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DIVISION OF AIR
RESOURCE MANAGEMENT

June 20, 2012

Mr. Jeffrey F. Koerner, Program Administrator
Florida Department of Environmental Protection
Office of Air Permitting and Compliance
2600 Blair Stone Road, M.S. 5505
Tallahassee, Florida 32399-2400

Via FedEx
Airbill No. 7985-1283-8652

**Re: Tampa Electric Company – Polk Power Station
Revisions to Proposed Draft Permits
Nos. 1050233-028-AV and 1050233-029-AC
Facility ID No. 1050233**

Dear Mr. Koerner:

On May 9, 2012, Tampa Electric Company (TEC) received an email correspondence from the Florida Department of Environmental Protection (DEP) announcing its intent to issue an air construction permit for the Polk Power Station located in Polk County, Florida. The proposed draft permit revises visible emission monitoring, fuel oil sampling and other miscellaneous permitting requirements.

Upon review of the draft air permits, TEC identified several issues that require resolution prior to finalizing the draft permits. On May 16, 2012, TEC requested an extension of time to petition a formal administrative hearing to July 6, 2012. The Office of the General Counsel granted the extension to amicably resolve these issues with the DEP. The summary of the issues and proposed resolutions are discussed below.

Draft/Proposed Permit 1050233-028-AV

Polk No.4 (EU-011) and No. 5 (EU-012)

The permit currently references CT No. 4 as EU-011 and CT No. 5 as EU-012. The EAOR references CT No. 4 as EU-013 and CT No. 5 as EU-014. Based on discussions with the DEP, the EAOR naming convention is correct and the EU-011 and EU-012 designations are no longer used. The correct designations should be incorporated throughout the entire permit.

Revision Conditions B.19/F.21

The analytical data previously provided in the letter request, dated February 16, 2012 shows daily sampling data each time a unit was dispatched on No. 2 fuel oil. These samples were collected from the fuel lines of the 2 MG storage tank. The data showed the sulfur levels ranged from 0.01 to 0.05%. Based on this data, it was believed the facility was using low sulfur fuel oil.

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A review of the current No. 2 fuel oil contract shows the shipments are specified as “ultra-low sulfur diesel.” The current contract specified the delivery of ultra-low fuel oil starting in April 5, 2011 through 2012. The contract specifies (Section 1.10) dyed, non-road, No. 2 ultra-low sulfur fuel oil. Section 5.1 requires the fuel oil shall meet ASTM designation D-975-10b “Standard Specification for Fuel Oils” or latest edition. This designation requires Grade No. 1-D S15 and Grade No. 2-D S15 distillate fuel for use in diesel engine applications requiring a fuel with 15 ppm sulfur (maximum).

Table 1 shows the analytical data for bulk shipments of No. 2 fuel oil between 2010 and 2012. The data shows the facility began using ultra-low fuel oil in May 2010. The results also show the sulfur content is typically 7 to 8 ppm in the ultra-low fuel oil fuel shipments. Since the delivery of ultra-low fuel oil, the sulfur content in the fuel tank has decreased to approximately 0.01%. The sulfur content will continue to decrease as ultra-low fuel is added to the tank.

Table 2 summarizes the reduction of SO₂ emissions resulting from the transition to ultra-low sulfur No. 2 fuel oil. The calculation shows a 97.3% decrease in SO₂ emissions between ultra-low sulfur and the low sulfur base years. A reduction of 99.7% can be realized after the implementation of the oil to natural gas fuel conversion project. After this project is implemented, No. 2 fuel oil will be onsite to supplement Polk No. 2 (EU – 009) and Polk No. 3 (EU – 010). Therefore, the very low sulfur levels support using the vendor’s records to demonstrate compliance. A summary of the emissions calculations is shown in **Attachment A**.

Table 1. Analytical Results of No. 2 Fuel Oil Shipments

Mon	Year	Trucks	Gallons	AB#	API 30	BTU 137,000	Sulfur <15 ppm	Sulfur <0.05%	Ash 0.01%
JAN	2010	95	17,249.50	5654	33.1	138,729	---	0.05	<MDL
FEB	2010	14	2,545.83	6051	32.6	139,197	---	0.04	<MDL
MAR	2010	36	6,573.36	6723	32.6	139,062	---	0.05	<MDL
APR	2010	36	6,597.38	7251	33.6	138,531	---	0.04	<MDL
MAY*	2010	12	2,187.50	7812	38.5	136,313	13	0.0013	<MDL
JUN	2010	20	3,535.43	8488	36.0	138,239	7.8	0.00078	<MDL
JUL	2010	29	4,934.64	9212	35.1	138,611	7.8	0.00078	<MDL
AUG	2010	42	7,391.40	9760	34.1	139,098	7.1	0.00071	<MDL
SEP	2010	24	4,212.79	9760	34.1	139,098	7.1	0.00071	<MDL
OCT	2010	23	3,932.71	10970	36.2	137,599	8.0	0.00080	<MDL
NOV	2010	32	5,541.88	11409	35.4	137,453	6.7	0.00067	<MDL
DEC	2010	111	18,505.93	11955	35.6	137,339	6.2	0.00062	<MDL
JAN	2011	49	8,356.62	12517	36.1	138,048	7.8	0.00078	<MDL
FEB	2011	5	899.88	13413	35.6	138,433	8.1	0.00081	<MDL
MAR	2011	0	0.00	no deliveries	---	---	---	---	---
APR	2011	27	4,433.57	14200	34.5	139,192	8.7	0.00087	<MDL
MAY	2011	0	0.00	no deliveries	---	---	---	---	---

Mon	Year	Trucks	Gallons	AB#	API 30	BTU 137,000	Sulfur <15 ppm	Sulfur <0.05%	Ash 0.01%
JUN	2011	16	2,650.55	14281	35.0	138,803	7.3	0.00073	<MDL
JUL	2011	12	2,113.17	14388	35.6	138,885	7.9	0.00079	<MDL
AUG	2011	9	1,588.02	14413	36.0	138,295	7.2	0.00072	<MDL
SEP	2011	8	1,413.10	14446	36.5	138,002	7.3	0.00073	<MDL
OCT	2011	3	528.48	L11K180	37.2	137,627	8.0	0.00080	0.001
NOV	2011	0	0.00	no deliveries	---	---	---	---	---
DEC	2011	46	8,161.95	L12A073	36.7	137,494	9.0	0.00090	0.001
JAN	2012	30	5,167.10	L12B040	36.2	137,290	8.2	0.00082	<MDL
FEB	2012	18	3,023.17	L12C047	36.3	136,938	9.0	0.00090	<MDL
MAR	2012	12	2,136.00	L12D039	35.0	137,260	5.3	0.00053	<MDL

*switched to ultra-low sulfur fuel oil

TEC originally proposed compliance with the maximum sulfur content through monthly fuel composite sampling. The proposed plan would consist of collecting fuel samples from each bulk delivery of fuel oil. At the end of each month, a composite sample would be prepared from each bulk fuel delivery. The composite sample would be analyzed in the laboratory for density, heat content, sulfur content and carbon content.

Table 2. Existing and Proposed SO₂ Emission Reduction Summary.

Description	2008-2009 Base Year Low Sulfur Fuel	2010-2011 Ultra Low Sulfur Fuel	Future Actual Fuel Conversion Project
Fuel Oil Consumed (gallons/year)	2,358,902	2,127,593	110,304
SO ₂ Emissions (tons/year)	8.24	0.22	0.02
Fuel Oil Reduction (%)	-----	9.8	95.3
SO ₂ Reduction (%)	-----	97.3	99.7

The proposed draft permit specifies compliance with the maximum sulfur content of the low sulfur fuel oil shall be demonstrated through vendor certification or measured in accordance with the requirements of 40 CFR Part 75, Appendix D, subsection 2.2.4.3 by testing the fuel oil by sampling from each fuel oil delivery (lot) to the storage tanks. Each oil sample will be analyzed in the laboratory for density, heat content, sulfur content and carbon content.

Based on the recent information, TEC proposes to use vendor documentation or monthly composite sampling to demonstrate compliance with the maximum sulfur content of the low sulfur fuel oil. TEC's preference is to use vendor contracts and bills of lading to demonstrate compliance. The contract specifies the minimum sulfur requirements for delivery and the bill of lading documents specify the minimum sulfur content in each delivery. This proposed procedure is not a sampling requirement of 40 CFR Part 75, Appendix D, and subsection 2.2.4.3. However, compliance can be demonstrated through an alternative procedure approved by the Administrator

pursuant to 40CFR 75.66. Therefore, TEC requests the DEP approve the procedure to demonstrate compliance with the maximum sulfur content of the fuel oil.

As a secondary alternative, a monthly composite sampling procedure is proposed to demonstrate compliance with the maximum sulfur content of the No. 2 fuel oil. TEC proposes to collect fuel samples from each bulk delivery of fuel oil. At the end of the month, a composite sample would be prepared from each fuel sample. The composite sample would be analyzed in the laboratory for density, heat content and sulfur content. As discussed earlier, this proposed procedure is not a sampling requirement of 40 CFR Part 75, Appendix D, subsection 2.2.4.3. However, compliance can be demonstrated through an alternative procedure approved by the Administrator pursuant to 40CFR 75.66. Therefore, TEC requests the DEP approve this alternative procedure to demonstrate compliance the maximum sulfur content of the fuel oil. An excerpt of the existing vendor contract and a sample bill of lading are shown in **Attachments B** and **C**. The proposed sampling plan is listed in Table 3.

Revision Condition C.10

The following change is requested to clarify satisfying the 8 consecutive quarterly monitoring requirements.

Revision Condition E.2

The mass balance of the system shows at the permitted heat input of 1,755 mmBtu per hour the corresponding maximum coal input of 2,433 mmBtu per hour or approximately 2,325 tons per day on a dry basis. Therefore, the maximum solid coal rate is a redundant limitation that should be deleted from the permit.

Revision Condition E.14

The air construction permit should be corrected to reference this condition revision. The change is requested to clarify record keeping requirements between shipments of new and existing batches.

Table 3. Proposed Alternative Facility-wide No. 2 Fuel Oil Sampling Procedure

- Two individual samples of fuel from each shipment shall be collected by the driver during discharge into the No. 2 fuel storage tank.
- Both samples will be identified with the delivery ticket number and delivery date and left at the delivery point for pickup by TEC.
- One sample will be used for testing and another sample will be retained for a period of 90 days.
- At the end of each month, TEC will prepare a monthly composite of shipments and send to Laboratory Services for routine analysis.
- If results of tests undertaken show the product to be out of specification, then either party may request that an inspector test the retained reference sample to determine compliance.

Draft/Proposed Permit 1050233-029-AC

Permit Modified: PSD-FL-194A, Specific Condition. E - Auxiliary Boiler (EU 003)

The facility is currently using ultra-low fuel oil. The vendor documentation such as a contract and bills of lading are sufficient to demonstrate compliance with the low sulfur fuel limit of 0.05%. The fuel oil used by the auxiliary boiler is exempt from a SO₂ limit and monitoring requirements on a 30 day rolling average basis. The exemption from this monitoring requirement should be included in the construction permit to document the deletion of Condition B.10 in the Title V permit 1050233-26-AV.

Permit Modified: 1050233-021-AC (PSD-FL-194H), Specific Condition 3, EU 006

The mass balance of the system shows at the permitted heat input of 1,755 mmBtu per hour the corresponding maximum coal input of 2,433 mmBtu per hour or approximately 2,325 tons per day on a dry basis. Since the current permit limits the heat input rate, the maximum solid feed rate is a reduction requirement that should be deleted.

Permit Modified: PA-92-32 (PSD-FL-263), Specific Condition 44 – CTs (EU 009 and 010)

The facility is currently using No. 2 ultra-low fuel oil. The vendor documentation such as a contract and bills of lading are sufficient to demonstrate compliance with the low sulfur fuel limit of 0.05%.

Suggested Revisions to Draft/Proposed Permits

Revisions and additions to the draft/proposed permits are requested as shown below. Additions are denoted with a double-underline and deletions are denoted with a ~~strikethrough~~.

Air Construction Permit Revisions

Permit Modified: PSD-FL-194A, Specific Condition. E - Auxiliary Boiler (EU 003)

E. Auxiliary Boiler: The maximum heat input to the auxiliary boiler shall not exceed 120.0 MMBtu/hr when firing No.2 fuel oil with 0.05 percent maximum sulfur content by weight. All fuel consumption must be continuously measured and recorded for the auxiliary boiler. The fuel oil sulfur limit imposed on the auxiliary boiler meets the definition of very low sulfur fuel oil per §40 CFR 60.41b. Per §40 CFR 60.41b, very low sulfur fuel oil shall have no more than 0.5 weight percent sulfur or that, when combusted without SO₂ emission control, will have a SO₂ emission rate equal to or less than 215 nanograms per joule (ng/J) or 0.5 lb/MMBtu of heat input. The fuel oil used by the auxiliary boiler meets both of these requirements and is exempt from the requirements of a SO₂ limit and monitoring on a 30 day rolling average basis. Consequently, compliance can be demonstrated using fuel records as described in §60.49b(r). ~~Consequently, the auxiliary boiler is exempt from a SO₂ emissions limit and shall show compliance by maintaining fuel records as described in §60.49b(r).~~

The fuel record requirement shall be met through vendor certification or measured with a composite sampling procedure approved by the Administrator pursuant to 40CFR 75.66. The fuel contract and bills of lading shall be used to demonstrate compliance for the vendor certification. The monthly composite sample shall be prepared from each fuel oil delivery (lot) to

the storage tanks. The sample will be analyzed in the laboratory for density, heat content and sulfur content. The fuel record requirement shall be met through vendor certification or measured in accordance with the requirements of 40 CFR Part 75, Appendix D, subsection 2.2.4.3 by testing the fuel oil by sampling from each fuel oil delivery (lot) to the storage tanks. Each oil sample will be analyzed in the laboratory for density, heat content, sulfur content and carbon content with the records of the results kept on site for five years and open to inspection by the Compliance Authority [PSD-FL-194A].

Permit Modified: 1050233-021-AC (PSD-FL-194H), Specific Condition 3, EU 006

3. Authorized Fuel: The permittee is authorized to gasify and fire a blend of petroleum coke/coal containing up to 85% petroleum coke, by dry weight, ~~at the current permitted capacity for the solid fuel gasification system of 2,325 tons per day.~~ [Application No. 1050233-029-AC and Rule 62-210.200(PTE), F.A.C.]

Permit Modified: PA-92-32 (PSD-FL-263), Specific Condition 44 – CTs (EU 009 and 010)

44. Fuel Oil Monitoring Schedule: Compliance with the maximum sulfur content of the low sulfur fuel oil shall be demonstrated through vendor certification or measured with a composite sampling procedure approved by the Administrator pursuant to 40CFR 75.66. The fuel contract and bills of lading shall be used to demonstrate compliance for the vendor certification. The monthly composite sample shall be prepared from each fuel oil delivery (lot) to the storage tanks. The sample will be analyzed in the laboratory for density, heat content and sulfur content. Compliance with the maximum sulfur content in the fuel oil shall be demonstrated by preparing a monthly composite sample from each fuel delivery. The monthly composite sample will be analyzed in the laboratory for density, heat content, sulfur content and carbon content. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d).

Title V Permit Revisions

B.19. Sulfur Content of Fuel. Compliance with the maximum sulfur content of the low sulfur fuel oil shall be demonstrated through vendor certification or measured with a composite sampling procedure approved by the Administrator pursuant to 40CFR 75.66. The fuel contract and bills of lading shall be used to demonstrate compliance for the vendor certification. The monthly composite sample shall be prepared from each fuel oil delivery (lot) to the storage tanks. The sample will be analyzed in the laboratory for density, heat content and sulfur content. ~~in accordance with the requirements of 40 CFR Part 75, Appendix D, subsection 2.2.4.3 by testing the fuel oil by sampling from each fuel oil delivery (lot) to the storage tanks. Each oil sample will be analyzed in the laboratory for density, heat content, sulfur content and carbon content with the records of the results kept on site for five years and open to inspection by the Compliance Authority. [Permit No.1050233-029-AC/PSD-FL-194J/PSD-FL-263B]~~

C.10. Monitoring - Visible Emission Observation. Upon issuance of this final Title V air operation permit, the permittee shall conduct a visible emissions observation in accordance with

EPA Method 9 at least once each calendar quarter for a period of at least 12 minutes for a total of 8 consecutive quarters. ~~If the test results of eight consecutive quarters show no visible emissions above 5% opacity based on a 6-minute average, the permittee may discontinue these quarterly observations.~~ If there is a subsequent exceedance of the visible emissions standard, the permittee shall begin the quarterly observations until eight consecutive quarters show no visible emissions above 5% opacity based on a 6-minute average. In all cases, if the test results of eight consecutive quarters show no visible emissions above 5% opacity, the permittee may discontinue these quarterly observations indefinitely. [Rule 62-213.440(1)(b)1.b. (Periodic Monitoring), F.A.C. {Resolution of objection from USEPA dated 01/22/1999 and revised (date).}] [Reserved]

E.2. Permitted Capacity. Solid fuels input to the solid fuel gasification plant shall consist of coal or coal/petroleum coke blends containing a maximum of 85% petroleum coke by weight. ~~The maximum input of solid fuels to the solid fuel gasification plant shall not exceed 2,325 tons per day, on a dry basis.~~ [Rules 62-4.160(2) and 62-210.200 (Definitions - PTE), F.A.C.; and Permit No. 1050233-029-AC/PSD-FL-194J/PSD-FL-263B]

E.14. Recordkeeping. Written or electronic records verifying that the coal/petroleum coke blends input to the solid fuel gasification system have not exceeded the 85% maximum petroleum coke by dry weight limit and the blended fuel sulfur content of 4.7% by weight limit, shall be maintained. ~~and submitted to the compliance authority with each annual report. These records shall be generated from each blended batch of coal/petroleum coke fuel. These records shall be generated each time a new shipment of coal/petroleum coke fuel is received or solid fuel is gasified.~~ [Permit No. 1050233-029-AC/PSD-FL-194J/PSD-FL-263B]

F.21. Fuel Oil Monitoring Schedule. Compliance with the maximum sulfur content of the low sulfur fuel oil shall be demonstrated through vendor certification or measured with a composite sampling procedure approved by the Administrator pursuant to 40CFR 75.66. The fuel contract and bills of lading shall be used to demonstrate compliance for the vendor certification. The monthly composite sample shall be prepared from each fuel oil delivery (lot) to the storage tanks. The sample will be analyzed in the laboratory for density, heat content and sulfur content. ~~Compliance with the maximum sulfur content in the fuel oil shall be demonstrated by preparing a monthly composite sample from each fuel delivery. The monthly composite sample will be analyzed in the laboratory for density, heat content, sulfur content and carbon content. The use of the NOX CEMS satisfies the requirement for nitrogen monitoring.~~ [Permit No. 1050233-029-AC/PSD-FL-194J/PSD-FL-263B]

Additional Title V Revisions

Revisions and additions to the tuning requirements are requested as shown below. Additions are denoted with a double-underline and deletions are denoted with a ~~strikethrough~~.

Section G

G.12d. DLN Tuning: CEMS data collected during initial or other DLN-tuning sessions shall be excluded from the compliance demonstrations provided the tuning session is performed in accordance with the manufacturer's specifications. The permittee shall report any excess emissions in the quarterly NOx report. ~~Prior to performing any tuning session, the permittee shall~~

Mr. Jeffrey F. Koerner
June 20, 2012
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~~provide the Compliance Authority with an advance notice of at least one (1) day that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail. [Design; Rule 62-4.070(3), F.A.C.; and PSD-FL-363/1050233-018-AC, Specific Condition 21.]~~

Section F

Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.

F.12 a. Tuning: CEMS data collected during initial or other tuning sessions shall be excluded from the compliance demonstrations provided the tuning session is performed in accordance with the manufacturer's specifications. The permittee shall report any excess emissions in the quarterly NOx report. [Rule 62-4.070(3), F.A.C]

TEC requests resolutions to the aforementioned changes at your earliest convenience. Please contact me at (813) 228-4232, if you have any questions regarding these proposed revisions.

Sincerely,



Robert A. Velasco, P.E., BCEE, QEP
Air Programs
Environmental, Health & Safety

EHS/iyw/RAV151

cc: Robert Wong, FDEP

Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: Karen A. Sheffield
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source or CAIR source.
3. Application Responsible Official Mailing Address... Organization/Firm: Tampa Electric company Street Address: P.O. Box 111 City: Tampa State: FL Zip Code: 33601-0111
4. Application Responsible Official Telephone Numbers... Telephone: (813) 228 - 4111 ext. Fax: (813) 228 - 1308
5. Application Responsible Official E-mail Address: kasheffield@tecoenergy.com
6. Application Responsible Official Certification: I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application. <p style="text-align: center;"><u>Karen Sheffield</u> Signature</p> <p style="text-align: right;"><u>06/14/2012</u> Date</p>

Professional Engineer Certification

1. Professional Engineer Name: Robert A. Velasco Registration Number: 57190
2. Professional Engineer Mailing Address... Organization/Firm: Tampa Electric Company Street Address: P.O. Box 111 City: Tampa State: FL Zip Code: 33601-0111
3. Professional Engineer Telephone Numbers... Telephone: (813) 228 - 4232 ext. Fax: (813) 228 - 1308
4. Professional Engineer E-mail Address: ravelasco@tecoenergy.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> (1) <i>To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> (2) <i>To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> (3) <i>If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> (4) <i>If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input checked="" type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> (5) <i>If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> Signature: <u><i>Robert A. Velasco</i></u> Date: <u>6/20/2012</u> (seal)

* Attach any exceptions to certification statement (See exemptions attached).

**Tampa Electric Company
Polk Power Station
Facility ID No. 1050233
VE, Fuel Testing and Minor Permit Revisions**

Professional Engineer Exceptions Statement

1. Professional Engineer Name: Robert A. Velasco, P.E. Registration Number: 57190
2. Professional Engineer Address... Organization/Firm: Tampa Electric Company Street Address: P.O. Box 111 City: Tampa State: FL Zip Code: 33601
3. Professional Engineer Telephone Numbers... Telephone: (813) 228 - 4232 Fax: (813) 228 - 1308
4. Professional Engineer E-mail Address: ravelasco@tecoenergy.com
5. Professional Engineer Statement: <i>(1) Engineering opinions and information included herein provides reasonable assurance of meeting the requirements of Chapter 62-210.300 F.A.C.;</i> <i>(2) Engineering information included herein is believed to be correct to the best of the Engineer's knowledge;</i> <i>(3) Emission information is based on acceptable techniques available for calculating emissions or estimating emissions from designated emission sources;</i> <i>(4) Seal does not certify or attest to the accuracy of work or information prepared by others who are qualified to perform such services. This includes, but not limited to drawings, specifications, vendor information, engineering test data, laboratory data, correspondences, personnel communication.; and</i> <i>(5) The Engineer is not responsible for subsequent modifications made by others without the Engineer's written consent.</i>

Attachment A

No. 2 Fuel Oil Emission Calculations

Emission Inventory Calculation Work Sheet

Polk Power Station

Facility ID No. 1050233

Emission Source Type

SO₂ Emissions - No. 2 Fuel Oil (Low and Ultra-low)

Facility and Source Description

Polk Unit No. (EU-001), Auxiliary Boiler (UE-003)

Polk Unit No. 2 (EU-009), Polk Unit No. 3 (EU-010)

Emission Estimation Equations

SO₂ Tons Base Year Low Sulfur No. 2 Fuel Oil:

SO₂ Tons=mmBtu/yr (average 2008 & 2009)*(AP-42 Factor - Table 3.4.1)*(1 ton/2000 lbs)

SO₂ Tons Base Year Ultra – Low Sulfur No. 2 Fuel Oil:

SO₂ Tons=mmBtu/yr (average 2010 & 2011)*(AP-42 Factor -Table 3.4.1)*(1 ton/2000 lbs)

SO₂ Tons Projected After Project Ultra – Low Sulfur No. 2 Fuel Oil:

SO₂ Tons=mmBtu/yr (average 2008 & 2009)*(AP-42 Factor -Table 3.4.1)*(1 ton/2000 lbs)

Input Data and Emission Calculations

Description	2008	2009	2010	2011	Future
Fuel Oil Used Unit 1 (gallons/yr)	2,296,778	1,979,810	2,477,054	1,091,363	-
AP - 42 Factor SO ₂ (lb/mmBtu)	0.05	0.05	0.002	0.002	0.002
Heat Input - Oil (mmBtu/yr)	317,459	274,157	342,355	150,907	-
Oil SO ₂ Emissions Unit 1 (tons/yr)	8.02	6.92	0.26	0.11	-
Fuel Oil Used Unit 2 (gallons/yr)	1,726	324,356	348,467	-	163,041
AP - 42 Factor SO ₂ (lb/mmBtu)	0.05	0.05	0.002	0.002	0.002
Heat Input - Oil (mmBtu/yr)	239	44,916	48,162	-	22,577
Oil SO ₂ Emissions Unit 2 (tons/yr)	0.006	1.13	0.04	-	0.02
Fuel Oil Used Unit 3 (gallons/yr)	47,010	68,126	338,300	-	57,568
AP - 42 Factor SO ₂ (lb/mmBtu)	0.05	0.05	0.002	0.002	0.002
Heat Input - Oil (mmBtu/yr)	6,498	9,434	46,757	-	7,966
Oil SO ₂ Emissions Unit 3 (tons/yr)	0.16	0.24	0.04	-	0.01
Total Gallons Burned	2,345,513	2,372,292	3,163,822	1,091,363	110,304
Total tons SO ₂ Emissions	8.19	8.29	0.33	0.11	0.02

Emissions Summary

Description	2008-2009 Base Year Low Sulfur	2010-2011 Year ULSF	Projected Fuel Conversion
SO ₂ Emissions (tons)	8.24	0.22	0.02
Fuel Burned (gallons)	2,358,902	2,127,593	110,304
% Difference SO ₂	0	97.3	99.7
% Difference Fuel Burned	0	9.8	95.3

Source of Input Data

Parameter	Date Source
Fuel Oil and Heat Content	TEC annual operation reports 2008-2011
Ultra Low Sulfur Fuel Oil - 15 ppm/0.0015%	TEC contract and bill of lading
Low Sulfur Fuel Oil - 500 ppm/0.05%	TEC
*Excludes EU – 001 on natural gas/syngas only	TEC - fuel conversion project, application No. 1050233-031-AV

Attachment B

Excerpt of Existing Fuel oil Contract

NOT FOR PUBLIC RELEASE

2011 - 2012

#2 Fuel Oil Supply Agreement

Between

RKA Petroleum Companies

And

Tampa Electric Company

For

Big Bend, Polk and Pasco Cogeneration Stations

NO. 2 FUELOIL SUPPLY AGREEMENT

This No. 2 Fuel Oil Supply Agreement ("Agreement") is entered into as of April 5, 2011 ("Effective Date"), between RKA Petroleum Companies, Inc. ("Seller") and Tampa Electric Company, 702 N. Franklin Street, Tampa, Florida ("Buyer"). Seller and Buyer are referred to individually as a "Party" and collectively as the "Parties".

1. **DEFINITIONS**

1.1. **Agreement**

This document, including attached exhibits and all other documents specifically identified and which are incorporated by reference.

1.2. **Contract Volume**

The quantity of Product that Seller is obligated to sell and deliver to Buyer and Buyer is obligated to accept and purchase in accordance with Section 3 of this Agreement.

1.3. **Delivery Point**

Buyer's fuel oil storage facility and any associated Generation Station.

1.4. **Effective Date**

Has the meaning set forth in the preamble of this Agreement.

1.5. **Emergency**

A need for additional Product for electric generation at the Delivery Point(s) due to unforeseen circumstances that are beyond the reasonable control of Buyer, such as but not limited to: state-wide power outages, forced outages at one or more Delivery Point(s), extreme weather conditions, or any similar event which requires quantities of Product above the Contract Volume in order to prevent interruption of needed electric generation.

1.6. **Force Majeure**

Has the meaning set forth in Section 9.1.

1.7. **Gallon**

A gallon of Product when measured at sixty degrees Fahrenheit (60°F) according to Table 6B of the latest versions of the ASTM-IP Petroleum Measurement Tables, ASTM Designation: D-1250-80, IP Designation: 200/81, as supplemented or amended. Unless otherwise mutually agreed by the Parties, the most recent revision of these tables will govern.

1.8. **Generation Station**

Buyer's Big Bend Station, Polk Power Station, and Pasco Cogen Ltd's Pasco Cogeneration.

1.9. **Inspector**

The independent petroleum inspecting company retained by the mutual agreement of the Parties to perform quantity verification, sampling, and quality analysis of Product delivered by Seller to Buyer, when requested by either Party.

1.10. **Product**

No. 2 Ultra low sulfur fuel oil, dyed, meeting the quality specifications established in Subsection 5.1.

1.11. **Shipment**

Total quantity delivered in a single unit of Transportation Equipment to a single Delivery Point.

1.12. **Shipment Point**

Seller's terminal or other Product storage facility where Product is loaded into Transportation Equipment for Shipment to Buyer.

1.13. **Term**

The term of this Agreement pursuant to Subsection 2.1.

1.14. **Total Delivered Price**

That price, as defined in Section 7.1, at which Buyer will compensate Seller for deliveries of Product, including transportation, adder and taxes.

1.15. **Transportation Equipment**

(a.) Any truck with a typical load capacity of 7,500 Gallons, or (b.) oil barge used as a means of transporting and delivering Product to the Delivery Point.

2. **TERM**

2.1. **Term**

This Agreement shall cover the period beginning on the Effective Date and running, unless earlier terminated in accordance with the provisions hereof (including without limitation Section 7.1.5), through and including March 31, 2012; provided, however, that the foregoing term may be extended by Tampa Electric, at its option, to and including March 31, 2013, upon thirty (30) days written notice to Seller.

3. **QUANTITY**

3.1. **Nomination Procedure**

Buyer will nominate to Seller a weekly forecast of anticipated Product volume requirements, designating the separate volumes, dates and anticipated time periods for deliveries at each Delivery Point, by close of business day on Monday of each week with the associated deliveries to occur the following week.

3.2. **Product Contract Volume**

Subject to Section 6.1 and the other limitations included in this Section 3.2, Seller shall deliver and sell and Buyer shall accept and purchase Product in a weekly forecast as nominated in Section 3.1 ("Contract Volume"). Subject to Section 6.1, a week shall be defined for purposes of nomination of the Contract Volume as the period of Sunday through Saturday. Subject to Buyer's agreement to purchase 100% of its good faith required Contract Volume of Product from Seller, there are no minimum monthly purchase requirements associated with this Agreement. In the event that Buyer increases the previously nominated Contract Volume or if Buyer's nominated requirements are in excess of 60 Shipments per week, Seller will use commercially reasonable efforts to secure additional supply to meet the additional volume requirement and will notify Buyer of its ability or inability to meet the additional volume requirements with twenty-four (24) hours of such request. Seller may incur additional cost in procurement of additional supply and may pass those costs on to Buyer if mutually agreed in advance of procurement of additional supply. In the event that Buyer and Seller cannot agree on a price (including any additional procurement costs) for requirements beyond the previously nominated Contract Volume or in excess of 60 Shipments, Buyer shall be released to purchase additional fuel from another supplier. If Buyer is unable to accept in any given week all of its Contract Volume for such week, then Buyer will postpone to a later week its receipt of such Contract Volume.

3.3. **Quantity Measurement**

Quantities of Product delivered shall be measured by Seller's readings taken during the loading of each unit of Seller's Transportation Equipment in accordance with recognized petroleum industry standards applicable thereto. Seller's measuring equipment shall be periodically calibrated in accordance with State of Florida specifications. At the time of arrival of each unit of Transportation Equipment at a Delivery Point, Seller shall provide Buyer with a copy of the Seller's suppliers printed notice of the quantity of Gallons contained in the unit of Transportation Equipment. In addition, quantities of Product delivered may be measured by Buyer by flow totalizer reading taken during the unloading of each unit of Transportation Equipment into the Buyer's storage tank in accordance with recognized petroleum industry standards applicable thereto, and subject to temperature adjustment. In the case of a discrepancy between the Buyer's and Seller's quantity measurement, the differential in question will be settled as per Section 7.3, Disputed Invoices.

4. **WARRANTIES, TITLE AND RISK OF LOSS**

4.1. **Warranty of Title**

Seller warrants that it will have and convey to Buyer at the time of delivery absolute and good title and full right to utilize the Product. Seller warrants that there are no liens, claims or encumbrances of any kind against the Product.

4.2. **Passage of Title and Risk of Loss**

Seller shall bear the risk of loss of Product until the Product is delivered to Buyer. Title and risk of loss shall pass from Seller to Buyer when the Product passes the first flange connecting Buyer's hose at the Buyer's Delivery Point to the Transportation Equipment. Any and all spills which occur up to the first flange of the Buyer's hose are the responsibility of the Seller, unless due to Buyer's negligence. Any and all spills which occur after the first flange of the Buyer's hose are the responsibility of the Buyer, unless due to Seller's negligence.

5. **QUALITY**

5.1. **Quality of Product**

Seller warrants that the Product will meet the quality specifications contained in the ASTM designation D-975-10b, or latest edition, "Standard Specification for Fuel Oils" or as otherwise accepted by Buyer. EXCEPT AS EXPRESSED IN THIS AGREEMENT, SELLER MAKES NO OTHER REPRESENTATION, GUARANTY, OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, IN FACT OR IN LAW, INCLUDING WITHOUT LIMITATION, OF MERCHANTABILITY, FITNESS, SUITABILITY OF THE PRODUCT FOR A PARTICULAR PURPOSE OR OTHERWISE.

5.2. **Quality Inspection**

5.2.1 Seller will provide Buyer, when requested, notice of the quality of the Product including all characteristics designated in Section 5.1 based upon composite samples taken from the tanks by Seller from which the Product is drawn at the Shipment Point. Two individual samples of Product from each unit of Transportation Equipment shall be taken by the driver during discharge into the Buyer's storage tank using sample bottles provided by Buyer. Both samples will be identified with the delivery ticket number and delivery date and left at the Delivery Point site in a box provided by Buyer. One sample ("Buyer's sample") will be used for testing by Buyer ("Buyer's analysis") and one sample ("Referee Sample") will be sealed and retained by Buyer for a period of 90 days. If results of tests undertaken by Buyer on Buyer's sample show the Product to be out of specification, then either Party may request that an Inspector test the referee sample ("Inspector Analysis") to determine compliance with Section 5.1 and prepare and deliver to Seller and Buyer documentation of the analysis. The

Attachment C

Sample Bill of Lading