

FEB 16 1988

Docket No. 50-293

MEMORANDUM FOR: James T. Wiggins, Chief  
Reactor Projects Branch No. 3

FROM: A. Randy Blough, Chief  
Reactor Projects Section No. 3B

SUBJECT: PILGRIM STATUS REPORT FOR THE PERIOD JANUARY 30-FEBRUARY 12, 1988

Enclosed is the Pilgrim bi-weekly status report from the NRC Resident Office at Pilgrim. Three resident inspectors and two region-based inspectors monitored activities at the plant during the report period. In addition, a four member NRC inspection team was onsite during the week of February 1, 1988 to review the adequacy of the onsite electrical power systems and distribution.

The status reports are intended to provide NRC management and the public with an overview of plant activities and NRC inspection activities. Subsequent inspection reports will address many of these topics in more detail.

Original Signed By:

A. Randy Blough, Chief  
Reactor Projects Section No. 3B

Enclosure:  
As stated

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Chairman, Board of Selectmen, Plymouth  
Chairman, Board of Selectmen, Carver  
Chairman, Board of Selectmen, Duxbury  
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Chairman, Board of Selectmen, Kingston  
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The Honorable E. J. Markey  
M. D. Ernst, Committee on Energy, Commonwealth of Massachusetts  
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## ENCLOSURE

### PILGRIM STATUS REPORT FOR THE PERIOD JANUARY 30 - FEBRUARY 12, 1988

#### 1.0 Plant Status

As of 8:00 a.m. on February 12, 1988, the reactor was in cold shutdown mode with moderator temperature about 95 degrees Fahrenheit.

#### 2.0 Facility Operations Summary

The plant has been shutdown for maintenance and to make program improvements since April 12, 1986. The reactor core was completely defueled on February 13, 1987 to facilitate extensive maintenance and modification of plant equipment. The licensee completed fuel reload on October 14, 1987. Reinstallation of the reactor vessel internal components and the vessel head was followed by completion of the reactor vessel hydrostatic test. The primary containment integrated leak rate test was also completed during the week of December 21, 1987.

During this report period, the licensee continued with the post-modification/maintenance testing of plant equipment. Some of the major ongoing projects include process computer tie-ins, hydrogen water chemistry system preoperational testing, and testing of the third emergency diesel generator.

#### 3.0 Items of Special Interest

##### NRC Public Meeting to Receive Comments on BECo's Pilgrim Restart Plan

As noted in the previous status report, NRC will be conducting public meetings on February 18, 1988, at the Plymouth Memorial Hall, in Plymouth, Massachusetts to receive public comments on the Boston Edison Company's Pilgrim Restart Plan. The meetings are scheduled for 1:00 p.m. to 4:00 p.m. and 7:00 p.m. to 10:00 p.m. The meetings will be formal, transcribed sessions where the public's testimony will be heard by NRC management. The NRC will also accept written testimony from those unable to attend. NRC will consider these comments, as appropriate, for enhancing NRC review and inspection activities.

Copies of Boston Edison's Pilgrim Restart Plan have been placed in local libraries for public review. NRC Region I has issued a news release to inform the public of the scheduled meetings. NRC plans to hold one or more followup public meetings to explain the NRC response to the public comments received on February 18. These followup meetings would occur after the staff has evaluated the comments and decided on the appropriate response actions, but prior to a staff recommendation to the Commission regarding plant restart.

### Fire in the Machine Shop

On February 11, 1988, at 7:35 p.m., the control room received a report of a fire in a contaminated area of the machine shop. The station fire brigade was dispatched to the scene. The Plymouth Fire Department was notified by the licensee and three fire trucks arrived at the site by 7:50 p.m. The licensee declared an Unusual Event at 7:50 p.m. The fire was confined to a small area and was identified as burning insulation from a heat-treating machine which was being used on a valve disk in the shop. The fire was extinguished but was still smoldering at 7:52 p.m. The smoldering insulation was placed into a 55 gallon drum filled with water, and the Unusual Event was secured at 8:05 p.m. Licensee radiological surveys indicated that there was no spread of contamination in the general area. Air samples taken in the area during the fire showed no airborne contamination. An NRC inspector was onsite at the time of the event and the resident inspectors are following up on the licensee's actions. The licensee is conducting a review and critique of their event response.

No personnel injury occurred during the fire. The inspector toured the scene on February 12, 1988. No damage was observed in the machine shop.

### Degraded Voltage Protection System Design Deficiency

During an engineering review, the licensee identified that setpoints for safety-related degraded voltage relays installed on the 4160 Volt AC (VAC) emergency buses may not be adequate. The inplant electrical distribution system includes two safety-related 4160 VAC buses which in turn supply all lower voltage safety-related AC loads. The 4160 VAC buses are equipped with both loss of voltage and degraded voltage relays. Either set of relays will trip the bus feeder breakers and start the emergency diesel generators. The licensee engineering review identified that in some cases the current setpoint for the degraded voltage relay may not be sufficient to ensure that the supply voltage to certain equipment would be maintained within its design operating band. The licensee reported this condition to the NRC via ENS at 6:00 p.m. on January 30, 1988. An NRC electrical inspection team, which was onsite during the week of February 1, reviewed the degraded voltage protection problem. Licensee's corrective actions will be evaluated under an unresolved item as described in the electrical team inspection report 50-293/88-08.

#### 4.0 Emergency Notification System (ENS) Report

During this period, the licensee made the following reports to the NRC pursuant to 10 CFR 50.72:

- On January 30, 1988, at 6:00 p.m., the licensee notified NRC regarding the deficiency found in the degraded voltage protection for the onsite power distribution system. The details are described in Section 3.0.
- On February 2, 1988, at 11:15 a.m., the licensee received unexpected isolations of the reactor water clean up system and secondary containment, and auto-start of the "A" standby gas treatment system. The actuations were caused by I&C technicians who lifted leads in the isolation logic to allow tie-in of a process computer monitoring loop. The leads were relanded, a blown fuse was replaced, and the isolations were cleared.
- On February 2, 1988, at 7:08 p.m., an auto-start of the "A" standby gas treatment system, and isolation of the secondary containment occurred. Licensee investigation determined that an electrical relay coil failed creating a fault and resulting in blow: logic power fuses. The de-energization of this portion of the PCIS logic caused the observed equipment actuations. The licensee replaced the defective relay coil and the fuses. The failed relay was a General Electric Type CR120A. A recent failure of this type of relay occurred on November 24, 1987 and on January 6, 1988. The licensee has evaluated the previous relay failures and is implementing corrective actions. The licensee's evaluation and corrective actions are described in the inspection report 50-293/87-50.
- On February 3, 1988, at 7:36 p.m., the licensee experienced a spurious anticipated-transient-without-scrum (ATWS) system trip signal. The ATWS system is designed to provide independent means of introducing negative reactivity to the reactor by tripping the reactor recirculation pumps and initiating the alternate means of control rod insertion system in the unlikely event of a reactor protection system failure. During this outage, the licensee has added a reactor feed-water pump trip and an additional recirculation pump trip to the existing ATWS system as part of the Safety Enhancement Program. In order to meet the NRC's ATWS mitigation requirements specified in 10 CFR 50.62, the standby liquid control system was also modified to utilize enriched sodium pentaborate solution. In response to the spurious ATWS system trip signal, the licensee halted the ongoing post modification testing on the ATWS system. An investigation to determine the cause of the spurious signal is continuing.
- On February 11, 1988, at 7:50 p.m., the licensee notified the NRC of the declaration of an Unusual Event regarding a fire in the machine shop. The details are described in Section 3.0.

#### 5.0 NRC Staff Status During the Period

The inspection staff at Pilgrim during the report period consisted of the following:

Clay Warren --- Senior Resident Inspector

Jeffrey Lyash --- Resident Inspector

Tae Kim --- Resident Inspector

In addition, a Regional Inspector was onsite during the week of February 1 to review the status of the material condition improvement action plan. During the week of February 8, a Region-based Reactor Engineer was onsite assisting the resident inspectors in reviewing overtime controls; this review is not yet complete. Also during the week of February 1, a four-member NRC inspection team was onsite to review the adequacy of the onsite electrical power systems and distribution. The results of these inspections will be documented in NRC Inspection Reports 50-293/88-02, 50-293/88-07 and 50-293/88-08. On February 12, 1988, the NRC Region I issued the routine resident inspection report 50-293/87-50 which covered the period of October 29 - November 30, 1987. The report identified four violations of NRC regulations.