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Fred Dacimo
Vice President, Operations

April 2, 2003
NL-03-059

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, D.C. 20555-0001

SUBJECT: Indian Point Nuclear Power Plant Unit 2
Docket No. 50-247
License No. DPR-26
Licensee Event Report # 2003-001-00
**Plant in an Unanalyzed Condition due to Cable Routing
Non-Compliance with Appendix R Separation Criteria**

Dear Sir:

The attached Licensee Event Report (LER) 2003-001-00 is hereby submitted in accordance with the requirements of 10 CFR 50.73. This condition is of the type defined in 10 CFR 50.73(a)(2)(ii)(B) as an unanalyzed condition that significantly degraded plant safety. This condition has been recorded in Entergy's Corrective Action Program as Condition Reports CR-IP2-2003-00765 and CR-IP2-2003-00867.

Entergy is making no new commitments in this LER.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Fred R. Dacimo".

Fred R. Dacimo
Vice President, Operations
Indian Point Energy Center

IE22

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cc: Mr. Hubert J. Miller
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Indian Point 2 Nuclear Power Plant
P. O. Box 38
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Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

1. FACILITY NAME Indian Point Unit 2	2. DOCKET NUMBER 05000- 247	3. PAGE 1 OF 4
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4. TITLE
Plant in an Unanalyzed Condition due to Cable Routing--Non-Compliance with Appendix R Separation Criteria

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
02	06	2003	2003	- 01 - 00		04	02	2003	FACILITY NAME	DOCKET NUMBER
										05000-
										05000

9. OPERATING MODE	1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check all that apply)									
10. POWER LEVEL	100	20 2201(b)			20 2203(a)(3)(ii)			X	50 73(a)(2)(ii)(B)		50 73(a)(2)(x)(A)
		20 2201(d)			20 2203(a)(4)				50 73(a)(2)(iii)		50 73(a)(2)(x)
		20 2203(a)(1)			50 36(c)(1)(i)(A)				50 73(a)(2)(iv)(A)		73 71(a)(4)
		20 2203(a)(2)(i)			50 36(c)(1)(ii)(A)				50 73(a)(2)(v)(A)		73 71(a)(5)
		20 2203(a)(2)(ii)			50 36(c)(2)				50 73(a)(2)(v)(B)		OTHER
		20 2203(a)(2)(iii)			50 46(a)(3)(ii)				50 73(a)(2)(v)(C)		Specify in Abstract below or in NRC Form 366A
		20 2203(a)(2)(iv)			50 73(a)(2)(i)(A)				50 73(a)(2)(v)(D)		
		20 2203(a)(2)(v)			50 73(a)(2)(i)(B)				50 73(a)(2)(vii)		
20 2203(a)(2)(vi)			50 73(a)(2)(i)(C)				50 73(a)(2)(viii)(A)				
20 2203(a)(3)(i)			50 73(a)(2)(ii)(A)				50 73(a)(2)(viii)(B)				

12. LICENSEE CONTACT FOR THIS LER

NAME Jeffrey Cottam, Senior Lead Technical Specialist Programs & Components Engineering	TELEPHONE NUMBER (Include Area Code) (914) 734-5741
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED				15. EXPECTED SUBMISSION DATE		
YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO		MONTH	DAY	YEAR

16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On February 6, 2003, IPEC, Programs & Components Engineering (P&CE), determined that the routing of Charging Pump (CHP) control cables did not meet the cable separation criteria specified in Appendix R Section III.G. On February 12, 2003, P&CE further identified that the routing of the power supply cables for the six Service Water Pumps (SWP) did not meet the separation criteria of Appendix R, Section III. G. These conditions were discovered during the validation and re-baselining of the Appendix R safe shutdown analysis. In the case of the CHPs, the control functions for all three CHPs were determined to be vulnerable to damage by a single fire event in Fire Area F, specifically the Primary Auxiliary Building (PAB), elevation 80 ft. In the case of the SWPs, the normal and alternate power supply cables for all six SWPs were determined to be vulnerable to damage by a single fire in Fire Area J, specifically the Turbine Building (TB), elevation 15 ft. The apparent cause was the lack of rigor applied in the engineering analysis that developed the Appendix R safe shutdown analysis. The Appendix R analysis lacks sufficient detail and/or support documentation to justify the original design configuration. The corrective actions taken were to complete the rebaselining of the Appendix R analysis and develop procedures or modifications to resolve non-compliance with Appendix R. Upon discovery of these conditions, IPEC initiated fire protection impairment actions in accordance with Station Administrative Order SAO-703, "Fire Protection Impairment Criteria and Surveillance," and interim compensatory measures were implemented. These conditions had no significant effect on the health and safety of the public.

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NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

Note: The Energy Industry Identification System Codes are identified within the brackets {}.

DESCRIPTION OF EVENT

On February 6, 2003, at 1600 hours, with steady state reactor power at 100%, Indian Point Energy Center (IPEC), Programs and Components Engineering (P&CE), determined that the routing of the Charging Pump (CHP) {CB}{P} control cables did not meet the cable separation criteria specified in Appendix R Section III.G. On February 12, 2003, at 1353 hours, P&CE further identified that the routing of the normal and alternate power supply cables for the six Service Water Pumps (SWP){BI} did not meet the separation criteria of Appendix R, Section III.G. P&CE discovered these conditions during the re-baselining of the Appendix R safe shutdown analysis as part of a Design Basis Initiative (DBI) Project.

The CHP control cables and control functions for all three CHPs were determined to be vulnerable to damage by a single fire event in Fire Area F, specifically in the Primary Auxiliary Building (PAB){NF}, elevation 80 ft. Panels for speed control and local/remote breaker control for all three pump controllers are located in a common hallway immediately outside the CHP cubicles. This configuration leaves all control functions (i.e. both breaker and speed control) for all three CHPs vulnerable to damage by a single fire event in the area. Upon discovery, CR-IP2-2003-00765 was recorded in the Entergy's Corrective Action Program.

The SWP normal and alternate power supply cables were determined to be vulnerable to the effects of a single fire in Fire Area J. In the event of a postulated fire in Fire Area J, the credited shutdown methodology places reliance on the use of the "normal" safety-related electrical distribution system {ED}, powered from the emergency diesel generators {EK}. Therefore, in the event of a fire in Fire Area J, at least one SWP is credited as operated using "normal" power supply and normal controls. The specific location of the vulnerability for the SWP normal power supply cables is Manhole (MH) 23 located on the 15 ft. elevation of the Turbine Building (TB){NM}. MH 23 is covered by a checkered plate that is exposed to the 15 ft. elevation that leaves the normal power supply cables potentially vulnerable to the effects of an oil fire in that area. Upon discovery, CR-IP2-2003-00867 was recorded in the Entergy's Corrective Action Program.

These areas of non-compliance with Appendix R were identified by the DBI Project for rebaselining the Appendix R analysis. This project will ensure that any other conditions of potential non-compliance with Appendix R separation criteria are identified, and, therefore, no additional extent of condition review was required.

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CAUSE OF EVENT

The apparent cause of these conditions was the lack of rigor applied in the engineering analysis that developed the Appendix R safe shutdown separation analysis. The Appendix R analysis lacks sufficient detail and/or support documentation to justify the original design configuration of the CHP control cables and SWP power cables.

CORRECTIVE ACTIONS

The following corrective actions have been or will be performed under Entergy's Corrective Action Program to address the cause and prevent recurrence:

1. Interim compensatory measures were implemented in accordance with SAO-703, "Fire Protection Impairment Criteria and Surveillance."
2. Complete the re-baseline of the Appendix R analysis for IP2 in accordance with DBI Project PI-1, following the course of action laid out in the Plan of Action developed as per the requirements of SAO-703.
3. When the Compliance Assessment task of DBI PI-1 is complete, develop an acceptable procedural and/or modification solution to resolve Appendix R non-compliance for the CHP and SWP cable separation issues.

EVENT ANALYSIS

These conditions are reportable under 10 CFR 50.73(a)(2)(ii)(B), any event or condition that resulted in the nuclear power plant being in an unanalyzed condition that significantly degraded plant safety. In the current configuration, the routing of cables for the CHPs and SWPs do not meet the cable separation criteria of 10 CFR 50, Appendix R and could be potentially damaged due to a fire in a single Fire Area F or Fire Area J respectively. A non-emergency eight (8) hour notification per 10 CFR 50.72(b)(3)(ii)(B) was provided to the NRC (Event No.39571) on 2/06/03 for the CHPs and was subsequently updated for the SWPs on 2/12/03.

PAST SIMILAR EVENTS

A review of previous Licensee Event Reports (LER) in the past two years for non-compliance with 10 CFR 50 Appendix R Separation Criteria did not indicate any such conditions.

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EVENT SAFETY SIGNIFICANCE

These conditions had no significant effect on the health and safety of the public. There were no actual safety consequences for these conditions because the plant was not challenged by an actual fire event that challenged the operability of the CHPs or the SWPs. The Fire Hazards Analysis for the PAB, 80 ft. elevation corridor, identifies active smoke detection to provide early detection. Both the PAB and TB have manual fire suppression equipment located in the area supporting the capability of rapid response by the Fire Brigade. Although these areas are not continually occupied, they are the main access for the PAB and the TB for station personnel (i.e. Health Physics, Security, Operations, Maintenance) who regularly pass through the areas during the course of their normal work routine. If conditions were to degrade, presenting a fire threat, it is likely that such conditions would be identified early and promptly corrected by station personnel preventing the occurrence of a significant fire. The Combustible Loading Calculation identifies that the normal combustible loading in the areas is "Low" indicating that a large consuming fire capable of impacting the CHP or the SWP cables is unlikely because there are not sufficient combustibles in the area to fuel such a fire. Also, transient combustibles for the area are controlled per Station Administrative Order SAO-701, "Control of Combustibles and Transient Fire Load," which limits transient fire loads in buildings during maintenance and modifications to the minimum amount of material practical. In the interim, compensatory measures were established and will remain in effect until required changes are implemented to establish regulatory compliance. A quantitative risk assessment was performed for a postulated fire affecting all three CHPs and the change in the core damage frequency was calculated to be 1.09 E-10. Although a complete quantitative risk assessment for the SWPs was not feasible given modeling limitations, sufficient qualitative mitigating factors exist to conclude that the actual risk associated with this condition was low. The significant sources of oil to support a fire that would challenge the SWP cables are distant from MH 23 and would likely be directed to the condenser pit or lower level of the TB. MH 23 is located at the southeast corner of the TB with the turbine lube oil system being centrally located. The oil reservoir is located at the north end of the TB. In its as-found condition, the manhole cover plate had only a limited number of small holes, which would restrict the entry of oil and would be unlikely to admit sufficient air to support sustained combustion within the enclosed manhole.