



March 25, 1977
L-77-94

Office of Nuclear Reactor Regulation
Attn: George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Lear:

Re: Turkey Point Unit No. 4
Docket No. 50-251

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As we discussed during our phone conversation of March 25, 1977, this letter is forwarded to provide information concerning the plugging of two steam generator tubes in Turkey Point Unit No. 4.

On March 20, Unit 4 was shut down to plug a leaking steam generator tube. During this outage, a second leaking tube was discovered and was also plugged. Since both leaking tubes have been successfully plugged, the unit is now ready to be returned to power operation.

We, at Florida Power & Light Company in consultation with the NSSS Vendor, have reviewed the above situation and have concluded that resumption of power can be effected in a safe manner and that continued operation presents no danger to the public. We have concluded that the leaks observed during this outage are similar to those previously observed in both Units 3 and 4 and, thus, do not present a new type of failure. Leakage was first observed in mid-February and progressed in an orderly fashion over a period in excess of one month. These leaks behaved in a predictable manner and, thus, presented no danger to the public. This type of leak behavior has been observed previously in these general locations. In addition, we have a program which will definitively determine the location of the leak in tube R-45, C-53, which is where the recent leakage has occurred in Turkey Point 4 Steam Generator 4C. This program will be conducted during the 1977 spring refueling outage of our Turkey Point Unit No. 4. A detailed summary of this program is provided in the attachment.

In addition, Florida Power & Light Company and the NSSS vendor are continuing to investigate possible ways to remove

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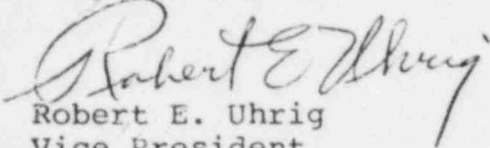
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an appropriate portion of the tube R-45, C-53, if necessary.

Very truly yours,


Robert E. Uhrig
Vice President

REU/JAD/hlc
Attachment

cc: Robert Lowenstein, Esq.

TURKEY POINT UNIT NO. 4

STEAM GENERATOR INSPECTION PROGRAM
PLANNED FOR SPRING 1977 REFUELING

1. Sludge maps utilizing standard eddy current technique will be made as follows:
 - a) Every other tube will be probed in rows 7, 14, 21, 28, 33, and rows 38 through 45 between columns 15 and 78.
 - b) Sludge Mapping will be performed in all three steam generators.
2. A complete Regulatory Guide 1.83 inspection will be performed.
3. Eddy current inspection will be performed in the one o'clock and 11 o'clock wedge regions to detect flaws in the tubes. This inspection will be conducted using a standard probe, but we also plan to include selective use of the helical scan probe which is under development and scheduled to be field tested in early April, 1977. This testing will be performed in all three steam generators.
4. An eddy current dent location program will be performed as follows:
 - a) A comprehensive full dent program is planned for one steam generator. Steam generator "C" has tentatively been selected.
 - b) A representative program is planned for the remaining two steam generators.
 - c) We expect to use a standard .540 inch diameter probe at reduced gain.
5. Tube gauging will be conducted on all three steam generators utilizing three different size eddy current probes (.540 in., .610 in., and .650 in. diameters).
6. A program to definitely determine the location of the leak in the 4C steam generator tube R-45, C-53 has been developed which includes:
 - a) A topside entry into "C" steam generator.
 - b) Cutting tube R-45, C-53, above the uppermost tube support plate.

- c) Eddy current testing through the open tube end using a standard probe. The helical scan probe currently scheduled for field testing in early April is also planned to be used.
- d) Tube gauging utilizing the .540 in., .610 in., and .650 in., diameter probes.
- e) Development of a probe that can be used to selectively pressurize short lengths of the tube with water and/or air to locate leaks by pressure decay or other means.