



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

August 24, 2022

Mr. John Ferrick
Site Vice President
Entergy Operations, Inc.
17265 River Road
Killona, LA 70057

**SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 – BIENNIAL PROBLEM
IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000382/2022010**

Dear Mr. Ferrick:

On July 28, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Waterford Steam Electric Station, Unit 3 and discussed the results of this inspection with Mr. Matt Lewis and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspection team reviewed the station's problem identification and resolution program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for problem identification and resolution programs. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

Finally, the team reviewed the station's programs to establish and maintain a safety-conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs. Overall, the team concluded that all work groups at the Waterford Steam Electric Station, Unit 3, maintained a healthy safety-conscious work environment. Having said this, the team found some work environment challenges in the security department. Through interviews with the staff members, the team identified that an environment exists where morale among officers is low due to continued staffing issues and high levels of overtime. This has led to fatigue and work/life balance issues. If left uncorrected, the team posited that continued degradation of staff morale due to fatigue, could negatively impact staff performance and potentially plant safety.

No findings or violations of more than minor significance were identified during this inspection.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,



Signed by Agrawal, Ami
on 08/24/22

Ami N. Agrawal, Team Lead
Inspection Program & Assessment Team
Division of Operating Reactor Safety

Docket No. 05000382
License No. NPF-38

Enclosure:
As stated

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**U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report**

Docket Number: 05000382

License Number: NPF-38

Report Number: 05000382/2022010

Enterprise Identifier: I-2022-010-0005

Licensee: Entergy Operations, Inc.

Facility: Waterford Steam Electric Station, Unit 3

Location: Killona, LA

Inspection Dates: July 03, 2022, to July 28, 2022

Inspectors: R. Azua, Senior Reactor Inspector
D. Childs, Resident Inspector
B. Correll, Reactor Inspector
N. Makris, Senior Emergency Response Coordinator

Approved By: Ami N. Agrawal, Team Lead
Inspection Program & Assessment Team
Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a biennial problem identification and resolution inspection at Waterford Steam Electric Station, Unit 3, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information.

List of Findings and Violations

No findings or violations of more than minor significance were identified.

Additional Tracking Items

None.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

OTHER ACTIVITIES – BASELINE

71152B - Problem Identification and Resolution

Biennial Team Inspection (IP Section 03.04) (1 Sample)

- (1) The inspectors performed a biennial assessment of the effectiveness of the licensee's Problem Identification and Resolution program, use of operating experience, self-assessments and audits, and safety conscious work environment.

Problem Identification and Resolution Effectiveness: The inspectors assessed the effectiveness of the licensee's Problem Identification and Resolution program in identifying, prioritizing, evaluating, and correcting problems. The inspectors also conducted a five-year review of the Auxiliary Component Cooling Water (ACCW) system.

- Operating Experience: The inspectors assessed the effectiveness of the licensee's processes for use of operating experience,
- Self-Assessments and Audits: The inspectors assessed the effectiveness of the licensee's identification and correction of problems identified through audits and self-assessments.
- Safety Conscious Work Environment: The inspectors assessed the effectiveness of the station's programs to establish and maintain a safety-conscious work environment.

INSPECTION RESULTS

Assessment	71152B
<u>Effectiveness of Problem Identification:</u> Based on the samples reviewed, the team determined that the licensee's performance in this area adequately supported nuclear safety. Overall, the team found that the licensee was identifying and documenting problems at an appropriately low threshold that supported nuclear safety.	
<u>Effectiveness of Prioritization and Evaluation of Issues:</u> Overall, the team found that the	

licensee was appropriately prioritizing and evaluating issues to support nuclear safety. Of the samples reviewed, the team found that the licensee, in general, correctly characterized condition reports as to whether they represented conditions adverse to quality, and then prioritized the evaluation and corrective actions in accordance with program guidance.

Effectiveness of Corrective Actions: Overall, the team concluded that the licensee's corrective actions supported nuclear safety. Specifically, the staff at the Waterford Steam Electric Station, Unit 3 developed effective corrective actions for the problems evaluated in the corrective action program and generally implemented these corrective actions in a timely manner commensurate with their safety significance. Having said this, two examples were identified where this was not the case. The team informed the licensee of these errors, and they addressed them through the corrective action program. The team determined these were isolated instances and did not represent a programmatic issue.

- As part of this inspection, the team selected the Auxiliary Component Cooling Water (ACCW) system for a focused review within the corrective action program. For this system, the team performed sample selections of condition reports, looking at the adequacy of the licensee's evaluation process for determining which items are placed in the corrective actions process, and the corrective actions taken. The team also reviewed the licensee's use of operational experience and the 10 CFR Part 21 process' with respect to this system. No problems were noted.

Corrective Action Program Assessment: Based on the samples reviewed, the team determined the licensee's corrective action program complied with regulatory requirements and self-imposed standards, and the licensee's implementation of the corrective action program adequately supported nuclear safety. The team found that management's oversight of the corrective action program process was effective.

Assessment	71152B
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Operating Experience: The team reviewed a variety of sources of Operating Experience including 10 CFR Part 21 notifications and other vendor correspondence, NRC generic communications, and publications from various industry groups including INPO and EPRI. The team determined that the Waterford Steam Electric Station, Unit 3 is adequately screening and addressing issues identified through Operational Experience that apply to the station and that this information is evaluated in a timely manner once it is received. Having said this, a couple of minor examples of process errors regarding 10 CFR Part 21's were identified and entered into the licensee's corrective action program.

Self-Assessments and Audit Assessment: The team reviewed a sample of the licensee's departmental self-assessments and audits to assess whether they regularly identified performance trends and effectively addressed them. The team also reviewed audit reports to assess the effectiveness of assessments in specific areas. Overall, the team concluded that the licensee had an effective departmental self-assessment and audit process. The audits that the team reviewed were very detailed, thorough, and identified issues.

Assessment	71152B
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Safety-Conscious Work Environment: The team interviewed approximately 30 individuals in group sessions of varying sizes, plus some one-on-one interviews. The interviews were conducted in person. The purpose of these interviews was (1) to evaluate the willingness of

your staff to raise nuclear safety issues, either by initiating a condition report or by another method, (2) to evaluate the perceived effectiveness of the corrective action program at resolving identified problems, and (3) to evaluate the Waterford Steam Electric Station, Unit 3's safety-conscious work environment (SCWE). The focus group participants included personnel from Security, Engineering, and Production. Overall, the Waterford Steam Electric Station, Unit 3, was found to have an adequate SCWE.

Willingness to Raise Nuclear Safety Issues: In all the interviews, the team found no evidence of challenges to SCWE. Individuals in these groups expressed a willingness to raise nuclear safety concerns and other issues through at least one of the several means available.

However, the team found some work environment challenges in the security department. Through interviews with the staff members, it was identified that an environment exists where morale among officers is low due to continued staffing issues and high levels of overtime, leading to fatigue and work/life balance issues. The team posited that continued degradation of staff morale due to fatigue, could negatively impact staff performance. Specifically, tired, and distracted people make mistakes. Plus, low morale may ultimately have a negative impact on SCWE.

Overall, the team concluded that all work groups at the Waterford Steam Electric Station, Unit 3, maintained a healthy safety-conscious work environment. However, morale issues may have a deleterious effect on staff performance and potentially on plant safety.

Employee Concerns Program: The team looked at the Waterford Steam Electric Station, Unit 3's Employee Concerns Program (ECP). The team interviewed the ECP manager and reviewed a number of investigations. Overall, the team determined that the investigation packages were of excellent quality, clearly demonstrating steps taken and basis for conclusions. In addition, the ECP manager demonstrated detailed knowledge of all the cases that were reviewed.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On July 28, 2022, the inspectors presented the biennial problem identification and resolution inspection results to Mr. Matt Lewis and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Calculations	ECF14-046	WF3 Fire Safety Analysis - Fire Area RCB	1
		FP-CLC-01	Combustible Loading Calculation for Fire Area RCB	005
	Corrective Action Documents	CR-WF3-	2013-00445, 2015-05234, 2016-07183, 2018-04804, 2019-01751, 2019-02349, 2019-03153, 2019-04695, 2019-06297, 2019-07175, 2020-00191, 2020-01109, 2020-02178, 2020-02188, 2020-02316, 2020-02649, 2020-02945, 2020-05569, 2020-05600, 2020-05607, 2020-05692, 2020-05855, 2020-05982, 2020-06067, 2020-06110, 2020-06312, 2020-06336, 2020-06462, 2020-06650, 2020-06722, 2020-06814, 2020-06904, 2020-06924, 2020-06930, 2020-06939, 2020-06980, 2020-07058, 2020-07178, 2020-07211, 2020-07215, 2020-07254, 2020-07255, 2020-07294, 2020-07328, 2020-07394, 2021-00040, 2021-00062, 2021-00195, 2021-00198, 2021-00199, 2021-00220, 2021-00226, 2021-00299, 2021-00300, 2021-00326, 2021-00404, 2021-00469, 2021-00496, 2021-00608, 2021-00836, 2021-00853, 2021-00895, 2021-00903, 2021-00908, 2021-00912, 2021-00918, 2021-00922, 2021-00924, 2021-00948, 2021-01116, 2021-01254, 2021-01268, 2021-01299, 2021-01386, 2021-01492, 2021-01630, 2021-01662, 2021-01784, 2021-01797, 2021-01835, 2021-01837, 2021-02059, 2021-02251, 2021-02262, 2021-02290, 2021-02312, 2021-02391, 2021-02466, 2021-02901, 2021-02993, 2021-03036, 2021-03065, 2021-03671, 2021-03677, 2021-03683, 2021-03832, 2021-03864, 2021-03868, 2021-03873, 2021-04001, 2021-04165, 2021-04184, 2021-04236, 2021-04279, 2021-04614, 2021-04905, 2021-04911, 2021-04912, 2021-04950, 2021-04974, 2021-04976, 2021-05004, 2021-05284, 2021-05322, 2021-05945, 2021-05242, 2021-05244, 2021-06020, 2021-06180, 2021-06244, 2021-06466, 2021-06554, 2021-06728, 2021-06774, 2022-00284, 2022-00342, 2022-00546, 2022-00814, 2022-00854, 2022-01167, 2022-01302, 2022-01503, 2022-01695, 2022-01837, 2022-01953,	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2022-02217, 2022-02336, 2022-02475, 2022-02484, 2022-02647, 2022-02746, 2022-02885, 2022-03125, 2022-03362, 2022-03430, 2022-03513, 2022-03529, 2022-03552, 2022-03575, 2022-03598, 2022-03704, 2022-03735, 2022-03963, 2022-03999, 2022-04052, 2022-04112, 2022-04164, 2022-04283, 2022-04351, 2022-04699, 2022-05424, 2022-05531	
	Engineering Changes	EC 87009	Operability Input to CR-WF3-2020-02316 - Failure to Test CCW Surge Tank LOLO Level Relays	000
		EC-0068122	Operability Input for Cut Rebar Documented in CR-WF3-2016-07183	0
		EC-0086935	Operability Input for CR-WF3-2020-2178 CC MPMP0001A(B)(AB)	0
		EC-C94-015	Structural Design of ACCW Equipment Platforms	A
		ENGCHG-WF3-EC-0000087009	Operability Input to CR-WF3-2020-02316 - Failure to Test CCW Surge Tank LOLO Level Relays	000
	Engineering Evaluations	WF3-PE-00217881	Procurement Engineering Evaluation 00217881	05/19/2022
	Miscellaneous	AR-21003222	Molded Case Circuit Breaker PM Classification Update	03/29/2021
		LO-WLO-2020-00058	Effectiveness review for CR-WF3-2020-6336	N/A
		OBS-2020-	117987, 118055	N/A
		OBS-2021-	0184, 3066, 3069, 3073, 3202, 3204, 7405, 7410, 8035, 8131, 8134, 9604, 9975, 9977, 14920, 17040, 21221, 21292	N/A
		Performance Review Meeting (DPRM/APRM)	Radiation Protection - 4/22/2021, 7/27/2021, 10/28/2021, 12/31/2021	
		Performance Review Meeting (DPRM/APRM)	Maintenance (Electrical and I&C) - 4/28/2021, 7/14/2021, 10/27/2021, 1/25/2022	
		WLP-ESPC-TRBLREFESH	Trouble Shooting Refresher	1
	Procedures	EN-AD-103	Document Control and Records Management Programs	25
		EN-DC-141	Design Inputs	18
		EN-DC-161	Control of Combustibles	24

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		EN-DC-206	Maintenance Rule (a)(1) Process	6
		EN-EC-100	Employee Concerns Program	14
		EN-EC-100-01	Employee Concerns Program Coordinator Training	4
		EN-EC-101	Differing Professional Opinion Resolution Process	3
		EN-EP-202	Equipment Important to Emergency Response	2
		EN-EP-202	Equipment Important to Emergency Response	3
		EN-FAP-DC-014	Engineering Change Stakeholder Engagement	2
		EN-IS-124	Industrial Safety Planning & Job Safety Hazard Analysis	4
		EN-LI-102	Corrective Action Program	47
		EN-LI-118	Causal Analysis Process	35
		EN-MA-106	Planning	4
		EN-OE-100	Operating Experience Program	35
		EN-OE-100-01	IER Level 1 and Level 2 Evaluations and Effectiveness Reviews	6
		EN-PL-100	Nuclear Excellence Model	10
		EN-PL-187	Safety Conscious Work Environment (SCWE) Policy	3
		EN-PL-190	Maintaining a Strong Safety Culture	4
		EN-QV-136	Nuclear Safety Culture Monitoring	23
		JA-PI-03	OE Screening	9
		MI-004-300	Guidelines for Rework of Electronic Equipment	303
		MI-004-300	Guidelines for Rework of Electronic Equipment	305
		OP-006-010	TEDG Operations	1
		OP-006-010	TEDG Operations	2
		OP-010-003	Plant Startup	356
		OP-010-003	Plant Startup	357
		OP-010-003	Plant Startup	358
		OP-010-003	Plant Startup	359
		OP-010-003	Plant Startup	360
OP-010-003	Plant Startup	361		
OP-100-014	Technical Specification and Technical Requirements Compliance	355		
	Self-Assessments	LO-WLO-2020-00058	Effectiveness Review for CR-WF3-2020-06336	N/A

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		QA-04-2022-W3-01	Engineering (Design Control) Audit	4/18/2022
		QA-12/18-2021-W3-1	Combined Operations and Technical Specifications Audit	7/12/2021
		QA-14/15-2021-W3-01	Quality Assurance Audit Report - Combined Radiation Protection and Radwaste Audit	10/25/2021
		QA-3-2021-W3-1	Quality Assurance Audit Report - Corrective Action Program (CAP)	06/29/2021
		QS-2022-WF3-002	2022 Corrective Action Program (CAP) Surveillance	05/05/2022
	Work Orders	216288	(OD) BMSR-416 - Type I Snubber Functional Test	N/A
		518880	QSPDS #2 NODE BOX DOES NOT PRESENT DATA TO REGULAR DISPLAY	N/A
		52776774	NG IPIS0945-B, NG IPS0935-B, NG MVA00812, Calibrate	
		52796992	SI IF0390-B, Calibrate Flow Loop IAW MI Procedures	
		52824939	SM IYR6040-V, Calibrate Spectrum Recorder IAW MI-003-345	
		545054	CC EREL701-Relay Perform Functional Test of LSX (CR 20-2316)	
		550262	CC EREL702-Relay Perform Functional Test of LSX (CR 20-2316)	
		554762	RC IHTE0221-B, REPLACE QSPDS 2 HJTC ASSEMBLY	N/A
		554774	TROUBLESHOOT RC IUTE0221 B 20-6814	N/A
		PMID	494, 533, 599, 616, 3618	
WO-00524923	Replace Mechanical Seal on ACCMPMP0001 B Pump CR-19-4695			