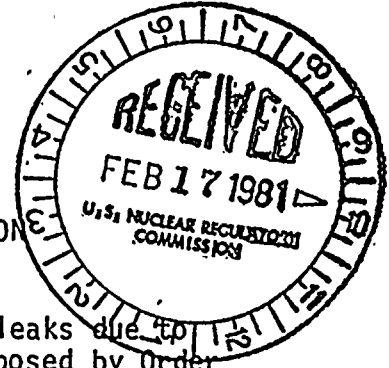


UNITED STATES  
 NUCLEAR REGULATORY COMMISSION  
 WASHINGTON, D. C. 20555

*Control File*

50-250  
 2-10-81



MEMORANDUM TO: Vincent Noonan, AD/MQE  
 FROM: Thomas Novak, AD/OR, DL  
 SUBJECT: TURKEY POINT PLANT STEAM GENERATOR INSPECTION

In 1976 Turkey Point Unit 4 developed steam generator tube leaks due to the denting phenomena. Unit 4 operated under conditions imposed by Order until 1978 when the inspection and plugging program was reasonably well established.

In 1977 similar license conditions were imposed on Unit 3 when the generators on that unit began to show denting. Since Unit 3 denting had not progressed as far as Unit 4 and since the inspection and plugging program had already been established the inspection conditions were imposed by amendment to the license.

Each unit new has steam generators that are plugged between 20 and 25% but have not had significant leakage for two or more years.\* Based on the past experience we find that the inspection procedures, plugging criteria, etc., are producing satisfactory results for six month operating periods. We do not have a technical basis for extending the operating period, however, we also do not have a technical basis for continuing to require our approval before returning the units to power operation following a steam generator inspection. Therefore, for convenience of the NRC as well as being representative of the status of the inspection program we propose that the attached revised license conditions be issued for both units at the Turkey Point Plant.

The attached conditions are modified from the Unit 4 conditions, the most restrictive conditions. The typed portions are the old conditions, the handwritten portions are new additions. The main change in the permission to return to power operations upon completion of the inspection and safety analysis by the licensee. Added features are the clear delineation of criteria used for inspection and plugging and the safety analysis by the licensee. We propose that these conditions be imposed on each unit in March 1981 the next inspection for Unit 3. Please comment on these conditions by February 23, 1981

Original signed by:  
 Thomas M. Novak

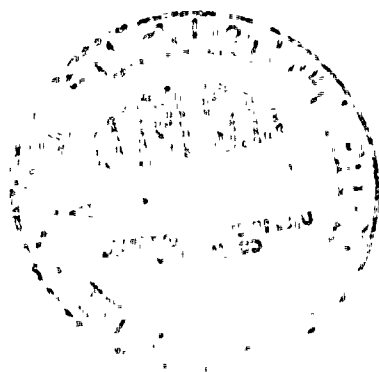
Thomas Novak, Assistant Director  
 Operating Reactors  
 Division of Licensing

cc: See next page

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\*The November leak in Unit 3 generator B was attributed to plugs that were loosened by shocks caused by a faulty bypass startup valve.

OFFICE	ORB #1 : DL	ORB #1 : DL	AD : OR				
SURNAME	MGrotenhuis	SVarga; ds	TNovak				
DATE	2/7/81	2/10/81	2/9/81				



D. Huang  
 E. Murphy  
 B. Gamble  
 S. Pawlicki  
 S. Varga  
 M. Grotenhufs

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

*Control File*

February 10, 1981

MEMORANDUM TO: Vincent Noonan, AD/MQE  
FROM: Thomas Novak, AD/OR, DL  
SUBJECT: TURKEY POINT PLANT STEAM GENERATOR INSPECTION

In 1976 Turkey Point Unit 4 developed steam generator tube leaks due to the denting phenomena. Unit 4 operated under conditions imposed by Order until 1978 when the inspection and plugging program was reasonably well established.

In 1977 similar license conditions were imposed on Unit 3 when the generators on that unit began to show denting. Since Unit 3 denting had not progressed as far as Unit 4 and since the inspection and plugging program had already been established the inspection conditions were imposed by amendment to the license.

Each unit now has steam generators that are plugged between 20 and 25% but have not had significant leakage for two or more years.\* Based on the past experience we find that the inspection procedures, plugging criteria, etc., are producing satisfactory results for six month operating periods. We do not have a technical basis for extending the operating period, however, we also do not have a technical basis for continuing to require our approval before returning the units to power operation following a steam generator inspection. Therefore, for convenience of the NRC as well as being representative of the status of the inspection program we propose that the attached revised license conditions be issued for both units at the Turkey Point Plant.

The attached conditions are modified from the Unit 4 conditions, the most restrictive conditions. The typed portions are the old conditions, the handwritten portions are new additions. The main change is the permission to return to power operations upon completion of the inspection and safety analysis by the licensee. Added features are the clear delineation of criteria used for inspection and plugging and the safety analysis by the licensee. We propose that these conditions be imposed on each unit in March 1981 the next inspection for Unit 3. Please comment on these conditions by February 23, 1981

A handwritten signature in dark ink, appearing to read "T. Novak", written in a cursive style.

Thomas Novak, Assistant Director  
Operating Reactors  
Division of Licensing

\*The November leak in Unit 3 generator B was attributed to plugs that were loosened by shocks caused by a faulty bypass startup valve.

*Future License Conditions for  
Units 3 and 4*

FEB 4 1981

M. GROTENHUIS

- (1) After operation in ~~cycle 6~~ of six equivalent full power months from ~~June 11, 1980~~, Turkey Point Unit shall be brought to the cold shutdown condition and the steam generators shall be inspected unless: (1) an inspection of the steam generators

*(the last steam generator inspection)*

~~is performed within this period as a result of the requirements in 2, 3 and 4 below, or (2) an acceptable analysis of the~~

*extension is granted by the Director of Nuclear*

*Reactor Regulation to authorize*

~~susceptibility for stress corrosion cracking of tubing is submitted to explicitly justify continued operation of Unit No. 4 beyond the authorized period of operation. Any analysis~~

*request for*

~~justifying continued operation must be submitted at least 45 days prior to the expiration date of the authorized period of operation. For the purpose of this requirement, equivalent operation is defined as operation with the reactor coolant at a temperature greater than 350°F. Nuclear Regulatory Commission (NRC) approval shall be obtained before resuming power operation following this inspection.~~

- (2) Reactor coolant to secondary leakage through the steam generator tubes shall be limited to 0.3 gpm per steam generator. With a steam generator tube leakage greater than this limit, the reactor shall be brought to the cold shutdown condition within 24 hours. <sup>and a</sup> Full steam generator inspection shall be performed, ~~and NRC approval shall be obtained before~~ resuming power operation following this inspection.

*amend 49  
special  
delete*

*of the leaking steam generator*

- (3) The concentration of radioiodine in the reactor coolant shall be limited to 1.0 microcurie/gram during normal operation and to 30 microcuries/gram during power transients.

- (4) ~~Reactor operation shall be terminated and NRC approval shall be obtained prior to resuming operation if~~ primary to secondary leakage attributable to the denting phenomena is detected in 2 or more tubes during any 20 day period. *an inspection and safety analysis shall be performed by the licensee.*

- (5) The Metal Impact Monitoring System (MIMS) shall be contained in operation with the capability of detecting loose objects. If the MIMS is out of service in other than cold shutdown or refueling mode of operation, this fact shall be reported to the NRC. Any abnormal indications from the MIMS shall also be reported to the NRC by telephone by the next working day and by a written evaluation within two weeks.

(6) Following each startup from below 350°F, core barrel movement shall be evaluated using neutron noise techniques.

(7) ~~The licensee shall provide for staff review information concerning the tube wastage predicted to occur during the latter half of the operating period which begins January 13, 1981 and extends for six equivalent months of operation. This information is to be supplied by February 28, 1981.~~ *amend 54 special* *deletable*

(7) *the* ~~any~~ inspection and plugging results from (1), (2), or (4) above shall be submitted to the NRC no later than 30 days following the return to power operation.

(8) Criteria for the inspection and plugging program are as delineated in the Standard Technical Specifications NUREG 0452, Regulatory Guide 1.83 and 1.121, ASME Section XI, and the Inspection program



for the units (i.e. letter L-80-345  
dated October 20, 1980 for Unit 4).

- (9) Prior to resumption of power operation following inspections per (1) (2) and (4) above the licensee shall perform a safety analysis per 10 CFR 50 Section 59.



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