

July 5, 2012

Mr. W. L. Berg  
General Manager  
Dairyland Power Cooperative  
3200 East Avenue South  
P.O. Box 817  
La Crosse, WI 54602-0817

SUBJECT: NRC INSPECTION REPORT 050-00409/12-08(DNMS) - LA CROSSE BOILING  
WATER REACTOR DECOMMISSIONING INSPECTION

Dear Mr. Berg:

On June 14, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the La Crosse Boiling Water Reactor (LACBWR) facility. The purpose of the inspection was to determine whether decommissioning activities were conducted safely and in accordance with NRC requirements. At the conclusion of the inspection on June 14, 2012, the NRC inspector discussed the results with members of your staff.

The inspection consisted of an examination of activities at the facility as they relate to safety and compliance with the Commission's rules and regulations. Areas examined during the inspection included radiological safety and spent fuel safety. Within these areas, the inspection consisted of a selective examination of procedures and representative records, field observations of activities in progress, and interviews with personnel.

Based on the results of this inspection, the NRC did not identify any violations.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Document Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

W. Berg

-2-

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

**/RA/**

Christine A. Lipa, Chief  
Materials Control, ISFSI, and  
Decommissioning Branch

Docket No. 050-00409  
License No. DPR-45

Enclosure:  
Inspection Report 050-00409/12-08(DNMS)

cc w/encl: D. Egge, Plant Manager  
J. McRill, Technical Support Engineer

cc w/o encl: T. Zaremba, Wheeler, Van Sickle and Anderson  
J. Kitsebel, Chairman, Wisconsin Public  
Service Commission  
S. Burmaster, Coulee Region Energy Coalition  
G. Kurck, Chairman, Town of Genoa  
P. Schmidt, Manager, Radiation Protection,  
Wisconsin Department of Health Services

W. Berg

-2-

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

**/RA/**

Christine A. Lipa, Chief  
Materials Control, ISFSI, and  
Decommissioning Branch

Docket No. 050-00409  
License No. DPR-45

Enclosure:  
Inspection Report 050-00409/12-08(DNMS)

cc w/encl: D. Egge, Plant Manager  
J. McRill, Technical Support Engineer

cc w/o encl: T. Zaremba, Wheeler, Van Sickle and Anderson  
J. Kitsembel, Chairman, Wisconsin Public  
Service Commission  
S. Burmaster, Coulee Region Energy Coalition  
G. Kurck, Chairman, Town of Genoa  
P. Schmidt, Manager, Radiation Protection,  
Wisconsin Department of Health Services

DISTRIBUTION w/encl:

B. Watson, FSME  
J. Hickman, FSME  
C. Pederson, RIII  
A. Boland, RIII

P. Pelke, RIII  
S. Orth, RIII  
H. Logaras, RIII  
C. Ariano, RIII

L. Linn, RIII  
P. Buckley, RIII  
T. Tomczak, RIII  
MCID Branch

\*see previous concurrence

ADAMS Accession Number: ML12192A223

DOCUMENT NAME: G:\DNMS\III\Work in progress\IR - LACBWR 2012 08 DNMS.doc

☒ Publicly Available ☐ Non-Publicly Available ☐ Sensitive ☒ Non-Sensitive

To receive a copy of this document, indicate in the concurrence box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

|        |              |   |            |   |  |  |  |  |
|--------|--------------|---|------------|---|--|--|--|--|
| OFFICE | RIII         | C | RIII       | C |  |  |  |  |
| NAME   | PJLee:ps PJL |   | CALipa CAL |   |  |  |  |  |
| DATE   | 07/05/12     |   | 07/05/12   |   |  |  |  |  |

OFFICIAL RECORD COPY

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION III**

Docket No.: 050-00409

License No.: DPR-45

Report No.: 050-00409/12-08(DNMS)

Licensee: Dairyland Power Cooperative  
3200 East Avenue South  
La Crosse, WI 54602

Facility: La Crosse Boiling Water Reactor

Location: La Crosse Site  
Genoa, Wisconsin

Dates: June 13 through 14, 2012

Inspectors: Peter J. Lee, Ph.D., CHP

Approved by: Christine A. Lipa, Chief  
Materials Controls, ISFSI, and  
Decommissioning Branch  
Division of Nuclear Materials Safety

## **EXECUTIVE SUMMARY**

### **La Crosse Boiling Water Reactor (LACBWR) NRC Inspection Report 050-00409/12-08 (DNMS)**

This routine decommissioning inspection covered aspects of radiological safety and spent fuel safety.

#### Radiological Safety

- The inspector determined that the licensee continued to be effective in controlling radiation worker personal exposure. (Section 1.1)
- The inspector determined that the licensee adequately implemented its effluent monitoring program. (Section 1.2)
- The inspector determined that the licensee complied with regulatory requirements for shipping radioactive materials. (Section 1.3)

#### Spent Fuel Safety

- The inspector determined that the licensee properly maintained the Fuel Element Storage Well water level, temperature, chemistry, and cleanliness to ensure the safe wet storage of the spent fuel. (Section 2.1)

## **Report Details<sup>1</sup>**

### **Summary of Plant Activities**

The licensee's current activities were focused on routine operations regarding the safe storage of spent fuel in the fuel pool and preparations for the dry fuel storage project.

### **1.0 Radiological Safety**

#### **1.1 Occupational Radiation Exposure (83750)**

##### **a. Inspection Scope**

The inspector reviewed the external exposure records for the fourth quarter of 2011 and first quarter of 2012. The inspector also reviewed the routine general area air sampling results for the period of September 2011 to the present associated with the reactor building. The inspector reviewed the direct radiation survey and smear sample results from the reactor building for the period of September 2011 to March 2012. The inspector reviewed the calibration procedures and records for area radiation monitors and neutron monitors.

##### **b. Observations and Findings**

The personnel exposures were well below Title 10 of the Code of Federal Regulations (CFR) Part 20 limits. Based on the review of air sampling results, the inspector concluded that the workers received no detectable internal exposure. Based on the review of the survey results, the inspector concluded that the licensee appropriately controlled contaminated areas and contamination levels within the facility had been kept to a minimum.

The licensee's area radiation monitors were calibrated and checked for proper operation in accordance with station procedures. The neutron monitors were properly calibrated by the vendor per the methods and requirements stated in ANSI N323A-1997. The inspector also observed the licensee performing a source check to assure the neutron monitors were working properly.

##### **c. Conclusions**

The inspector determined that the licensee continued to be effective in controlling radiation worker personal exposure.

#### **1.2 Radioactive Waste Treatment, and Effluent and Environmental Monitoring (84750)**

##### **a. Inspection Scope**

The inspector evaluated the licensee's activities to effectively control, monitor, and quantify releases of radioactive materials in liquid, gaseous, and particulate forms to the environment. The inspectors reviewed the licensee's 2011 "Effluent and Environmental Monitoring Reports," and the Offsite Dose Calculation Manual (ODCM).

---

<sup>1</sup>NOTE: A list of acronyms used in the report is included at the end of the report.

b. Observations and Findings

The licensee's gaseous effluent monitors and waste water effluent monitor were calibrated and checked for proper operation in accordance with station procedures. The licensee participates in a cross check program with an off-site laboratory to confirm the quality of its analytical data. Results of a cross check of licensee laboratory results completed in calendar year 2011 indicated agreement in all analytical data.

The ODCM was comprehensive and contained the requirements listed in the licensee's technical specifications. The effluent monitoring data indicated that release concentrations were consistent with limits specified in 10 CFR Part 20, Appendix B, Table 2, and that doses to the general public were in conformance with Appendix I of 10 CFR Part 50. Further, environmental sampling results indicated only background radiation levels with no distinct contribution from the shutdown reactor site.

c. Conclusions

The inspector determined that the licensee adequately implemented its effluent monitoring program.

1.3 Transportation of Radioactive Materials (86750)

a. Inspection Scope

The inspector reviewed the radioactive materials shipping program and applicable shipping documents. The inspector evaluated whether the licensee was in compliance with NRC and Department of Transportation (DOT) shipping requirements.

b. Observations and Findings

The licensee processed one waste shipment on October 12, 2011 since the last inspection. The licensee shipped the radiological waste to the Energy Solutions site in Oak Ridge, Tennessee. The licensee's shipping manifest showed that personnel packaged, labeled, and marked each shipping container according to the DOT and 10 (CFR) Part 71 transportation requirements. The licensee verified that the results of radiation and removable contamination levels were within applicable limits. The waste manifest included all required information.

c. Conclusions

The inspector determined that the licensee complied with regulatory requirements for shipping radioactive materials.

## **2.0 Spent Fuel Safety**

### **2.1 Spent Fuel Pool Safety at Permanently Shutdown Reactors (60801)**

#### **a. Inspection Scope**

The inspector reviewed the licensee's activities to ensure the safe wet storage of spent fuel in the Fuel Element Storage Well (FESW). The review included the verification of water temperature, and water level requirements of Technical Specification (TS) 4.1.2, the surveillance requirements of TS 5.1.2, and the water chemistry and cleanliness control requirements of the licensee's Health and Safety Procedure HSP-7.2, for the period of October 2011 to the present.

#### **b. Observations and Findings**

All parameters reviewed were consistent with limits specified in HSP-7.2, "Sampling of Fuel Element Storage Well." The FESW water level and temperature met the requirements of TS 4.1.2. The FESW water level and temperature had been verified to meet the surveillance requirements of TS 5.1.2.1. The FESW water level indication channel had been calibrated as required by the surveillance requirements of TS 5.1.2.2.

#### **c. Conclusions**

The inspector determined that the licensee properly maintained the FESW water level, temperature, chemistry, and cleanliness to ensure the safe wet storage of the spent fuel.

## **3.0 Exit Meeting**

The inspector presented the inspection results to members of the licensee's staff at the conclusion of the inspection on June 14, 2012. The licensee did not identify any of the documents or processes reviewed by the inspector as proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION



## **SUPPLEMENTAL INFORMATION**

### **PARTIAL LIST OF PERSONS CONTACTED**

- \* D. Egge, Plant Manager
- \* R. Cota, Training/Security Supervisor  
J. Henkelman, Quality Assurance Specialist
- \* L. Nelson, Health and Safety Supervisor
- \* S. Rafferty, Reactor Engineer
- \* D. Tesar, Security Supervisor
- \* E. Martin, Quality Assurance Manager  
J. McRill, Tech Support Engineer  
W. Trubilowicz, Tech Support Engineer

\* Persons present at the exit meeting.

### **INSPECTION PROCEDURES USED**

|           |  |
|-----------|--|
| IP 60801: | Spent Fuel Pool Safety   |
| IP 83750: | Occupational Radiation Exposure  |
| IP 86750: | Transportation of Radioactive Materials                                |
| IP 84750: | Radioactive Waste Treatment, and Effluent and Environmental Monitoring |

### **ITEMS OPENED, CLOSED, AND DISCUSSED**

|           |      |
|-----------|------|
| Opened    | None |
| Closed    | None |
| Discussed | None |

### **INITIALISMS AND ACRONYMS**

|        |   |
|--------|---|
| ADAMS  | Agencywide Documents Access and Management System |
| CFR    | Code of Federal Regulations                       |
| DNMS   | Division of Nuclear Materials Safety              |
| DOT    | Department of Transportation                      |
| FESW   | Fuel Element Storage Well                         |
| LACBWR | La Crosse Boiling Water Reactor                   |
| NRC    | U. S. Nuclear Regulatory Commission               |
| ODCM   | Offsite Dose Calculation Manual                   |