Progress Energy

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BUREAU OF AIR REGULATION

March 16, 2006

Michael P. Halpin, P.E.
DEP/DARM
North Permitting Section
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

Re: Crystal River Plant – Modular Cooling Towers Draft Construction Permit Comments

Dear Mr. Halpin:

Thank you very much for processing the cooling tower permit. Progress Energy has the following comments on the draft construction permit:

1. Section III – Emissions Units Specific Conditions – item number 7 requires Progress Energy to equip the modular cooling towers with a circulating water flow meter and maintain flow records for each calendar month. Due to the problems of maintaining a flow monitor in a salt water environment Progress Energy would prefer to calculate circulating water flow based on hours of operation of each pump and a nominal flow value per hour. This is the method we use in our current permit for the helper cooling towers (EU Number 13 Subsection F).

   The following is a description of the circulating water system – please refer to the attached "modular cooling tower numbering scheme". There are 67 modular cooling tower units shown in the drawing:

   Bank A – A1 through A15
   Bank B – B1 through B22
   Bank C – C1 through C15
   Bank D – D1 through D15

   The pumps that supply circulating water flow are is follows:

   - 3 North Pumps (P-A1 through P-A3) – The North Pumps supply circulating water flow to the modular cooling towers in Bank A.
   - 24 South Pumps (P-B1 to P-B13 and P-D1 to P-D11) – The South Pumps supply circulating water flow to the modular cooling towers in Banks B and D. Note the pumps are color coded - the blue pumps (P-B1 through P-B13) will supply circulating water flow to Bank B. The pink pumps (P-D1 through P-D11) will supply circulating water flow to Bank D.

- The circulating water for Bank C will be supplied by the existing helper cooling tower. Currently, there are four helper cooling towers with nine cells in each tower for a total of 9 X 4 = 36 cells. Excess water from the fourth (the existing cooling tower furthest to the west) cooling tower will supply circulating water to bank C.

We propose the following flow rates:

- North Pumps (total flow) 45 kgpm (2,700 kgph)
- South Pumps (total flow) 96 kgpm (5,760 kgph)
- Bank C will receive circulating water flow from the existing cooling tower system (HCT # 4). If any of the fans in cells C-1 through C-15 operate, Progress Energy will report a circulating water flow of 39 kgpm (2,340 kgph).

Accordingly we would appreciate item number 7 to read as follows:

7. Circulating Water Flow: Circulating water flow will be measured by monitoring the hours of operation of each circulating water pump. For each hour of operation each north pump will flow 15 kgpm (900 kgph). For each hour of operation each south pump will flow 4 kgpm (240 kgph).

The fans in bank C1 through C15 will be monitored for operation. If any of the fans are operating in those cells, the circulating water flow will be 39 kgpm (2,340 kgph).

Partial hours of operation will be prorated. Records of the circulating water flow will be maintained each calendar month of operation.

2) Section III – Emissions Units Specific Conditions – item number 3 requires that Progress Energy maintain the cooling tower circulating water flow on a twelve month rolling basis. As the cooling towers will predominantly operate during the summer months, Progress Energy would prefer to maintain records of the circulating water flow on a calendar twelve month basis. This will ease the record keeping requirement.

If you have any questions, please contact me at (727) 820-5295. Thank you very much for processing the application.

Best Regards,

Dave Meyer

Dave Meyer, P.E.
Senior Environmental Specialist

XC: Bernie Cumbie
Scott Osbourn, Golder

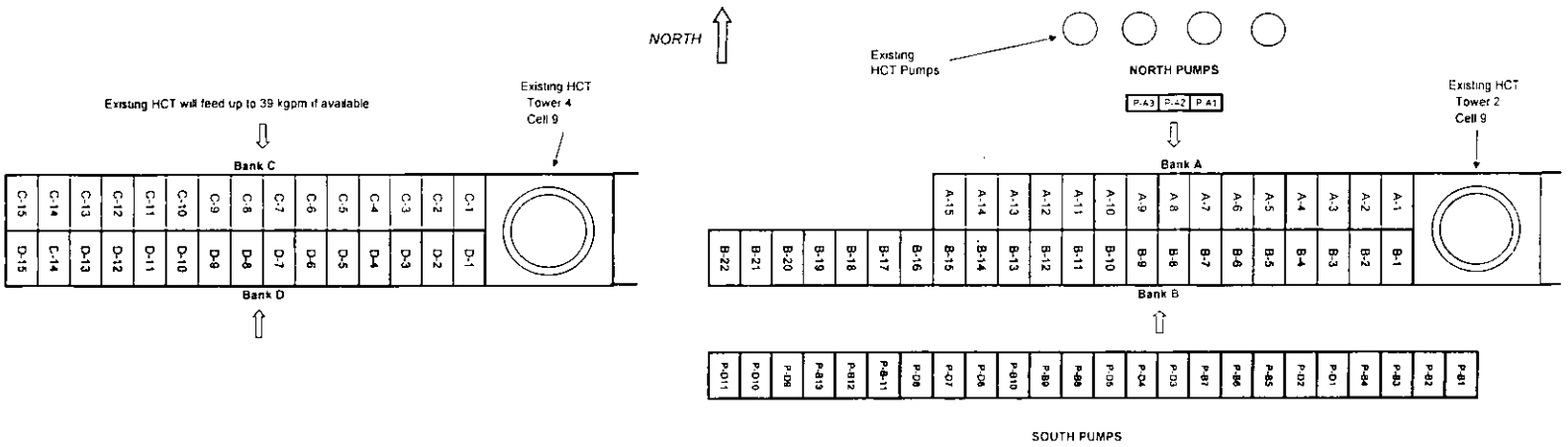
Attachment

North pumps = 15 kgpm each - 3 pumps x 15 kgpm/pump = 45 kgpm total (2,700 kgpm)
Tower 4 supply = 39 kgpm (2340 kgph)
Total water supply = 96 + 45 + 39 = 180 kgpm (10,800 kgph)

Bank A	15
Back B	22
Bank C	15
Bank D	15
Total	67

12 x 30 ft

2	1
4	3
6	5
8	7
10	9



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Progress Energy Florida
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Mr. Bernie Cumbie, Plant Manager
Progress Energy Florida
Crystal River Units 1&2
100 Central Avenue CN77
St. Petersburg, Florida 33701

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