UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 31, 2016

Ms. Barbara A. Nick
President and Chief Executive Officer
Dairyland Power Cooperative
3200 East Avenue South
P.O. Box 817
La Crosse, WI 54602-0817

SUBJECT: LA CROSSE BOILING WATER REACTOR – SAFETY EVALUATION APPROVING REVISION 29 TO THE QUALITY ASSURANCE PROGRAM DESCRIPTION (CAC NO. L53102)

Dear Ms. Nick:

By letter dated October 29, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16020A004), as supplemented by letters dated November 17, 2015, and April 6, 2016 (ADAMS Accession Nos. ML16015A018 and ML16069A202, respectively), Dairyland Power Cooperative (Dairyland, the licensee) submitted an application seeking U.S. Nuclear Regulatory Commission (NRC) review and approval of Revision 29 to the Quality Assurance Program Description (QAPD) for the decommissioning La Crosse Boiling Water Reactor (LACBWR) prior to implementation.

The proposed changes reflect the LACBWR license transfer from Dairyland to LaCrosse Solutions, LLC (Solutions), which was approved by the NRC staff on May 20, 2016 (ADAMS Accession No. ML16123A049), as well as the plan to subcontract management and activity oversight for the LACBWR Independent Spent Fuel Storage Installation (ISFSI) to Dairyland. The QAPD provides a consolidated overview of the quality program and controls that govern the operation and maintenance of the LACBWR ISFSI, as well as the remaining decommissioning of the LACBWR plant.

The proposed changes include a reduction in commitment by replacing the LACBWR Safety Review Committee with an Independent Management Assessment process and replacing the Operations Review Committee with a Qualified Technical Reviewer, which were submitted for NRC review and approval in accordance with the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) paragraph 50.54(a)(4).

The NRC staff has completed its review of the licensee's request and has determined that the Quality Assurance Program, as described in the LACBWR QAPD, Revision 29, meets the criteria of Appendix B to 10 CFR Part 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," and is, therefore, acceptable. The staff's associated safety evaluation is provided in the enclosure.

Should you have any questions regarding this matter, please contact myself or Marlayna Vaaler at (301) 415-3178 or via e-mail at marlayna.vaaler@nrc.gov.

Sincerely,

/RA/

Bruce A. Watson, CHP, Chief
Reactor Decommissioning Branch
Division of Decommissioning, Uranium Recovery,
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket Nos. 50-409 and 72-046
License No. DPR-45

Enclosure:
Safety Evaluation

cc w/enclosure: La Crosse Boiling Water
Reactor Service List

Should you have any questions regarding this matter, please contact myself or Marlayna Vaaler at (301) 415-3178 or via e-mail at marlayna.vaaler@nrc.gov.

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Enclosure:
Safety Evaluation

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Reactor Service List

DISTRIBUTION: RDB R/F KKavanagh, NRO LMicewski, NRO

ADAMS Accession No. ML16152A014

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OFFICIAL RECORD COPY

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE U.S. NUCLEAR REGULATORY COMMISSION

RELATED TO REVISION 29 OF THE QUALITY ASSURANCE PROGRAM DESCRIPTION

LA CROSSE BOILING WATER REACTOR

AND THE INDEPENDENT SPENT FUEL STORAGE INSTALLATION

DOCKET NOS. 50-409 AND 72-046

1.0 INTRODUCTION

By letter dated October 29, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16020A004), as supplemented by letters dated November 17, 2015, and April 6, 2016 (ADAMS Accession Nos. ML16015A018 and ML16069A202, respectively), Dairyland Power Cooperative (Dairyland, the licensee) submitted an application seeking U.S. Nuclear Regulatory Commission (NRC) review and approval of Revision 29 to the Quality Assurance Program Description (QAPD) for the decommissioning La Crosse Boiling Water Reactor (LACBWR) prior to implementation.

The proposed changes reflect the LACBWR license transfer from Dairyland to LaCrosse Solutions, LLC (Solutions), which was approved by the NRC staff on May 20, 2016, as well as the plan to subcontract management and activity oversight for the Independent Spent Fuel Storage Installation (ISFSI) to Dairyland. The QAPD provides a consolidated overview of the quality program and controls that govern the operation and maintenance of the LACBWR ISFSI, as well as the remaining decommissioning of the LACBWR plant.

2.0 REGULATORY EVALUATION

The NRC's regulatory requirements related to quality assurance (QA) programs are set forth in the applicable portions of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities"; Subpart H, "Quality Assurance," to 10 CFR Part 71, "Packaging and Transportation of Radioactive Material"; and Subpart G, "Quality Assurance," to 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste."

The regulations in 10 CFR 50.54 specify, in part, that "each nuclear power plant or fuel reprocessing plant licensee subject to the quality assurance criteria in appendix B of this part shall implement the quality assurance program described or referenced in the Safety Analysis Report, including changes to that report." In addition, 10 CFR 50.54(a)(4) requires licensees to

submit to the NRC changes to the QA program that reduce commitments and receive NRC review and approval prior to implementation.

The regulations in 10 CFR Part 71, Subpart H, establish the QA requirements that apply to the design, purchase, fabrication, handling, shipping, storage, cleaning, assembly, inspection, testing, operation, maintenance, repair, and modification of components of packaging that are important to safety. In addition, 10 CFR 71.101(f) specifies, in part, that "a Commission-approved quality assurance program that satisfies the applicable criteria of subpart H of this part, appendix B of part 50 of this chapter, or subpart G of part 72 of this chapter, and that is established, maintained, and executed regarding transport packages, will be accepted as satisfying the requirements of…this section."

The regulations in 10 CFR Part 72, Subpart G, establish the ISFSI QA requirements that apply to design, purchase, fabrication, handling, shipping, storage, cleaning, assembly, inspection, testing, operation, maintenance, repair, modification of structures, systems, and components (SSCs), and decommissioning that are important to safety. In addition, 10 CFR 72.140(d) specifies, in part, that "a quality assurance program previously approved by the Commission as satisfying the requirements of Appendix B to part 50 of this chapter, subpart H to part 71 of this chapter, or subpart G to this part will be accepted as satisfying the requirements of this section."

In addition, the proposed changes to the LACBWR QAPD require prior NRC review and approval in accordance with Section IV(a)(1) of a September 15, 1994, Confirmatory Order issued by the NRC to Dairyland, which states, in part, that "a reduction in site staffing levels below the minimum number for any group or area shown in the organization chart…or a change in the reporting relationships for the Plant Manager must be submitted to the NRC as specified in 10 CFR 50.4, and receive NRC approval prior to implementation."

The NRC staff evaluated the proposed revision to the LACBWR QAPD against the above requirements to determine if the proposed changes were a reduction in commitment. As such, the staff has completed an evaluation in accordance with the applicable requirements and determined that Revision 29 to the LACBWR QAPD will continue to maintain and implement an effective QA program for the LACBWR plant and LACBWR ISFSI.

3.0 TECHNICAL EVALUATION

In evaluating the adequacy of the LACBWR QAPD, the NRC staff used the guidance contained in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Section 17.3, "Quality Assurance Program Description," dated August 1990 (ADAMS Accession No. ML052350376), which provides acceptance criteria for QA program descriptions. The staff noted that the LACBWR QAPD is organized in a format that is consistent with NUREG-0800, Section 17.3. As outlined below, the staff determined that the LACBWR QAPD adequately describes how the applicable requirements of 10 CFR Part 50, Appendix B; 10 CFR Part 71, Subpart H; and 10 CFR Part 72, Subpart G, will be implemented.

The changes in Revision 29 to the LACBWR QAPD that represent a potential reduction in commitment, as well as the NRC staff's evaluation of those changes, are described below.

a. Changes to the organizational structure that will become effective when Solutions assumes responsibility from Dairyland for management and decommissioning activities at LACBWR in accordance with the approved license transfer.

Specifically, the changes to the LACBWR QAPD reflect a LACBWR organization administered by an onsite Solutions Project Manager who reports directly to the offsite corporate Executive Vice President and General Manager. The onsite Project Manager is responsible for all decommissioning activities and has authority over onsite activities necessary for the safe storage of nuclear fuel, which will be subcontracted to Dairyland. The subcontracted Dairyland organization is headed by the Site Manager, Genoa who reports to the Project Manager. The Site Manager, Genoa will have responsibility for the administration and operation of the LACBWR ISFSI. The routine work activities of the LACBWR ISFSI will be managed by an ISFSI Manager who reports directly to the Site Manager, Genoa. According to Dairyland's application, as supplemented, the quality assurance organization provides oversight of the LACBWR decommissioning and ISFSI activities and is independent of the organizations performing work activities. To ensure this, the Quality Assurance Manager reports directly to the Project Manager and has access to the Solutions corporate QA director as needed.

The NRC staff determined that these proposed changes continue to meet the guidance of NUREG-0800, Section 17.3, regarding the structure, oversight, and independence of the LACBWR QA organization, and are therefore acceptable.

b. Changes to the safety review function related to audits and the performance of self-assessments described in the QAPD.

Specifically, the Safety Review Committee (SRC) has been removed from Revision 29 to the LACBWR QAPD and replaced with the Independent Management Assessment (IMA) process, which periodically monitors overall performance and confirms that activities affecting quality comply with the QAPD and that the QAPD is being implemented effectively. According to Dairyland's application, as supplemented, the IMA process is performed by individuals who are independent of the activity assessed and who provide an appropriate level of expertise in the activities assessed. In addition, the IMA results are communicated in a timely fashion to a level of management having the authority to effect corrective actions as needed.

The requirements for the independent review function of the SRC were based on American National Standards Institute (ANSI) N18.7-1976, "Administrative Controls and Quality Assurance for the Operation Phase of Nuclear Power Plants," which was endorsed by NRC Regulatory Guide (RG) 1.33, "Quality Assurance Program Requirements (Operation)," Revision 2, dated February 1978. However, these QA requirements were intended primarily for operating nuclear power plants.

The NRC staff evaluated the proposed change for continued compliance with (1) 10 CFR Part 50, Appendix B, Criterion II, "Quality Assurance Program," which states, in part, that, "the applicant shall regularly review the status and adequacy of the quality assurance program;" and (2) 10 CFR Part 50, Appendix B, Criterion XVIII, "Audits,"

which states, in part, that, “the audits shall be performed by appropriately trained personnel not having direct responsibilities in the area being audited,” neither of which require an independent review function as described by ANSI N18.7-1976.

The NRC staff determined that the proposed change continues to meet the guidance of NUREG-0800, Section 17.3, and the applicable criteria of 10 CFR Part 50, Appendix B, regarding the structure, oversight, and independence of the LACBWR QA organization, and are therefore acceptable.

c. Changes to the safety review function related to design control and review as described in the QAPD.

Specifically, due to the anticipated limited number of important to safety and/or radiological items that will require a design or safety review for the LACBWR ISFSI, as well as the overall reduced staff onsite during the advanced stages of LACBWR decommissioning, the Operations Review Committee (ORC) function has been replaced with a Qualified Technical Reviewer (QTR). According to Dairyland’s application, as supplemented, the QTR function is accomplished by the Project Manager and Site Manager, Genoa, and encompasses the functions currently performed by the ORC consistent with the scope of activities performed at a permanently defueled facility in an advanced stage of decommissioning.

By letter dated March 17, 2016 (ADAMS Accession No. ML16069A202), the NRC staff submitted a Request for Additional Information (RAI) to Dairyland requesting clarification of the proposed minimum QTR qualification requirements specified in the revised QAPD, which allow for equivalent qualification of a QTR to be “evaluated on a case by case basis.” Revision 28 of the LACBWR QAPD, Section II, “Quality Assurance Program,” Subsection F, “Personnel Training and Qualification,” specified minimum qualification requirements for an ORC member, including a stipulation that equivalent qualifications shall be in accordance with ANSI 18.1-1971, “Selection and Training of Nuclear Power Plant Personnel.” Therefore, Dairyland’s proposed change to the QTR qualification requirements in Revision 29 to the LACBWR QAPD represents a reduction in commitment in the licensee’s QA program as compared to Revision 28.

In the RAI response letter dated April 6, 2016, Dairyland stated that the QAPD will be amended to include an additional provision that requires the QTR experience and qualifications be consistent with RG 1.8-1977, “Qualification and Training of Personnel for Nuclear Power Plants,” which states that the use of ANSI N18.1 criteria for selection and qualification of personnel is generally acceptable. As such, the proposed additional changes to the LACBWR QAPD ensure that there is not a reduction in commitment regarding the Personnel Training and Qualification QA requirements.

The NRC staff determined that the proposed change continues to meet the requirements of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” which states, in part, that “the verifying or checking process shall be performed by individuals or groups other than those who performed the original design, but may be from the same organization,” and is therefore acceptable.

d. Changes made to clarify the applicability of the QAPD to the LACBWR ISFSI and current facility decommissioning activities.

Specifically, Revision 28 of the LACBWR QAPD was applicable to the ISFSI and "passive SAFSTOR decommissioning." The proposed Revision 29 to the LACBWR QAPD is applicable to the ISFSI and "decommissioning." This change is consistent with the current scope of activities being performed at the LACBWR facility, which recently exited SAFSTOR status and resumed active decommissioning and dismantlement of the structures remaining on site. The submittal of an application to transfer the facility license from Dairyland to Solutions in order to expedite decommissioning, as well as the impending submittal of the LACBWR License Termination Plan, indicate the progression from a stage of passive storage to one of active decommissioning. Therefore, the terminology "passive SAFSTOR," which represents a specific stage of decommissioning, has been replaced with the term "decommissioning," which refers more inclusively to all stages of decommissioning, including the active stages that will be entered by LACBWR upon implementation of the license transfer.

The NRC staff determined that the proposed changes continue to meet the requirements of 10 CFR Part 50, Appendix B, Criterion II, "Quality Assurance Program," which states, in part, that "the applicant shall establish, consistent with the schedule for accomplishing activities, a quality assurance program which complies with the requirements of this appendix." The proposed changes more accurately reflect the scope of activities subject to the QAPD that are occurring at the LACBWR facility, and are therefore acceptable.

e. Changes made to the LACBWR records management program, removal of references, and other editorial and administrative changes to the LACBWR QAPD.

Specifically, the proposed revision to the LACBWR QAPD replaces Section XVII, "Records," in its entirety. The change (1) describes the implementation of a Records Management System, under which quality records will be identified, controlled, protected, and stored; (2) describes methods of authentication, indexing, distribution, classification, storage, and disposition; and (3) specifies that the most stringent applicable regulatory requirements will be used to determine final disposition for the variety of decommissioning and ISFSI records included within the scope of the QAPD.

The NRC staff determined that the proposed change continues to meet the requirements of 10 CFR Part 50, Appendix B, Criterion XVII, "Quality Assurance Records," which states, in part, that "sufficient records shall be maintained to furnish evidence of activities affecting quality…[and] shall be identifiable and retrievable," and is therefore acceptable.

In addition, the NRC staff evaluated additional changes to the LACBWR QAPD that were considered non-substantial or administrative in nature, including:

(1) use of Nuclear Energy Institute (NEI) 14-05, "Guidelines for the Use of Accreditation in Lieu of Commercial Grade Surveys for Procurement of Laboratory Calibration and Test Services," for calibration services relating to

measuring and test equipment (M&TE), in accordance with an NRC safety evaluation dated February 9, 2015;

(2) enhancing the reporting requirements of 10 CFR Part 21, “Reporting of Defects and Noncompliance,” to include 10 CFR 71.95, “Reports,” and 10 CFR 72.242, “Recordkeeping and reports;”

(3) removal of references that were redundant or no longer applicable to the LACBWR decommissioning status or LACBWR ISFSI; and

(4) editorial changes to remove historical information that will no longer be relevant after license transfer, make specific references more general in nature, and eliminate unnecessary detail with no QA relevance.

The NRC staff determined that the proposed changes continue to meet the applicable requirements of 10 CFR Part 50, Appendix B, as well as the QA requirements of 10 CFR Part 71, Subpart H, and 10 CFR Part 72, Subpart G. The proposed changes more accurately reflect the scope of activities subject to the QAPD that are occurring at the LACBWR facility, and are therefore acceptable.

4.0 CONCLUSION

The NRC staff has determined that the proposed changes to the LACBWR QAPD are acceptable because they continue to provide an organizational description that includes the organizational structure, functional responsibilities, levels of authority, and interfaces for establishing, executing, and verifying LACBWR quality assurance program implementation. In addition, the LACBWR QAPD: (1) establishes independence between the organization performing checking functions related to the quality assurance program and the organization responsible for performing the function; (2) provides for applicable management to be responsible to size the quality assurance organization commensurate with the duties and responsibilities assigned; and (3) clearly describes and defines responsibility and authority for planning, establishing, and implementing an effective overall quality assurance program. Accordingly, the NRC staff concludes that the LACBWR quality assurance program complies with the applicable NRC regulations and can be used by Dairyland and Solutions for the LACBWR ISFSI, as well as decommissioning activities associated with the LACBWR facility.

5.0 REFERENCES

1. NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Section 17.3, “Quality Assurance Program Description," dated August 1990 (ADAMS Accession No. ML052350376).

2. ANSI N18.7-1976, “Administrative Controls and Quality Assurance for the Operation Phase of Nuclear Power Plants,” dated February 19, 1976.

3. RG 1.33, “Quality Assurance Program Requirements (Operation),” Revision 2, dated February 1978.

4. ANSI 18.1-1971, “Selection and Training of Nuclear Power Plant Personnel,” dated March 8, 1971.

5. RG 1.8-1977, “Qualification and Training of Personnel for Nuclear Power Plants,” Revision 1-R, dated May 1977 (ADAMS Accession No. ML12305A250).

6. NEI 14-05, “Guidelines for the Use of Accreditation in Lieu of Commercial Grade Surveys for Procurement of Laboratory Calibration and Test Services,” Revision 0, dated April 2014.

Principal Contributor: L. Micewski, NRO/DCIP

Dated: May 31, 2016