

December 8, 2006

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

SUBJECT: ERRATA TO LA CROSSE BOILING WATER REACTOR INSPECTION REPORT 050-00409/06-03(DNMS) AND NOTICE OF VIOLATION

Dear Mr. Berg:

As discussed with Mr. Robin Cota of your staff on December 5, 2006, the NRC issued an inspection report (NRC Inspection Report 050-00409/06-03) and Notice of Violation (NOV) on November 13, 2006, which contained minor errors. That inspection report has been revised to correct the minor errors, which included correcting references to a section number and the associated title quoted from the LACBWR Emergency Plan. In addition, the wording of the NOV and portions of the inspection report were revised to better articulate the NRC's findings. The enclosed errata contains the revised NOV and Inspection Report.

We apologize for any inconvenience to you and your staff.

Sincerely,

/RA/

James L. Cameron, Chief  
Decommissioning Branch

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

Enclosures:  
Errata to Inspection Report 050-00409/06-03 and Notice of Violation

cc w/encls: Roger Christians, Plant Manager  
B. D. Burks, P.E., Director, Bureau of Field Operations  
J. Mettner, Chairman, Wisconsin Public  
Service Commission  
Spark Burmaster, Coulee Region Energy Coalition  
State Liaison Officer  
Chief, Radiation Protection Section  
WI Department of Health and  
Social Services, Division of Health

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Letter to W. L. Berg from Jamnes L. Cameron dated December 8, 2006

SUBJECT: ERRATA TO LA CROSSE BOILING WATER REACTOR INSPECTION  
REPORT 050-00409/06-03(DNMS) AND NOTICE OF VIOLATION

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RIII Enf. Coordinator

## NOTICE OF VIOLATION

Dairyland Power Cooperative  
La Crosse Boiling Water Reactor

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

During an NRC inspection conducted on October 17, 2006, with continuing in-office review through November 8, 2006, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," the violation is listed below:

10 CFR 50.54(q) states, in part, that a licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in 10 CFR 50.47(b).

10 CFR 50.47(b)(4) requires the facility licensee to have a standard emergency classification and action level scheme in use.

The LaCrosse Boiling Water Reactor (LACBWR) Emergency Plan Emergency Action Level (EAL) matrix (Table D-1) requires, in part, the declaration of an Unusual Event when an "Event Type" occurs for "Any Unplanned or Unexpected Release of Radioactive Materials within the Plant," which involves "Any uncontrolled increase in radiation levels or airborne contamination levels greater than 10 times normal".

Contrary to the above, on October 13, 2006, airborne contamination levels of americium-241 greater than 10 times normal were detected by the licensee in the reactor building and the licensee did not declare an Unusual Event.

This is a Severity Level IV violation (Supplement VIII).

Pursuant to the provisions of 10 CFR 2.201, Dairyland Power Cooperative is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, Region III, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 13 th day of November 2006

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.: 050-00409

License No.: DPR-45

Report No.: 050-00409/06-03(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: October 17, 2006 (onsite)  
November 8, 2006 (in-office review)

Inspector: Peter J. Lee, Ph.D., CHP, Health Physicist

Approved by: James L. Cameron, Chief  
Decommissioning Branch

## **EXECUTIVE SUMMARY**

### **La Crosse Boiling Water Reactor (LACBWR) NRC Inspection Report 050-00409/06-03(DNMS)**

This was a special, reactive inspection, performed in response to the licensee's October 16, 2006 "Notification of Unusual Event." The licensee's basis for the emergency declaration was the identification of airborne concentrations in the general areas of the reactor building that exceeded 10 times the normal level. On October 13, 2006, the licensee identified 3 to 5 derived air concentrations (DACs) of americium-241 in the reactor building, outside of the area in the lower levels of the building where licensee staff were cutting piping associated with the control rod drive mechanisms. The licensee did not normally observe any detectable concentrations of americium-241 in the reactor building, however, the minimum detectable concentration of americium-241 for the licensee's radioanalytical counting equipment was approximately 1.0 DAC.

Subsequent investigation by the licensee determined that the counting equipment was contaminated with americium-241, which resulted in false indications of airborne americium-241. Recounting of the air samples taken between October 13 and 17, 2006, determined that airborne concentrations were below the minimum detectable concentration.

Notwithstanding the licensee's subsequent determination that the results of earlier air sampling in the reactor building were not valid, the licensee made a declaration of an Unusual Event on October 16, 2006, based on airborne concentrations of americium-241 that it had identified on every air sample taken since October 13. As a result, the licensee should have made the declaration based on those conditions on October 13, rather than waiting until October 16. The licensee's failure to make a timely emergency declaration constitutes a violation of 10 CFR 50.54(q).

The licensee's actions following the declaration were timely and appropriate, including notification to the NRC and the subsequent recovery from the event. The event did not result in any exposures to workers or release of radioactive material to the environment.

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

### **1.0 Radiological Safety**

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

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

The inspector reviewed the sequence of events associated with the licensee's October 16, 2006, declaration of a "Notification of Unusual Event." The review included interviews of licensee personnel, evaluation of the results of air sampling taken between October 13 and 17, 2006, and examination of the licensee's counting system used to analyze the samples.

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

On October 12, 2006, the licensee removed the reactor expansion ring, the cover for the failed fuel system located in the upper cavity, and the leak off tubes for the upper control rod drive mechanisms. Air samples taken from the main floor of the reactor building indicated the presence of airborne americium-241 at approximately 8 derived air concentrations (DACs). The licensee verified the results on October 13, 2006, by gamma analysis.

At this time, the licensee postulated that the americium-241 was caused by the work in the cavity. However, when setting up for the lower cavity work, the licensee built an enclosure around the work area, which included dedicated ventilation using high efficiency particulate air (HEPA) filters. The licensee could not explain the presence of americium-241 outside the enclosed work and on the main floor of the reactor building. The licensee stopped all work on the expansion ring, however, other work in the reactor building continued. Surveys, including large area surface wipes for removable contamination, did not identify the presence of americium-241. An air sample taken on the main floor of the reactor building taken late October 13, 2006, continued to indicate airborne americium-241 at about the 3 DACs level. At this time, the licensee declared the reactor building an airborne radioactivity area and restricted access to only those personnel qualified to wear respiratory protection. As an additional measure, the licensee installed HEPA filtration units to draw air from the upper cavity in an attempt to remove the airborne radioactivity.

On October 14, 2006, air sampling continued to indicate airborne americium-241 levels in the building in the 3 to 5 DACs range. The licensee closed all drain valves to the expansion ring and shut off the HEPA filtration units, which were still taking a draw on the upper cavity, in an attempt to locate the source of the americium-241. The licensee maintained normal reactor building ventilation to try and clear the airborne radioactivity. On October 15, 2006, the levels of airborne radioactivity remained at 3 to 5 DACs.

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

An air sample taken in the early morning of October 16, 2006, indicated no change in the reactor building airborne concentration of americium-241. The licensee put all work in the reactor building on hold and declared an Unusual Event and notified NRC. The licensee based its decision on an emergency action level of airborne concentrations greater than 10 times normal levels in the plant, as described in Table D-1 of the licensee's Emergency Plan.

Surveys in the basement of the reactor building indicated high levels of americium-241 contamination. The licensee decontaminated the basement area and continued normal ventilation. However, air samples taken in the afternoon of October 16 continued to indicate americium-241 concentrations at 3 to 5 DACs. The licensee started another stack fan to increase the air flow through the reactor building and the building ventilated overnight.

On October 17, 2006, early morning air samples indicated no change in the americium-241 concentrations. The licensee examined its air sample counting equipment and discovered that the sample holder was contaminated with americium-241. On October 12, 2006, the licensee calibrated the gas proportional counter using an americium-241 counting standard that it had made. Evidently, a small piece of this source likely broke free and remained on the sample holder. The licensee had not noticed the contaminated sample holder previously, since the holder was not used during analyses for background radiation levels. The licensee surveyed the counting room and did not identify any contamination. The licensee re-analyzed the air samples taken from October 12 through 17. The results indicated only background levels.

On the morning of October 17, 2006, the inspector observed the sample analyses and evaluated the analytical results. Based on the review of analytical results of all the air samples, no detectable airborne americium-241 actually existed in the reactor building.

Title 10 of CFR 50.54(q) states, in part, that a licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in 10 CFR 50.47(b). Title 10 of CFR 50.47(b)(4) requires the facility licensee to have a standard emergency classification and action level scheme in use. The licensee maintained an emergency plan, "LACBWR Emergency Plan," Revision 25, dated December 2004. The Emergency Plan Emergency Action Level (EAL) matrix (Table D-1) states that an Unusual Event will be declared for "Any Unplanned or Unexpected Release of Radioactive Materials within the Plant," which involves "Any uncontrolled increase in radiation levels or airborne contamination levels greater than 10 times normal". The licensee's failure to declare an Unusual Event on October 13, 2006, when airborne contamination levels of americium-241 were detected at greater than 10 times normal in the reactor building constitutes a violation of 10 CFR 50.54(q). This is a Severity Level IV violation (VIO 05000409/2006003).

c. Conclusions

The inspector concluded that the licensee's October 16, 2006, declaration of an Unusual Event was based on erroneous information due to contamination of equipment used to analyze air samples. Based on a subsequent re-analysis of the air samples in question, the licensee determined that no detectable airborne contamination existed.

As such, there was no detectable exposure to workers or releases to the environment. However, the licensee's failure to make the event declaration on October 13, 2006, based on the air sample information available at the time, constitutes a violation of 10 CFR 50.54(q). The licensee's corrective actions will be evaluated following receipt of the response to the Notice of Violation and during a future inspection.

## **2.0    Exit Meeting**

The inspector presented the preliminary inspection results to members of the licensee's staff at the conclusion of the inspection on October 17, 2006. An additional telephone exit meeting was conducted on November 8, 2006. 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**

- \* 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

\* Persons present at the exit meeting.

### **INSPECTION PROCEDURES USED**

IP 83750: Occupational Radiation Exposure

### **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**

#### Opened

050-00409/2006-003      VIO      Failure to make a timely declaration of an Unusual Event in accordance with emergency plan following identification of airborne concentration in the main floor of the reactor building exceeding the emergency action level.

Closed                          None

Discussed                          None

Attachment

## **INITIALISMS AND ACRONYMS**

ACP	Administrative Control Procedure
ADAMS	Agencywide Documents Access and Management System
CFR	Code of Federal Regulations
DAC	Derived Air Concentration
DNMS	Division of Nuclear Materials Safety
HEPA	High Efficiency Particulate Air
LACBWR	La Crosse Boiling Water Reactor
NOV	Notice of Violation
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
VIO	Violation