



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, IL 60532-4352

March 26, 2015

EA-15-026

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

**SUBJECT: LA CROSSE BOILING WATER REACTOR INDEPENDENT SPENT FUEL  
STORAGE INSTALLATION – NRC INSPECTION REPORT  
07200046/2014001(DNMS) AND 05000409/2014008(DNMS)**

Dear Ms. Nick:

On December 15, 2014 through December 18, 2014, inspectors from the U.S. Nuclear Regulatory Commission (NRC) conducted a routine inspection at your facility in Genoa, Wisconsin, with continued in-office review through February 24, 2015. The purpose of the inspection was to review activities performed under your NRC license to ensure that activities were being performed in accordance with NRC requirements. The inspection results were discussed with members of your staff at the conclusion of the site inspection on December 18, 2014, and during a telephone discussion with members of your staff on February 24, 2015. The enclosed inspection report presents the results of the inspection.

During this inspection, the NRC staff examined activities conducted under your license related to public health and safety. Additionally, the staff examined your compliance with the Commission's rules and regulations as well as the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, three apparent violations of NRC requirements were identified and are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The apparent violations involved the failure to ensure emergency response staffing levels satisfied the La Crosse Emergency Plan as required by Title 10 of the *Code of Federal Regulations* (CFR) 50.54(q)(2), failure to submit changes to the Emergency Plan that reduced its effectiveness to the NRC for review prior to implementation as required by 10 CFR 50.54(q)(4), and failure to conduct emergency drills and exercises at the frequency specified in the La Crosse Emergency Plan as required by 10 CFR 50.54(q)(2).

Because the NRC has not made a final determination in this matter, the NRC is not issuing an enforcement action for these inspection findings at this time. The circumstances surrounding these apparent violations, the significance of the issues, and the need for lasting and effective corrective action were discussed with your staff at the inspection exit meeting on February 24, 2015.

Before the NRC makes its enforcement decision, we are providing you an opportunity to either: (1) respond in writing to the apparent violations addressed in this inspection report within 30 days of the date of this letter; (2) request a Predecisional Enforcement Conference (PEC); or (3) request Alternate Dispute Resolution (ADR). If a PEC is held, it will be open for public observation and the NRC will issue a press release to announce the time and date of the conference. Please contact Wayne Slawinski at 630-829-9820 within ten days of the date of this letter to notify the NRC of your intended response. A PEC should be held within 30 days and an ADR session within 45 days of the date of this letter.

If you choose to provide a written response, it should be clearly marked as "Response to the Apparent Violations in Inspection Report No. 07200046/2014001(DNMS) and 05000409/2014008(DNMS); EA-15-026," and should include, for the apparent violations: (1) the reason for the apparent violations, or, if contested, the basis for disputing the apparent violations; (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 was or will be achieved. In presenting your corrective actions, be aware that the promptness and comprehensiveness of your actions will be considered in assessing any civil penalty for the apparent violations. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," may be useful in preparing your response. You can find the information notice on the NRC website at: <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1996/in96028.html>. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate response is not received within the time specified or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision or schedule a PEC.

If you choose to request a PEC, the conference will afford you the opportunity to provide your perspective on the apparent violations and any other information that you believe the NRC should take into consideration before making an enforcement decision. The decision to hold a pre-decisional enforcement conference does not mean that the NRC has determined that violations have occurred or that enforcement action will be taken. This conference would be conducted to obtain information to assist the NRC in making an enforcement decision. The topics discussed during the conference may include the following: information to determine whether a violation occurred, information to determine the significance of a violation, information related to the identification of a violation, and information related to any corrective actions taken or planned to be taken.

In lieu of a PEC, you may also request Alternative Dispute Resolution (ADR) with the NRC in an attempt to resolve this issue. ADR is a general term encompassing various techniques for resolving conflicts using a third party neutral. The technique that the NRC has decided to employ is mediation. Mediation is a voluntary, informal process in which a trained neutral (the "mediator") works with parties to help them reach resolution. If the parties agree to use ADR, they select a mutually agreeable neutral mediator who has no stake in the outcome and no power to make decisions. Mediation gives parties an opportunity to discuss issues, clear up misunderstandings, be creative, find areas of agreement, and reach a final resolution of the issues. Additional information concerning the NRC's program can be obtained at <http://www.nrc.gov/about-nrc/regulatory/enforcement/adr.html>. The Institute on Conflict Resolution (ICR) at Cornell University has agreed to facilitate the NRC's program as a neutral third party. Please contact ICR at 877-733-9415 within 10 days of the date of this letter if you are interested in pursuing resolution of this issue through ADR.

Please be advised that the number and characterization of the apparent violations described in the enclosed inspection report may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations on this matter.

In addition to the apparent violations for which escalated enforcement action is being considered, the NRC determined that three Severity Level IV violations of NRC requirements occurred. The violations were evaluated in accordance with the NRC Enforcement Policy. The violations involved the failure to: submit an Independent Spent Fuel Storage Installation (ISFSI) decommissioning funding plan timely as required by 10 CFR 72.30(b); have an adequate program in place to ensure augmentation of emergency response capabilities was available to implement Emergency Plan actions required by 10 CFR 50.47(b)(2); and have an emergency classification system within implementing procedures that adhered to the emergency classification system within the Emergency Plan as required by 10 CFR 50.47(b)(4). These violations are being treated as non-cited violations, consistent with Section 2.3.2 of the NRC Enforcement Policy.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, will be made available electronically for public inspection in the NRC's Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC's website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made publicly available without redaction.

B. Nick

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Please feel free to contact Matthew Learn of my staff if you have any questions regarding this inspection. Mr. Learn can be reached at 630-829-9603.

Sincerely,

*/RA/*

Julio F. Lara, Acting Director  
Division of Nuclear Materials Safety

Docket Nos. 072-00046; 050-00409  
License No. DPR-45

Enclosure:

IR Nos. 07200046/2014001(DNMS); 05000409/2014008(DNMS)

cc w/encl: R. Palmberg, Generation Vice President  
L. Peters, Genoa Site Manager  
D. Egge, Plant/ISFSI Supervisor  
W. Trubilowicz, Technical Engineer  
R. Grey, Radiation Protection Supervisor

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. Kruck, Chairman, Town of Genoa  
P. Schmidt, Manager, Radiation Protection,  
Wisconsin Department of Health Services

B. Nick

- 4 -

Please feel free to contact Matthew Learn of my staff if you have any questions regarding this inspection. Mr. Learn can be reached at 630-829-9603.

Sincerely,

*/RA/*

Julio F. Lara, Acting Director  
Division of Nuclear Materials Safety

Docket Nos. 072-00046; 050-00409  
License No. DPR-45

Enclosure:  
IR Nos.: 07200046/2014001(DNMS); 05000409/2014008(DNMS)

cc w/encl: R. Palmberg, Generation Vice President  
L. Peters, Genoa Site Manager  
D. Egge, Plant/ISFSI Supervisor  
W. Trubilowicz, Technical Engineer  
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J. Kitsebel, Chairman, Wisconsin Public Service Commission  
S. Burmaster, Coulee Region Energy Coalition  
G. Kruck, Chairman, Town of Genoa  
P. Schmidt, Manager, Radiation Protection,  
Wisconsin Department of Health Services

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| NAME   | MLearn:ps ML WJS<br>for |   | ROrlikowski WJS for | RSkokowski RS *1 | JLara     |
| DATE   | 3/20/2015               |   | 3/20/2015           | 3/26/2015        | 3/26/2015 |

\*1 – OE, NMSS & NSIR reviewed and concurred via e-mail from C. Faria on 3/26/2015

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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION III**

Docket No.: 072-00046; 050-00409

License No.: DPR-45, General License (ISFSI)

Report No.: IR 07200046/2014001(DNMS)  
IR 05000409/2014008(DNMS)

Licensee: Dairyland Power Cooperative (DPC)

Facility: La Crosse Boiling Water Reactor (ISFSI)

Location: Genoa, WI

Dates: On-site Inspection: December 15-18, 2014  
Telephone Exit Meeting: February 24, 2015

Inspectors: Matthew C. Learn, Reactor Engineer  
Wayne J. Slawinski, Senior Health Physicist

Approved by: Robert J. Orlikowski, Chief  
Materials Control, ISFSI, and  
Decommissioning Branch  
Division of Nuclear Materials Safety

Enclosure

## **EXECUTIVE SUMMARY**

### **LA CROSSE BOILING WATER REACTOR NRC INSPECTION REPORT 07200046/2014001(DNMS) AND 05000409/2014008(DNMS)**

A routine inspection of licensed activities associated with the storage of spent nuclear fuel at the La Crosse Boiling Water Reactor (LACBWR) independent spent fuel storage installation (ISFSI) was conducted from December 15 through December 18, 2014 including in office review through February 24, 2015. The inspection consisted of interviews of site personnel, onsite walkdowns, and reviews of: emergency preparedness and fire protection; surveillance and maintenance activities; environmental monitoring; and quality assurance activities related to the ISFSI.

The inspectors identified three apparent violations of Title 10 of the *Code of Federal Regulations* (CFR) section 50.54(q) concerning the licensee's: failure to ensure emergency response staffing levels as required by the La Crosse Emergency Plan, failure to submit changes to the Emergency Plan that reduced its effectiveness to the U.S. Nuclear Regulatory Commission (NRC) for review prior to implementation, and failure to conduct emergency drills and exercises in accordance with the frequency specified in the La Crosse Emergency Plan.

The inspectors also identified three Severity Level IV non-cited violations concerning the licensee's: failure to submit their ISFSI decommissioning funding plan timely as required by 10 CFR 72.30(b), failure to have an adequate program in place for emergency staff augmentation to ensure Emergency Plan actions could be accomplished as required by 10 CFR 50.47(b)(2), and failure to have an emergency classification system within their implementing procedures that adhered to the emergency classification system of the Emergency Plan as required by 10 CFR 50.47(b)(4).

## Report Details

### **1.0 Away from Reactor Independent Spent Fuel Storage Installation (IP 60858)**

#### 1.1 Review of Emergency Plan Program from ISFSI Activation until Emergency Plan Revision 34 Issuance (Revisions 31-33)

##### a. Inspection Scope

The inspectors reviewed the licensee's compliance with the Emergency Plan and associated Emergency Planning requirements in 10 CFR Part 50 and 72. The inspectors reviewed staffing changes following fuel movement to the independent spent fuel storage installation (ISFSI) pad. The inspectors reviewed changes to the Emergency Plan Revision 31. The inspectors reviewed adherence to Emergency Plan requirements for exercises and drills.

##### b. Observations and Findings

###### *Non-Compliance with Emergency Plan Staffing Requirements*

On June 20, 2011, the La Crosse Boiling Water Reactor (LACBWR) Emergency Plan was updated to Revision 31. The revision to the LACBWR Emergency Plan added provisions for an independent spent fuel storage installation (ISFSI) that had not yet been loaded with casks containing spent nuclear fuel. The previous revision of the Emergency Plan (Revision 30) had solely focused on the non-operating reactor plant and associated spent nuclear fuel that had been contained within the fuel element storage well.

On July 12, 2012, the licensee moved their first Vertical Concrete Cask (VCC) to the ISFSI pad. Between June and September 2012, the licensee successfully loaded all fuel assemblies into dry casks and transferred each of those casks to the ISFSI onsite storage pad. The fifth and final cask was successfully placed on the pad on September 19, 2012.

Title 10 CFR 50.54(q) states, in part, "a holder of a license under this part... shall follow and maintain the effectiveness of an emergency plan that meets the requirements in appendix E of this part..."

The LACBWR Emergency Plan, Revision 31 Section 1.1 "Plant Emergency Response Organization" provided the authority and responsibility for Emergency Plan activation to the Operations Shift Supervisor. Section 1.1 defined minimum emergency plan staffing as an Operations Shift Supervisor, an Operator, a Security Shift Supervisor, and the security force. Additionally, the LACBWR Emergency Plan, Revision 31 Section A.1.3.8, "Augmented ISFSI Emergency Response Organization," states that "On-shift ISFSI personnel can implement the Emergency Plan without assistance from others."

The licensee maintained continuous operations staff coverage including an Operations Supervisor and an Operator onsite while fuel was maintained in the Fuel Element Storage Well (FESW) throughout the spent fuel assembly storage campaign which culminated on September 19, 2012.

On September 20, 2012, the operations department staffing was reduced at the site without a corresponding change to the Emergency Plan. Specifically, the operations department was not staffed during backshifts and weekends as required by Emergency Plan Section 1.1. Moreover, radiation protection technician staffing was not maintained during backshifts, weekends and whenever radiological work did not occur at the plant. As a result, backshift and weekend staffing was limited to site security personnel.

The operations personnel were trained to perform radiological surveys whenever health physics staff were not onsite and consequently provided the emergency plan required assessment capability while onsite. In contrast, the security staff had not been trained to conduct radiation surveys. As a result of the staffing changes, radiological assessment capability was limited only to weekday day shifts. Therefore, radiological assessment capability required by the Emergency Plan was diminished because radiological survey qualified staff were not continuously onsite. Consequently, during backshift and weekends the licensee's ability to assess radiological conditions, evaluate emergency preparedness event entry criteria (action level thresholds) and declare timely EALs was degraded. Given their staffing changes, the licensee was unable to implement the Emergency Plan without offsite assistance from others as required by Emergency Plan Section A.1.3.8.

Following discussions with NRC staff on October 26, 2012, continuous operations staffing was reinstated at the site. However, on October 29, 2012, the licensee implemented Revision 32 to the Emergency Plan following an inadequate effectiveness review by both the onsite and offsite safety review committees, at which time continuous operations staff coverage was again terminated for backshifts and weekends. During the October 26 – 29 transitional period between Revisions 31 and 32, the licensee trained and qualified its security staff in basic radiological assessment capabilities related to ISFSI operations, as the revised emergency plan delegated certain emergency response functions to the Security Shift Supervisor when other qualified staff was not onsite. The licensee documented this issue in their corrective action program under CAR 2013-005.

An AV was identified, from September 20 until October 26, 2012, for the failure to maintain staffing at minimum levels prescribed by the LACBWR Emergency Plan Revision 31, as required by 10 CFR 50.54(q)(2). Specifically, the licensee failed to follow Emergency Plan Section 1.1 and Section A.1.3.8 which specifies minimum staffing requirements to ensure the Emergency Plan may be implemented without offsite assistance.

Pending final determination of the safety significance and NRC's enforcement decision, this issue was identified as an Apparent Violation (AV 07200046/2014001-01; 05000409/2014008-01; Non-Compliance with Emergency Plan Staffing Requirements)

#### *Reduction in Effectiveness of Emergency Plan without NRC Approval*

10 CFR Part 50.54(q)(3) states that, "the licensee may make changes to its emergency plan without NRC approval only if the licensee performs and retains an analysis demonstrating that the changes do not reduce the effectiveness of the plan."

10 CFR Part 50.54(q)(4) further states that, “the changes to a licensee emergency plan that reduce the effectiveness of the plan... may not be implemented without prior approval by the NRC.” A reduction in effectiveness means a change in the emergency plan that reduces the capability to perform an emergency planning function which includes assessment capability.

On October 29, 2012, the licensee made changes to their Emergency Plan through issuance of the LACBWR Emergency Plan, Revision 32. The LACBWR Emergency Plan, Revision 31 established requirements for emergency response to ISFSI events while maintaining emergency response to non-operating reactor plant events. The licensee revised the plan to reduce the emergency response requirements for the LACBWR plant following movement of all irradiated fuel from the plant facility to the onsite ISFSI.

Specifically, among other changes, the revised Emergency Plan removed twelve plant related events and retained three ISFSI related events. Additionally, the revision eliminated the “Alert” classification, reduced the frequency of emergency exercises from annually to biennially, and eliminated 1 hour staff augmentations requirements. The licensee evaluated the change against the standards of 10 CFR 50.47(b) and the requirements of 10 CFR 50, Appendix E and determined that the changes did not decrease the effectiveness of the Emergency Plan.

During the NRC review of Revision 32, NRC staff identified that the changes made in Revision 32 reduced the effectiveness of the Emergency Plan, as defined by 10 CFR 50.54(q)(4). The licensee eliminated plant EAL events related to radiological releases including effluent releases because they reasoned that spent fuel was removed from the plant and therefore the radiological source term that remained at the plant could not create a significant consequence to the public. The licensee acknowledged in their evaluation that, although the spent fuel was moved to the ISFSI, a potential for adverse radiological conditions during plant decommissioning and dismantlement activities existed. Since there were ongoing decommissioning and dismantlement operations periodically conducted in the plant and liquid collection systems and the plant ventilation systems remained in operation, the NRC determined that releases of radioactive materials were possible. Therefore, the removal of these event types equated to a reduction in effectiveness which required NRC approval.

The NRC staff also identified that an adequate technical evaluation or basis was not provided by the licensee to eliminate the Alert classification, reduce exercise frequencies, and reduce staffing augmentation times.

NRC staff identified that the licensee removed reactor plant related requirements from its Emergency Plan although decommissioning was not complete and licensed radioactive material was present in the plant.

The NRC communicated to the licensee in telephone conversations on December 19, 2012, and January 24, 2013, that Revision 32 of the Emergency Plan reduced its effectiveness and that the changes made by the licensee to the plan were not consistent with the requirements of 10 CFR 50.54(q)(4). The licensee documented the issue in their corrective action program under CAR 2013-004 on January 24, 2013.

As part of their corrective actions, the licensee performed a quantitative analysis of the dispersion of the remaining LACBWR plant nuclide inventory in order to justify the changes made in Revision 32. Following the completion of the analysis, the licensee submitted Revision 33 of the Emergency Plan for NRC approval on August 6, 2013. On April 14, 2014, Revision 34 was submitted for approval in response to NRC's inquiry about the elimination of the "Alert" classification. NRC staff found that the licensee had not justified removal of the Alert classification in Revision 32 and 33. Revision 34 was subsequently approved by the NRC on September 18, 2014.

During the period of December 19, 2012 through September 18, 2014, the licensee failed to implement corrective actions to regain compliance with Revision 31. Instead, the licensee continued to implement Revision 32 even though it had not been approved in accordance with 10 CFR 50.54(q)(4). The NRC discussed the need to restore compliance with an acceptable Emergency Plan in telephone conversations with the licensee on December 19, 2012, January 24, 2013, August 20, 2013, and December 4, 2013. The licensee documented the issue in CAR 2013-004 dated January 24, 2013, and CAR 2013-022 dated December 27, 2013, and initiated actions for approval of the Emergency Plan by the NRC as discussed above. Actions were not taken by the licensee in the interim nearly two year period between Revision 31 and Revision 34 to fully restore compliance with Revision 31. The corrective actions were closed following the submission of Revision 34 for NRC approval.

An AV was identified, because the licensee made changes to their emergency plan that reduced the effectiveness of the plan and implemented these changes on October 29, 2012, without prior approval by the NRC as required by 10 CFR 50.54(q)(4).

Pending final determination of the safety significance and NRC's enforcement decision, this issue was identified as an Apparent Violation (AV 072000046/2014001-02; 05000409/2014008-02; Reduction in Effectiveness of Emergency Plan without NRC Approval)

*Title 10 CFR 50.54(q), "Emergency Plans" - Failure to Perform Drills and Exercises as Required by the Emergency Plan*

10 CFR 50.54(q) states, in part, "a holder of a license under this part... shall follow and maintain the effectiveness of an emergency plan that meets the requirements in appendix E of this part..."

Revision 31 of the LACBWR Emergency Plan, Section E.2.2.1, "Plant Emergency Plan Exercises," states that "to ascertain the necessary level of familiarity with emergency plan and procedures and to demonstrate the effectiveness of the plan, plant exercises will be conducted annually to evaluate the overall response and emergency capability of the LACBWR/DPC." Additionally, Section E.2.3 "Drills," states that "A drill is a supervised instruction aimed at testing, developing, and maintaining skills in a particular operation. Drills may be conducted as part of an exercise. Drills will be evaluated as described in Subsection 2.5 of this Section. The types and frequency of drills is as follows: fire drills will be conducted annually... medical emergency drills will be conducted annually... health physics drills will be conducted annually."

The inspectors identified that the licensee conducted a plant emergency exercise in 2010, however, failed to perform a plant emergency exercise in 2011, 2012, and 2013. The inspectors also identified that the licensee failed to perform fire drills in 2011 and 2012; a medical drill in 2013; and a valid health physics drill in 2012. The health physics activity in 2012 credited as a drill was not a supervised instruction that tested, developed and maintained skills because it did not involve radiological conditions that necessitated an action, did require emergency plan implementation, and was not observed or critiqued.

An AV was identified, in that between 2011 and 2013, the licensee failed to follow their Emergency Plan in accordance with 10 CFR 50.54(q)(4). Specifically, the licensee failed to perform emergency exercises and drills in accordance with the LACBWR Emergency Plan, Revision 31 Sections E.2.2.1 and E.2.3 respectively.

Pending final determination of the safety significance and NRC's enforcement decision, this issue was identified as an Apparent Violation (AV 07200046/2014001-03; 05000409/2014008-03; Failure to Perform Drills and Exercises as Required by the Emergency Plan)

The licensee entered this issue into their corrective action program under CAR 2013-002. Following the issuance of Revision 34 to emergency plan, the licensee was no longer required by its plan to conduct plant (non-ISFSI) emergency exercises. The licensee performed ISFSI facility related emergency exercises in 2012 and 2014, in accordance with the Emergency Plan.

c. Conclusion

The inspectors identified three apparent violations of 10 CFR 50.54(q) for the licensee's failure to maintain Emergency Plan staffing, submit changes to the Emergency Plan that reduced its effectiveness to the NRC for review prior to implementation, and conduct emergency drills and exercises in accordance with the frequency specified in the Emergency Plan.

1.2 Review of Emergency Plan Program since Emergency Plan Revision 34 Issuance

a. Inspection Scope

On September 18, 2014, the NRC approved the LACBWR Emergency Plan, Revision 34. The revision removed all event types associated with the plant (Non-ISFSI) and associated processes and programs supporting these event types. The licensee revised their implementing procedures, processes, and programs following the approval of Revision 34.

The inspectors observed and evaluated the conduct of the ISFSI biennial emergency preparedness exercise. The inspectors reviewed the Emergency Plan, implementing procedures, and the exercise scenario with the exercise objectives and expected sequence of events. The inspectors reviewed the proposed exercise scenario to understand its scope and evaluate its adequacy to ensure the licensee could demonstrate their emergency response capabilities. The inspectors observed the pre-exercise briefing, the exercise, and the licensee's formal post-exercise self-assessment.

Through document reviews and walkdowns, the inspectors also assessed the licensee's fire protection program for its effectiveness to support safe storage of spent nuclear fuel.

b. Observations and Findings

*Review of 2014 ISFSI Emergency Exercise Performance*

Section 8.3 of the LACBWR ISFSI Emergency Plan requires the licensee to perform a biennial exercise to demonstrate emergency response capabilities and effectiveness of the licensee's Emergency Plan. The scenario for the December 16, 2014, exercise involved a simulated tornado striking the ISFSI. Following an initiating event, the cask was simulated to be damaged creating potential for a damaged confinement boundary. The licensee implemented appropriate, timely, and necessary actions to address the simulated event. The licensee correctly classified the event, made timely notifications, augmented personnel onsite as needed, conducted adequate radiological monitoring, and ensured the safety of personnel. Exercise participants maintained control throughout the scenario, starting with a prompt recognition of the initiating event and through recovery discussions. Throughout the exercise, the licensee's staff communicated well with all involved parties and demonstrated knowledge of the Emergency Plan. During the post-exercise critique, the licensee adequately evaluated its emergency response and management capability.

The licensee's fire protection program was assessed through reviews of periodic fire drill records and applicable fire protection program documents. The scenarios were reviewed to determine whether they were realistic and met drill objectives. The inspectors did not identify any un-analyzed combustibles stored or located within the ISFSI.

*Emergency Plan Implementing Procedures not in accordance with Emergency Plan*

10 CFR 50.47(b)(4) states, in part, "A standard emergency classification and action level scheme... is used by the nuclear facility."

The inspectors reviewed EPP-20.01, 'ISFSI Emergency Conditions,' Revision 3. The procedure defines conditions that constitute an emergency at the ISFSI and provides guidance for determining when emergency conditions at the ISFSI should be classified as an ALERT which would require activation of the Emergency Plan and implementation of Emergency Plan Procedures. Within the procedures an emergency is classified based on specific information contained in Attachment 1, "ISFSI Emergency Events." Specifically, Attachment 1 provides both quantitative and qualitative criteria requiring declaration of an Alert under the event type "Potential Damage to Loaded Cask Confinement Boundary." Specifically, Attachment 1 required declaration of an Alert when any one of the following qualitative conditions are observed: A VCC has moved out of its normal position on the ISFSI Pad, or VCC damage to the top or sides of cask with concrete debris found nearby, or tornado driven missile has impacted a VCC, or a VCC has tipped over on the ISFSI Pad or has fallen off the ISFSI Pad, or  $\geq 50\%$  of VCC inlets and outlets are blocked. Additionally Attachment 1 required declaration of an Alert when any one of the following quantitative conditions are observed:  $>500\mu\text{R/hr}$  before reaching the Isolation Zone Fence, or Measured dose rate at the Isolation Zone Fence

exceeds the tag value in EPP-20.04 or  $\geq 40$  mRem/hr on side of VCC, or  $\geq 50$  mRem/hr on top of VCC, or  $\geq 200$  mRem/hr average of measurements at eight air inlets and outlets of VCC.

The inspectors reviewed the Emergency Plan, Revision 34, Table 4.1 "ISFSI Emergency Events," and identified that the Emergency Plan only contained quantitative criteria requiring declarations of an Alert under the event type "Potential Damage to Loaded Cask Confinement Boundary." Specifically, Table 4.1 requires declaration of an Alert when any one of the following quantitative (measured) conditions are identified:  $\geq 40$  mRem/hr on side of VCC, OR  $\geq 50$  mRem/hr on top of VCC, OR  $\geq 200$  mRem/hr average of measurements at eight air inlets and outlets of VCC.

The inspectors determined that the licensee's implementing procedures and associated emergency action level scheme were not in alignment with the licensee's Emergency Plan emergency action level scheme. Specifically, the implementing procedures contained qualitative criteria that would require declaration of an Alert that are not contained within the Emergency Plan. The inspectors noted that while most of the qualitative criteria was indicative of a potential event at the ISFSI which could lead to the quantitative criteria being exceeded, there was potential for an over classification of an event. For example, during a heavy snow fall, the lower vents of the VCC could be blocked by snow, which would require declaration of an Alert according to the licensee's implementing procedures. In contrast the licensee's design basis evaluation demonstrates that the lower vents can be blocked for an indefinite amount of time without any safety impact or associated increase in dose rate.

The inspectors determined that the licensee failed to have an emergency classification system within their implementing procedures that adhered to the emergency classification system within their Emergency Plan, and therefore this was a violation of 10 CFR 50.47(b)(4).

The licensee documented this issue within their corrective action program under CAR 2014-022 and initiated actions for revision of the procedure.

The inspectors determined that this was a performance deficiency that warranted screening for enforcement. The inspectors determined that the failure to have an emergency classification system within their implementing procedures that adhered to the emergency classification system within their Emergency Plan was a violation of more than minor significance using Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," example 4h.

The inspectors utilized Inspection Manual Chapter (IMC) 0609, Appendix B, "Emergency Preparedness Significance Determination Process, in conjunction with NRC Enforcement Policy to make a significance determination. The inspectors determined that requirements of 10 CFR 50.47(b)(4) "Emergency Classification System" is a Planning Standard. The inspectors determined that the violation was similar to the Green Finding example in IMC 0609 Table 5.4-1, "The EAL classification process would result in an over-classification causing an unnecessary emergency declaration." Specifically, the licensee's implementing procedures contained additional qualitative criteria that would require declaration of an Alert for a "Potential Damage to Loaded Cask Confinement Boundary" when not required by the emergency plan.

The inspectors determined that this similar Green Finding example for a Planning Standard Function for a Non-Risk Significant Planning Standard could be correlated to Enforcement Policy example 6.6.d.1, in that “a licensee ability to meet or implement any regulatory requirement not related to assessment or notification such that the effectiveness of the emergency plan decreases.” The inspectors determined that the violation could be evaluated using example 6.6.d.1 as a Severity Level IV violation.

10 CFR 50.47(b)(4) states, in part, “A standard emergency classification and action level scheme... is used by the nuclear facility.”

Contrary to the above, on December 15, 2014, the licensee failed to utilize a standard classification and action level scheme. Specifically, the inspectors identified that the licensee failed to have an emergency classification system within their implementing procedures that adhered to the emergency classification system within their Emergency Plan.

Because this violation was of very low safety significance, Severity Level IV, and was entered into the licensee’s corrective action program, this violation is being treated as a NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. (NCV 07200046/2014001-04; 05000409/2014008-04; Emergency Plan Implementing Procedures not in accordance with Emergency Plan)

*Staff Augmentation Capability not in accordance with Emergency Plan*

10 CFR 50.54(q) states, in part, “a holder of a license under this part... shall follow and maintain the effectiveness of an emergency plan that meets the requirements in appendix E of this part...”

10 CFR 50.47 states, in part, “On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.”

The LACBWR Emergency Plan, Revision 34, Section 3.3, “ISFSI Event Response Surveillance” states: “A Response Surveillance is required following off-normal, accident or natural phenomena events. The NAC-MPC Systems in use at an ISFSI shall be inspected within 4 hours after the occurrence of an off-normal, accident or natural phenomena event in the area of the ISFSI. Following a natural phenomena event, the ISFSI shall be inspected to determine if movement or damage to the CONCRETE CASKS has resulted in unacceptable site boundary dose rates.”

Through interviews with licensee staff, the inspectors identified that the licensee failed to have a staffing augmentation program in place to ensure that the actions specified in Emergency Plan Section 3.3 could be met. Specifically, the inspectors identified that the licensee did not have a staffing mechanism in place to ensure that radiological protection staff could respond to the site within 4 hours of an event to adequately characterize the site boundary dose rates.

The inspectors determined that the licensee failed to have an adequate program in place to ensure augmentation of response capabilities is available to ensure Emergency Plan actions could be accomplished as required by 10 CFR 50.47(b)(2).

The licensee documented this issue within their corrective action program under CAR 2014-025 and initiated actions to implement a staffing augmentation program. The inspectors determined that this was a performance deficiency that warranted screening for enforcement. The inspectors determined that the failure to have a staffing mechanism in place to ensure emergency plan compliance was a violation of more than minor significance using Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," example 4h.

The inspectors utilized IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process, in conjunction with NRC Enforcement Policy to risk inform the significance determination. The inspectors determined that the violation was similar to the Degraded Planning Standard Function example in IMC 0609 Table 5.2-1, "Staffing processes would permit a shift to go below Emergency Plan minimum staffing requirements, but there were no actual instances in which such shortage occurred." Specifically, the licensee's staffing program could not ensure response capabilities were available to timely implement Emergency Plan actions; however, there were no actual instances of emergencies where this occurred.

The inspectors determined that this similar Green Finding example for a Planning Standard Function for a Non-Risk Significant Planning Standard could be correlated to Enforcement Policy example 6.6.d.1, in that "a licensee ability to meet or implement any regulatory requirement not related to assessment or notification such that the effectiveness of the emergency plan decreases." The inspectors determined that the violation could be evaluated using example 6.6.d.1 as a Severity Level IV violation of 10 CFR 10 CFR 50.47(b)(2).

10 CFR 50.47 states, in part, "On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

Contrary to the above, on December 15, 2014, the licensee failed to ensure timely augmentation of response capabilities is available. Specifically, the inspectors identified that the licensee did not have a staffing mechanism in place to ensure that radiological protection staff could respond to the site within 4 hours of an event to adequately characterize the site boundary dose rates.

Because this violation was of very low safety significance, Severity Level IV, and was entered into the licensee's corrective action program, this violation is being treated as a NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. (NCV 07200046/2014001-05; 05000409/2014008-05; Staff Augmentation Capability not in accordance with Emergency Plan)

c. Conclusion

The inspectors identified two severity level IV violations of 10 CFR 50.54(q) for the licensee's failure to have an emergency classification system within their implementing procedures that adhered to the emergency classification system within their Emergency Plan in accordance with 10 CFR 50.47(b)(4), and failed to have adequate staffing programs to ensure compliance with requirements contained within the Emergency Plan and therefore this was a violation of 10 CFR 50.47(b)(2).

The licensee demonstrated the ability to conduct an emergency exercise and assess their performance during a formal critique. Fire protection requirements were met regarding the conduct of drills and controlling combustibles in and around the ISFSI.

1.3 Surveillance and Maintenance

a. Inspection Scope

The inspectors reviewed the licensee's surveillance and maintenance program associated with dry fuel storage to verify compliance with the applicable regulations, the License, and TS. The inspectors walked down the ISFSI pad, observed daily surveillance activities, interviewed personnel, and reviewed select documents. The inspectors reviewed several records of daily temperature checks and radiological surveys performed since the last NRC inspection.

b. Observations and Findings

The inspectors conducted a walk down of the ISFSI pad and observed qualified licensee staff perform daily surveillances of the casks including temperature monitoring and inlet and outlet vent screen checks to ensure they were free of significant blockage or damage. The inspectors also evaluated the general condition of the ISFSI pad. The inspectors noted that temperature logs indicated that the casks operated as designed with no abnormalities. The inspectors found that the licensee performed and documented the surveillance activities as required by TS and site procedures. In addition, the inspectors performed independent radiation surveys of the casks, and general ISFSI area. The results were bounded by the radiological postings and consistent with the licensee's radiological surveys.

No findings of significance were identified.

c. Conclusion

The licensee implemented its surveillance and maintenance program in accordance with applicable regulations, the License, and TS.

1.4 Environmental Monitoring

a. Inspection Scope

The inspectors reviewed the licensee's annual Radioactive Effluent Release Reports for 2012 and 2013. The inspectors also reviewed semi-annual radiological survey results

performed by the licensee in 2013 and 2014. This review evaluated whether the licensee complied with the off-site dose requirements prescribed by 10 CFR 72.104.

b. Observations and Findings

The licensee performed environmental radiological monitoring as required for the ISFSI. The survey results indicated that the licensee was well under the limits of 10 CFR 72.104. These results were verified by the inspectors performing independent radiation surveys of the ISFSI

No findings of significance were identified.

c. Conclusion

The licensee established and maintained its environmental monitoring program in accordance with applicable 10 CFR Part 20, 50, and 72 regulations, the License, and TS.

1.5 Quality Assurance

a. Inspection Scope

The inspectors verified through document reviews and conduct of interviews whether changes were appropriately controlled and done in accordance with QA requirements. Corrective action reports from 2013 and 2014 were reviewed to determine whether the licensee effectively identified, resolved, and prevented problems. Additionally, the inspectors reviewed safety review committee and operations review committee documents to assess the onsite safety culture and whether issues were being identified and addressed. The inspectors reviewed the timeliness of financial assurance documentation that is required to be submitted to the NRC.

b. Observations and Findings

The inspectors reviewed 10 CFR 72.48 evaluations performed during 2012, 2013, and 2014. A review of CRs written during 2012, 2013, and 2014 indicated that the licensee was effectively identifying and correcting facility issues. Safety review committee and operations review committee meetings were conducted at regular intervals since the previous inspection and issues were being addressed through the Corrective Action Program (CAP).

*Failure to Submit Decommissioning Funding Plan*

Federal Register Notice 76FR35512, dated June 17, 2011, included a new rulemaking requirement that affected Part 72 licensees. The Federal Register documented a change to 72.30(b) which required Part 72 licensees to submit to the NRC for review and approval an ISFSI decommissioning funding plan. The final rule made changes to the financial assurance requirements for Part 72 licensees to provide greater consistency with similar decommissioning requirements in the 10 CFR Part 50 regulations. Financial assurances are financial arrangements provided by the licensee to ensure funds for

decommissioning will be available when needed. The effective date of the new rule was December 17, 2012. The new rule required licensees to submit a decommissioning funding plan to the NRC by the effective date of the rule. Contrary to this, LACBWR had not submitted their ISFSI decommissioning funding plan until March 23, 2013. 10 CFR 72.30(b), Financial Assurance and recordkeeping for decommissioning,” states that, “Each holder of... of a license under this part must submit for NRC review and approval a decommissioning funding plan...”

Contrary to the above, LACBWR had not submitted their ISFSI decommissioning funding plan by December 17, 2012.

Because this violation was of very low safety significance, Severity Level IV, and was entered into the licensee’s corrective action program, this violation is being treated as a NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. (NCV 07200046/2014001-06; 05000409/2014008-06; Failure to Submit Decommissioning Funding Plan)

The licensee submitted the ISFSI Decommissioning Funding Report on March 23, 2013. (NCV 07200046/2014001-06; 05000409/2014008-06; Failure to Submit Decommissioning Funding Plan)

c. Conclusion

The licensee implemented its CAP in accordance with the applicable regulations and site QA requirements. Through the CAP, issues were effectively identified and corrected by the licensee. A violation of very low safety significance was identified for the licensee’s failure to submit their ISFSI decommissioning funding plan timely as required by 10 CFR 72.30(b).

**2.0 Exit Meeting**

The inspectors presented the inspection results to Mr. L. Peters and other members of your staff at the conclusion of the site inspection on December 18, 2014, and during a teleconference on February 24, 2015. The licensee acknowledged the results presented and did not identify any of the potential report input as proprietary in nature.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## SUPPLEMENTAL INFORMATION

### PARTIAL LIST OF PEOPLE CONTACTED

- \*L. Peters, Genoa Manager
- \*D. Egge, Plant/ISFSI Supervisor
- \*J. Henkelman, Quality Assurance Specialist
- \*R. Grey, Radiation Protection Supervisor
- \*E. Martin, QA Manager
- \*W. Trubilowicz, Technical Engineer
- \*M. Mo, Security Manager

\* Persons present at the exit meeting on February 24, 2015

### INSPECTION PROCEDURE USED

60858                      Away From Reactor ISFSI Inspection Guidance

### ITEMS OPENED, CLOSED, AND DISCUSSED

#### Opened

|   |     |  |
|---|-----|--|
| 07200046/2014001-01;<br>05000409/2014008-01 | AV  | Non-Compliance with Emergency Plan Staffing Requirements                     |
| 07200046/2014001-02;<br>05000409/2014008-02 | AV  | Reduction in Effectiveness of Emergency Plan Without NRC Approval            |
| 07200046/2014001-03;<br>05000409/2014008-03 | AV  | Failure to Perform Drills and Exercises as Required by the Emergency Plan    |
| 07200046/2014001-04;<br>05000409/2014008-04 | NCV | Emergency Plan Implementing Procedures not in accordance with Emergency Plan |
| 07200046/2014001-05;<br>05000409/2014008-05 | NCV | Staff Augmentation Capability not in Accordance with Emergency Plan          |
| 07200046/2014001-06;<br>05000409/2014008-06 | NCV | Failure to Submit Decommissioning Funding Plan                               |

Closed

07200046/2014001-04;  
05000409/2014008-04

NCV Emergency Plan Implementing Procedures not in  
Accordance with Emergency Plan

07200046/2014001-05;  
05000409/2014008-05

NCV Staff Augmentation Capability not in Accordance with  
Emergency Plan

07200046/2014001-06;  
05000409/2014008-06

NCV Failure to Submit Decommissioning Funding Plan

## LIST OF ACRONYMS USED

|        |   |
|--------|---|
| ADAMS  | Agencywide Documents Access and Management System |
| ADR    | Alternate Dispute Resolution                      |
| AV     | Apparent Violation                                |
| CAP    | Corrective Action Program                         |
| CAR    | Corrective Action Report                          |
| CFR    | Code of Federal Regulations                       |
| CoC    | Certificate of Compliance                         |
| DNMS   | Division of Nuclear Materials Safety              |
| EA     | Enforcement Action                                |
| EAL    | Emergency Action Level                            |
| FESW   | Fuel Element Storage Well                         |
| ICR    | Institute of Conflict Resolution                  |
| IMC    | Inspection Manual Chapter                         |
| IR     | Inspection Report                                 |
| ISFSI  | Independent Spent Fuel Storage Installation       |
| LACBWR | La Crosse Boiling Water Reactor                   |
| NRC    | United States Nuclear Regulatory Commission       |
| PEC    | Predecisional Enforcement Conference              |
| TS     | Technical Specification                           |
| VCC    | Vertical Concrete Cask                            |

## LIST OF DOCUMENTS REVIEWED

The following is a partial list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety, but rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

10 CFR 72.212 Report; Revision 4  
2014 Emergency Preparedness Exercise Package  
72.48-OP-99-5.01; ISFSI VCC Heat Removal Monitoring System; Revision 0  
72.48-RE-13-01; revise ISFSI Fire Protection Procedures; Revision 0  
72.48-RE-2013-05; ACP-12.03, ISFSI VCC Heat Removal System; Revision 0  
ACP-02.13; Operations Safety Review Committee; Revision 20  
ACP-02.14; Safety Review Committee; Revision 18  
ACP-07.06; 10 CFR 72.48 Evaluations  
ACP-12.03; ISFSI VCC Heat Removal System Monitoring; Revision 1  
ACP-16.0; Corrective Action Program; Revision 24  
CAR 2013-004; Emergency Plan Submittal to USNRC; dated January 24, 2013  
CAR 2013-005; EAL Responses at ISFSI; dated January 24, 2013  
CAR 2013-007; ISFSI Decommissioning Funding Plan; dated February 25, 2013  
CAR 2013-021; Emergency Plan Exercise; dated November 20, 2013  
CAR 2013-022; Emergency Plan Audit Issues; dated December 27, 2013  
CAR 2014-022; Action Level is not Consistent for EPP Declaration; dated December 18, 2014  
CAR 2014-023; EAL Entry Basis not Clear; dated December 18, 2014  
CAR 2014-024; Subjective Deactivation Criteria; dated December 18, 2014  
CAR 2014-025; Process or Program to Ensure 4 hours RPT Response Time; dated December 18, 2014  
CAR 2014-026; SRC Membership did not Include Off-Site Individual; dated December 18, 2014  
Decommissioning Funding Plan for ISFSI; March 12, 2013  
Emergency Exercise and Drill Records; 2011-2012  
Environmental Dosimetry Data; 2013-2014  
EPP-20.01; ISFSI Emergency Conditions; Revision 3  
EPP-20.02; ISFSI Organization and Operations during Emergencies; Revision 4  
EPP-20.03; ISFSI Communications Systems; Revision 3A  
EPP-20.04; ISFSI Emergency Dose Rate Assessment and Survey; Revision 2A  
EPP-20.06; ISFSI Emergency Radiation Monitoring; Revision 3  
Fire Protection Training and Drill Records; 2012-2014  
FPP-20.04; ISFSI Monthly Fire Prevention Inspection; Revision 3  
HSP-20.06; Radiation Surveys; Revision 33  
ISFSI Emergency Preparedness Training Slides  
ISFSI Fire Protection Training Slides  
ISFSI Outer Isolation Zone Fence Surveys; 2013-2014  
ISFSI Quality Assurance Training Slides  
LACBWR Emergency Plan; Revision 31  
LACBWR ISFSI Emergency Plan; Revision 32  
LACBWR ISFSI Emergency Plan; Revision 33  
LACBWR ISFSI Emergency Plan; Revision 34

LACBWR Possession Only License; Amendment 72  
Operations Safety Review Committee Minutes; 2012-2014  
Quality Assurance Program Description; Revision 27  
Radiation Protection Orientation Slides  
Retrievability Strategy  
Safety Review Committee Minutes; 2012-2014  
TPP-08; Fire Protection Training Procedure; Revision 14  
TPP-20; ISFSI General Employee Training; Revision 0  
VCC Dose Surveys; 2013-2014