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Steven P. Vercelli
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10 CFR 50.73

RBG-47959

June 25, 2019

Attn: Document Control Desk
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852-2738

Subject: Licensee Event Report 50-458 / 2019-002-00, "Standby Liquid Control System (SLC) pipe through-wall leak".

River Bend Station, Unit 1
NRC Docket No. 50-458
Renewed License No. NPF-47

In accordance with 10 CFR 50.73, enclosed is the subject Licensee Event Report. This document contains no commitments. If you have any questions, please contact Mr. Tim Schenk at 225-381-4177.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Vercelli".

SPV/djp

Enclosure: Licensee Event Report 50-458 / 2019-002-00, "Standby Liquid Control System (SLC) pipe through-wall leak".

cc: NRC Region IV Regional Administrator, w/o Enclosure
NRC Senior Resident Inspector – River Bend Station, Unit 1
Ji Young Wiley, Department of Environmental Quality, Office of Environmental Compliance, Radiological Emergency Planning and Response Section
Public Utility Commission of Texas, Attn: PUC Filing Clerk
NRC Project Manager



LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

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 Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by 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.

1. Facility Name River Bend Station - Unit 1	2. Docket Number 05000 458	3. Page 1 OF 2
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4. Title
Standby Liquid Control System (SLC) pipe through-wall leak

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
04	26	2019	2019	002	00	06	25	2019	NA	05000 NA
									Facility Name	Docket Number
									NA	05000 NA

9. Operating Mode

11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)

5	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(f)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
10. Power Level	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
0	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(1)
	<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)(D)	<input type="checkbox"/> 73.77(a)(2)(i)
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(ii)
	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> Other (Specify in Abstract below or in NRC Form 366A)		

12. Licensee Contact for this LER

Licensee Contact Tim Schenk, Manager - Regulatory Assurance	Telephone Number (Include Area Code) 225-381-4177
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13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable to ICES	Cause	System	Component	Manufacturer	Reportable to ICES
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

14. Supplemental Report Expected

Yes (If yes, complete 15. Expected Submission Date) No

15. Expected Submission Date

Month	Day	Year
08	31	2019

Abstract (Limit to 1400 spaces, i.e., approximately 14 single-spaced typewritten lines)

Through-wall leakage in the Safety Related Standby Liquid Control System (SLC) (**BR**) piping segment (SLS-150-037-1) was identified and confirmed by the NDE Examiners during a system leakage examination (VT-2). The identified leakage from this section of piping was at a rate of 1 drop every 1 to 2 minutes. The leak was discovered while conducting pressure test activities. At the time of discovery RBS was in its 20th refueling outage.

The section of piping spool [PSP] affected was cut out and replaced in accordance with ASME Section XI IWA-4000 (Work Order 00523751). The required elements for examination/material as required in the ASME Code were followed during the replacement of the affected segment of piping. After the required examinations, line (SLS-150-037-1) was returned to service. Additional analysis of the original piping section that was removed will be tracked under the RBS corrective action program to help validate assumptions as to the cause of the piping through wall indication. No direct cause can be ascertained at this time. The affected segment of the pipe has been sent to a materials laboratory for an analysis of the location in the piping where the through wall leakage occurred. The results of that off-site analysis will be provided in a supplement to this report.



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

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

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1. FACILITY NAME River Bend Station - Unit 1	2. DOCKET NUMBER 05000- 458	3. LER NUMBER		
		YEAR 2019	SEQUENTIAL NUMBER 002	REV NO. 00

NARRATIVE

BACKGROUND

The SLC system (TS 3.1.7) is manually initiated from the main control room as directed by the Emergency Operating Procedures (EOP-1, EOP-4 and EOP-5). This is an alternate method to shut down the Reactor [RCT] should the Control Rod Drive System (**AA**) fail to provide this function. The SLC system provides a backup capability for reactivity control and is independent of normal reactivity control provisions in the nuclear reactor.

Through wall leakage was confirmed by operations and NDE personnel near a 7D bend outside of the bend radius in a straight section of piping during test conditions established in accordance with RBS Pressure Testing requirements. Because of this, the SLC system was deemed inoperable and River Bend Station (RBS) issued a required 8-hour report under 10 CFR 50.72(b)(3).

REPORTED CONDITION

On April 26, 2019, while at 0% power/Mode 5, a through-wall leak was identified and confirmed by operations and non-destructive evaluation personnel (NDE) on line SLS-150-037-1 during test conditions established in accordance with River Bend pressure testing requirements. Line SLS-150-037-1 is within the boundary for ASME Section XI pressure test SLS.001 and is an ASME Section III, Class 1 line.

FAILURE ANALYSIS

A visual examination of the non-conforming material (SLS-150-037-1) after removal did not identify any known degradation mechanisms that could be assessed visually (e.g., erosion, corrosion). The remaining (accessible) piping was visually examined and no issues similar to line SLS-150-037-1 were noted.

No direct cause can be ascertained at this time. The affected segment of the pipe has been sent to a materials laboratory for an analysis of the location in the piping where the through wall leakage occurred.

CORRECTIVE ACTION TO PREVENT RECCURRENCE

CR-RBS-2019-2883 CA08 (due date 07/17/2019) has been issued to track the off-site material analysis results of the SLC Piping with through wall leakage indication. Further actions will be developed as need based on the results of this analysis.

PREVIOUS OCCURRENCE EVALUATION

There have been no similar events reported by RBS in the past three years.

SAFETY SIGNIFICANCE

Both the Reactor Coolant Pressure Boundary (RCPB) (**AD**) and SLC systems remained functional based on the amount of leakage identified during pressure test conditions. The piping has been replaced and the system pressure boundary has been tested, and will continue to be tested in accordance with ASME Section XI requirements, as applicable. Based on current data available taken from the analysis performed on-site, the SLC system was determined to be functional with the identified through wall leak.

(NOTE: Energy Industry Identification System component function identifier and system name of each component or system referred to in the LER are annotated as (**XX**) and [XX], respectively.)