Indian Point 3 **Nuclear Power Plant** P.O. Box 215 Buchanan, New York 10511

914 736.8001



NewYork Power Authority

January 26, 1994 IPN-94-010

U.S. Nuclear Regulatory Commission ATTN: Document Control Desk Mail Stop PI-137 Washington, D.C. 20555

SUBJECT:

Indian Point 3 Nuclear Power Plant Docket No. 50-286 Licensee Event Report # 93-055-00 "Inadequate 10 CFR 50, Appendix R Emergency Lighting Due to Design Deficiency Places the <u>Plant Outside Its Design Basis"</u>

Dear Sir:

The attached Licensee Event Report (LER) 93-055-00 is hereby submitted in accordance with the requirements of 10CFR50.73. This event is of the type defined in the requirements pursuant to 10CFR50.73(a)(2)(ii)(B). Also attached are the commitments made by the Authority in this LER.

Very truly yours,

John H. Garrity Resident Manager Indian Point 3 Nuclear Power Plant

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John H. Garrity Resident Manager



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Mr. Thomas T. Martin Regional Administrator Region I U.S. Nuclear Regulatory Commission 475 Allendale Road King of Prussia, Pennsylvania 19406-1415

INPO Records Center 700 Galleria Parkway Atlanta, Georgia 30339-5957

U.S. Nuclear Regulatory Commission . Resident Inspectors' Office Indian Point 3 Nuclear Power Plant

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Attachment 1 List of Commitments

Number	Commitment	Due
IPN-94-010-01	Analyze the areas of concern and develop a modification package to change existing lighting and/or install new emergency lighting to correct the inadequacies prior to startup. This modification will retest the subject areas to determine that the newly modified installed lighting units adequately illuminate safe shutdown equipment which requires manual operator actions.	Prior to startup
IPN-94-010-02	Complete the area blackout test ENG-533 to ensure that all other operator actions (and access/egress paths) required for alternate shutdown are adequately illuminated prior to startup.	Prior to startup
IPN-94-010-03	Complete an area blackout test, prior to startup, for any manual operator actions outside the control room which would be required for normal control room shutdown as a result of plant fires.	Prior to startup

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DESCRI	PTION OF EVE	<u>NT</u>	
On December 27, 1993, at appr cold shutdown (reactor power temperature at 107 degrees Fa atmospheric and the pressuriz identified that there was ins illuminate the 6.9 KV switchg Turbine Building (NM) (Append 46-TB) and the turbine front	oximately 23 level at 7 c hrenheit, re er level at ufficient em ear area on ix R Emergen stand on the	00 hours, with th ps, reactor coola actor coolant pre 25%), a reactor o ergency lighting the 15 foot eleva cy Battery Lighti 55 foot elevatio	ne plant in int essure at operator to ation of the ing Unit EBR- on of the

Turbine Building (EBR-38-TB). The reactor operator made this discovery during the performance of Engineering Acceptance Test ENG-533, Revision 1, "Appendix R Emergency Battery Lighting Area Blackout Test Procedure". The ENG serves to verify the adequacy of 10 CFR 50, Appendix R emergency lighting utilized during an alternative shutdown fire scenario which requires evacuation of the Control Room. Upon determination of the lighting inadequacies Deviation Event Report DER 93-888 was initiated on December 27, 1993.

Off Normal Operating Procedure ONOP-FP-1A, Revision 8, "Safe Shutdown From Outside the Control Room" identifies instructions for locally operated equipment required to achieve and maintain hot shutdown in the event a fire prevents control of this equipment from the Central Control Room (CCR) or if the CCR becomes inaccessible. At the 6.9 KV switchgear (SWGR) enclosure, the operator must manually isolate normal 6.9 KV feeds to the 6.9 KV switchgear and align the Appendix R diesel generator (GEN) to the 6.9 KV safe shutdown bus. At the turbine stand on the 55 foot elevation of the Turbine Building, the operator must trip the main turbine or verify it is already tripped.

The emergency lights are required in accordance with 10 CFR 50, Appendix R, Section III.J which states, "Emergency lighting units with at least an 8-hour battery power supply shall be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto."

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CAUSE OF EVENT

This event was caused by personnel error in that two modifications (MOD 85-03-077 FP and MOD 86-03-089 FP) should have identified that the 10 CFR 50, Appendix R lights must be tested in a blackout condition. Testing in the blackout condition is required to verify that the operator can perform the actions required to achieve 10 CFR 50, Appendix R alternate safe shutdown and that adequate lighting is available for access and egress during the performance of these actions. The subject areas were identified as requiring emergency lighting units but the modification that installed these lights did not accurately test the areas to ensure the lighting was sufficient to accomplish the required task.

CORRECTIVE ACTIONS

Corrective action IPN-93-137-04, taken in LER 93-042-00, will serve to revise the Modification Control Manual (MCM) to require that modifications identify the safety function(s) of the equipment being worked on and that post-modification testing identified in the modification verifies the function(s). This MCM revision is scheduled to be completed prior to startup. The MCMs which are in effect, together with the revision identified above, will assure that appropriate testing requirements are identified in modifications.

The following corrective actions are planned to address the emergency lighting deficiencies identified:

- 1. Analyze the areas of concern and develop a modification package to change existing lighting and/or install new emergency lighting to correct the inadequacies prior to startup. This modification will retest the subject areas to determine that the newly modified installed lighting units adequately illuminate safe shutdown equipment which requires manual operator actions.
- 2. Complete the area blackout test ENG-533 to ensure that all other operator actions (and access/egress paths) required for alternate shutdown are adequately illuminated prior to startup.
- 3. Complete an area blackout test, prior to startup, for any manual operator actions outside the control room which would be required for normal control room shutdown as a result of plant fires.

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These actions noted above will address the current lighting deficiencies and review the existing configuration for any other inadequacies. If additional deficiencies are found as a result of the corrective actions, a supplement to this LER will be submitted.

ANALYSIS OF EVENT

This event is reportable pursuant to 10 CFR 50.73 (a)(2)(ii)(B) because the lighting for the actions stated in the event description is inadequate to accomplish the alternate safe shutdown actions in accordance with 10 CFR 50, Appendix R, Section III.J. The lighting has been inadequate for the two areas since the initial installation of the subject emergency battery lights (FH)(LF) by modification MOD 85-03-077 FP which was declared operable on October 3, 1985. The lighting in the area of the 6.9 KV switchgear will require repositioning existing lamps and/or adding additional battery lighting units.

A similar event reported in Licensee Event Report LER 93-007-00 identified that two operator egress pathways had been without the 8hour lighting units required by 10 CFR 50, Appendix R, Section III.J. LER 93-042-00 was also similar in that it identified inadequate design testing specified in an engineering design document.

SAFETY SIGNIFICANCE

The existing 10 CFR 50, Appendix R emergency battery lighting is not sufficient to provide proper illumination to execute the alternate safe shutdown actions at the 6.9 KV switchgear area and the turbine stand in accordance with the testing criteria established in ENG-533. Utilizing the testing criteria, the performance of the required manual operator actions at the 6.9 KV switchgear and the turbine front stand would have been impeded due to insufficient illumination levels. ENG-533 testing conditions do not allow for any lighting sources other than the emergency battery lights installed for 10 CFR 50, Appendix R The plant is currently in a cold shutdown condition; purposes. therefore, the current lighting inadequacies for this plant condition have no impact on safety. However, this condition has existed since modification MOD-85-03-077 FP was declared operable on October 3, 1985.

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