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SUBJECT: Discusses component cooling water continuous tube cleaning sys performance testing.

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U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
CCW Continuous Tube Cleaning System Performance Testing

In the Florida Power & Light Company response to EA 87-85 it was committed that revised engineering evaluations of the operation of the component cooling water (CCW) heat exchangers would be issued. These evaluations were scheduled for issue on August 6, 1988 for Unit 3 and six months following return to power after installation of the CCW heat exchanger continuous tube cleaning (CTC) system for Unit 4. One of the primary inputs for the revised engineering evaluation is the CTC performance test. Performance testing of the CTC System will confirm the ability to maintain tube scaling below levels that would prevent removal of post accident heat loads and establish an interval during which this capability is predictable. Heat exchanger performance is to be confirmed by surveillance testing at the end of this interval. CTC system performance testing will also confirm original conclusions that an adverse ICW System impact is not created and that accelerated tube wear is not a concern.

The primary cause of heat transfer efficiency reductions in the CCW heat exchangers at Turkey Point is tube scale buildup. The buildup rate increases with increasing canal water temperature and concentrations of dissolved calcium carbonate. A four month test window during the warmest months of the year is needed to insure that the maximum cooling water inlet temperatures do not induce CCW heat exchanger fouling rates beyond the capability of the CTC system to maintain a desired CCW heat exchanger tube cleaniness. Additionally, an optimal test program must not be interrupted by forced unit outages as test data becomes meaningless in the absence of a heat load. The introduction of a forced outage would necessitate an adjustment to the test window. Additionally, any prolonged forced outages during the warmest summer months will reduce the optimization of the CTC system operation.

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The Unit 4 system had originally been planned for installation during the late 1988 - early 1989 refueling but, due to the operational benefits being experienced through the use of the Unit 3 system, plans are being made to facilitate a spring installation of the CTC system. It is planned that this system will be available to support the summer months when heat exchanger fouling historically has posed the greatest problems.

In order to fulfill the above requirements for the performance test, which will result in a truly optimized CTC system use, a period of relatively steady operation between the months of June to October is required. For this reason an extension is requested for the issuance of the revised engineering evaluation for Unit 3 to two months following the satisfactory completion of a four month performance test.

If an extension is granted, concurrent testing of the Unit 3 and Unit 4 systems will be scheduled, pending completion of the installation of the Unit 4 system. However, due to the outage scheduled for Unit 4 during the Fall of this year, a 4 month test period for its system may not be available. It is felt that, due to system similarities, the results from the full 4 month test of the Unit 3 system can be applied to the Unit 4 system and a revised evaluation issued. The conclusion applied to Unit 4 would then be verified through follow-up surveillance testing.

Assuming limited load interruption occurs during the June to October test period and the compatibility of data between the two units, both tests would be completed and a revised evaluation issued by the end of this year.

Very truly yours,

W. F. Conway
Acting Group Vice President
Nuclear Energy

WFC/SDF/gp

cc: Dr. J. Nelson Grace, Regional Administrator,
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Senior Resident Inspector, USNRC, Turkey Point Plant

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