10 CFR 50.73

Progress Energy

Serial: RNP-RA/08-0083
JUL 21 2008

Attn: Document Control Desk
United States Nuclear Regulatory Commission
Washington, DC 20555-0001

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23

LICENSEE EVENT REPORT NO. 2008-001-00
APPENDIX R PATHWAY IMPASSABLE DUE TO LOCK CONFIGURATION

Ladies and Gentlemen:

The attached Licensee Event Report is submitted in accordance with the requirements of 10 CFR 50.73. Should you have any questions regarding this matter, please contact Mr. C. A. Castell at (843) 857-1626.

Sincerely,

Jack E Hurst for EJK

Ernest J. Kapopoulos, Jr.
Plant General Manager
H. B. Robinson Steam Electric Plant, Unit No. 2

CAC/ahv

Attachment

c: L.A. Reyes, NRC, Region II
M. G. Vaaler, NRC, NRR
NRC Resident Inspector

Progress Energy Carolinas, Inc.
Robinson Nuclear Plant
3581 West Entrance Road
Hartsville, SC 29550

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NRR

NRC FORM 366 (9-2007) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES 08/31/2010

LICENSEE EVENT REPORT (LER)

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

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4. TITLE

Appendix R Pathway Impassable due to Lock Configuration

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
										05000
05	21	2008	2008	- 001	- 00	07	21	2008	FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE

1

10. POWER LEVEL

100%

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)

☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)	
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)	
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)	
☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)	
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)	
☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☒ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)	
☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)	
☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ OTHER Specify in Abstract below or in NRC Form 366A	
☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)		

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER (Include Area Code)
C. A. Castell	843-857-1626

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	MONTH	DAY	YEAR
☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO				

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

During a security exercise on May 21, 2008, with H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, in Mode 1 at 100% power, Security personnel were unable to open the gate between the Radwaste Building and the "C" Auxiliary Boiler due to an improperly locked gate. This gate is part of an Appendix R safe shutdown pathway. It was subsequently identified that the key that would have been obtained by Operations personnel as part of their dedicated shutdown equipment would not have opened the security lock on the gate between the Radwaste Building and the "C" Auxiliary Boiler, had it been required.

The condition described in this Licensee Event Report is reportable in accordance with 10 CFR 50.73(a)(2)(v)(A), "Any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to: (A) Shut down the reactor and maintain it in a safe shutdown condition; (B) Remove residual heat; (C) Control the release of radioactive material; or (D) Mitigate the consequences of an accident."

The health and safety of the public and plant personnel were not impacted by this event. No actual fire events or loss of safe shutdown capability have occurred. Completed corrective actions included establishing the proper lock configuration, the individual involved was counseled, a sign was added showing the proper configuration, and the required keys were placed in the appropriate location. Planned corrective actions include a procedure change to strengthen the verification and validation process for locked doors and gates, and installation of a breakable seal to replace the locks.

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NARRATIVE

I. DESCRIPTION OF EVENT

During a security exercise on May 21, 2008, with H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, in Mode 1 at 100% power, Security personnel were unable to open the gate between the Radwaste Building and the "C" Auxiliary Boiler due to an improperly locked gate. This gate is part of an Appendix R safe shutdown pathway.

In addition, it was subsequently identified that the key that would have been obtained by Operations personnel as part of their dedicated shutdown equipment would not have opened the security lock on the gate between the Radwaste Building and the "C" Auxiliary Boiler, had it been required. Therefore, the Appendix R pathway through this gate has been unavailable to operators for an unknown period of time.

II. CAUSE OF EVENT

The gate between the Radwaste Building and "C" Auxiliary Boiler is part of an Appendix R pathway that Operations personnel must access during implementation of site procedure DSP-002, "Hot Shutdown Using the Dedicated/Alternate Shutdown System," during a postulated fire in the Emergency Switchgear (E1/E2) Room. Operations personnel access this gate by use of a key obtained during implementation of procedure DSP-002. This gate also has a Radiation Control (RC) lock installed on the same chain. The two locks, a security lock and an RC lock, are intended to be connected in a configuration that would allow access through the gate using either a security or RC key.

This event was investigated using the HBRSEP, Unit No. 2, Corrective Action Program and documented in Significant Adverse Nuclear Condition Report 280422. The investigation found that the root cause of this event was that procedural controls were not sufficient to ensure that Operations personnel would receive the key needed to open this gate during implementation of DSP-002. In addition, the investigation found that the method used for configuration control of the two locks was inadequate. The investigation also determined that the improper lock configuration was caused by a contract Radiological Protection technician. The technician had opened the gate for maintenance activities and upon exit locked the RC lock into a link in the chain instead of properly locking it into the security lock.

III. ANALYSIS OF EVENT

The condition described in this Licensee Event Report is reportable in accordance with 10 CFR 50.73(a)(2)(v)(A), any event or condition that could have prevented the fulfillment of the safety function of structures that are needed to: (A) Shut down the reactor and maintain it in a safe shutdown condition; (B) Remove residual heat; (C) Control the release of radioactive material; or (D) Mitigate the consequences of an accident.

This Appendix R pathway is required for a postulated fire in the Cable Spread Room, E1/E2 Room, Electrical Equipment Area Room, Rod Control Room, Control Room, Hagan Room, or Containment. The operator would be required to perform a time-critical manual action to prevent or mitigate the

effects of spurious actuation of components that may adversely affect the ability to achieve safe shutdown.

The health and safety of the public and plant personnel were not impacted by this event. No actual fire events or loss of safe shutdown capability have occurred. Engineering analyses of the potential safety significance determined the event to be of low safety significance. The bounding case is the Pressurizer [AB:PZR] Power Operated Relief Valves [AB:PCV] spuriously opening as a result of cable-to-cable fire-induced circuit failures. For this case, the analyses demonstrate that the difference in core damage frequency caused by the potential delay is minimal and that the core remains covered.

IV. CORRECTIVE ACTIONS

Completed Corrective Actions:

- The locks were changed to the proper configuration.
- The individual that locked the gate incorrectly was counseled.
- A sign was attached to the gate between the Radwaste Building and "C" Auxiliary Boiler showing a depiction of the proper locking configuration.
- RC gate keys were obtained and placed in the appropriate location (i.e., the Fire Equipment Building).

Planned Corrective Actions:

- Procedure OMM-043, "Verification and Validation," will be revised by August 28, 2008, to strengthen the verification and validation process for locked doors and gates.
- A breakable seal will be installed to replace the security lock and the RC lock. This action is expected to be completed by August 28, 2008.

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NARRATIVE

V. ADDITIONAL INFORMATION

Previous Similar Events:

Recent Licensee Event Reports (LER) for HBRSEP, Unit No. 2, were reviewed. The following similar event was identified:

- LER 2003-003-00, Discovery of Two New Appendix R Safe Shutdown Vulnerabilities. The cause of this event was the unclear guidance provided in the original Appendix R Safe Shutdown Analysis for postulated fire-induced circuit failures. The corrective action was to establish clear guidance on the performance of circuit analysis for safe shutdown purposes and to ensure the program is in alignment with this guidance. The corrective actions associated with LER 2003-003-00 were predominantly focused on mitigation of the previously unidentified failure modes and hence would not have been expected to resolve the condition described in LER 2008-001-00.