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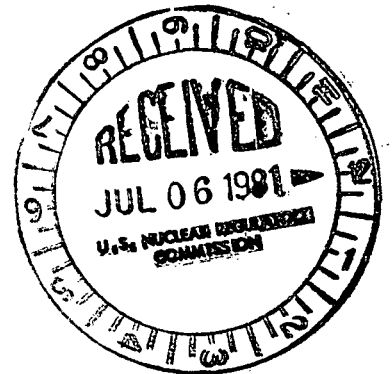


June 22, 1981
IPN-81-45

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attention: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing

Subject: Indian Point No. 3 Nuclear Power Plant
Docket No. 50-286
Action Plan for 10CFR50 Appendix R
Fire Protection Requirements



Dear Sir:

This letter provides the Authority's action plan for addressing the fire protection requirements of Appendix R to 10 CFR 50 in accordance with our March 19, 1981 letter (IPN-81-19).

In accordance with Appendix R to 10 CFR 50, the Authority is required to implement Sections III.G, III.J. and III.O. at the Indian Point Unit 3 (IP-3) facility. On March 19, 1981, the Authority petitioned the Commission for an exemption from the schedular requirements of 10 CFR Part 50.48(c), which governs the implementation of the above three sections. The Authority also proposed to submit by June 22, 1981, an action plan to address the requirements of Section III.G. and plans and schedules for meeting the requirements of Sections III.J. and III.O.

*Hook
A.S. 1/1*

Attachment I to this letter provides the Section III.G. action plan and the Section III.O. plans and schedule. The Authority has completed installation of emergency lighting at IP-3 with eight (8)-hour battery power supplies in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto. Therefore, the IP-3 facility is presently in compliance with Section III.J. of Appendix R to 10 CFR 50 and no further action is required.

Please note that this letter confirms the March 19, 1982 submittal date for Section III.G. plans and schedules identified in our March 19, 1981 letter. Until that time, the Authority may request additional relief from the requirements of Section III.G., as the need for such exemption requests arises.

Very truly yours,



for J.P. Bayne
Senior Vice President
Nuclear Generation

cc: Mr. T. Rebelowski
Resident Inspector, USNRC
P.O. Box 448
Buchanan, NY 10511

Mr. Ron Barton
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ATTACHMENT I

ACTION PLAN
FOR
10CFR50 APPENDIX R
FIRE PROTECTION REQUIREMENTS

Power Authority of the State of New York
Indian Point 3 Nuclear Power Plant
Docket No. 50-286
June 22, 1981

Section III.G. Action Plan

INTRODUCTION

On February 17, 1981, 10CFR Part 50.48 and Appendix R to 10CFR50 became effective. Section 50.48 requires that all operating reactors licensed to operate prior January 1, 1979 meet the requirements of Section III.G of Appendix R. Section 50.48 also required that plans and schedules and/or exemption requests for meeting the fire protection requirements of section III.G. be submitted by March 19, 1981.

In the Authority's consideration, Section 10CFR Part 50.48 did not allow sufficient time to perform the appropriate evaluation and prepare plans and schedules to implement the requirements of Section III.G. Accordingly, additional time was requested to submit this information on March 19, 1982. In addition, the Authority committed to prepare and submit to the NRC, on June 22, 1981, an action plan which would systematically show the evaluation required for the preparation of plans and schedules in order to meet the requirements of Section III.G. This action plan is presented below.

PURPOSE

The purpose of the action plan is to provide a systematic method to evaluate the requirements of Section III.G. and identify the required plant modifications or actions. This action plan provides a means to utilize the resources available in an optimum manner to implement these fire protection requirements in a timely fashion.* This action plan identifies and provides a detailed schedule for each of the aspects associated with meeting the requirements of Section III.G.

ACTION PLAN

Prior to determining which of the options provided in Section III.G will be selected, a comprehensive analysis must be performed for all safety-related circuits and all associated non-safety related circuits of each fire zone. This analysis will identify the critical circuits, equipment, and fire zones and will assess the potentially adverse impact the loss of each may have on the Plant's ability to achieve and maintain safe shutdown within the criteria of Section III.G.

*It should be noted that the Authority is concurrently engaged in the design and/or implementation of various other major modifications, e.g., TMI; environmental qualification; control room human factors; radwaste storage; turbine repairs; AFWS turbine pump missile shield; and intake structure/circulating water pumps.

The Authority has completed the extensive review of the safety related circuits; however, a similar review of non-safety related associated circuits is currently underway. Additionally, a re-examination of the safety related cables in accordance with the Appendix R requirements and the staff feedback on the Authority's previous submittals is also being performed. These efforts are delineated in the attached figure. The estimated schedule presented in the attached figure relating to Section III.G is further explained below.

1. Review of All Non-Safety Cables

Section III.G requires that "cables including non-safety associated circuits that could prevent operation or cause maloperation due to hot shorts, open circuits or shorts to ground, or (sic) redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside the primary containment. . ." be provided with one of the methods of paragraphs IIIG.2.a, IIIG.2.b or IIIG.2.c. Thus, all cables including non-safety cables which fall under the above criteria need to be identified. This tedious effort requires that each and every cable in the Plant be reviewed and numerous computer runs be performed in order to single out the subject cables. This effort requires about 16 weeks for completion.

2. Engineering Evaluation

As the affected cables are identified, the following criteria of Section III.G. shall be applied:

- a) Separation by a fire barrier having a 3-hour rating;
- b) Separation by a horizontal distance of 20 feet;
- c) Enclosure in a fire barrier having a 1-hour rating along with fire detection and automatic suppression equipment.

Additionally, those cables or systems which do not comply with the above criteria are further evaluated to determine and demonstrate equivalent protection. For those cases in which equivalent protection is demonstrated, appropriate safety evaluations and documentation must be prepared in order to support future exemption requests. This effort requires input from 1. above. This effort is being performed in parallel to Step 1. This effort requires about 13 weeks for completion and is constrained by the completion of Step 1. above.

3. Review Impact on Systems

As Steps 1. and 2. above are completed, the cases which do not comply with Appendix R are identified for each fire zone. This requires additional analyses to determine the impact on the alternative or redundant safe shutdown equipment in the event of a postulated fire. Should this analysis indicate that the cable or system is important to safe shutdown, further analysis will be performed to determine an alternate means for safe shutdown or a plant modification will be identified. This effort requires about 18 weeks for completion and is constrained by steps 1. and 2. above. Since a good portion of the items identified in Steps 1. and 2. must be completed first, this effort will be started at a later date.

4. Determination of the Modifications of Exemptions Thereof

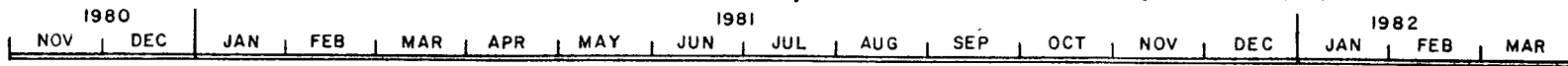
Upon completion of Steps 1. through 3. above, those areas which may require a modification to comply with Appendix R requirements will be identified. Once again, for these areas, the criteria of paragraph III.G.2.a., b., and c. will be applied. An evaluation of compliance options to determine which is the optimum method of compliance will be performed. This analysis takes into consideration such aspects as safety significance of the modification and installation requirements (e.g., outage requirements and length and practicality of installations). This effort requires about 14 weeks to be completed and is constrained by Steps 1. through 3. above. This step cannot be started until a good portion of the data from the previous steps is available.

5. Report Preparation

Additionally, about 21 weeks following completion of Steps 1. through 4. are necessary for the preparation of a report in order to fully document the results of the this Action Plan. This time is necessary for the preparation of the report, in-house reviews, and publication. Also, this effort requires the determination of the schedule for completion of any plant modification identified.

Section III.G. requirements are applicable to cables for systems necessary to achieve and maintain hot shutdown. Nevertheless, rather than demonstrate that the cold shutdown systems can be repaired within 72 hours at this time, the Power Authority has decided to perform the evaluation of all cables including those required to achieve and maintain cold shutdown. Thus, the number of cables required to be evaluated has greatly increased.

SCHEDULE FOR APPENDIX R, SECTION III-G REQUIREMENTS



I. EVALUATION OF 11/24 3/12
10 CFR 50.48
AND APPENDIX R
REQUIREMENTS
NEGOTIATIONS WITH ARCHITECT ENGINEER

II. ACTION PLAN III G PREPARATION 3/12 6/22

III. ACTION PLAN FOR SECTION III G, APPENDIX R.

1. REVIEW ALL NON-SAFETY CABLES

7/6 10/23

2. ENGINEERING REVIEW

7/24 10/26

3. REVIEW IMPACT ON SYSTEMS

8/10 12/11

4. DETERMINE TYPE MODIFICATION
OR EXEMPTIONS

9/8 1/6

5. REPORT PREPARATION

10/23 2/6 3/19

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In-house review
Final publication

Section III.0. Plans and Schedules

Background

On March 6, 1979, the Commission issued Amendment No. 24 to Facility Operating License DPR-64 for the Indian Point 3 Facility (IP-3). This amendment transmitted the Safety Evaluation Report (SER) for the IP-3 Fire Protection Program review. Section 3.12 of the SER required the Authority to upgrade the Reactor Coolant Pump (RCP) Oil Collection System in order to provide coverage of potential leakage points including oil fill points, lower control units, upper bearing coolers, lift pumps and piping and drainage to a container. Details showing size and location of drip pans and oil shields relative to potential leakage points were also required. By letters dated February 6, 1979 (IPN-79-2) and February 12, 1981 (IPN-81-8), the Authority provided the required information including system drawings. Installation of this system was completed in October 1980.

Appendix R Section III.0. Requirements

On February 17, 1981, 10CFR Part 50.48 and Appendix R to 10CFR50 became effective and required that plans and schedules for a further upgrade of the RCP Oil Collection System be submitted to the Commission by March 19, 1981 (see Section III.0.). This further upgrade requires the Authority to provide for collection from additional potential leakage sites and to ensure there is reasonable assurance that the system will withstand the Safe Shutdown Earthquake. By letter dated March 19, 1981 (IPN-81-19) the Authority requested an exemption from the schedule requirements for submitting plans and schedules and exemption requests by requesting that the submittal due date be extended to June 22, 1981.

Plans and Schedules

The Authority has scheduled the upgrade of the RCP Oil Collection System to provide for collection from the additional leakage sites during the December 1981 refueling outage. Presently, detailed plans for this upgrade are not available from the vendor. However, the Authority will transmit these plans to the Commission as soon as possible.

At this time, the Authority has not yet completed its analysis of the existing RCP Oil Collection System. This analysis will determine whether further upgrade of the system in accordance with the seismic requirements of Appendix R, Section III.0. will enhance fire protection safety in this area. The Authority's judgement is that, at the IP-3 facility, it will not. The Authority has, therefore, undertaken this analysis to demonstrate the adequacy of the existing fire protection system in this area rather than simply install potentially unnecessary modifications which will increase

the cost of electric power to New York State consumers. Accordingly, the goal of this analysis is to demonstrate that during a Safe Shutdown Earthquake (SSE) the operability of safety-related equipment will not be affected by RCP oil leakage based on at least one of the following:

- 1) there is reasonable assurance that the existing system will withstand the SSE,
- 2) an oil spill of the entire RCP inventory cannot occur,
- 3) an oil spill cannot come in contact with surfaces hot enough to ignite the oil and smoke generation will not affect the operability of safety-related equipment,
- 4) an oil spill, if ignited, will not affect the operability of safety-related equipment.

This analysis is expected to be complete by August 28, 1981.

Conclusion

The Authority requests an additional extension of time to August 28, 1981 to complete the above described analysis and to provide a schedule for any modifications deemed necessary. Plans for any modifications to be performed pursuant to Section III.O. will be provided as they become available.

In accordance with 10CFR Part 50.12(a), the Authority requests that the above extension be granted under, and as part of, the review of our March 19, 1981 exemption request, for the same reasons set forth therein. Approval of this request is authorized by 10CFR Part 50.12(a) and will not endanger life or property or the common defense and security and is in the public interest.