September 19, 2001

Mr. A. A. Linero, P.E.
Bureau of Air Regulation, Mail Station #5505
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: DEP File No. 0990594-001-AC
Belle Glade Energy Center
Palm Beach County, Florida

Dear Al,

Please be advised that the Health Department received the Draft Permit and associated attachments on September 14, 2001 and has completed its initial review of the documents. Based on the review, the Health Department offers the following comments:

1. On the issue of "Gross" versus "Net" generating capacity from the steam turbine (Public Notice & Condition III.A.9.), the Health Department is aware that DEP's Siting Office recently determined that new facilities can be exempted from the Power Plant Siting Act provided the "net" steam capacity is below 75 megawatts. The Health Department suggests that the permit reflect "net" capacity for both consistency and environmental purposes.

2. On the issue of the maximum sulfur content of the natural gas (Conditions III.A.6. and III.B.6.), the Health Department believes that these limits are not enforceable by the compliance authority based on the compliance method (Condition III.C.6.). As proposed, compliance is based on monthly records and vendor data. It is suggested that the permit specify the ASTM methods as the reference methods. This will allow the compliance authority to collect samples and enforce the limits.

3. On the issue of power augmentation (Condition III.A.8.), the Health Department suggests that the relaxation on the hours of operation be tied to a performance standard versus installation of an oxidation catalyst. This is suggested since the amount of catalyst installed plays a significant role in the overall reduction efficiency of the system. Without specifying a performance standard, the permittee could install 3 grams of catalysts with no reduction in emissions and request relaxation of the restriction.

4. The CO emission standards (Conditions III.A.11 and III.B.8.) for normal operation do not appear to reflect the limitations described in the BACT determination (7.4 vs. 8 ppmvd). It is also suggested that the emission limitations clearly state whether or not emissions associated with startup, shut down, or malfunction are included. If excluded, the standard should include an annual cap on emissions. The Health Department also believes that CEMS on the SCGTs should be required given the large number of allowed operating hours each year and the potential for numerous startups.

5. The NOx emission standards (Conditions III.A.12 and III.B.9.) like the CO standards should clearly state whether or not emissions associated with start-up, shut down, or malfunction are included. If excluded, the standard should include an annual cap on emissions. The NOx emission limitations and limits on hours of operation do not reflex the NOx emissions reported in the Public Notice (375 vs. 365).

6. The VOC emission standards (Conditions III.A.16. and III.B.12.) are not consistent. For the CCGT, efficient combustion and good operating practices are listed BACT. For the SCGTs, emission limitations have been established and an initial compliance test required based on avoiding BACT. It is suggested that the proposed standards apply to both the CCGT and SCGT and that based on emissions, initial and renewal testing required as specified by the Department's rules. The special compliance testing can be a condition of the permit as well.

7. Excess visible emissions (Conditions III.A.17.a. and III.B.13.a.) during startup and shutdown appear to be excessive for natural gas fired units, specifically the SCGTs. In addition, the allowed time period (ten 6-minute periods) is not consistent with the allowed startup and shutdown periods. It is suggested that if excess visible emissions will be allowed by the Department that the condition read as follows:

   Visible Emissions: Visible emissions in excess of 10% opacity shall be allowed during periods of startup and shutdown, as defined in Condition III.A.17.d., provided best operational practices are followed to minimize all emissions and visible emissions do not exceed 20% opacity. Visible emissions in excess of 10% opacity shall be allowed during periods of malfunctions, as defined in Condition III.A.17.d. or III.B.13.d., provided best operational practices are followed to minimize all emissions.

8. Excess NOx emissions (Conditions III.A.17.d and III.B.13.d.) for the different periods are understandable for the CCGT but not the SCGTs. For the SCGTs, the exclusion of excess emissions associated with startup and shutdown for a 2-hour period (assumed to be on a per day basis) is acceptable. However, allowing a 3-hour exclusion during periods outside startup or shutdown is not nor is there justification. For malfunctions, excess emissions should be allowed provided best operating practices are followed.

9. Section III.D. addresses the other emission units (Cooling Tower, Diesel Generator, Gas Fuel Heater, Fire Pump, NH3 Tank, and Fuel Oil Tanks) at the source. Under the PSD regulations, PSD review and BACT apply to each emission unit that emits a pollutant for which the source emits above the significance thresholds. The Department has applied the BACT requirement to the cooling tower for PM and PM10 emissions as would be expected even though the potential emissions are below the Generic Exemption level of Rule 62-210. 300(3)(b), F.A.C. However, for the diesel generator, gas fuel heater, and the fire pump, all sources of NOx, CO, SO_2 and PM/PM10 the Department has permitted the exemption of the units and not determined BACT as required.

   Review of Rule 62-210.300(3), F.A.C. appears to exempt units from the permitting requirements of Chapter 62-212. However, the exemptions do not apply if the emissions unit is subject to any unit-specific applicable requirement. The unit-specific applicable requirements in this case include PSD review, BACT, and the conditions of the proposed PSD Permit. It is suggested that the Department redraft the section but address the exemption limitations as BACT.

10. Cooling Tower (Condition III.D.1.) BACT limitations are not enforceable by the compliance authority from a practical standpoint. It is suggested that the condition include a limitation on total dissolved solids within the cooling tower water since the solids play a significant role in PM/PM10 emissions.

11. Diesel Generator (Condition III.D.2.) is not exempt from PSD permitting or BACT. It is suggested that the Department deem the exemption criteria as BACT.

12. Gas Fuel Heater (Condition III.D.3.) is not exempt from PSD permitting or PSD BACT. It is suggested that the Department deem Natural Gas firing as BACT for PM/PM10 and SO_2 and good combustion practices as BACT for NOx and CO. The condition should also limit fuel firing to clean pipeline quality natural gas to ensure compliance with the NSPS Subpart Dc requirements.

13. Diesel Fire Pump (Condition III.D.4.) is not exempt from PSD permitting or BACT. It is suggested that the Department deem the exemption criteria as BACT.

14. NH3 and Fuel Oil Tanks (Conditions III.D.5. and III.D.6.) are not subject to any unit-specific applicable requirements, are not subject to BACT review, and have emissions below the generic exemption levels. It is suggested that the Department delete the conditions.

15. Appendix BD, page BD-7, paragraph 1, last sentence references fuel oil firing. It is suggested that the reference be deleted since the units are limited to firing natural gas.

16. Appendix BD, page BD-8, NOX Control Techniques, Wet Injection addresses fuel oil firing. It is suggested that the reference be deleted since the units are limited to firing natural gas.
17. Appendix BD, page BD-11 paragraph 2, references installation of a XONON system on a unit by the summer of 2001. The summer of 2001 is about to pass and it would be more appropriate for the Department to update the statement regarding actual installation of the system.
18. Appendix BD, page BD-11 paragraph 3 references fuel oil firing. It is suggested that the reference be deleted since the units are limited to firing natural gas.
19. Appendix BD, page BD-15, last paragraph contains a typo "establishment of establishment of startup…"
20. Appendix BD, page BD-16 paragraph 6 (full paragraph) states that "…startup emissions will not cause annual emissions greater than the potential-to-emit under continuous operation." If this is the case, it is suggested that the Department cap annual CO and NOx emissions from the facility.
21. Appendix BD, page BD-18, second bullet contains a typo "…Hot SCR is not be cost-effective…"
22. Appendix BD, page BD-19, fifth bullet references the North Broward County Resource Recovery Facility which is a significant distance from the proposed Belle Glade facility.
23. Appendix BD, page BD-19, sixth bullet references only Dry Low NOx for the CCGT when it is the combination of DLN and SCR that achieves the 0.07 lb/MWH performance.
24. Appendix BD, page BD-19, seventh and eighth bullets establish a work practice standard for the startup of the CCGT that includes use of a by-pass stack or duct. These requirements did not appear as permit conditions. It is suggested that if the Department establishes a work practice that the permit reflect the requirements as permit conditions.

If you have any questions, please contact me at the telephone numbers given below.

Sincerely,

For the Division Director
Environmental Health and Engineering

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cc: I. Goldman, FDEP-Southeast District