

Entergy Operations, Inc. River Bend Station 5485 U.S. Highway 61N St. Francisville, LA 70775 Tel 225-381-4157

William F. Maguire Site Vice President

RBG-47754

May 9, 2017

U. S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, DC 20555

Subject: Licensee Event Report 50-458 / 2017-003-00 River Bend Station – Unit 1 Docket No. 50-458 License No. NPF-47

RBF1-17-0053

Dear Sir or Madam:

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, Fillreune WFM / dhw

Enclosure

cc: U. S. Nuclear Regulatory Commission Region IV 1600 East Lamar Blvd. Arlington, TX 76011-4511

> NRC Sr. Resident Inspector P. O. Box 1050 St. Francisville, LA 70775

INPO (via ICES reporting)

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> Central Records Clerk Public Utility Commission of Texas 1701 N. Congress Ave. Austin, TX 78711-3326

Department of Environmental Quality Office of Environmental Compliance Radiological Emergency Planning and Response Section Ji Young Wiley P.O. Box 4312 Baton Rouge, LA 70821-4312

NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION					APPROVED BY OMB: NO. 3150-0104 EXPIRES: 03/31/2020										
(04-2017) LICENSEE EVENT REPORT (LER) (See Page 2 for required number of digits/characters for each bloc (See NUREG-1022, R.3 for instruction and guidance for completing this					t) block) his form	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 confrol number.									
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)						the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.									
1. FACILITY NAME						2. DOCKET NUMBER 3				3. PAGE	3. PAGE				
River Bend Station – Unit 1						05000-458					1 OF 3				
4. TITLE Manual	Reacto	or Scram I	nitiated	in Respo	onse to Incr	ease in S	Steam P	ressure D	Durinc	n Steam Lea	ak Troubleshoo	otina			
5. EVENT DATE 6. LER NUMBER 7. REPORT DATE 8. OTHER FACILITIES INVOLVED															
MONTH	DAY	YEAR	YEAR	SEQUENT NUMBE	IAL REV	MONTH	DAY	YEAR	FAC						
	10	2017	2017	003		05	00	2017	FAC	ILITY NAME		DOCKET NUMBER			
03	10	2017	2017	003	00	05	09	2017					05000		
9. OPERATING MODE 11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)															
	1		□ 20.2201(b) □			20.2203		☐ 50.73(a)(2)(ii)(A)			☐ 50.73(a)(2)(viii)(A)				
			20.2201(d)			20.2203	-	☐ 50.73(a)(2)(ii)(B)			50.73(a)(2)(viii)(B)				
			□ 20.2203(a)(1) □			20.2203		☐ 50.73(a)(2)(iii)			50.73(a)(2)(ix)(A)				
			□ 20.2203(a)(2)(i) □ 50.36(c)((1)(i)(A)	∑ 50.73(a)(2)(iv)(A)			50.73(a)(2)(x)				
10.1	POWERL	EVEL.	□ 20.2203(a)(2)(ii) □ 50.36(c)(1				(1)(ii)(A)	50.73(a)(2)(v)(A)			$1 \square 73.71(a)(4)$				
	15		$\Box 20.2203(a)(2)(iii) \qquad \Box 50.36(c)(2)$				(2) (2)(")		$\Box 50.73(a)(2)(V)(B)$			73.7	\Box 73.71(a)(5)		
	10		\Box 20.2203(a)(2)(iv) \Box 50.46(a)				.40(a)(3)(1)		\Box 50.73(a)(2)(V)(C)			\Box 73.77(a)(1)			
				$\frac{2203(a)(2)}{2203(a)(2)}$		50.73(a)(2)(i)(A)				50.73(a)(2)(v)	(D)	73.77(a)(2)(ii)			
						50.73(a)(2)(i)(C)			OTHER Specify in Abstract below				or in NRC Form 366A		
		<u>.</u>			1	2. LICENS		ITACT FO		S LER			IIII OOOA		
LICENSEE	CONTACT					<u> </u>					TELEPHON	E NUMBER (In	clude Area	Code)	
Tim Schenk, Manager – Regulatory Assurance									225-38	1-4177					
			13). COMPLE	TE ONE LINE	FOREAC	HCOMP	ONENT FA	LURE	DESCRIBED	IN THIS REPORT	•			
CAL	ISE	SYSTEM	1 сом	PONENT	MANU- FACTURER	REPOF TO I	RTABLE EPIX	CAUS	E	SYSTEM	COMPONENT	MANU FACTUR	ER	TO EPIX	
(see te	xt)								:						
14. SUPPLEMENTAL REPORT EXPECTED							15. EX	PECTED	MONTH	DAY	YEAR				
YES (If yes, complete 15. EXPECTED SUBMISSION DATE)					N 🛛	C	SUBN	AISSION							
ABSTRAC	T (Limit to	1400 space	s, i.e., app	roximately 1	5 single-space	d typewritte	n lines)								
				1. (7								•			
On March 10, 2017, at approximately 7:14 a.m. CST, the reactor operator manually actuated a reactor scram in response to an approximately 15 percent at the time. The turking generator had been															
approximation as percent at the time. The turbine generator had been synchronized to the grid at 5:13 a.m. on March 10, and was being closely monitored by engineers and operators since a major															
modification to the turbine electro-hydraulic control (EHC) system had been installed during the recent refueling outage.															
Approximately 45 minutes prior to the manual scram, a main control room alarm actuated indicating a problem with the EHC system.															
A few minutes later, it was reported from the turbine building that there was a steam leak in the area of the EHC steam pressure															
transmi	tters. S	hortly th	ereafte	r, reacto	r préssure	began to) increa	se with n	o der	nand signal	present, at w	hich time	e the re	actor	

operator initiated the scram. The main feedwater system remained in service, and reactor water level control performed normally as designed. No reactor safety-relief valves actuated. The main turbine bypass valves did not open following the shutdown, and engineering review determined this condition was consistent with the response to the abnormal configuration of the EHC system pressure transmitters created by efforts to isolate the leak locally. Approximately five minutes after the scram, the outboard main steam isolation valves were manually closed to limit the reactor cooldown rate. This event resulted from the incorrect installation of a new compression fitting in the steam pressure instrumentation tubing for the main turbine control system. This event is being reported in accordance with 10 CFR 50.73(a)(2)(iv)(A) as a manual actuation of the reactor protection system.

NRC FORM 366A U.S. NUCLEAR REGULA	ATORY COMMISSION	APPROVED BY OMB: NO. 3150-010 Estimated burden per response to comply will	4 th this mandatory	EXPIRES: collection request: 80 hd	3/31/2020 ours. Reported		
LICENSEE EVENT R CONTINUATION	EPORT (LER) 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 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,					
(See NUREG-1022, R.3 for instruction and guidance for http://www.nrc.gov/reading-m/doc-collections/nuregs/	or completing this form staff/sr1022/r3/)	NEOB-10202, (3150-0104), Ornice of Manage used to impose an information collection doe NRC may not conduct or sponsor, and a collection.	ement and Budge is not display a cu person is not re	t, wasnington, DC 2050 irrently valid OMB contro quired to respond to, th	bl number, the he information		
1. FACILITY NAME	2. DOCKET N	UMBER		3. LER NUMBER			
Piver Bond Station Linit 1	05000 458		YEAR	SEQUENTIAL	REV NO.		
Niver Bend Station - Onit 1	00000-408		2017	003	00		
NARRATIVE		· · · · · · · · · · · · · · · · · · ·					
REPORTED CONDITION		~					
On March 10, 2017, at approximately 7:14 to an abnormal increase in steam pressur generator was on line. The reactor had be power ascent was in progress. The turbin was being closely monitored by engineers control (EHC) system [JI] had been installe	4 a.m. CST, the read re. Reactor power een taken critical a ne generator had be s and operators sin ed during the outag	ctor operator manually actu was approximately 15 perce t 4:39 p.m. on March 8 follo een synchronized to the gric ce a major modification to t ge.	ated a rea ent at the t owing a ref d at 5:13 a. he turbine	ctor scram in r ime, and the tu ueling outage, m. on March 1 electro-hydra	esponse urbine and .0, and ulic		
EHC system. A few minutes later, it was r steam pressure transmitters. The operati field observations, the single-point vulner trip. Shortly thereafter, reactor pressure from efforts to isolate the steam leak. The main feedwater system remained in s safety-relief valves actuated. The main to	reported from the t ions shift manager rability of the trans began to increase service, and reacto urbine bypass valve	urbine building that there w held a briefing with the ope mitter configuration, and th with no demand signal press r water level control was pe the did not open following the	vas a stean rators on p le possibili ent. This r erformed n e shutdown	n leak in the ar potential effec ty of a main tu esponse likely ormally. No re n, and enginee	rea of the ts of the rbine resulted eactor ring		
pressure transmitters created by efforts t outboard main steam isolation valves we	is isolate the leak long to isolate the leak l	coally. Approximately five n to limit the reactor cooldov	ninutes aft vn rate.	er the scram, 1	the		
Other than scheduled testing on the Divis of the scram.	sion 1 diesel genera	itor, no safety-related syste	ms were o	ut of service at	t the time		
This event is being reported in accordance system	e with 10 CFR 50.7	3(a)(2)(iv)(A) as a manual ac	tuation of	the reactor pr	otection		
INVESTIGATION							
During the recent refueling outage, a digi	tal control system	had been installed on the m	ain steam	turbine bypass	·•		
pressure regulation system. Part of that i pressure transmitter (**PT**) near the h existing steam pressure transmitters by a installed tubing compression fittings sepa concluded that the ferrule in the fitting w the tubing when the nut was tightened.	modification involv igh pressure turbin Idding a tee fitting i arated during effort as not fully inserte	e. The transmitter was to b into an existing run of tubing is to isolate the leak. Exami d, and did not compress add	main turb e installed g (**TBG* nation of t equately to	ine steam thro adjacent to tw *). One of the he component o engage the si	s / uttle vo newly- is urface of		
pressure regulation system. Part of that pressure transmitter (**PT**) near the h existing steam pressure transmitters by a installed tubing compression fittings sepa concluded that the ferrule in the fitting w the tubing when the nut was tightened.	modification involv igh pressure turbin dding a tee fitting i arated during effort as not fully inserte	e. The transmitter was to b into an existing run of tubing is to isolate the leak. Exami d, and did not compress add	main turb e installed g (**TBG* nation of t equately to	ine steam thro adjacent to tw *). One of the he component o engage the so	s / httle vo newly- ts urface of		

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NRC FORM 366A	U.S. NUCLEAR REGULA	TORY COMMISSION	APPROVED BY OMB: NO. 3150-010)4	EXPIRES: 3	3/31/2020			
(See NUREG-1022, R.3 f http://www.nrc.gov/readin	CONTINUATION S CONTINUATION S for instruction and guidance for ng-rm/doc-collections/nuregs/s	EPORT (LER) SHEET or completing this form ttaff/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.						
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River Bend Station	– Unit 1	05000-458		YEAR	SEQUENTIAL NUMBER	REV NO.			
		1 · · · · · · · · · · · · · · · · · · ·		2017	003	00			
The tee fitting was installed by two qualified pipefitters who were contracted for the refueling outage, with oversight provided by a contract pipefitter foreman. The field work to complete the fit-up of the tee connection was specified as Quality Control (QC) Hold Point. The contract foreman stated that he was present during the fit-up of the tee connection and that the technicians performed the work as required, fitting each of the three connections and tightening them one at a time starting with the top compression fitting and ending with the bottom connection. When the fittings were tight, he observed the technicians use a gap tool to verify proper gap and engagement of the compression nut on the tee connection body.									
CAUSAL ANALYSIS									

This event resulted directly from the incorrect installation of the tee compression fitting for the new steam pressure transmitter. A contributing cause was the lack a standard process on how to properly verify compression tubing and fitting engagement is maintained during the tightening process.

CORRECTIVE ACTION TO PREVENT RECURRENCE

A maintenance procedure will be developed to address the proper installation of compression fittings. This action will be tracked in the corrective action program.

PREVIOUS OCCURRENCE EVALUATION

RBS has reported no similar events in the last three years.

SAFETY SIGNIFICANCE

The plant responded as designed to the transient. The response of the main turbine bypass valves resulted from the efforts to isolate the steam leak, and was, by itself, of no consequence to the operators' response to the event. The steam leak was isolated by closure of an instrument valve. The outboard main steam isolation valves were manually closed in accordance with procedures to manage reactor cooldown rate. There were no injuries as a result of the steam leak. This event was, thus, of minimal significance to the health and safety of the public.

(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.)