April 8, 2005

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 05000409/2005-001(DNMS) - LA CROSSE BOILING WATER REACTOR (LACBWR)

Dear Mr. Berg:

On April 1, 2005, the NRC completed an inspection at the LACBWR facility. The purpose of the inspection was to determine whether decommissioning activities were conducted safely and in accordance with NRC requirements in the areas of facility management and control, decommissioning support, radiological safety, and spent fuel safety. At the conclusion of the inspection on April 1, 2005, the NRC inspector discussed the findings 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 are identified in the enclosed report. 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 Publicly Available Records (PARS) component of NRC's document system (ADAMS). The NRC's document system is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

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

Sincerely,
/RA/
Jamnes L. Cameron, Chief
Decommissioning Branch

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

Enclosure: Inspection Report 05000409/2005-001(DNMS)

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.	050-00409
License No.	DPR-45
Report No.	05000409/2005-001(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:	March 29 - April 1, 2005
Inspector:	Peter J. Lee, Ph.D., CHP, Health Physicist
Approved by:	Jamnes L. Cameron, Chief Decommissioning Branch

EXECUTIVE SUMMARY

La Crosse Boiling Water Reactor (LACBWR)
NRC Inspection Report 05000409/2005-001(DNMS)

This routine decommissioning inspection covered aspects of facility management and control, decommissioning support activities, radiological safety, and spent fuel safety.

Facility Management and Control

- The inspector determined that the licensee's process for evaluating the safety impacts of design changes and modifications was in compliance with 10 CFR 50.59. (Section 1.1)

- The material integrity of structures, systems, and components necessary for the safe storage of spent fuel and for the conduct of safe decommissioning activities was being monitored and maintained. Plant housekeeping was good. (Section 1.2)

- The inspector determined that the licensee had conducted the proper training and met the requirements of the Decommissioning Plan. (Section 1.3)

Decommissioning Support Activities

- The licensee ensured the temperature in the containment building and fuel element storage well (FESW) was adequate to protect the FESW and associated cooling systems from the effects of extreme cold weather. (Section 2.1)

Radiological Safety

- The inspector determined that the licensee continued to be effective in controlling personal exposures and preventing the spread of contamination. (Section 3.1)

- The inspector determined that the licensee complied with regulatory requirements for shipping radioactive materials. (Section 3.2)

- The inspector concluded that the licensee was adequately implementing the effluent and environmental monitoring programs in accordance with the Offsite Dose Calculation Manual. (Section 3.3)

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 4.1)

Report Details[1]

Summary of Plant Activities

The current licensee's activities were focused on routine operations regarding the safe storage of spent fuel in the fuel pool and removal of the concrete shield blocks from the lower cavity of reactor vessel and pipes from the main steam system.

1.0 Facility Management and Control

1.1 Safety Reviews, Design Changes and Modifications (37801)

a. Inspection Scope

The inspector reviewed the licensee's safety screening reviews completed since July 2004 to assess the licensee's conclusions regarding the need for safety evaluations in accordance with 10 CFR 50.59.

b. Observations and Findings

The inspector verified that the safety review process stated in LACBWR Administrative Control Procedure (ACP)-06.4 met the Part 9900 guidance on 10 CFR 50.59. The inspector determined that the licensee had properly conducted the safety reviews and was in compliance with the procedural requirements, and that a 10 CFR 50.59 safety evaluation was not required for the design changes and modifications reviewed.

c. Conclusions

The inspector determined that the licensee's process for evaluating the safety impacts of design changes and modifications was in compliance with the requirements of 10 CFR 50.59.

1.2 Decommissioning Performance and Status Review at Permanently Shut Down Reactors (71801)

a. Inspection Scope

The inspector performed a plant tour of the control room and the fuel element storage well (FESW) area to evaluate the material condition of structures, systems, and components (SSC) necessary for the safe storage of spent fuel. Plant areas were also inspected for housekeeping and fire protection.

b. Observations and Findings

In the control room, the operators were cognizant of plant status and equipment in service. The inspector walked down all accessible areas associated with the FESW, which contained SSCs for the safe storage of spent nuclear fuel. Radiation monitoring,

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[1]NOTE: A list of acronyms used in the report is included at the end of the report.

water level and temperature indicators were inspected. No deficiencies were identified. Continued cooling of the spent fuel pool was not challenged.

The FESW area was clear and free of obstacles and hazards. No fire hazards were observed. Installed fire suppression equipment was well identified and accessible. Generally, the plant was maintained in good condition and all radiological areas were adequately marked.

c. Conclusions

The material integrity of structures, systems, and components necessary for the safe storage of spent fuel and for the conduct of safe decommissioning activities was being monitored and maintained. Plant housekeeping was good.

1.3 Organization, Management and Cost Controls (36801)

a. Inspection Scope

The inspector evaluated the licensee's training program as specified in the Decommissioning Plan.

b. Observations and Findings

The inspector reviewed the training program and training records for the year 2004, including the fuel handler training, radiation protection training, and general employee training. The inspector determined that the licensee had adequately conducted the training in accordance with its training program.

During the inspection, the licensee was preparing for the fuel handling training for the fuel handlers. The inspector reviewed the fuel transfer bridge test procedure, and observed the fuel handlers performing the test. The test was the requirement prior to conducting the fuel handling training. The fuel handlers were given hands-on refresher training every two years. The inspector determined that the licensee had performed the test properly and was in compliance with procedural requirements.

c. Conclusions

The inspector determined that the licensee had conducted the proper training and met the requirements of the Decommissioning Plan.

2.0 Decommissioning Support Activities

2.1 Cold Weather Preparations (71714)

a. Inspection Scope

The inspector evaluated whether the licensee had effectively implemented a cold weather program to protect required systems against extreme cold weather. The fuel element storage well (FESW), also known as spent fuel pool, was the primary system of concern.

b. Observations and Findings

The licensee did not maintain a procedure for cold weather preparations. Cold weather checks performed by the licensee included heating boiler checks and FESW temperature checks. The air handlers in the containment building and the station heating boiler that supplied steam to the air handler were maintained and supplied adequate heat to the containment building. The covers over the containment freight door and the turbine truck bay door were in place.

The recirculation flow through the FESW and associated piping kept the temperature around 105° F in the FESW during the winter. The heat transferred through convection from the spent fuel pool and the recirculation piping system maintained adequate containment building temperatures during the winter without the need of the station heating boiler, although the boiler was available to provide supplemental heating. The piping connected to the FESW was inside the containment building and was well protected from the extreme cold weather.

c. Conclusions

The licensee ensured the temperature in the containment building and FESW was adequate to protect the FESW and associated cooling systems from the effects of extreme cold weather.

3.0 Radiological Safety

3.1 Occupational Radiation Exposure (83750)

a. Inspection Scope

The inspector examined and evaluated aspects of the radiation protection program. Specific areas evaluated included exposure and contamination control.

b. Observations and Findings

The inspector reviewed the external exposure records for the third and fourth quarters of 2004. The personnel exposures were well below 10 CFR Part 20 limits and consistent with the low level of activity within the facility. The inspector reviewed the air sampling results from work conducted in accordance with the radiations work permits for the period of July 2004 to the present. The inspector also reviewed the routine general area air sampling results for the period of July 2004 to the present associated with the reactor and turbine buildings. Based on the review, the inspector determined that the sampling had not resulted in the identification of any fission or activation products. Therefore, the inspector concluded that the workers received no detectable internal exposure for the period of July 2004 to the present.

The inspector reviewed the direct radiation survey and smear sample results from the reactor building and turbine building for the period of July 2004 to March 2005. The inspector determined that the licensee appropriately controlled contaminated areas and contamination levels within the facility had been kept to a minimum.

The inspector reviewed the calibration procedures and records for area radiation

monitors, radiation survey meters, and scintillation alpha/beta detectors, which were calibrated during December 2004 and March 2005. The inspector also interviewed station personnel to ascertain whether the instruments were adequately calibrated. From these interviews, the inspector determined that the licensee had calibrated all the instruments properly and was in compliance with procedural requirements.

c. Conclusions

The inspector determined that licensee continued to be effective in controlling personal exposures and preventing the spread of contamination.

3.2 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 has processed two radiological waste shipments since the last inspection, one on March 31, 2004, and the other one on August 18, 2004. The waste contained concrete shield blocks from the reactor vessel and metal pipes from the main steam system. The licensee shipped the radiological waste to GTS Duratek in Oak Ridge, Tennessee. The inspector reviewed the documents for the shipment, including the waste stream analysis for 10 CFR Part 61, loaded waste shipment radiation surveys, and NRC Forms 540 and 541 for shipment of low-level radioactive waste. The licensee conducted audits of the shipments by reviewing all documents and signed off the checklist before the material left the site. Based on the review of the records, the inspector determined that the licensee had properly prepared the shipping documents in compliance with both NRC and DOT requirements.

c. Conclusions

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

3.3 Radioactive Waste Treatment, and Effluent and Environmental Monitoring (84750)

a. Inspection Scope

The inspector examined and evaluated aspects of the effluent and environmental monitoring programs, including a review of analytical data and instrument calibrations. The inspector also reviewed the Radioactive Effluent Report and Radiological Environmental Monitoring Report for calendar year 2004.

b. Observations and Findings

Based on interviews with station personnel and a review of the applicable records, the inspector determined that the primary stack air effluent monitor and waste water effluent monitor were properly calibrated and checked for operation in accordance with station procedures. Based on the analytical results of effluent releases, the inspector determined that all calculated offsite doses were well below the Offsite Dose Calculation Manual limits as specified in the LACBWR Technical Specifications. Based on the environmental sampling results, the inspector determined that the radiation levels detected in the samples could not be distinguished from background.

c. Conclusions

The inspector concluded that the licensee adequately implemented the effluent and environmental monitoring programs in accordance with the Offsite Dose Calculation Manual.

4.0 Spent Fuel Safety

4.1 Spent Fuel Pool Safety at Permanently Shutdown Reactors (60801)

a. Inspection Scope

The inspection included an evaluation of spent fuel pool safety. Factors considered in the evaluation included water temperature, level, chemistry, and cleanliness.

b. Observations and Findings

The inspector reviewed the records of chemistry, conductivity, and gamma spectrum analysis results for the period of July 2004 to March 2005 and determined that all of the parameters were within limits specified in Health Safety Procedure (HSP)-7.2, "Sampling of Fuel Element Storage Well (FESW)." Cleanliness control in the area of the FESW was adequate. The inspector reviewed the records of the FESW water level and temperature for the period of July 2004 to March 2005 and determined that these parameters met the requirements of Technical Specification 4.1.2. The FESW water level and temperature had been monitored daily according to the surveillance requirements of Technical Specification 5.1.2.1.

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.

5.0 Exit Meeting

The inspector presented the inspection results to members of the licensee's staff at the conclusion of the inspection on April 1, 2005. The licensee did not identify any of the documents or processes reviewed by the inspector as proprietary.

PARTIAL LIST OF PERSONS CONTACTED

* R. Christians, Plant Manager
* R. Cota, Training/Security Supervisor
* J. Henkelman, Quality Assurance Specialist
* M. Johnsen, Tech Support Engineer
* L. Nelson, Health and Safety Supervisor
* S. Rafferty, Reactor Engineer
* M. Moe, Captain, Burns Security
* D. Egge, Quality Assurance Supervisor
* R. Lewton, Electrician & Instrument Technician
* J. McRill, Tech Support Engineer

INSPECTION PROCEDURES USED

IP 36801:	Organization, Management and Cost Controls
IP 37801:	Safety Reviews, Design Changes and Modifications
IP 71801:	Decommissioning Performance and Status Review at Permanently Shut Down Reactors
IP 71714	Cold Weather Preparations
IP 83750:	Occupational Radiation Exposure
IP 84750:	Radwaste Treatment, Effluent, and Environmental Monitoring
IP 86750:	Solid Radwaste Management and Transportation of Radioactive Materials
IP 60801:	Spent Fuel Pool Safety at Permanently Shutdown Reactors

LIST OF DOCUMENTS REVIEWED

The licensee documents reviewed and utilized during the course of this inspection are specifically identified in the “Report Details” above.

ITEMS OPENED, CLOSED, AND DISCUSSED

None

INITIALISM AND ACRONYMS

ACP	Administrative Control Procedure
ADAMS	Agencywide Documents Access and Management System
FESW	Fuel element storage well
DNMS	Division of Nuclear Materials Safety
DOT	Department of Transportation
GET	General Employee Training
HSP	Health Safety Procedure
LACBWR	La Crosse Boiling Water Reactor
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
SSC	Structures, systems, and components