MEMORANDUM FOR: Thomas A. Rehm, Assistant for Operations
Office of Executive Director for Operations

FROM: Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

SUBJECT: KENNEDY QUESTIONS - 1/7/88 HEARING ON PROPOSED RESTART OF PILGRIM (EDO #003569)

Enclosed are NRR's responses to the questions Senator Kennedy has raised. Question 3 was answered by OGC. Where appropriate, answers were reviewed by the Region. If you have any further questions, please contact Suzie Black of my staff on (X21255).

Original signed by
Thomas E. Murley

Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

Enclosures:
Kennedy Responses

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3/3/88	3/5/88	3/5/88	3/3/88

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4/1/88

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QUESTION 1. There remains a great deal of uncertainty as to how the NRC will evaluate whether the Pilgrim reactor is ready to restart. As you know, I fully support the adjudicatory hearing process and hope that the NRC will agree that an adjudicatory hearing is the proper way to proceed. I am aware that there has been one public meeting in Plymouth and that another meeting is contemplated. Would you provide me with a schedule of planned or proposed future meetings, including the location of the meetings, who will attend from the NRC, and what public involvement there will be at the meetings. I am also interested in learning if a final decision has been made on Governor Dukakis' and Attorney General Shannon's petition for an adjudicatory hearing. If a decision has not yet been made, when will it be made?

ANSWER.

The NRC staff and local officials in Massachusetts have engaged in a continuing dialogue on the Pilgrim situation. This dialogue has included public meetings with the Plymouth Board of Selectmen and Chamber of Commerce, the Duxbury Board of Selectmen, the Massachusetts Joint Committee on Energy, the Massachusetts Legislative Committee on the Investigation and Study of the Pilgrim Station, the Town of Plymouth Advisory Committee on Nuclear Matters, and others. The NRC staff also participated in a public forum on the Pilgrim situation at the

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Duxbury High School on October 29, 1987. This meeting was sponsored by the Duxbury Board of Selectmen. Representatives from some of these groups also have participated in NRC Region I management meetings dealing with the Pilgrim facility, including the Systematic Assessment of Licensee Performance (SALP) meeting held on May 7, 1987. On October 8, 1987, the NRC met with representatives of the Commonwealth of Massachusetts in our Region I office. This meeting, which was open to the public, was held to discuss agenda items proposed by the Commonwealth, including emergency preparedness issues, the status of various NRC technical reviews, and inspection activities expected in the next few months. Subsequently, other meetings have been held with representatives of the Commonwealth discussing the same topics.

The most recent meeting, which was coordinated with the Commonwealth and invited participation by interested members of the public, was held in Plymouth on February 18, 1988 to receive comments on the Pilgrim Nuclear Station Restart Plan.

The following is the projected schedule, location and expected participation for future meetings which are currently planned. The schedules are tentative and subject to change depending on several of the integrated activities being conducted by both the licensee and NRC staff.

1. Public meeting(s) will be held in the Plymouth area, currently projected for late April or early May to discuss the disposition of comments and concerns raised in the February 18, 1988 public meeting. The meeting(s) will be chaired by NRC senior staff members and members of the public will participate.

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2. A Commission meeting, currently projected for late May or early June, to brief the Commission on the status of Pilgrim activities relating to plant restart and the NRC staff's plans and schedule for completing their readiness review. This will be a public meeting held in the Washington, D.C. area. The extent of public participation will be detailed in the Federal Register Notice of the pending meeting.

3. A public meeting will be held in the Plymouth area to discuss the results of NRC's team inspection of the readiness of the plant and licensee management support the restart and safe operation of the plant. This meeting is tentatively scheduled for July or August.

4. A public meeting, currently projected for July or August, will be held between NRC senior staff and State Senator William Golden and the other petitioners who submitted the July, 1986, 10 CFR 2.206 Petition, if the petitioners desire a meeting. This meeting will discuss emergency preparedness, management and plant readiness issues. NRC will also answer questions of the petitioners. It will be held in the Plymouth area. The petitioners and members of the public will participate. This meeting may be coordinated with the meeting addressed in number 3 above.

5. The Commission will hold an additional public meeting at NRC Headquarters prior to making any decisions regarding the readiness of Pilgrim to resume operations. The staff will provide a full accounting of its recommendations and supporting bases in relation to the restart of the Pilgrim station during this meeting. This meeting is not currently scheduled. The extent of public participation will be detailed in the Federal Register Notice of the pending meeting.

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Other public meetings, including those with Boston Edison, will be held as circumstances warrant. These meetings will be announced pursuant to NRC staff policy on open meetings (43 FR 28058 which is enclosed).

A final decision has not been made on Governor Dukakis' and Attorney General Shannon's petition for an adjudicatory hearing. The petitioners were notified in our letter dated November 13, 1987 that the Petition would be treated as a request for action according to 10 CFR 2.206 of the Commission's regulations. The staff is nearing completion of their evaluation of the information related to the petition and we expect to render a decision under 10 CFR 2.206 in the near future.

Enclosure:
43 FR 28058

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Enclosure to
Question 1

COMMISSION NOTICES
POLICY STATEMENTS

Conduct of Proceedings

43 FR 28058
Published 6/28/78

DOMESTIC LICENSE APPLICATIONS

Open Meetings and Statement of NRC Staff Policy

The Nuclear Regulatory Commission's (NRC's) regulations in 10 CFR 2.102 permit applicants to confer informally with the NRC technical staff during reviews of domestic license or permit applications. These meetings have served as an essential means for the exchange of technical information and views necessary for the technical review of applications. For several years other parties or potential parties to domestic licensing proceedings, as well as members of the general public, have, upon request, been permitted to attend applicant-NRC technical staff meetings as observers. However, the Commission's regulations do not require that others be permitted to attend such informal meetings between applicant and staff, and the general practice being followed in this regard has never been formally articulated. This statement is intended to provide such articulation. It is also noted that this matter is related to the provision for increased public participation which was approved by the Commission during its consideration of NUREG 0292 (Denton Report).

As a general matter, the Commission and staff try to involve concerned citizens in any Commission activity in which they have expressed an interest. All meetings conducted by the NRC technical staff as part of its review of a particular domestic license or permit application (including an application for an amendment to a license or permit) will be open to attendance by all parties or petitioners for leave to intervene in the case. These meetings are intended by the NRC technical staff to facilitate an exchange of information between the applicant and the staff. It is expected that the NRC technical staff and the applicant will actively participate in the meeting. Others may attend as observers. Likewise, when meetings are scheduled between the staff and other parties or petitioners, applicants would be permitted to attend only as observers.

The general policy of open meetings described above will admit of only a few exceptions, which must be approved by the Director of the relevant division. For example, some persons may not be permitted to attend meetings where classified or proprietary information (including sensitive safeguards information) is to be discussed. The NRC staff will prepare a written summary of the unclassified and nonproprietary portions of such meetings and forward the summary to interested persons unable to attend so that they will be informed of what transpired at the meeting. However, attendance will not be limited solely because preliminary opinions, recommendations, or advice will be offered on the merits of the applications during the meeting.

When a party or petitioner for leave to intervene requests, reasonable efforts will be made by the NRC staff to inform the party or petitioner of forthcoming meetings conducted by the NRC technical staff so that appropriate arrangements for attendance can be made. It is recognized that in some cases the need for a prompt meeting may make it impossible or impracticable to notify all parties and petitioners. The policy described above also cannot practicably be applied to chance encounters between NRC technical staff personnel and other parties or petitioners but such chance encounters will not be permitted to serve as a source of information for the conduct of licensing reviews.

46 FR 28533
Published 5/27/81

Statement of Policy on Conduct of Licensing Proceedings

I. Background

The Commission has reviewed the docket of the Atomic Safety and Licensing Board Panel (ASLBP) and the current status of proceedings before its individual boards. In a series of public meetings, the Commission has examined at length all major elements in its licensing procedure. It is clear that a number of difficult problems face the agency as it endeavors to meet its responsibilities in the licensing area.

This is especially the case with regard to staff reviews and hearings, where requested, for applications for nuclear power plant operating licenses.

Historically, NRC operating licensing reviews have been completed and the license issued by the time the nuclear plant is ready to operate. Now, for the first time the hearings on a number of operating license applications may not be concluded before construction is completed. This situation is a consequence of the Three Mile Island (TMI) accident, which required a reexamination of the entire regulatory structure. After TMI, for over a year and a half, the Commission's attention and resources were focused on plants which were already licensed to operate and on the preparation of an action plan which specified changes necessary for reactors as a result of the accident.

Although staff review of pending license applications was delayed during this period, utilities which had received construction permits continued to build the authorized plants. The staff is now expediting its review of the applications and an unprecedented number of hearings are scheduled in the next 24 months. Many of these proceedings concern applications for operating licenses. If these proceedings are not concluded prior to the completion of construction, the cost of such delay could reach billions of dollars. The Commission will seek to avoid or reduce such delays whenever measures are available that do not compromise the Commission's fundamental commitment to a fair and thorough hearing process.

Therefore, the Commission is issuing this policy statement on the need for the balanced and efficient conduct of all phases of the hearing process. The Commission appreciates the many difficulties faced by its boards in conducting these contentious and complex proceedings. By and large, the boards have performed very well. This document is intended to deal with problems not primarily of the boards' own making. However, the boards will play an important role in resolving such difficulties.

Individual adjudicatory boards are encouraged to expedite the hearing process by using those management methods already contained in Part 2 of the Commission's Rules and Regulations. The Commission wishes to emphasize though that, in expediting the hearings, the board should ensure that the hearings are fair, and produce a record which leads to high quality decisions that adequately protect the public health and safety and the environment.

Virtually all of the procedural devices discussed in this Statement are currently being employed by sitting boards to varying degrees. The Commission's reemphasis of the use of such tools is intended to reduce the time for completing licensing proceedings. The guidelines set forth below are not to be

QUESTION 2. During your testimony, you mentioned that the NRC had asked Boston Edison a series of questions relating to direct torus venting. Specifically, Edison was asked when and under what conditions they would utilize a direct torus vent. At the time of the hearing, Boston Edison had not yet responded to the NRC's questions. You indicated that a response would be necessary before the NRC could proceed with considering whether the installation of a direct torus vent was warranted at Pilgrim. Has Edison responded to the NRC's questions? If so, has the NRC made a decision on whether it will permit the licensee to make the direct torus vent improvement?

ANSWER.

The Boston Edison Company (BECo) has not yet responded to our questions of August 21, 1987 relating to their submittal of a design for a direct torus vent (DTV). As stated in the testimony, the questions must be resolved before the system is placed into service. The vent line, which would be capable of providing a hardened (high pressure) path from the containment torus structure to the plant stack, has physically been installed with blind flanges to isolate the DTV from the existing low pressure vent path through the plant Standby Gas Treatment System to the plant stack. The installation of the piping, supports, and blind flange were installed by BECo pursuant to provisions of 10 CFR 50.59.

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10 CFR 50.59 allows licensees to make changes to their facility as described in the safety analysis report without prior Commission approval, if the proposed change does not involve a change in the technical specifications incorporated in the license or an unreviewed safety question.

An inspection team was sent to the Pilgrim site during the first week of March to review the non-operational physical plant modification. The objective of the inspection was to verify the adequacy of the plant modification and associated licensee safety evaluations. The vent line is not operational as installed, however, we chose to confirm that the plant modification (including the installation of the piping, supports and blind flange) does not adversely affect the function of the other plant systems, structures or the plant response under accident conditions. The inspection team concluded that the plant modification was adequately evaluated by the licensee and the design change had been made with no adverse impact on plant safety. The conclusion was based on a system walkdown, inspection of the supporting documentation and interviews with utility personnel. At this time the NRC has not made a decision on allowing the installation or operation of a direct torus vent system.

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QUESTION 3. During the hearing, I asked you how many times the NRC has been formally requested to hold adjudicatory hearings in relation to restarting or licensing a nuclear reactor. I would be interested in learning who made the requests (i.e., whether they came from the licensee, from a State government, or elsewhere), and whether the NRC acted favorably or unfavorably on the requests (and/or petitions)?

ANSWER.

There have been contested operating licensing proceedings for most operating nuclear power plants. Our log shows some 80 proceedings. There have also been some 70 proceedings involving amendments to power plants' operating licenses. Many amendment proceedings could affect continued reactor operation.

We have identified 6 proceedings directly involving power plant restarts:

Browns Ferry - 1975; Changes involving startup after fire; Intervenor B. Garner. Commission authorized operation.

Humboldt Bay - 1977; Request to delete seismic upgrade requirements allowing startup of the facility; Intervenor Sierra Club, Friends of the Earth. Proceedings terminated after licensee notified NRC of intent to decommission the facility.

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Trojan - 1978; Proceedings on Commission Order requiring modifications to Control Building; Intervenors D. McCoy, C.Parson, N.Bell, E.Rosolie, S.Willingham, Coalition for Safe Power, Columbia Environmental Council, Bonneville Power Authority, State of Oregon. Commission authorized operation.

Rancho Seco - 1979; Proceedir to permit operation after post-TMI shutdown Order; Licensee requested earing; Intervenor California Energy Commission et.al. Commission aut[illegible]ed operation.

Three Mile Island 1 - 1979; Proceedings to permit operation after post-TMI shutdown Order; Intervenors Commonwealth of Pennsylvania, UCS, TMI Alert, Mr.& Mrs. Aamodt. Commission authorized operation.

San Onofre Unit 1 - 1984; Seismic shutdown Order recission; Hearing requested by Sierra Club et.al. Commission denied request for hearing and authorized operation.

We also looked at 81 published Director's Decisions issued since February, 1979 that relate to power reactors. In 30 of those cases petitioners made requests under 10 CFR § 2.206 that could fairly be construed as requests for adjudicatory hearings. (Petitioners rarely used the word "adjudicatory".)

A brief explanation of the process associated with petitions filed under 10 CFR § 2.206 is called for. Under 10 CFR 2.206, any person may file a request with an NRC director "...to institute a proceeding pursuant to § 2.202 [orders to show cause] to modify, suspend or revoke a license, or for such other action

as may be proper." There is no requirement for the petitioner to demonstrate a legal interest in the matters raised in the petition.

Only if the NRC institutes a proceeding in response to the 2.206 petition, will members of the public be given an opportunity to request a hearing and demonstrate the requisite legal interest in the proceeding so as to be allowed to intervene. The demonstration of requisite interest is not affected by the fact that the petitioner to intervene had filed a 2.206 petition; it is an independent requirement.

Thus, granting an adjudicatory hearing directly in response to a 2.206 petition would be legally inappropriate. The reason is that a 2.206 petitioner has no right to a hearing. Illinois v. NRC, 591 F.2d 12, 14 (7th Cir. 1979). For this reason, the NRC has never granted an adjudicatory hearing in direct response to the request of a 2.206 petitioner.

Nevertheless, in two instances, requests by petitioners did indirectly result in adjudicatory hearings. In one case, an Order to Show Cause issued in response to a petition, see Dairyland Power Cooperative (LaCrosse Boiling Water Reactor), DD80-9, 11 NRC 392 (1980), resulted in a proceeding. In a second case the Commission decided to hold a discretionary adjudication to resolve safety issues raised by a petition and Director's Decision responding to the petition. See Consolidated Edison Co. of New York Inc. (Indian Point Unit No. 3), DD-80-55, 11 NRC 351 (1980). See also Consolidated Edison Co. of New York Inc. (Indian Point Unit No. 3). CLI-81-1, 13 NRC 1 (1981).

QUESTION 4. You may be aware that the Massachusetts State Legislature is considering a bill which would expand the Emergency Planning Zone around nuclear power plants in Massachusetts to 50 miles. Would the NRC support this initiative?

ANSWER.

We assume that the proposal for expanding the Emergency Planning Zone (EPZ) referred to in your question relates to the current 10-mile plume exposure pathway EPZ, as there is currently a 50-mile EPZ for the ingestion exposure pathway. It is the NRC view that the current detailed planning requirements for the 10-mile plume exposure pathway EPZ and 50-mile ingestion exposure pathway EPZ are adequate to assure that prompt and effective actions can be taken to protect the public in the event of an accident. Thus we do not believe there is a need from a public health and safety standpoint to expand the 10-mile plume exposure pathway EPZ around nuclear power plants to 50 miles. However, this does not at all preclude a State and utility from working together to develop supplemental planning for the plume exposure pathway for areas beyond 10 miles if they so desire.

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QUESTION 5. In your prepared statement you said, "The NRC will not permit the facility (Pilgrim) to resume operation until corrective actions satisfactory to the NRC have been taken to address the Emergency Planning deficiencies identified by FEMA". Have those corrective actions been taken? You also indicated that the NRC would allow the plant to restart without the resolution of all Emergency Planning deficiencies. What deficiencies would the NRC allow to be left unresolved at restart?

ANSWER.

Progress has been made to date toward improving the offsite emergency preparedness programs at Pilgrim and correcting the emergency planning deficiencies identified by FEMA. Drafts of the local emergency plans have been completed and six of these plans have been forwarded by the Commonwealth to FEMA for informal technical review. The draft Massachusetts Civil Defense Agency Area II plan has essentially been completed and is being reviewed by the Commonwealth. The draft of the Commonwealth plan for Pilgrim is nearing completion.

As indicated in the testimony, the NRC may authorize restart with some planning issues not fully resolved. In reaching this decision, the NRC will examine each planning deficiency and weigh the significance of the deficiency, the nature of any compensatory actions, and the progress being made by the Commonwealth, local governments and the licensee toward correction of the deficiency. Emergency planning is a dynamic process at operating nuclear plant sites in the

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United States. In practice, we expect that emergency response plans will be revised and improved on a continual basis. Deficiencies identified during the ongoing review process and in biennial exercises at each of these sites are assessed for significance and plants may be allowed to operate while the deficiencies are being corrected. Given the progress to date at Pilgrim, it is premature at this time to attempt to determine which, if any, deficiencies will remain when restart decisions are to be made. However, the NRC will give special attention to the corrective actions involving the emergency response plans for schools and day care centers as well as the emergency response plans for special-needs and transport-dependent populations in the plume exposure pathway emergency planning zone.

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QUESTION 6. You said in your testimony that a detailed team inspection will be performed at Pilgrim prior to a restart decision. Has that inspection commenced? When will it conclude? How long will the public have to review the NRC's findings relative to the inspection and prior to a restart decision?

ANSWER.

Prior to consideration of Pilgrim plant restart, the NRC will conduct an Integrated Assessment Team Inspection (IATI) at Pilgrim to review and evaluate the effectiveness of licensee corrective action programs in order to determine the readiness of the plant and licensee personnel to support the restart and safe operation of Pilgrim. The inspection will encompass a three week period and is tentatively scheduled for June 1988 based on a projection of licensee activities. It is expected that the report, documenting the findings of the team, will be issued approximately one month prior to the planned public Commission meeting to consider a restart decision.

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QUESTION 7. A great deal of public concern has focused on a release of radioactive resin which occurred at Pilgrim in the summer of 1982. It is my understanding that radioactive resin was found on the rooftops of buildings owned by Boston Edison. Would you please provide all the data the NRC has on file (including onsite and offsite readings, dosimeter readings and stack readings) indicating what the level of radioactivity had been in the period of time when the resin was released.

ANSWER.

In response to your request, we have made a comprehensive search of our files regarding information on the radioactive resin release at the Pilgrim Station. Enclosed are all the documents which were found as a result of this search.

Enclosures 1 and 3 provide the most detail concerning the event itself. Figure 1 of Enclosure 1 indicates the extent of the contamination by the resin found on June 11, 1982. All contamination found was within the site boundary. Figure 1 of Enclosure 1 provides a detailed map, but basically contamination was found as follows:

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Location	Activity in disintegrations per minute (DPM)*
Adminstration Building Roof	100,000 - 200,000 DPM
Turbine Building	100,000 DPM
AOG Building	200,000 DPM
Retube Building	200,000 DPM
Main Transformer Area	1,000 - 25,000 DPM
Pavement curb near Retube Building	20,000 - 80,000 DPM
Pavement curb near Administration Building	100,000 - 200,000 DPM

Enclosures:

1. Inspection Report No. 50-293/82-20, dated August 5, 1982.
2. Letter from R. W. Starostecki, NRC, to W. D. Harrington, BECo, dated June 16, 1982.
3. Letter from J. E. Howard, BECo, to R. W. Starostecki, NRC, dated July 15, 1982.
4. NUREG-0837, "NRC TLD Direct Radiation Monitoring Network," Progress Reports for January through September 1982, Vol. 2 Nos. 1, 2, and 3.
5. Memorandum from R. J. Mattson, NRC, to H. R. Denton, NRC, "Generic Implications of the Release of Spent Demineralizer Resins from Pilgrim, Unit No. 1," dated July 8, 1982.

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*In descrete small piles of resin of several grams.

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6. Memorandum from J. L. Pellet, NRC, to K. V. Seyfrit, NRC, "Technical Review Report on Pilgrim 1 Resin Migration," dated April 19, 1983.

7. Event Evaluation Sheet, "Spent Resin Release," dated June 14, 1982.

8. IE Information Notice No. 82-43, "Deficiencies in LWR Air Filtration/Ventilation Systems," dated November 16, 1982.

9. Pilgrim Nuclear Power Station, "Radioactive Effluent and Waste Disposal Report Including Radiological Impact on Humans," January 1 through June 30, 1982, dated September 1, 1982.

10. Pilgrim Nuclear Power Station, "Radioactive Effluent and Waste Disposal Report Including Radiological Impact on Humans," July 1 through December 30, 1982, dated March 1, 1983.

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QUESTION 8. In recent years, Boston Edison has had unsatisfactory ratings in the area of fire protection. I would like to know if Pilgrim is now in full compliance with fire protection requirements? Are all barriers, fire doors and penetration seals repaired and capable of passing required testing? Are fire watches still required in certain areas of the plant? How many fire watches are still needed? Will the NRC require Edison to complete the upgrading of the entire fire protection system prior to allowing restart? How many maintenance requests are still outstanding in the area of fire protection? Please also comment on the condition of the Halon system in the computer room at the plant and the smoke detectors over the spent fuel pool.

ANSWER.

Pilgrim is either in compliance or will be in compliance with its fire protection requirements prior to restart.

One activity of the additional licensee fire protection personnel described above was a reevaluation of plant fire protection features, comparing those features against NRC requirements and guidance, in an effort to determine (a) the level of actual compliance, and (b) the adequacy of the features provided to prevent unacceptable fire damage.

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During the course of this reevaluation the licensee found several cases where they did not literally comply with the NRC requirements or specific commitments they had made earlier. The licensee, however, provided justification to demonstrate adequate protection against unacceptable fire damage. On that basis, the licensee asked for exemptions from those requirements. In most cases the staff granted the exemptions. In those cases where the staff did not agree with the justification provided, the licensee made modifications so as to be in compliance.

Because of the more or less constant activity at operating plants, temporary changes, repairs, modifications, etc., may result in a particular condition that is not in compliance. These situations are contemplated and provisions are in place to assist in identifying the situation beforehand, providing interim protection measures (such as fire watches) and maintaining administrative control of the situation to assure that the out-of-compliance condition is corrected.

Before answering each of the specific sub-questions about fire protection at the Pilgrim Station, it is useful to address the overall programmatic status. During the last one and one-half to two years Boston Edison Company has made significant improvements in their entire fire protection program. Additional personnel with extensive experience in nuclear power plant fire protection

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have been hired. Realignment of responsibilities and authority among these licensee personnel have strengthened the entire fire protection program and provided a higher level of accountability and continuity of effort that has resulted in substantial improvement in the program. This is evidenced by the methodology and thoroughness exhibited in identifying and correcting deficiencies.

The licensee has indicated that all modifications and work associated with upgrading required fire barriers, fire doors and penetration seals has been completed. The licensee has committed to having all of the necessary documentation concerning the above work completed prior to plant startup.

Fire watches continue to be used in some areas at Pilgrim as well as most operating plants. At the beginning of the present outage approximately 18 months ago, eight persons per shift were assigned full time responsibility for fire watches covering approximately 180 individual postings. As of March 17, 1988, no continuous fire watches are required. Two persons per shift are assigned as fire watches covering 41 separate postings throughout the plant. Of those 41 postings, 25 are related to fire barrier deficiencies, 15 are related to maintenance activities and one is related specifically to activities pertaining to the outage.

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One hundred and sixty-one maintenance requests were still outstanding in the area of fire protection on March 17, 1988. However, this number by itself does not give an accurate picture of the Pilgrim fire protection maintenance program. On January 5, 1987 there were 260 open maintenance requests related to fire protection. Since January 1, 1987, approximately 1,480 new fire protection-related maintenance requests have been generated and approximately 1,580 have been closed.

A computer located in a small room adjacent to the Cable Spreading Room is being phased out. The room is protected by an operable automatic Halon fire suppression system. A new plant computer has been installed next to the Technical Support Center and the primary fire protection is provided by a sprinkler system with secondary protection provided by an automatic Halon fire suppression system. Both of these systems are operable.

Six smoke detectors are located over the Spent Fuel Pool in the ventilation system exhaust ducts. Four of the six detectors have already been tested during this current plant outage. The other two are scheduled for testing prior to plant startup.

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QUESTION 9. How many automatic and manual scrams have occurred at Pilgrim since the plant became operational? What is the annual industry-wide average?

ANSWER.

Table 1 provides data on unplanned automatic and manual scrams during critical operation for Pilgrim from 1984 through 1987 compiled from licensee event reports per 10 CFR 50.72 and 10 CFR 50.73. The comparable industry average rates are also provided in Table 1.

Prior to 1984, reactor scrams were not directly reportable to the NRC (Pilgrim entered commercial service December 1, 1972). As a result, that information is not readily available in our files, and in order to meet the timely response you requested only data from 1984 is listed.

Enclosure:

Table of Unplanned Scrams
When Critical for Pilgrim
and Industry

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Enclosure to Question 9

Table 1

Unplanned Scrams When Critical for Pilgrim and Industry

1984 - 1987

	1984*	1985	1986	1987**
Pilgrim				
Automatic	0	4	4	0
Manual	0	0	0	0
Industry Average				
Automatic	5.4	5.0	4.0	3.2
Manual	0.6	0.5	0.5	0.6

*Pilgrim critical hours for 1984 = 170.

**Pilgrim critical hours for 1987 = 0.

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QUESTION 10. How many "Unusual Events" and how many "Alerts" have been declared at Pilgrim since 1972? Please describe and give the date of each report. How does this compare to the industry-wide average?

ANSWER.

One of the major lessons from the TMI-2 accident in 1979 was the need to upgrade emergency planning at nuclear plant sites. As a result, the NRC published the definition and guidance for emergency categories of "Unusual Event" and "Alert" in January 1980 in NUREG 0654/FEMA-REP-1, codified them in Appendix E to Part 10 CFR 50 in August 1980, and embodied them in reporting requirement 10 CFR 50.72 in August 1983. The NRC staff has compiled a computerized data base, consistent with the definitions of emergency categories and the reporting requirements, from August 1982 to present. For comparison purposes, the computer data base information available dating from August 1983, the first complete year of collecting data, is provided. The computer records of notifications to the Operations Center show that Pilgrim has declared 12 Unusual Events and no Alerts since 1983. Of the 12 Unusual Events, 2 were caused by fires in nonsafety related equipment and 1 was due to a potentially contaminated individual being transferred offsite for medical treatment. The remainder were attributed to safety system inoperability which necessitated shutdown of the plant in accordance with the plant's Technical Specifications. A table of all Unusual Events for Pilgrim is enclosed which describes the events and dates of each.

Enclosure:
Table of Unusual Events at
Pilgrim Nuclear Station

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A comparison of Pilgrim Unusual Events versus the industry average follows:

Year	Industry Unusual Events	Licensed Units	Industry Average	Pilgrim Unusual Events
*1982	-	-	-	-
1983	205	85	2.4	0
1984	224	91	2.0	1
1985	312	98	3.2	5
1986	209	104	2.0	5
1987	231	109	2.1	0
*1988	-	-	-	-
5 Year Total			11.7	11

*Pilgrim reported an Unusual Event on August 18, 1982 relating to a fire in a face mask fitting machine and an Unusual Event an February 11, 1988 relating to a fire in the machine shop. These and other licensee Unusual Events which may have occurred in this time frame are not included in the table because the information is not included in the computer data base for the entire year. Pilgrim also had one Alert on June 3, 1982 relating to a withdrawn incore detector resulting in abnormal radiation levels. This event lasted approximately 2 hours. Pilgrim had no other Alerts from 1983 to 1987, however Alerts have been reported from other licensed facilities.

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Enclosure to Question 10

Unusual Events at Pilgrim Nuclear Station

August 1983 to Present

Event	Description
4/26/84	Potentially contaminated man taken to hospital.
5/16/85	2 safety system trains inoperable.
05/23/85	2 safety system trains inoperable.
09/20/85	2 safety system trains inoperable.
10/15/85	2 safety system trains inoperable.
11/04/85	Residual Heat Removal safety train A inoperable.
01/04/86	2 of 8 Main Steam Isolation Valves fail closure time test.
01/09/86	Fire in line to hydrogen storage tanks.
02/11/86	Low pressure coolant injection inoperable.
02/14/86	2 safety system trains inoperable.
04/11/86	Loss of containment integrity.
02/11/88	Fire in machine shop.

Kenne[illegible], NRR
3/30[illegible]

QUESTION 12. There have been a number of allegations concerning the illegal dumping of radioactive waste on Boston Edison property. Concerns have also been raised over Edison's use of the town dump for disposal of radioactive material. Would you please describe what monitoring the NRC conducts or requires on materials and waste leaving the Pilgrim site. Has the NRC or the licensee performed tests on Edison property and at the town dump to ensure that there are no elevated levels of radiation at areas suspected of containing radioactive waste? Where and when were tests conducted? What were the results?

ANSWER.

The NRC staff does not itself monitor materials and wastes leaving the Pilgrim site. The licensee is required to monitor all items containing or contaminated with radioactivity that are leaving the site. There are several facility procedures that provide specific guidance and instructions to plant health physics workers regarding this activity. All radioactive wastes that are sent to sites specifically intended for burial must meet federal regulations for radiation dose rate and contamination levels as well as special requirements of the burial sites. NRC performs routine inspections of the radioactive transportation area to ensure that licensees are conforming to these regulatory requirements. Further, onsite materials not thought to be contamina[illegible] at are being shipped offsite that have the potential of being contamin[illegible] surveyed prior to being allowed off the site. The licensee is not allowed to dispose of contaminated objects in non-radwaste facilities without a special

Kennedy/NRR
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variance provided for in 10 CFR 20.302(a). BECo has not applied for these variances. To our knowledge, no contaminated objects have been disposed of in the town dump or in other public facilities not specifically intended for contaminated objects.

Some cut shrubs with slight contamination were disposed of on BECo property in 1987. The contamination was not detected with standard survey meters, but was so low that it was only detected on clippings using sensitive laboratory equipment. The clippings had been taken after these shrubs had been taken from the site. Notwithstanding, the contamination levels were lower than typical soil background levels and they posed no health hazard (see enclosed Inspection Report 50-293 87, dated March 11, 1988, p.12). NRC has not performed surveys for contamination of the town dump or at other BECo properties. NRC does not routinely perform contamination surveys of this type. As stated in the Inspection Report, the inspectors reviewed the licensee's program for release of material from the site and concluded that it was adequate.

Enclosure:
Inspection Report dtd 3/11/88

Kennedy/NRR
3/30/88

QUESTION 13. Has Pilgrim ever violated established radiation emission levels i.e., have there been any releases from the plant which exceeded standards set by the NRC?

ANSWER.

The permissible levels of radiation in unrestricted areas and of radioactivity in effluents to unrestricted areas are established in NRC regulations embodied in 10 CFR 20, Standards for Protection Against Radiation. These regulations specify limits on levels of radiation and limits on concentrations of radionuclides in the facility's effluent releases to the air and water (above natural background) under which the reactor must operate. Further, the regulations require that there be no unmonitored release paths from the plant. The regulations are structured to provide reasonable assurance that no member of the general public in unrestricted areas will receive a radiation dose, as a result of facility operation, of more than 0.5 rem in 1 calendar year. These radiation-dose limits are established to protect the health and safety of the public.

In addition to the Radiation Protection Standards of 10 CFR 20, 10 CFR 50.36a establishes license requirements in the form of license Technical Specifications on effluents from nuclear power reactors. The purpose of the Technical Specifications on effluents is to keep releases of radioactive materials to unrestricted areas during normal operations, including expected operational

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occurrences, as low as is reasonably achievable (ALARA). Another regulation (Appendix I of 10 CFR 50) provides numerical guidance on dose-design objectives for light water reactors to meet this ALARA requirement. The dose-design objectives are low, about 1% of the Radiation Protection Standards of 10 CFR 20. Thus, it is possible for a licensee to exceed the dose-design objectives, but still be within the Radiation Protection Standards.

The NRC staff has reviewed the agency records on radioactivity releases from the Pilgrim nuclear power plant. Although there were situations when the radioactivity releases exceeded Pilgrim's Technical Specifications, these releases did not exceed the Radiation Protection Standards of 10 CFR 20.

We have also reviewed the agency records on the amounts of radioactivity measured in the environment around the Pilgrim nuclear power plant. The licensee has reported elevated levels above normal background of some radionuclides in some environmental samples over the time period 1978 through 1981. However, it should be noted that Pilgrim's previous guidelines for reporting elevated levels of radioactivity in environmental samples were conservative. Under Pilgrim's current Technical Specifications, many (if not all) of the previously reported elevated levels would no longer be considered reportable. The previously reported elevated levels of radioactivity in environmental samples would lead to doses less than specified in the Radiation Protection Standards and thus would be below NRC regulatory limits.

In summary, radioactive emissions from the Pilgrim nuclear power plant have occasionally exceeded the plant's Technical Specifications; however, they have not exceeded the NRC's Radiation Protection Standards.

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF GOVERNMENTAL AND PUBLIC AFFAIRS, REGION I
475 Allendale Road, King of Prussia, Pa. 19406
Tel. 215-337-5330

No. I-88-37
Contact: Karl Abraham

April 6, 1988

NOTE TO EDITORS AND STATION ASSIGNMENT EDITORS

A. Randy Blough, Chief of the Reactor Projects Section that inspects Pilgrim, has issued a status report summarizing activities of the inspection staff during the period March 12-25, 1988.

The report is attached.

#

March 30, 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 MARCH 12-25, 1988

Enclosed is the Pilgrim bi-weekly status report from the NRC Resident Office at Pilgrim. Three resident inspectors monitored activities at the plant during the report period. In addition, a four member NRC inspection team visited the Pilgrim Station and the licensee's Chiltonville training facility to evaluate the licensee's revised Emergency Operating Procedures.

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

(more)

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ENCLOSURE

PILGRIM STATUS REPORT FOR THE PERIOD MARCH 12-25, 1988

1.0 Plant Status

As of 8:00 a.m. on M[illegible], the reactor was in cold shutdown mode with moderator temp[illegible] about [illegible] degrees Fahrenheit.

2.0 Facility Operations

The plant has been [illegible] intenance and to make program improvements since April 12 [illegible] reactor core was completely defueled on February 13, 1987 to [illegible] 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.

3.0 Items of Special Interest

NRC Evaluation of the Emergency Operating Procedures

The Emergency Operating Procedures (EOPs) are used by the control room operators in case of abnormal conditions in the plant. The licensee has revised the existing EOPs to meet the updated industry guidelines for operating boiling-water reactors and to incorporate the recent plant modifications. The new EOPs and the related Procedure Generation Package were submitted to the NRC for review on December 14, 1987.

As part of the NRC evaluation of the new EOPs at the Pilgrim Station, a four-member NRC inspection team visited the Pilgrim Station and the licensee's Chiltonville training facilities during the week of March 14, 1988. The evaluation included observation of control room operators' execution of the EOPs utilizing the control room simulator, review of onsite documents relating to the EOP development, and review of operator training. The results of the evaluation will be documented in the inspection report 50-293/88-11.

Reactor Operator Licensing Examination Results

On March 15, 1988, NRC Region I issued the examination report 50-293/87-56 documenting the results of the NRC administered examinations on December 7-11, 1987 to Boston Edison Company's candidates for operating licenses. Written examinations and operating tests were administered to two senior reactor operator and six reactor operator candidates. All candidates passed these examinations.

Personnel who directly operate a nuclear power reactor are required to be licensed by the NRC. Each candidate for an operating license must meet certain educational and experience standards. These individuals participate in a complete and extensive licensee training program. Upon completion of this training program, the NRC administers comprehensive written and oral examinations, including a plant walkthrough.

Recent NRC Inspection Results

On March 4, 1988, NRC Region I issued the inspection report 50-293/88-01 documenting the results of a routine inspection of the Pilgrim Station radiation safety program conducted on January 25-29, 1988 by a region based specialist inspector. Areas reviewed included followup on previous inspector findings, organization and staffing of the licensee's Radiation Protection Section, control of locked high radiation areas, control of hot particles and disposition of excavated dirt. No violations were identified.

The inspection report 50-293/88-03 was issued on March 7, 1988 documenting the results of a routine inspection conducted on January 25-29, 1988 by two region based specialist inspectors. Areas inspected included followup on previous inspection findings in the area of materials/component integrity and plant modifications and test procedures. In addition, the Power Ascension Test Program and the licensee's plans for oversight and assessment of Power Ascension activities were reviewed. No violations were identified. The Power Ascension Test Program was determined to be in the developmental stages and not fully ready for inspection. A future inspection will be conducted to assess the licensee Power Ascension Program when finalized.

On March 4, 1988, NRC Region I issued the inspection report 50-293/88-05 documenting the results of a routine inspection conducted on January 25-28, 1988 by two region based specialist inspectors. Areas inspected included changes to the emergency preparedness program, organization and management control, training, protective action decision making and emergency action levels. No violations were identified.

The inspection report 50-293/88-06 was issued on March 4, 1988 documenting the results of a routine inspection conducted on January 25-28, 1988 by two region based specialist inspectors. Areas inspected included the site security program upgrades, security organization, protected area physical barriers, access control of personnel and packages, and adequacy of alarm stations and compensatory measures. No violations were identified.

On March 17, 1988, NRC Region I issued the inspection report 50-293/88-09 documenting the results of a special inspection conducted on February 24-25, 1988 by a region based specialist inspector. The inspection focused on conditions surrounding the classification and reporting of a Notification of Unusual Event identified on February 11, 1988. One weakness was noted regarding offsite notifications. The licensee failed to follow the requirements of Emergency Procedure 5.7.2.8, "Control Room Emergency Communications", which requires, in part, the notification of the Plymouth Policy Department of conditions surrounding an emergency classification of an Unusual Event or above. The licensee had identified this problem and was working on corrective actions. This weakness has been classified as a licensee identified violation.

4.0 Emergency Notification System (ENS) Report

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

On March 12, 1988, the licensee experienced an automatic closure of the inboard primary containment isolation valve on the reactor water cleanup (RWCU) system suction line. Investigation by the licensee indicated that the technicians performing a surveillance on the electrical portions of the system inadvertently grounded a wire which had been lifted during the surveillance test. Grounding the wire resulted in a blown logic power fuse, and deenergization of this portion of the logic caused the valve to automatically close. The fuse was replaced and the test subsequently completed.

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 four member inspection team was onsite during the week of March 14, 1988 to evaluate the licensee's revised EOP's.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
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No. I-88-46
Contact: Karl Abraham

April 21, 1988

NOTE TO EDITORS AND STATION ASSIGNMENT EDITORS

A. Randy Blough, Chief of the Reactor Projects Section that inspects Pilgrim has issued a status report summarizing activities of the inspection staff during the period March 26 - April 8, 1988.

The report is attached.

#

April 19, 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 MARCH 26 - APRIL 8, 1988

Enclosed is the Pilgrim bi-weekly status report from the NRC Resident Office at Pilgrim. Three resident inspectors monitored activities at the plant during the report period. In addition, a region-based specialist inspector was onsite during the week of April 4, 1988, to review the licensee's radioactive waste processing systems and effluent monitoring. On May 11, 1988, NRC will be conducting a public meeting at the Plymouth Memorial Hall, in Plymouth, Massachusetts to respond to the public comments and concerns on the Boston Edison Company's Pilgrim Restart Plan raised during the February 18, 1988 public meeting. NRC Region I will issue a news release to inform the public of the scheduled meeting.

Section 3 of the enclosed report provides an overview of NRC activities and plans for assessing licensee's readiness for restart. 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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ENCLOSURE

PILGRIM STATUS REPORT FOR THE PERIOD MARCH 26 - APRIL 8, 1988

1.0 Plant Status

As of 8:00 a.m. on April 8, 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 successful completion of the reactor vessel hydrostatic test. The primary containment integrated leak rate test was also successfully completed during the week of December 21, 1987.

3.0 Items of Special Interest

Overview of NRC Activities Regarding Pilgrim

In April 1986, an Augmented Inspection Team (AIT) was dispatched from NRC Region I to Pilgrim in response to several operational problems. At that time the licensee agreed, in a Confirmatory Action Letter, to obtain Regional Administrator approval prior to a plant restart. Most of the related technical issues were resolved. However, NRC concerns raised during the 1985 Systematic Assessment of Licensee Performance (SALP) and during a subsequent regional diagnostic team inspection remained. On July 25, 1986, Boston Edison Company announced that the outage would be extended to include refueling and completion of plant modifications. The requirement to obtain NRC approval prior to restart was extended in August, 1987 to cover the other hardware and SALP related performance issues. On August 27, 1986, the Regional Administrator, NRC-Region I, requested in a letter to the licensee that they perform a formal assessment of their readiness for plant restart, and provide the assessment results for NRC review. By letters dated July 30, 1987, October 26, 1987 and January 4, 1988, the licensee submitted the Pilgrim Nuclear Power Station Restart Plan. A special NRC Task Force was formed to review and evaluate the Restart Plan. This Task Force completed its initial review and, on March 18, 1988, forwarded a request for additional information to the licensee.

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NRC is continuing to devote considerable inspection resources to Pilgrim. The resident staff has been maintained at three inspectors. Since the plant was shut down on April 12, 1986, the NRC has conducted 84 special and routine inspections in various functional areas at Pilgrim expending 11,977 direct inspection hours. Senior NRC management involvement also remains substantial. A series of management meetings to discuss the licensee's progress and proposed programs have been held. Frequent site tours by Commissioners, the Director of Office of Nuclear Reactor Regulation (NRR) and the Regional Administrator have been conducted. A Pilgrim Restart Assessment Panel was formed which consists of senior management from NRR and Region I. This Panel coordinates the planning and execution of NRC activities, and assesses the results of these activities to provide an independent judgement of the plant's readiness for operation. The Panel meets approximately bi-weekly, with alternating meetings held onsite. Development of the staff's restart recommendation will be coordinated by the Panel.

The licensee's management self-assessment to determine restart readiness is underway. Once a conclusion has been reached by the licensee a formal restart request will be submitted. The NRC staff currently plans to perform an Integrated Assessment Team Inspection (IATI) and a SALP, prior to finalizing a NRC staff recommendation on restart. A Readiness Report addressing the SALP and IATI results will be prepared to support the NRC staff recommendation. Current plans include a status briefing for the Commission, a full Commission meeting to review the staff's recommendation, and a Commission vote regarding restart. Some Commissioners have indicated that they will visit the site personally prior to the Commission meeting.

In order to accommodate broad public participation into the NRC assessment process, a public meeting was conducted by the NRC in Plymouth, Massachusetts on February 18, 1988. Public comments on the licensee's Restart Plan were received orally and in writing. Prior to the meeting, copies of the Restart Plan were made available to the local town libraries for public review. The NRC Task Force is reviewing the meeting transcription to identify and disposition relevant comments and concerns. A second public meeting is scheduled to be held in the Plymouth area on May 11, 1988, to respond to the comments and concerns raised during the first meeting. Before a position on restart of the plant is developed in final form, a public meeting will be held between NRC senior staff and State Senator William Golden and other petitioners who submitted the July 1986 10 CFR 2.206 petition if the petitioners desire such a meeting. This meeting will discuss NRC's actions regarding the Pilgrim plant and answer questions of the petitioners.

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

On May 11, 1988, NRC will be conducting a public meeting at the Plymouth Memorial Hall, in Plymouth, Massachusetts to respond to the public comments and concerns on the Boston Edison Company's Pilgrim Restart Plan raised during the February 18, 1988 public meeting. The meeting is scheduled for 7:00 p.m. to 9:00 p.m. NRC Region I will issue a news release to inform the public of the scheduled meeting.

Management Meeting for Power Ascension Test Program

On April 8, 1988, a publicly-noticed management meeting was held between NRC and Boston Edison Company (BECo) officials at the NRC offices in King of Prussia, Pennsylvania. BECo management presented an overview of the ongoing engineering analysis to support the basis of their Power Ascension Test Program. The licensee previously had submitted a Power Ascension Test Program and a Management Self-Assessment Program describing the methods which will be employed to assess and confirm the readiness of plant hardware and staff for extended power operation. NRC staff review of these items is ongoing.

4.0 Emergency Notification System (ENS) Report

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

On March 31, 1988, at 12:42 p.m., an inadvertent reactor building isolation and an automatic start of both standby gas treatment trains occurred. A licensed operator performing a daily surveillance test of the refueling floor high radiation monitors failed to properly reset the monitors. When the operator proceeded to test the redundant monitors, combined trip functions resulted in the observed engineered safety systems actuations. The trip signals were reset and the systems returned to normal operation a short time later.

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 region-based specialist inspector was onsite during the week of April 4, 1988 to review the licensee's effluent monitoring program including radioactive waste processing systems.

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