



10 CFR 50.73
L-2021-114
June 3, 2021

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

RE: Turkey Point Units 3 and 4
Docket No. 50-250 and 50-251
Reportable Event: 2021-002-00
Date of Event: April 15, 2021
Title: Unrecognized Technical Specification Surveillance Requirement Non-Compliance

The attached Licensee Event Report 05000250/2021-002-00 is submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) for a condition prohibited by Technical Specifications. The event affected Units 3 and 4 and is reported on Unit 3 per NUREG-1022 guidance.

If there are any questions, please call Mr. Robert Hess at 305-246-4112 or e-mail Robert.Hess@fpl.com.

Sincerely,

A handwritten signature in blue ink that reads 'M.D. Pearce'.

Michael Pearce
Site Vice President – Turkey Point Nuclear Plant
Florida Power & Light Company

Attachments: USNRC Forms 366 and 366A, current revision

cc: USNRC Senior Resident Inspector, Turkey Point Plant
USNRC Regional Administrator, Region II



LICENSEE EVENT REPORT (LER)

(See Page 3 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 FOIA, Library, and Information Collections Branch (T-6 A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollections.Resource@nrc.gov, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk all: oira_submission@omb.eop.gov. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

1. Facility Name Turkey Point Unit 3	2. Docket Number 05000 250	3. Page 1 OF 3
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4. Title Unrecognized Technical Specification Surveillance Requirement Non-Compliance

5. Event Date			6. LER Number			7. Report Date			8. Other Facilities Involved	
Month	Day	Year	Year	Sequential Number	Revision No.	Month	Day	Year	Facility Name	Docket Number
04	15	2021	2021	- 002 -	00	06	03	2021	Turkey Point Unit 4	05000 251
									Facility Name	Docket Number
										05000

9. Operating Mode 1	10. Power Level 100
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11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)

<input type="checkbox"/> 10 CFR Part 20	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	10 CFR Part 73
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.69(g)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(4)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.71(a)(5)
<input type="checkbox"/> 20.2203(a)(2)(i)	10 CFR Part 21	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(1)(i)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 21.2(c)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(i)
<input type="checkbox"/> 20.2203(a)(2)(iii)	10 CFR Part 50	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 73.77(a)(2)(ii)
<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<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)(v)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)	
<input type="checkbox"/> OTHER (Specify here, in abstract, or NRC 366A).				

12. Licensee Contact for this LER

Licensee Contact David Stoia, Licensing Engineer	Phone Number (Include area code) 305-246-6538
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13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable to IRIS	Cause	System	Component	Manufacturer	Reportable to IRIS
E									

14. Supplemental Report Expected	15. Expected Submission Date	Month	Day	Year
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, complete 15. Expected Submission Date)				

16. Abstract (Limit to 1560 spaces, i.e., approximately 15 single-spaced typewritten lines)

On 4/15/2021 FPL identified that Reactor Protection System (RPS) Technical Specification Functional Unit (FU) 20 had not met Technical Specification Surveillance Requirements (TSSRs) during 5 discrete periods over the past 3 years. Due to RPS design limitations, FU20, Automatic Trip and Interlock Logic, could not be fully tested above the P8 interlock (45% reactor power). The trip functions not tested are automatically bypassed and not testable above the P8 interlock, but below P8 are active and TSSR 4.3.1.1 is applicable. During the identified periods the completion time was not met. Since the condition was unrecognized, action was not taken, resulting in discrete periods of non-compliance with the TSAS.

The subject Actuation Logic Tests have since been completed and test frequencies adjusted in the Surveillance Frequency Control Program to accommodate the RPS system design. All FU20 trip functions are operable and within approved surveillance frequencies.

This event is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B) for a condition prohibited by Technical Specifications.

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

(See NUREG-1022, R.3 for instruction and guidance for completing this form
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1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
Turkey Point Unit 3	05000-250	YEAR 2001	SEQUENTIAL NUMBER 002	REV NO. 00

NARRATIVE**EVENT DESCRIPTION**

On 4/15/2021 FPL determined that RPS FU20, Automatic Trip and Interlock Logic, had not met TSSR 4.3.1.1. The Actuation Logic Tests (ALT) that apply to several trip functions, due to the design of the RPS [JC], were not being performed at the frequencies specified by the SFCP. The FU20 TSSRs include the ALTs as described in TS 4.3.3.1 Table 4.3-1, the 92-day (quarterly) frequencies for which are assigned by the SFCP. The affected FU20 trip functions tested by the ALTs and their respective power interlocks include:

- Power Range Neutron Flux (low setpoint); <P10 (10% power)
- Intermediate Range Neutron Flux; <P10
- Source Range Neutron Flux; <P6 (10E-5 cps)
- Reactor Coolant Low Flow (2/3 loops); <P8 (45% power)
- Reactor Coolant Pump Breaker Open (2/3 loops); <P8

The SFCP previously prescribed a quarterly frequency to the ALT for each of these trip functions. However, the design of the RPS is such that reactor power must be below the associated interlock of each trip function to perform the ALT. The subject ALTs are active below the P8 interlock (45% reactor power). When the reactors are operating at full power these trip functions are bypassed and the ALTs cannot be performed. If the ALT surveillance is past due and reactor power is maneuvered to a level below the corresponding interlock, such as for equipment maintenance or a scheduled outage, the TSSR is not met, rendering the FU20 channel inoperable. TS 3.3.1 Table 3.3-1 Action 8 directs shutdown to Mode 3 within 6 hours if a single channel is inoperable. In cases where both channels are inoperable TS 3.0.3 applies, also directing shutdown to Mode 3 within 6 hours. Since the condition was unrecognized, action pursuant to the TSAS was not taken, resulting in 5 discrete periods of TSAS non-compliance that occurred over the Past Operability Review (POR) assessment period.

All of the periods of TS non-compliance during the assessment range occurred during power reductions of Units 3 and 4 for equipment maintenance or scheduled outages. Since there were no load reductions that went below 10% power and scheduled outages begin with a manual reactor trip from approximately 15% power, only the trip functions associated with the P8 (45%) interlock were non-compliant. This includes the Reactor Coolant Low Flow (2/3 loops) and RCP Breaker Open (2/3 loops) reactor trip functions. The evaluation concluded that the discrete periods of TS 3.3.1 or TS 3.0.3 non-compliance were as follows:

Unit	Period	Ch A	Ch B	Applicable TS
3	9/30/18 04:41 - 10/1/18 00:02 (19 hrs 21 min)	X	X	TS 3.0.3
3	5/18/19 11:08 - 5/20/19 00:50 (37 hrs 42 min)		X	TS 3.3.1
3	9/26/19 20:54 - 9/27/19 19:31 (22 hrs 37 min)	X	X	TS 3.0.3
3	3/29/20 05:43 - 3/30/20 00:02 (18 hrs 19 min)	X	X	TS 3.0.3
4	3/10/19 05:45 - 3/11/19 00:02 (18 hrs 17 min)	X	X	TS 3.0.3

All FU20 ALT surveillances that could not be performed above their respective interlock power levels had been completed regularly during outage conditions, which is consistent with the design of the Turkey Point RPS. There were no failures during the surveillance testing and therefore no loss of safety function during the periods of TS non-compliance. At no point had any completed surveillance frequency exceeded an 18-month fuel cycle.

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Turkey Point Unit 3	05000-250	2021	002	00

NARRATIVE**CAUSE**

The cause of this event is a latent gap within the test capabilities of the Turkey Point RPS. Although not compliant with the SFCP frequencies, the practice of performing the ALT surveillances during outage conditions is consistent with the design of the Turkey Point RPS.

SAFETY SIGNIFICANCE

The safety significance of this event is low. The subject ALT surveillances had been completed at frequencies that were consistent with the design of the Turkey Point RPS. No test failures had occurred during the assessment period. The actions to bring the SFCP frequencies into alignment with the RPS design did not require any additional surveillance testing.

CORRECTIVE ACTIONS

All FU20 ALT surveillances that cannot be performed above their respective interlock power levels have been completed during reactor shutdown conditions. The SFCP implementing procedure has been revised to assign an 18-month refueling outage frequency to the subject FU20 ALT surveillances. All FU20 ALT surveillances are currently within their approved performance frequencies. FU20 is fully operable.

ADDITIONAL INFORMATION

EIIS Codes are shown in the format [IEEE system identifier, component function identifier, second component function identifier (if appropriate)].

SIMILAR EVENTS

A 5-year historical review of reportable events related to unrecognized inoperability of equipment required by Technical Specifications was performed to identify similar events or patterns. No other cases of TS surveillance frequencies that exceeded Tech Spec shutdown requirements were identified.