

50-250/257



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

MAY 7 1987

The Honorable Lawton Chiles  
United States Senator  
Federal Building  
Lakeland, Florida 33801

Dear Senator Chiles:

I am pleased to respond to your March 31, 1987 letter in which you indicated that a constituent of yours, Mr. P. A. Oldfield, was concerned that the Turkey Point Nuclear Plant is unsafe and should be closed. Mr. Oldfield indicates that his concern is based on recent reports. However, Mr. Oldfield did not identify the reports nor provide any details relating to their conclusion. I assume Mr. Oldfield's concern is based on a recent operational event which occurred on Unit 4 and was identified by the licensee, Florida Power and Light Company. This event has received extensive media coverage in the Miami area. The problem was a leak in the Reactor Coolant System (RCS) of Unit 4 which occurred at the reactor vessel head area. The leak resulted in deposition of crystalline boric acid on the reactor vessel head and surrounding areas. A brief description of the event, actions taken by the licensee and Nuclear Regulatory Commission (NRC), status of the event, ongoing efforts in relation to the event, and the regulatory requirements and basis for determining the operational safety of the Turkey Point facility or any other operating nuclear power facility follows.

Turkey Point, Unit 4, has been operating since its last outage in September 1986 with a small RCS leak in the flange connection portion of an instrumentation penetration on the reactor vessel head. The licensee conducted a safety evaluation which concluded that the leak was not an RCS pressure boundary fault, was within the unit's Technical Specification limits, and did not involve an unreviewed safety question. Boric acid corrosion of the carbon steel clamp in the flange area was considered not to be a threat by the licensee. However, a recommendation was made that the clamp assembly should be inspected within six months. A reinspection during an October 1986 outage did not identify a significant increase in the boric acid accumulation.

Unit 4 was shut down on March 11, 1987 because of an unrelated problem. On March 13, 1987, the clamp assembly was inspected and revealed an extensive buildup of crystalline boric acid on the reactor vessel head and surrounding areas. One of the NRC resident inspectors personally inspected the vessel head area on March 16, 1987. Corrosion damage was observed on the threads of several vessel head closure studs and the ductwork of the control rod drive mechanism cooling fans, which are located above the reactor vessel head. The other nuclear unit at the site, Unit 3, is currently in a refueling outage. Unit 3 has not experienced a leak of this type and is unaffected by the Unit 4 problem.

The licensee is cleaning up the residue, evaluating the effect of the boric acid buildup on the reactor vessel, the effect on other safety related components located in the immediate area of the reactor vessel head, and implementing any

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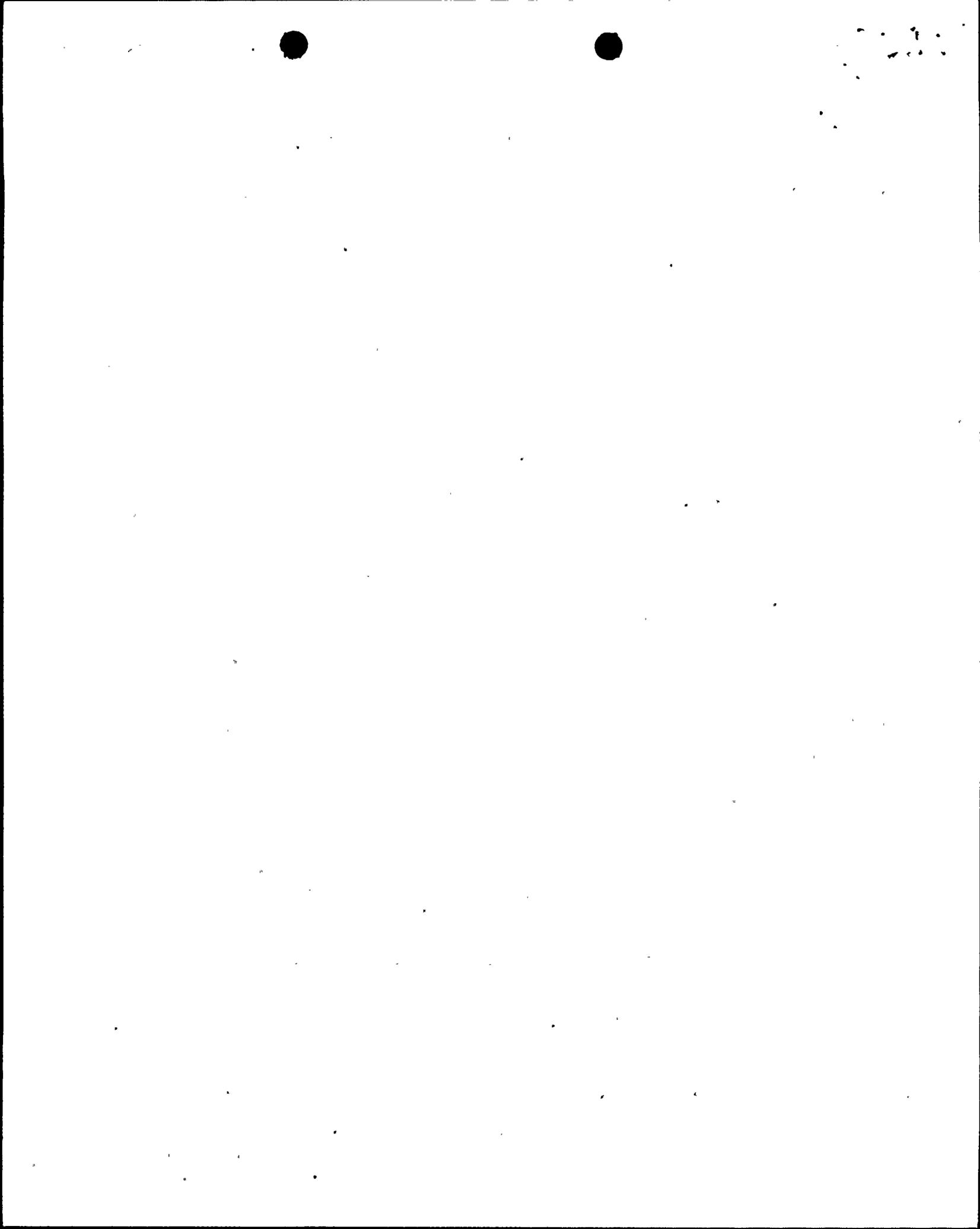
necessary corrective actions. In addition, the effects of crystalline boric acid found on any safety related components located within the containment area are also being evaluated and any necessary corrective actions are being taken. The licensee is being assisted in this effort by representatives of the nuclear steam supply system manufacturer, Westinghouse, and the supplier of the reactor vessel, Babcock and Wilcox.

The regulatory requirements for licensing nuclear power plants such as Turkey Point are codified in Title 10 to the Code of Federal Regulations, Part 50. The NRC staff is guided by the considerations in 10 CFR 50.40, "Common Standards," when issuing operating licenses. This regulation includes, among other things, collective consideration of operating procedures, plant-specific design features and technical specifications (TS).

The plant-specific Final Safety Analysis Report (FSAR) contains the analyses, assumptions and specific design features to assure compliance with the regulations. The TS, which are derived from the analyses and evaluations included in the facility's FSAR, specify the safety limits for operation and restrictions if the safety limits cannot be met. Thus, the FSAR and TS for the Turkey Point facility (including all changes and amendments) provide the bases for the NRC staff's determination that there is reasonable assurance that the facility complies with the regulations and that the health and safety of the public will not be endangered.

As previously stated, when the licensee initially discovered the Unit 4 leak in September 1986, a safety evaluation was performed by the licensee which indicated that the leak was not an RCS pressure boundary fault, was within TS limits for total RCS leakage and did not involve an unreviewed safety question. Based on this safety evaluation, the licensee determined that the unit could continue to operate and was in conformance with the FSAR and TS. When the leak was reinspected in October 1986, no significant change was noted and the unit was still in conformance with the FSAR and TS. The third inspection of the leak on March 3, 1987, revealed extensive buildup of the boric acid. The licensee then kept the unit in a shutdown condition while performing a safety evaluation and implementing any necessary corrective actions prior to resuming operation. The licensee is providing a detailed report of the event, their safety analyses and their corrective actions to us.

The NRC has an extensive inspection and enforcement program to assure that operation and safety standards are met at all operating nuclear power plant sites. The Turkey Point Plant has three full-time resident inspectors onsite. In addition, several announced and unannounced inspections are performed by specialists from NRC headquarters and the region to augment the resident inspection activities. When an event occurs at an operating facility, a coordinated effort by the appropriate region and headquarters staff is initiated to determine the significance of the event and the subsequent actions necessary to be taken by the licensee and the NRC. In addition to the normal inspection activities described above, we have investigation programs in place



for special assessments. These investigations are to assure timely, thorough and systematic inspection or investigation of operational events that represent a significant degradation in safety margin or operational events of a lesser safety significance threshold but for which a detailed specialized assessment is warranted.

An Incident Investigation Team (IIT) is activated for operational events that represent a significant degradation in safety margin. An Augumented Inspection Team (AIT) is activated for events of lesser significance but for which we have determined a specialized assessment is warranted. Due to the location of the leak and the extensive amount of boric acid, we determined that an independent specialized assessment by the NRC staff was warranted.

An AIT was formed and sent to the Turkey Point site on March 19, 1987. The AIT is composed of regional staff and headquarters personnel. The team members have expertise in the areas necessary to assess the affects of the crystalline boric acid (i.e., chemical, mechanical, metallurgy, etc). The team is performing an independent assessment of the event, as well as the licensee's corrective actions, and will document their findings in an inspection report.

In summary, both the licensee and the NRC staff are performing independent assessments of the effects of the RCS leakage and preparing detailed reports which will provide the bases to determine if Unit 4 is in conformance with its design, as documented in the FSAR, and can be operated within its TS.

I trust you find this responsive to your request and of assistance in assuring yourself and your constituents that the Commission's requirements and programs to assure safe operation of all operating nuclear power plants, including Turkey Point, are based on sound technical requirements and judgements by the staff. I assure you that Turkey Point, Unit 4, will not be allowed to restart until the condition of the reactor vessel and its associated safety-related components and other safety-related components within containment are restored to a proper operational condition. The actions being taken by the staff in these areas are consistent with the Commission's statutory responsibility to ensure that all operating facilities achieve and maintain adequate levels of protection of public health and safety.

If we can be of further assistance, please do not hesitate to contact us.

Sincerely,  
Original Signed by  
V. Stello  
Victor Stello, Jr.  
Executive Director  
for Operations

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4/27/87

\*PREVIOUS CONCURRENCE SEE DATE

LA:PDII-2*	PM:PDII-2*	D:PDII-2*	AD:RP*	D:RP*	ADP*	*DDO:NRR	DO:NRR*	EDO
DMiller	DMcDonald:bg	LRubenstein	GLainas	SVarga	FMiraglia	JSniezek	TMurley	VStello
4/21/87	4/21/87	4/21/87	4/21/87	4/22/87	4/22/87	4/24/87	4/27/87	3/2/87



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Local PDR w/cy of incoming

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

Rec'd 10:00 AM  
4/8

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**ACTION**

Due Suseyok 4/14/87  
4/23/87

EDO PRINCIPAL CORRESPONDENCE CONTROL  
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FROM:  
SEN. LAWTON CHILES

DUE: 04/22/87  
*Extended to*  
*04/29/87*  
*Per Dewayne Morris*  
*Telecon 4/9/87*

EDO CONTROL: 002717  
DOC DT: 03/31/87  
FINAL REPLY:

TO:  
OCA

FOR SIGNATURE OF:  
EXECUTIVE DIRECTOR

\*\* GREEN \*\*

SECY NO: 87-333

DESC:  
ENCLOSES TELEGRAM FROM P. A. OLDFIELD RE SAFETY  
AT TURKEY POINT

ROUTING:  
GRACE

DATE: 04/07/87  
ASSIGNED TO: NRR CONTACT: DENTON

SPECIAL INSTRUCTIONS OR REMARKS:  
REPLY TO LAKELAND, FLORIDA OFFICE.

NRR RECEIVED: 4/8/87  
ACTION: DPLA:NOVAK

NRR ROUTING: DENTON/SNIEZEK  
PPAS  
MOSSBURG

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