



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

July 27, 2021

Mr. John Dent, Jr., Vice President
and Chief Nuclear Officer
Nebraska Public Power District
72676 648A Avenue
Brownville, NE 68321

**SUBJECT: COOPER NUCLEAR STATION – BIENNIAL PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000298/2021012**

Dear Mr. Dent, Jr.:

On July 1, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Cooper Nuclear Station. On July 1, 2021 the NRC inspectors discussed the results of this inspection with you 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 corrective action 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 corrective action 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. Based on the team's observations and the results of these interviews the team found no evidence of challenges to your organization's safety-conscious work environment. Your employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

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

J. Dent, Jr.

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Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

A handwritten signature in black ink, appearing to read 'Ami', with a stylized flourish at the end.

Signed by Agrawal, Ami
on 07/27/21

Ami N. Agrawal, Team Leader
Inspection Programs & Assessment Team
Division of Reactor Safety

Docket No. 05000298
License No. DPR-46

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

COOPER NUCLEAR STATION – BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION
INSPECTION REPORT 05000298/2021012 – DATED JULY 27, 2021

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DATE	7/27/2021	7/27/2021			

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

Docket Number: 05000298

License Number: DPR-46

Report Number: 05000298/2021012

Enterprise Identifier: I-2021-012-0018

Licensee: Nebraska Public Power District

Facility: Cooper Nuclear Station

Location: Brownville, NE

Inspection Dates: June 14, 2021 to July 01, 2021

Inspectors: R. Azua, Senior Reactor Inspector
B. Correll, Senior Reactor Inspector
J. Mateychick, Senior Reactor Inspector
J. Melfi, Project Engineer
A. Siwy, Senior Resident Inspector

Approved By: Ami N. Agrawal, Insp Prgms & Assessment Team Leader
Insp Pgms & Assessment Team
Division of Reactor Safety

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a biennial problem identification and resolution inspection at Cooper Nuclear Station, 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. Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), inspectors were directed to begin telework. In addition, regional baseline inspections were evaluated to determine if all or a portion of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on site. The inspections documented below met the objectives and requirements for completion of the IP.

OTHER ACTIVITIES – BASELINE

71152B - Problem Identification and Resolution

Biennial Team Inspection (IP Section 02.04) (1 Sample)

- (1) The inspectors performed a biennial assessment of the licensee's corrective action program, use of operating experience, self-assessments and audits, and safety-conscious work environment.
 - Corrective Action Program Effectiveness: The inspectors assessed the corrective action program's effectiveness in identifying, prioritizing, evaluating, and correcting problems. The inspectors also conducted a five-year review of the residual heat removal system.
 - Operating Experience, Self-Assessments and Audits: The inspectors assessed the effectiveness of the station's processes for use of operating experience, 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
<p><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.</p> <p><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 correctly characterized each condition report as to whether it represented a condition adverse to quality, and then prioritized the evaluation and corrective actions in accordance with program guidance.</p> <p><u>Effectiveness of Corrective Actions:</u> Overall, the team concluded that the licensee's corrective actions supported nuclear safety. Specifically, the Cooper Nuclear Station 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. As part of this inspection, the team selected the plant's residual heat removal 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 action process, and the corrective actions taken. The team did not identify any concerns with this system that were not already being addressed by the station's monitoring and corrective action programs.</p> <p><u>Corrective Action Program Assessment:</u> 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.</p>	

Assessment	71152B
<p><u>Operating Experience:</u> The team reviewed a variety of sources of operating experience including Entergy fleet notifications, NRC generic communications, and publications from various industry groups such as the Nuclear Energy Institute (NEI) and Electric Power Research Institute (EPRI). The team determined that the Cooper Nuclear Station 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. However, the team identified that the licensee does not have a procedure to provide guidance for the Security group to monitor for operating experience. The team identified that the licensee did not incorporate guidance similar to Entergy procedure EN-OE-221 "Security Organization, Standards & Expectations," with respect to monitoring for operating experience, when implementing the 0-CNS-OE-100 "Operating Experience Program." The 0-CNS-OE-100 procedure does not apply to the Security organization, but no procedure is provided to the Security organization for conducting operating experience reviews. However, the team did not identify any missed opportunities with respect to security operating experience during this inspection. The licensee captured this observation and will evaluate it in condition report CR-CNS-2021-03053.</p>	

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. Audits were very detailed, thorough, and identified issues.

Assessment	71152B
<p><u>Safety-Conscious Work Environment:</u> The team interviewed twenty individuals in six group interviews. The purpose of these interviews was (1) to evaluate the willingness of the licensee 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 licensee's safety-conscious work environment (SCWE). The focus group participants were from the Instrumentation and Controls organization, and the Security organization. Overall, the Cooper Nuclear Station has an adequate Safety-Conscious Work Environment.</p> <p><u>Willingness to Raise Nuclear Safety Issues:</u> In the assessed focus groups, 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. Overall, the team concluded that the Cooper Nuclear Station maintains a healthy SCWE.</p> <p><u>Employee Concerns Program:</u> The team looked at Cooper Nuclear Station's Employee Concerns Program (ECP). The team interviewed the ECP manager and an on-site representative and discussed the electronic ECP program and the Lighthouse program, for a sample of ECP cases. The team independently reviewed two ECP's investigative packages. The team provided some observations to the licensee concerning the ECP program for their awareness. Overall, the team did not identify any concerns with the program.</p>	

EXIT MEETINGS AND DEBRIEFS

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

- On July 1, 2021, the inspectors presented the biennial problem identification and resolution inspection results to John Dent, Jr. and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Calculations	NEDC 19-009	Operability Calculation for an Auxiliary Steam Line Break in G Critical Switchgear Room	0
71152B	Corrective Action Documents	CR-CNS-	2015-03519, 2016-04922, 2016-05082, 2016-06050, 2016-07645, 2017-00324, 2017-00553, 2017-01504, 2017-01505, 2017-01507, 2017-01510, 2017-01519, 2017-01520, 2017-01534, 2017-02326, 2017-02933, 2017-03247, 2017-03248, 2017-04162, 2017-06326, 2017-04564, 2018-00394, 2018-00397, 2018-00435, 2018-05169, 2018-06295, 2018-06420, 2018-07341, 2019-00860, 2019-01161, 2019-01166, 2019-01167, 2019-01335, 2019-01336, 2019-01337, 2019-01338, 2019-01340, 2019-01341, 2019-01361, 2019-01402, 2019-01403, 2019-03147, 2019-03192, 2019-03360, 2019-03631, 2019-03672, 2019-03729, 2019-03802, 2019-03936, 2019-03936, 2019-03940, 2019-03962, 2019-03971, 2019-04194, 2019-04209, 2019-04222, 2019-04317, 2019-04336, 2019-04572, 2019-04573, 2019-04683, 2019-04898, 2019-04945, 2019-04960, 2019-04980, 2019-05210, 2019-05331, 2019-05388, 2019-05528, 2019-05576, 2019-05617, 2019-05619, 2019-05620, 2019-05637, 2019-05638, 2019-05682, 2019-05795, 2019-05870, 2019-05967, 2019-06008, 2019-06064, 2019-06064, 2019-06159, 2019-06278, 2019-06302, 2019-06302, 2019-06322, 2019-06323, 2019-06484, 2019-06521, 2020-00181, 2020-00181, 2020-00324, 2020-00446, 2020-00457, 2020-00504, 2020-00612, 2020-00721, 2020-00722, 2020-00739, 2020-00743, 2020-00747, 2020-00756, 2020-00978, 2020-01249, 2020-01383, 2020-01458, 2020-01473, 2020-01532, 2020-01534, 2020-01572, 2020-01573, 2020-01618, 2020-01621, 2020-01690, 2020-01702, 2020-01703, 2020-01848, 2020-01929, 2020-01990, 2020-02046, 2020-02433, 2020-02582, 2020-02757, 2020-02902, 2020-03015, 2020-03402, 2020-03522, 2020-03525, 2020-03861, 2020-03861, 2020-03862, 2020-04175, 2020-04392, 2020-04511, 2020-04533, 2020-04814, 2020-04902, 2020-04924, 2020-04934, 2020-04953, 2020-04953, 2020-05313, 2020-05580, 2020-05668, 2020-06042, 2020-06058, 2020-06278, 2021-00187, 2021-00211,	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2021-00857, 2021-00923, 2021-01022, 2021-01210, 2021-01212, 2021-01214, 2021-01216, 2021-01252, 2021-01253, 2021-01254, 2021-01255, 2021-01256, 2021-01257, 2021-01262, 2021-01263, 2021-01281, 2021-01282, 2021-01299, 2021-01456, 2021-02100	
71152B	Corrective Action Documents Resulting from Inspection	CR-CNS-	2021-02959, 2021-03008, 2021-03015, 2021-03017, 2021-03053	
71152B	Drawings	CNS-BLDG.-133	Cooper Nuclear Station Penetration Drawing North Wall - 2F 881 '-9" Reactor Bldg	10/05/2020
71152B	Engineering Changes	EC 20-014	New SW Operational Requirement to Prevent Discharge Canal Sediment Blockage	0
71152B	Engineering Changes	ECR 11692576	RHR-MOV-MO31A Overtorque Evaluation	0
71152B	Engineering Evaluations	ER-2015-037	RCIC Governor Control Systems Qualification Report	0
71152B	Miscellaneous		Operational Focus Meeting Agenda	
71152B	Miscellaneous		Refueling Outage RE31 Regulatory Affairs & Compliance (RA&C) Startup Review and Report	10/22/2020
71152B	Miscellaneous	CED 6012122	RHR Steam Condensing Mode Piping Isolation	06/12/2003
71152B	Miscellaneous	Engineering Report	ER 2020-003 2019 Maintenance Rule Structural Monitoring Report	0
71152B	Miscellaneous	Engineering Report 2020-004	Evaluation of December 2019 Service Water Blockage	0
71152B	Miscellaneous	INPO 19-002	Clearance and Tagging	2
71152B	Miscellaneous	Licensee Event Report	2016-007-00, Isolation of Shutdown Cooling due to Relay Maintenance Results in a Loss of Safety Function	12/19/2016
71152B	Miscellaneous	LO 2020-0047-	008, 014, 024	
71152B	Miscellaneous	Meeting	Condition Report Screening Committee	6/14/2021
71152B	Miscellaneous	ML20085H006	Cooper Nuclear Station - NRC Inspection Report 05000298/2020010	0
71152B	Miscellaneous	Operations Instruction #17	Daily Report	3/18/21

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Miscellaneous	RCR 2002-0796	Review of IN 2002-15 Hydrogen Combustion Events in Foreign BWRs	06/06/2002
71152B	Miscellaneous	Standing Order 2019-10	Use of Skill of the Craft is prohibited for all normal plant activities. Procedure in hand is required when performing any activity in the plant.	8/8/2019
71152B	Miscellaneous	System Health Report	RHR System	Dec-19
71152B	Miscellaneous	System Health Report	RHR System	June - 20
71152B	Miscellaneous	System Health Report	RHR System	April -21
71152B	Miscellaneous	System Health Report	RHR System	Jan-21
71152B	Miscellaneous	System Health Report	RHR System	Nov-20
71152B	Miscellaneous	System Health Report	RHR System	Mar-20
71152B	Miscellaneous	Training Manual	COR002-23-03, Residual Heat Removal	10
71152B	Miscellaneous	Training Manual	COR002-27-03 - Service Water	12
71152B	Miscellaneous	Training Manual	ESP00005027 -ESO System Training	2
71152B	Miscellaneous	Vendor Manual	VM-1012, PRESRAY CORP, Reactor Building Doors R101 AND R102 (proprietary)	10/25/2020
71152B	Miscellaneous	WT 2019-0040-210	Perform a thorough review of Operations Skill of the Craft database which includes re-screening of all activities for applicability.	
71152B	Procedures	0-CNS-FAP-LI-001	Performance Improvement Review Group (PRG) Process	4
71152B	Procedures	0-CNS-LI-102	Corrective Action Process	07/29/2020
71152B	Procedures	0-CNS-LI-104	Self-assessment and Benchmark Process	6
71152B	Procedures	0-CNS-LI-118	Cause Evaluation Process	3
71152B	Procedures	0-CNS-LI-121	Trending and Performance Review Process	4
71152B	Procedures	0-CNS-OE-100	Operating Experience Program	02/03/2021
71152B	Procedures	0-CNS-WM-100	Work Order Generation, Screening, and Classification	16

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Procedures	0-EBS-NOT	SAP Notifications	29
71152B	Procedures	0-EN-EP-306	Drills and Exercises	10C1
71152B	Procedures	0-EN-HU-106	Procedure and Work Instruction Use and Adherence	3C2
71152B	Procedures	0.4ENTERGY	Entergy Procedure Processing	10/30/2019
71152B	Procedures	0.5OPS	Operations Review of Condition Reports/Operability Determination	01/13/2021
71152B	Procedures	15.RCIC.311	RCIC Control System Calibration Test	1
71152B	Procedures	3-EN-DC-147	Engineering Reports	5C1
71152B	Procedures	3-EN-DC-150	Condition Monitoring of Maintenance Rule Structures	6C4
71152B	Procedures	3-EN-DC-306	Acceptance of Commercial-Grade Items/Services in Safety-Related Applications	5C1
71152B	Procedures	6.RCIC.102	RCIC IST and 92 Day Test	40
71152B	Procedures	Administrative Procedure 0-Barrier	Barrier Control Process	30
71152B	Procedures	Administrative Procedure 0-CNS-MA-123	Identification and Trending of Rework	1
71152B	Procedures	Administrative Procedure 0-CNS-OE-100	Operating Experience Program	9
71152B	Procedures	Administrative Procedure 0.10	Operating Experience Program	10/11/12
71152B	Procedures	Administrative Procedure 0.23	CNS Fire Protection Plan	81
71152B	Procedures	EN-NS-221	Security Organization, Standards & Expectations	013
71152B	Procedures	EN-OE-100	Operating Experience Program	34
71152B	Procedures	Engineering Procedure 3.21	Fabrication of Replacement Parts	14
71152B	Procedures	Engineering Procedure 3.31	MOV Overthrust/Overtorque Evaluation	9
71152B	Procedures	Engineering Procedure 3.33	Motor Operated Valve Program	27
71152B	Procedures	Engineering	Limited Torque Actuator Configuration Control	6

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		Procedure 3.33.6		
71152B	Procedures	Engineering Procedure 3.6.1	Fire Barrier Control	22
71152B	Procedures	Maintenance Procedure 14.HV.301	HV Moore 353 Controller Configuration Download and Calibration Check	7
71152B	Procedures	Maintenance Procedure 7.2.78.2	Pipe Penetration Seal Installation Using Gasket Placement	5
71152B	Procedures	Maintenance Procedure 7.5.3	MOV Diagnostics	13
71152B	Procedures	System Operating Procedure 2.2.20	Standby AC Power System (Diesel Generator)	111
71152B	Procedures	System Operating Procedure 2.2.47	HVAC Reactor Building	64
71152B	Procedures	System Operating Procedure 2.2.65.1	REC Operations	84
71152B	Procedures	System Operating Procedure 2.2.71	Service Water System	131
71152B	Radiation Work Permits (RWPs)	LO 2019-0202	Occupational ALARA Planning and Controls" (IP-71124.02) and "Occupational Dose Assessment" (IP-71124.04)	1/24/2020
71152B	Self-Assessments	LO 2019-00129-001	Work Control Self-Assessment	10/31/2019
71152B	Self-Assessments	LO 2019-0124-004	Cycle 31 Road to Excellence Priority 1.1 - Nuclear Safety, Operations Management and Leadership, IER 17-5 recommendations and IER L3 19-005 self- assessment	
71152B	Self-Assessments	LO 2019-0176-001	2019 Cooper Crew Performance Evaluation	
71152B	Self-	LO 2020-0034-	Operation Error Pre-Cursor SOER 10-2 Screen	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Assessments	001		
71152B	Self-Assessments	LO 2020-0034-010	Tagging Focused Self-Assessment	
71152B	Self-Assessments	LO 2020-0117-001	Cooper Nuclear Station Operations Training Effectiveness Review	
71152B	Self-Assessments	LO 2020-0126	Pre PI&R NRC Inspection Self-Assessment	
71152B	Self-Assessments	LO-2019-0201	2020 Inservice Inspection Program Self-Assessment	7/01/2020
71152B	Self-Assessments	LO-2020-0095-020	Analysis on Worker Protection Issues	11/17/2020
71152B	Self-Assessments	QA Audit 19-04	Maintenance	07/11/2019
71152B	Self-Assessments	QA Audit 19-07	Chemistry, Effluent and Environmental Monitoring	10/07/2019
71152B	Self-Assessments	QA Audit 20-02	Corrective Action Program	05/20/2020
71152B	Self-Assessments	QA Audit 20-04	Radiological Controls	08/19/2020
71152B	Work Orders	5219342, 5319879, 5336962		
71152B	Work Orders	5306957	(NRC Identified) Fire Seal Discrepancy	0