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DIVISION OF AIR
RESOURCE MANAGEMENT

July 18, 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. 7938-0237-7857

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

Dear Mr. Koerner:

As discussed on July 17, 2012, Tampa Electric Company (TEC) is requesting to rescind current air permit application No. 3148-1 (“TEC PPS Oil-to-NG Conversion”) and draft permit nos. 1050233-031-AV/1050233-030-AC and combine the referenced work in the draft proposed air permits nos. 1050233-028-AV/1050233-029-AC to create one (1) air construction permit and one (1) Title V air permit. TEC and Florida Department of Environmental Protection (DEP) both agree the consolidation of both projects will simplify compliance issues associated with two (2) active PSD air construction permit revisions and two (2) active Title V permit revisions. DEP indicated the consolidation effort will not delay the processing of the Oil-to-NG Conversion project.

Comment to Air Permits

TEC also requests additional modifications to Conditions E.2 - Permitted Capacity, F.12 - Excess Emissions Allowed - Startup, Shutdown or Malfunction and G.12 - Allowable NO_x Data Exclusions. A discussion of the modifications and suggested edits are discussed below.

Comments to Condition E.2

DEP changed the petcoke tons/day limitation as requested since that is a redundant and unnecessary limitation. However, the maximum solid fuel input limitation of 2,325 tons per day was not changed but is also redundant per the following discussion. The energy balance of the gasification process is shown attached. The figure shows the maximum design heat input at the gasifier is 1,761 mmBtu/hr. The total corresponding solid fuel heat input is equivalent to approximately 2,433 mmBtu/hr. Since the process is an integrated system, the gasifier heat input and solid fuel feed rate are proportional to each other at a specified heat content.

The table below shows the solid fuel feed rate is inversely proportional to the heat content of the fuel at a constant heat input. The solid fuel feed rate is shown to decrease with an increase in heat content. Conversely, the solid fuel feed rate is shown to increase with a decrease in heat content. The highest solid fuel feed rate is shown to occur at a 100% coal fuel blend. Since the facility is permitted use 100% coal blend, the maximum solid fuel rate was calculated to be approximately 2,317 tons/day (dry basis). This is equivalent to the 2,325 tons/day limitation in Condition E.2. Since the gasifier heat input is proportional the solid fuel feed rate, the heat input of the gasifier can be solely used to demonstrate compliance with the maximum solid fuel feed rate. Therefore, a maximum solid fuel feed is not required for compliance purposes and TEC requests that this feed rate limitation be removed.

Solid Feed Rate and Heat Content Relationship on a Dry Basis.

Fuel Composition	Heat Content (Btu/lb Dry Basis)	Solid Fuel Feed Rate (ton/day)	Solid Fuel Heat Input Rate (mmBtu/hr)	Syngas Heat Input Rate (mmBtu/hr)
Standard Coal (100%)	12,600	2,317	2,433	1,761
Coal/Coke Blend (60%/40%)	14,400	2,028	2,433	1,761
Coal/Coke Blend (85%/15%)	15,000	1,946	2,433	1,761
Pet Coke (100%)	15,300	1,908	2,433	1,761

Comments to Conditions F.12 and G.12

TEC also requests additional modifications of the tuning provisions for the following reasons:

- Condition F.12 was requested for Polk Unit No. 2 and 3 to be consistent with Polk No. 4 and 5 tuning provisions (Condition G.12);
- Deletion of the 24-hour notice from Condition G.12 (and excluded from Condition F.12) was requested to allow the flexibility to perform tune-ups required by the manufacturer or facility operations to maintain performance of the combustion turbine. There have been circumstances where the 24-hour notice was not possible and enforcement discretion could not be obtained in a reasonable manner.
- A 24-hour advance notice in Condition G.12 was deleted to be consistent with TEC's Bayside Title V air permit.
- NOx excess emission reporting requirement was requested to be consistent with TEC's Big Bend and Bayside Title V air permits.

Suggested Revisions to Draft/Proposed Permits

TEC received revised draft/proposed permits on July 13, 2012. Based on TEC's review, additional revisions are requested as shown below. Additions are denoted with a double underline and deletions are denoted with a ~~strike through~~.

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 design heat rates in Condition A.2 shall be used to demonstrate compliance with the maximum solid fuel feed rate to the gasification plant. ~~The maximum input of solid fuels to the solid fuel~~

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~~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]

F.12 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 or in accordance with methods/procedures established by the owner/operator through site-specific testing. The permittee shall report any excess emissions in the quarterly NO_x report. [Rule 62-4.070(3), F.A.C]

G.12 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 or in accordance with methods/procedures established by the owner/operator through site-specific testing. The permittee shall report any excess emissions in the quarterly NO_x report. [Rule 62-4.070(3), F.A.C.; and PSD-FL-363/1050233-018-AC, Specific Condition 21.]

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

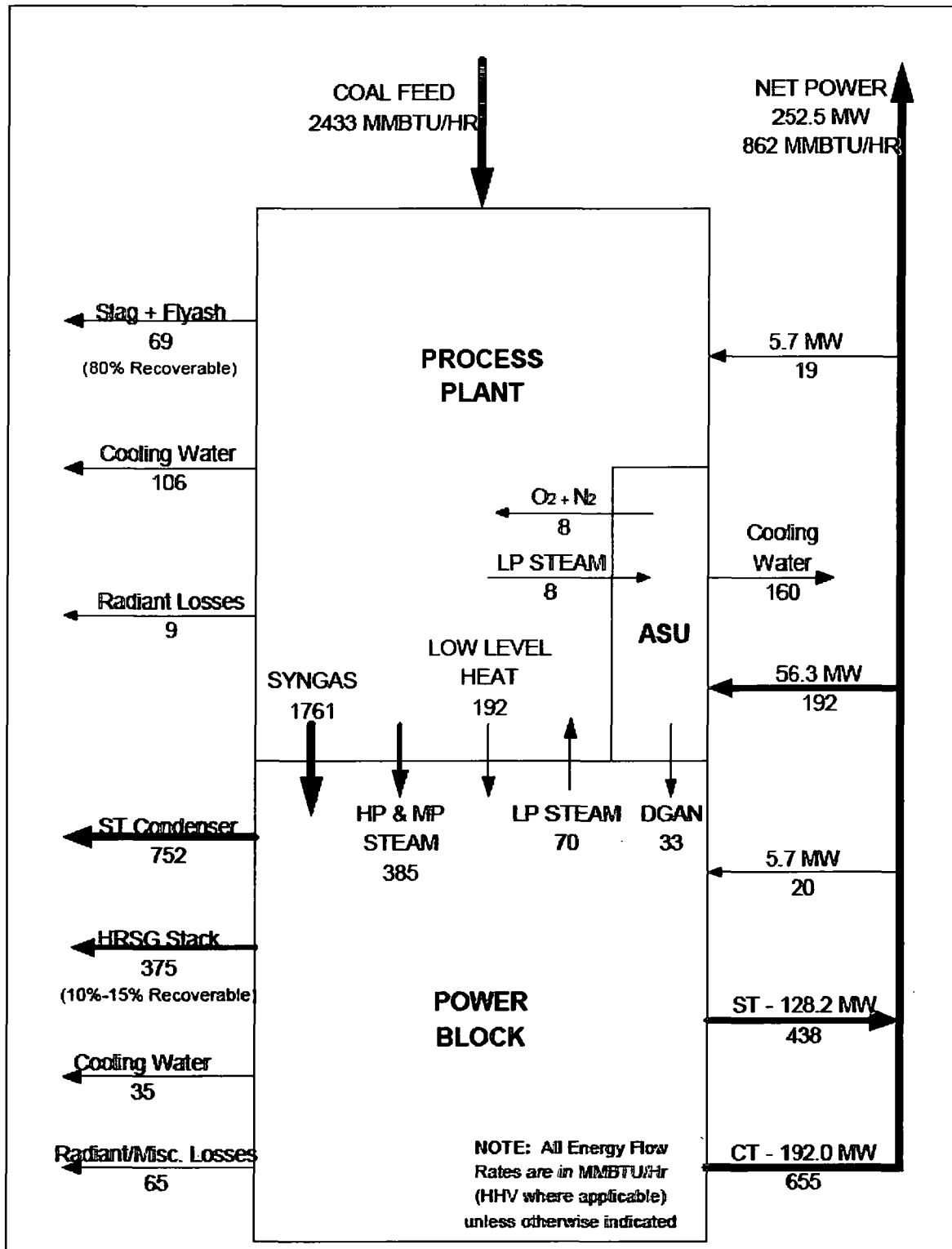
Sincerely,



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

EHS/iym/RAV155 Rescind NG Conversion Project & Revisions to Proposed
Permits Nos 28 29

cc: Robert Wong, FDEP



Typical Energy Balance for PPS Integrated Gasification Combined Cycle IGCC process.