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April 12, 2013

Docket Nos.: 50-366

NL-13-0648

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

Edwin I. Hatch Nuclear Plant
Licensee Event Report 2013-01
Unplanned RPS Actuation due to Scram Discharge Water Level during
Surveillance Testing

Ladies and Gentlemen:

In accordance with the requirements of 10CFR50.73(a)(2)(iv)(A), Southern Nuclear Operating Company hereby submits the enclosed Licensee Event Report concerning an unplanned RPS actuation that occurred during the course of performing refueling interlocks surveillance testing.

This letter contains no NRC commitments. If you have any questions, please contact Doug McKinney at (205) 992-5982.

Respectfully submitted,

A handwritten signature in black ink that reads "C. R. Pierce". The signature is written in a cursive style with a prominent "C" and "P".

C. R. Pierce
Regulatory Affairs Director

CRP/sbt/md

Enclosure: LER 2-2013-001

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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. Madison, Vice President – Hatch

Mr. B. L. Ivey, Vice President – Regulatory Affairs

Mr. B. J. Adams, Vice President – Fleet Operations

Mr. M. A. Dowd - OE Coordinator

RTYPE: CHA02.004

U. S. Nuclear Regulatory Commission

Mr. V. M. McCree, Regional Administrator

Mr. R. E. Martin, NRR Senior Project Manager - Hatch

Mr. E. D. Morris, Senior Resident Inspector – Hatch

Enclosure

NL-13-0648

Licensee Event Report 2013-001

Unplanned RPS Actuation due to Scram Discharge Volume
High Level during Surveillance Test

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 Records and FOIA/Privacy Service Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resources@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.

1. FACILITY NAME Edwin I. Hatch Nuclear Plant	2. DOCKET NUMBER 05000 366	3. PAGE 1 OF 3
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4. TITLE
Unplanned RPS Actuation due to Scram Discharge Volume High Level During Surveillance Test

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
02	16	2013	2013	- 001 -	0	04	12	2013	FACILITY NAME	DOCKET NUMBER
										05000
										05000

9. OPERATING MODE 5	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)									
10. POWER LEVEL 000	<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 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)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input checked="" 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

FACILITY NAME Edwin I. Hatch / Steven Tipps – Lead Licensing Engineer	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

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

On 2/16/2013, at approximately 0310 eastern standard time (EST), Unit 2 was in the refueling mode, when a valid unplanned reactor protection system (RPS) actuation occurred as a result of scram discharge volume (SDV) high level. Following shutdown for refueling the scram vent and drain valves would not open as expected which resulted in water remaining in the SDV. The refueling interlocks surveillance testing was being performed in accordance with the Operations surveillance procedure with the SDV water level above the setpoints for the "rod withdrawal block" and the "scram trip" in conjunction with closed SDV vent and drain valves. Jumpers had been installed to bypass the rod block signal, and the scram signal had been bypassed using the "Disch Vol Hi Level Byp" switch. When the Reactor Mode Switch was placed in the "Start & Hot Standby" position, a full reactor protection system (RPS) actuation occurred. Subsequent investigation revealed that the SDV high level bypass is only active with the mode switch in the "Shutdown" or "Refuel" positions.

The RPS actuation was caused by the presence of a water level in the SDV above the trip setpoint and by a less than adequate procedure. The absence of procedure prerequisites to confirm the SDV Hi Level Rod Block and RPS trip signals were not present prior to performing the refueling interlocks surveillance procedure resulted in positioning the reactor mode switch to the "STARTUP" position with the SDV trip signal present. This caused the SDV high level trip signal to no longer be bypassed resulting in the RPS actuation. The SDV high level condition was cleared and beginning of shift training (BOST) was issued to inform licensed operators of the event. Actions to prevent recurrence involved revision of Units 1 and 2 refueling interlocks surveillance procedures.

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

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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 2/16/13, Unit 2 was in a refueling outage and the Refueling Interlocks Functional Testing was being performed in accordance with the Operations surveillance procedure as a prerequisite for Fuel Movement Operations. At the time of the performance of the refueling interlocks surveillance the scram discharge volume (SDV) level was above the trip setpoints for the SDV Rod Withdrawal Block and SDV Scram as a result of SDV vent and drain valves being closed. Instrument and Control (I&C) technicians installed jumpers to bypass the SDV rod block signal, and the SDV scram signal had been bypassed using the SDV bypass switch that was designed to accomplish this when the reactor is shutdown. During the course of the refueling interlocks surveillance testing a procedure step required the Reactor Mode Switch to be placed in the "START & HOT STBY" position. A valid RPS actuation was received when the Reactor Mode Switch was taken to the "START & HOT STBY" position.

During a subsequent investigation, a review of the RPS logic associated with the SDV high level condition was performed. Operations personnel confirmed that the SDV high level bypass is only active when the mode switch is in the "SHUTDOWN" or "REFUEL" position. Operations personnel would expect to be prompted of this information in the procedure prerequisites where movement of the mode switch to a required position will cause a trip signal on SDV high level if that alarm is present. A review of other Operations and Maintenance procedures that involve movement of the reactor mode switch indicated that there is a provision in the "Prerequisites" section of these procedures to confirm that the SDV high level rod out block and scram trips are clear. However, the refueling interlocks functional testing surveillance procedure did not contain this prerequisite.

CAUSE OF EVENT

The unplanned RPS actuation was caused by the presence of a water level in the SDV above the trip setpoint and by a less than adequate procedure. The absence of procedure prerequisites to confirm the SDV Hi Level Rod Block and RPS trip signals were not present prior to performing the refueling interlocks surveillance procedure resulted in positioning the reactor mode switch to the "STARTUP" position with the SDV trip signal present. This caused the SDV high level trip signal to no longer be bypassed resulting in the RPS actuation. Contributing to the event was the fact that the Operations shift personnel did not realize that the SDV Hi Level Bypass was only active when the Reactor Mode Switch is in SHUTDOWN or REFUEL.

REPORTABILITY ANALYSIS AND SAFETY ASSESSMENT

The RPS actuation resulted from an actual SDV high level condition which is a valid actuation signal for this monitored parameter. Even though the 'SCRAM' function had already been completed with all control rods being fully inserted, the associated logic had not been removed from service. For this reason this is considered a valid RPS actuation and is being reported in accordance with 10 CFR 50.73(a) (2) (iv) (A).

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The SDV receives the water displaced by the motion of the CRD pistons during a reactor scram. Should this volume fill to a point where there is insufficient volume to accept the displaced water, control rod insertion would be hindered. Therefore, a reactor scram is initiated while the remaining free volume is still sufficient to accommodate the water from a full core scram. The two types of Scram Discharge Volume Water Level - High Functions are an input to the RPS logic. No credit is taken for a scram initiated from these Functions for any of the design basis accidents or transients analyzed in the FSAR. However, they are retained to ensure the RPS remains OPERABLE.

During this event, the reactor was in the Refueling Mode with the safety function having already been completed with all control rods already fully inserted. The occurrence of this event from "at power" conditions has been analyzed. Based on this information this reported condition has low nuclear safety significance.

CORRECTIVE ACTIONS

The SDV high level condition was cleared to allow performance of the required surveillance procedure for refueling interlocks. A BOST was issued to the Operations Department to inform personnel of the event and to explain the operation of the SDV high level bypass logic as well as other scram bypasses. This BOST explained when each scram bypass is in effect depending on plant mode, plant conditions and reactor mode switch positions.

Corrective actions to preclude recurrence involved procedure revisions for the refueling interlocks surveillance procedures on Unit 1 and Unit 2 to ensure the SDV high level is cleared prior to performance of the affected procedures.

ADDITIONAL INFORMATION

Other Systems Affected: None

Failed Components Information: None

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

Previous Similar Events:

A review of Hatch LERs was performed from January 2006 to the present and no similar events were identified.