scearce, Lynn
Subject: 0570039-065-AC, Tampa Electric Company, Big Bend Station, Draft Permit

Dear Mr. Burrows:

Attached is the official **Notice of Draft Permit** for the project referenced below. Click on the link displayed below to access the permit project documents and reply back verifying receipt of the document(s) provided in the link.

Note: We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Owner/Company Name: TAMPA ELECTRIC COMPANY (TEC)
Facility Name: BIG BEND STATION

Project Number: 0570039-065-AC
Permit Status: DRAFT
Permit Activity: CONSTRUCTION
Facility County: HILLSBOROUGH

Click on the following link to access the permit project documents:
http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0570039.065.AC.D_pdf.zip.

If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Office of Permitting and Compliance.

Lynn **S**cearce

Office **o**f **P**ermitting **a**nd **C**ompliance **(OPC)**
Division **o**f **A**ir **R**esource **M**anagement – **DEP**
2600 **B**lair **S**tone **R**oad, **M**ail **S**top **5505**
Phone: **8**50-**7**17-**9**025

Please take a few minutes to share your comments on the service you received from the department by clicking on this link DEP Customer Survey.

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