

**David R. Vineyard**  
Vice President - Hatch

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November 3, 2014

Docket Nos.: 50-321

NL-14-1705

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555-0001

Edwin I. Hatch Nuclear Plant  
Licensee Event Report 2014-007-00  
Unanalyzed Condition Due to a Non-Functional Penetration Affecting Both Safe  
Shutdown Paths During a Postulated Fire

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(ii)(B), Southern Nuclear Operating Company hereby submits the enclosed Licensee Event Report.

This letter contains no NRC commitments. If you have any questions, please contact Greg Johnson at (912) 537-5874.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "David R. Vineyard".

D. R. Vineyard  
Vice President – Hatch

DRV/jcm

Enclosures: LER 2014-007-00

cc: Southern Nuclear Operating Company  
Mr. S. E. Kuczynski, Chairman, President & CEO  
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer  
Mr. D. R. Vineyard, Vice President – Hatch  
Mr. B. L. Ivey, Vice President – Regulatory Affairs  
Mr. T. E. Tynan, Vice President – Fleet Operations  
Mr. B. J. Adams, Vice President – Engineering  
Mr. G. L. Johnson, Regulatory Affairs Manager - Hatch

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RTYPE: CHA02.004

U. S. Nuclear Regulatory Commission  
Mr. V. M. McCree, Regional Administrator  
Mr. R. E. Martin, NRR Senior Project Manager - Hatch  
Mr. D. H. Hardage, Senior Resident Inspector – Hatch



**LICENSEE EVENT REPORT (LER)**

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@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 an 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.

<b>1. FACILITY NAME</b> Edwin I. Hatch Nuclear Plant Unit 1	<b>2. DOCKET NUMBER</b> 05000 321	<b>3. PAGE</b> 1 OF 3
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**4. TITLE**  
Unanalyzed Condition Due to a Non-Functional Penetration Affecting Both Safe Shutdown Paths During a Postulated Fire

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
09	13	2014	2014	- 007 -	00	11	4	2014	FACILITY NAME	DOCKET NUMBER

<b>9. OPERATING MODE</b>	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)</b>			
1	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
100	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

**12. LICENSEE CONTACT FOR THIS LER**

LICENSEE CONTACT Edwin I. Hatch / Steven Tipps – Licensing Supervisor	TELEPHONE NUMBER (Include Area Code) 912-537-5880
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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
D	NG	PEN	N/A	Y					

<b>14. SUPPLEMENTAL REPORT EXPECTED</b> <input checked="" type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input type="checkbox"/> NO	<b>15. EXPECTED SUBMISSION DATE</b> MONTH: 12, DAY: 18, YEAR: 2014
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**ABSTRACT** (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On September 13, 2014, at approximately 0307 EDT, with Unit 1 operating at approximately 100 percent rated thermal power, several uncovered bolt holes were found in a fire penetration between the reactor building area and a ventilation room. Due to the observed degradation of the fire penetration, the 3 hour fire rating was no longer maintained and the affected fire penetration was declared non-functional. This nonconforming condition regarding the fire penetration also resulted in an unanalyzed condition that could adversely impact both safe shutdown paths in the event of a postulated fire. At 0953 EDT, an 8 hour NRC notification was made for this unanalyzed condition. Hourly fire watches were established for the affected fire areas as compensatory measures to preserve the safe shutdown paths.

The most probable cause for the nonconforming condition of the affected fire penetration was attributed to a failure to fill in bolt holes that resulted from the removal of TSI Thermo Lag panels performed as a corrective action in response to NRC Generic Letter 92-08. Actions are currently being taken to inspect other similarly affected fire penetrations and evaluate their "as found" configuration, prioritizing penetrations that previously contained Thermo Lag panels. If similar conditions are identified as part of this inspection activity that impacts both safe shutdown paths, these conditions will be reported in the final supplement report following the conclusion of the inspections.



**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@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 an 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.

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**NARRATIVE**

PLANT AND SYSTEM IDENTIFICATION

General Electric – Boiling Water Reactor  
Energy Industry Identification System codes appear in the text as (EIS Code XX)

DESCRIPTION OF EVENT

On 09/13/2014 at approximately 0307 EDT, with Unit 1 operating at approximately 100 percent rated thermal power, several uncovered bolt holes were identified in a fire penetration (PEN) located between the 158 foot elevation in the reactor building area and the reactor building exhaust filter train room. The penetration is classified as a Category 1, 3-hour fire rated barrier located between the 1203K and the 1205N fire areas. This nonconforming fire penetration resulted in an unanalyzed condition that could adversely affect both safe shutdown paths in the event of a postulated fire. The associated wall was declared nonfunctional as it would not be able to meet 10 CFR 50 Appendix R requirements.

On 09/13/2014 at 0953 EDT, an 8 hour NRC notification was made for an unanalyzed condition due to the fire penetration not meeting Appendix R requirements as a 3-hour barrier. Hourly fire watches were established for the affected fire areas.

CAUSE OF EVENT

The most probable cause for the nonconforming condition of the affected fire penetration was attributed to a failure to fill in bolt holes that resulted from the removal of TSI Thermo Lag panels performed as a corrective action in response to NRC Generic Letter 92-08. The work instructions to remove the panel probably did not contain the proper instructions to repair or fill in the bolt holes after removal of the Thermo Lag panel.

REPORTABILITY AND SAFETY ASSESSMENT

The event is reportable per 10 CFR 50.73(a)(2)(ii)(B) as the non-functional penetration represents an unanalyzed condition that significantly degrades plant safety due to the presence of a degraded fire penetration that could compromise both safe shutdown paths during a postulated fire event.

The “as found” configuration does not meet 10 CFR 50 Appendix R requirements as a postulated fire could potentially compromise both paths of safe shutdown. However, the presence of the fire wall, albeit degraded, continues to provide a suitable barrier to provide some confinement of a postulated fire. This barrier in conjunction with defense in depth measures that include fire detection, fire suppression systems, and timely response by the station fire brigade provide reasonable assurance that in the event of a fire, the engineered features in conjunction with the station fire brigade actions will mitigate the consequences of a fire such that at least one safe shutdown path should be preserved. This is a postulated event and did not affect the safe operation of the plant or the health and safety of the public. Based on this information, this event is considered to have very low safety significance.

CORRECTIVE ACTIONS

Fire watches were established as part of a compensatory measure and will remain until the affected fire penetrations are functional and meet 10 CFR 50 Appendix R requirements.

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

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As part of a previous extent of condition, all fire penetrations are being inspected to evaluate their "as-found" configuration. Actions will be taken to determine if some of the affected penetrations have already been inspected to determine if similar "as found" conditions existed for penetrations that previously contained Thermo Lag panels. Fire watches will be established as a compensatory measure during the evaluation and repair phase of any non-conforming fire penetrations. Additionally, the priority of the planned penetration inspection will be adjusted to prioritize penetrations that previously contained Thermo Lag panels, such that all fire penetrations that previously contained Thermo Lag panels will be inspected by 11/21/2014. Any additional corrective actions due to non-functional fire penetrations affecting both safe shutdown paths will be provided in a final supplemental report.

ADDITIONAL INFORMATION

Other Systems Affected: No systems other than those mentioned in this report were affected by this event.

Failed Components Information:

Master Parts List Number: 1T43H528J	Manufacturer Code: N/A
Manufacturer: N/A	EIIS System Code: NG
Model Number: N/A	Reportable to EPIX: Y
Type: Fire Penetration	Root Cause Code: D

Commitment Information: This report does not created any new licensing commitments.

Previous Similar Events:

LER 1-2014-006, identified non-functional fire barriers that compromised safe shutdown paths in a postulated fire event. Several fire barriers failed to meet inspection criteria during the performance of a fire barrier surveillance and were declared non-functional. The affected fire barriers were found in a non-conforming condition due to the wall slowly degrading over time as a result of the natural settling of the wall. Fire watches are established as a compensatory measure during the evaluation and repair phase of any non-conforming fire barriers. Corrective actions are being taken to repair and return degraded fire barriers to functional status. As an extent of condition, the remaining fire walls are currently being inspected to determine if other similar degraded conditions exist. These corrective actions are still in progress and therefore would not be expected to have prevented the presence of the condition reported in this LER.

LER 1-2014-004, identified non-functional penetrations that comprised safe shutdown paths in a postulated fire event. An analysis identified some fire penetration seals containing 1.5 inches or less of grout in hollow walls could compromise safe shutdown paths during a postulated fire event. Based on this identification, the fire penetrations did not meet an acceptable configuration that has been tested for the required fire rating and therefore, did not meet 10 CFR 50 Appendix R requirements. All fire barriers containing penetrations of this nature were identified as non-functional due to a lack of adequate configuration control of the fire penetration seals through hollow walls. The corrective actions from this event are still in progress and therefore would not be expected to have prevented the presence of the condition reported in this LER.