



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, IL 60532-4352

July 27, 2016

Mr. John Sauger  
Executive VP and Chief Nuclear Officer  
EnergySolutions  
2701 Deborah Avenue  
Zion, IL 60099

SUBJECT: LA CROSSE BOILING WATER REACTOR – NRC INSPECTION  
REPORT 07200046/2016001(DNMS); 05000409/2016001(DNMS)

Dear Mr. Sauger:

On July 14, 2016 the U.S. Nuclear Regulatory Commission (NRC) completed an onsite inspection at the permanently shut down La Crosse Boiling Water Reactor in Genoa, Wisconsin. The purpose of the inspection was to determine whether decommissioning and spent nuclear fuel storage activities were conducted safely and in accordance with NRC requirements. The enclosed report presents the results of this inspection, which were discussed with Mr. J. Nowak and other members of your staff on July 14, 2016.

During the inspection period, the NRC inspector reviewed the following aspects of onsite activities: operation of an independent spent fuel storage installation; self-assessments, audits and corrective actions; and followup on traditional enforcement actions. The inspection consisted of an examination of activities at the site as they relate to safety and compliance with the Commission's rules and regulations. Areas examined during the inspection are identified in the enclosed report. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observation of activities, and interviews with personnel.

Based on the results of this inspection, no violations of NRC requirements were identified.

In accordance with title 10 of the *Code of Federal Regulations* (CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter, and its enclosure, will be made available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records System (PARS) component of NRC's Agencywide Documents Access and Management

J. Sauger

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System (ADAMS), accessible from the NRC's website at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

**/RA/**

Michael A. Kunowski, Chief  
Materials Control, ISFSI, and  
Decommissioning Branch  
Division of Nuclear Materials Safety

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

Enclosure:  
IR 07200046/2016001(DNMS);  
05000409/2016001(DNMS)

cc w/encl: LaCrosse *Solutions* Service List

J. Sauger

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cc w/encl: LaCrosse *Solutions* Service List

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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION III**

Docket Nos.: 072-00046; 050-00409

License Nos.: DPR-45, General License (ISFSI)

Report No.: 07200046/2016001(DNMS);  
05000409/2016001(DNMS)

Licensee: LaCrosse*Solutions*

Facility: La Crosse Boiling Water Reactor

Location: Genoa, Wisconsin

Dates: July 11 - July 14, 2016

Inspector: Matthew C. Learn, Reactor Engineer

Approved by: Michael A. Kunowski, Chief  
Materials Control, ISFSI, and  
Decommissioning Branch  
Division of Nuclear Materials Safety

Enclosure

## **EXECUTIVE SUMMARY**

### **LA CROSSE BOILING WATER REACTOR NRC INSPECTION REPORT 07200046/2016001(DNMS); 05000409/2016001(DNMS)**

A safety inspection of licensed activities associated with decommissioning and spent nuclear fuel storage at the La Crosse Boiling Water Reactor was conducted from July 11 through July 14, 2016.

#### **Operation of an Independent Spent Fuel Storage Installation**

- The licensee implemented its surveillance, maintenance, radiological monitoring, and quality assurance programs as it pertains to the independent spent fuel storage installation in accordance with applicable NRC requirements, the License, and Certificate of Compliance. (Section 1.0)

#### **Self-Assessment, Auditing, and Corrective Action**

- The licensee identified issues at an appropriate thresholds and entered the issues into the corrective action program. Issues were screened and prioritized commensurate with safety significance. Licensee evaluations determined the significance of issues, and included appropriate remedial corrective actions. (Section 2.0)

#### **Followup on Enforcement Actions**

- The inspector determined that, based on the licensee's actions, the corrective actions taken adequately addressed a Notice of Violation that was the basis for the discretionary inspection. No other instance of the violations was identified. (Section 3.0)

## Report Details

### 1.0 Operation of an Independent Spent Fuel Storage Installation (Inspection Procedure (IP) 60855))

#### 1.1 Inspection Scope

The inspectors reviewed documents, interviewed plant personnel, and performed in-field observations to assess the licensee's performance in the following areas:

- Changes made to the programs and procedures since the last inspection (December 2014, ADAMS Accession Number ML15085A562) were consistent with the license or Certification of Compliance (CoC) and did not reduce the effectiveness of the program;
- Evaluations required by Title 10 of the *Code of Federal Regulations* (CFR) 72.212(b), 10 CFR 50.59 and 10 CFR 72.48;
- Radiological controls on independent spent fuel storage installation (ISFSI) operations;
- Radiation dose and contamination levels in the ISFSI;
- Records of fuel assemblies and physical inventories;
- Routine activities were performed in accordance with approved procedures and surveillance activities have been conducted at the specified periods; and
- Management oversight and quality assurance assessments of ISFSI activities.

#### 1.2 Observations and Findings

The inspector observed that the licensee was programmatically evaluating changes to site modifications, programs, and procedures since the last inspection in accordance with 10 CFR 50.59, 10 CFR 72.48, and 10 CFR 72.212. Changes were consistent with the License and CoC and did not reduce the effectiveness of the applicable programs.

The licensee performed routine surveys and environmental radiological monitoring as required for the ISFSI. The survey results indicated that radiological conditions were in accordance with the Technical Specification and 10 CFR 72.104 limits.

The inspector found that the licensee was performing material control and accountability verifications of spent nuclear fuel stored at the ISFSI. The licensee maintained the necessary records of spent nuclear fuel stored at the ISFSI.

The inspector conducted a walk-down of the ISFSI pad and observed staff perform daily surveillances of the casks, including inlet and outlet screen checks to ensure they were free of significant blockage or damage. The inspector also evaluated the structural

condition of the pad and casks. The licensee performed and documented the surveillance activities as required by the CoC and site procedures.

A review of corrective action reports written since the last ISFSI inspection indicated that the licensee was effectively identifying and correcting conditions adverse to quality.

No findings were identified.

### 1.3 Conclusion

The licensee implemented its surveillance, maintenance, radiological monitoring, and quality assurance programs as it pertains to the ISFSI in accordance with applicable NRC requirements, the License, and CoC.

## 2.0 **Self-Assessments, Audits, and Corrective Actions (IP 40801)**

### 2.1 Inspection Scope

The inspector reviewed documents and interviewed plant personnel to assess the licensee's performance in the following areas:

- Administrative procedures prescribed actions for the identification, evaluation and resolution of problems;
- License procedures prescribed thresholds for the performance of self-assessments, audits, and surveillances;
- Licensee management reviewed self-assessments, audits, and corrective actions to remain knowledgeable of plant performance;
- Self-assessments were conducted by technically qualified personnel and sufficient independence from the licensee;
- Issues or problems were identified and corrected in accordance with the licensee's corrective action program;
- Quality assurance personnel audited changes in the status of decommissioning and licensee organization; and
- Licensee management observed maintenance and surveillance activities, operations evolutions, and training.

The inspector reviewed corrective action program documents to determine: if a sufficiently low threshold for problem identification existed; the quality of follow-up evaluations, including extent-of-condition; and if the licensee assigned timely and appropriate prioritization for issue resolution commensurate with the significance of the issue. Issues that were repetitive and those with the potential for safety or regulatory consequence were evaluated further by the inspector to assess apparent and/or common cause and significance.

## 2.2 Observations and Findings

The inspector determined that issues were identified by the licensee at an appropriate threshold within applicable functional areas of the site and entered into the corrective action program. Issues were effectively screened, prioritized, and evaluated commensurate with safety significance. The scope and depth of evaluations were adequate in that the evaluations reviewed addressed the significance of issues and assigned an appropriate course of remedial action.

The inspector verified that audits, surveillances, and self-assessments conducted since the last inspection were performed with technically qualified personnel, and when appropriate, utilized personnel independent of the licensee. Finally, the inspector verified that quality assurance personnel continued to audit changes implemented at the site.

No findings were identified.

## 2.3 Conclusions

Applicable issues were identified by the licensee at appropriate thresholds and entered into the corrective action program. Licensee evaluations determined the significance of issues and included appropriate corrective actions. Audits were performed on an appropriate frequency by technically qualified personnel.

## 3.0 **Followup on Enforcement Actions (IP 92702)**

### 3.1.1 Inspection Scope

On June 22, 2015, a Notice of Violation was issued by the NRC to the licensee conveying a Severity Level III problem for two NRC-identified violations. Additional details of the violations are documented in NRC Inspection Report 7200046/2014001(DNMS); and 05000409/2014008(DNMS) dated March 26, 2015.

The first violation involved the failure to submit a license amendment to the NRC for changes in the licensee's Emergency Plan (EP) that reduced its effectiveness prior to implementing those changes. The second violation involved the failure to follow the approved EP for operations personnel staffing, and conducting emergency drills and exercises in accordance with the frequency specified in the plan.

This inspection was conducted in accordance with IP 92702, "Followup on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, and Alternative Dispute Resolution Confirmatory Orders." The inspection objective was to determine that adequate corrective actions have been implemented and maintained for enforcement actions including violations.

The inspector reviewed the licensee's EP program to determine whether the EP program had been maintained in a state of operational readiness since the violation.



The inspector reviewed drill and exercises performed since the violation to ensure compliance with EP requirements. The inspector observed the licensee's biennial exercise.

The inspector reviewed the licensee's changes to the EP program to determine whether the EP program continued to meet license commitments and the NRC requirements, and whether the change negatively affected the overall state of emergency preparedness at LACBWR since the violation.

### 3.2 Observations and Findings

The licensee documented the associated violations in Corrective Action Reports 2012-121, 2013-002, 2013-004, 2013-005, and 2013-022.

The inspector determined that the licensee's EP plan implementing procedures were adequate to meet the EP plan requirements for classification and notification. Individuals were properly trained in emergency response functions. Emergency response equipment was inventoried and functional.

The inspector verified that the licensee was performing exercises and drills in accordance with the EP. The licensee performed more drills than required by the EP since the last inspection. The inspector observed the licensee's biennial emergency exercise. The inspector determined that the exercise scenario provided sufficient opportunities to demonstrate key skills in principal functional areas to protect public health and safety. Following the exercise, the inspector observed portions of the licensee's critique and concluded that the licensee adequately assessed performance and planned to enter identified weaknesses into the corrective action program as appropriate.

The inspector observed that changes made to the EP plan did not reduce its effectiveness and that screenings and evaluations contained the appropriate level of detail and sufficient basis to support the change. However, this review is not a formal safety evaluation and does not constitute formal NRC approval of the changes. Therefore, these changes remain subject to future NRC inspection in their entirety.

No findings were identified.

### 3.3 Conclusion

The inspector determined that, based on the licensee's actions, the corrective actions taken adequately addressed a Notice of Violation that was the basis for the discretionary inspection. No other instance of the violations were identified. This violation is closed. (07200046/2014001-01, 05000409/2014008-01, Non-Compliance with Emergency Plan Staffing Requirements; 07200046/2014001-02, 05000409/2014008-02, Reduction in Effectiveness of Emergency Plan without NRC Approval; 07200046/2014001-03, 05000409/2014008-03, Failure to Perform Drills and Exercises as Required by the Emergency Plan)

#### **4.0 Exit Meeting**

The inspectors presented the results of the inspection to Mr. J. Nowak and other members of the LaCrosse*Solutions* staff at an onsite exit meeting on July 14, 2016. The licensee acknowledged the results presented.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

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

C. Olson, ISFSI Manager  
E. Martin, Quality Assurance Manager  
J. Henkelman, Quality Assurance Specialist  
J. Nowak, General Manager  
J. Werner, Quality Assurance Manager  
L. Peters, Genoa Site Manager  
M. Moe, Security Manager

### **INSPECTION PROCEDURES (IPs) USED**

IP 40801	Self-Assessment, Auditing, and Corrective Action at Permanently Shutdown Reactors
IP 60855	Operation of an ISFSI
IP 92702	Followup on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, and Alternative Dispute Resolution Confirmatory Orders

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

<u>Opened</u>	<u>Type</u>	<u>Summary</u>
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None

<u>Closed</u>	<u>Type</u>	<u>Summary</u>
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07200046/2014001-01; 05000409/2014008-01	AV	Non-Compliance with Emergency Plan Staffing Requirements
07200046/2014001-02; 05000409/2014008-02	AV	Reduction in Effectiveness of Emergency Plan Without NRC Approval
07200046/2014001-03; 05000409/2014008-03	AV	Failure to Perform Drills and Exercises as Required by the Emergency Plan

## PARTIAL 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 50.54(q) Reviews 2015-2016  
10 CFR 50.59 Screenings 2015-2016  
10 CFR 72.48 Screenings 2015-2016  
10 CFRT 72.212 Report; dated July 2012  
ACP-20-02.01; ISFSI Training Program; Issue 1  
ACP-20-02.02; Qualified Technical Review Training Process; Issue 1  
ACP-20-02.04; Independent Management Assessment  
ACP-20-03.03; 10 CFR 72.48 Screening and Evaluations; Issue 0  
ACP-20-05.04; Security Maintenance Request; Issue 0  
ACP-20-05.01; Plans, Programs, Procedures, and Instructions – Initiation, Revision, and Approval; Issue 0  
ACP-20-06.01; Document Control System; Issue 0  
ACP-20-15.01; Corrective Action Program; Issue 0  
ACP-20-17.01; Quality Assurance Overview; Issue 0  
Audits 2015-2016  
Concrete Cask Survey Record; dated May 24, 2016  
Condition Reports 2015-2016  
Corrective Action Reports 2015-2016  
Emergency Plan Drills 2015-2016  
Emergency Plan; Revision 36  
EPP-20.01; Emergency Conditions; Issue 7  
EPP-20.02; Organization and Operations during Emergencies; Issue 7  
EPP-20.03; Communications Systems; Issue 5  
EPP-20.04; Emergency Dose Rate Assessment and Survey; Issue 4  
EPP-20.05; Medical Emergencies, First Aid Assistance, and Emergency Ambulance Service; Issue 6  
EPP-20.06; Emergency Radiation Monitoring; Issue 4  
EPP-20.08; Maintenance of Emergency Preparedness; Issue 5  
Isolation Zone Fence Survey Record; dated May 24, 2016  
La Crosse Boiling Water Reactor License  
LACBWR Fire Protection Plan; Issue 1  
LC-AD-PR-004; Corrective Action Program; Revision 1  
LC-QA-PR-002; Quality Assessments; Revision 0  
LC-RA-PR-001; Regulatory Reviews; Revision 1  
LC-TR-PG-001; LACBWR Training Program; Revision 1  
NAC-MPC Certificate of Compliance; Amendment 6  
NAC-MPC Final Safety Analysis Report; Revision 10  
Operations Review Committee Meeting Minutes 2015-2016  
Quality Assurance Program Description; Revision 28  
RPP 20.00; ISFSI Radiation Protection Program; Issue 0  
Safety Review Committee Meeting Minutes 2015-2016  
Self-Assessments 2015-2016

Surveillances 2015-2016

TI-EP-20.01; Emergency Plan Training; Issue 1

Vertical Concrete Cask Annual Structural Inspection; dated September 30, 2015

Vertical Concrete Casks Survey Record; dated May 16, 2016

WI-FP-01 Fire Protection Periodic Maintenance; Issue 0

WI-FP-20.01; Control of Ignition Sources; Issue 0

WI-QA-04; Vertical Concrete Cask and ISFSI Pad Annual Inspection; Issue 0

WI-QA-05; Vertical Concrete Cask Vent Obstructions Removal; Issue 0

WI-RP-20.01 Dosimetry Issue; Issue 0

WI-RP-20.02; Use of the Radiation Exposure Monitoring and Information Transmittal System;  
Issue 0

WI-RP-20.03; Radiation Surveys; Issue 0

### **LIST OF ACRONYMS USED**

ADAMS	Agencywide Documents Access and Management System
AV	Apparent Violation
CFR	Code of Federal Regulations
CoC	Certificate of Compliance
DNMS	Division of Nuclear Materials Safety
EP	Emergency Plan
IP	Inspection Procedure
IR	Inspection Report
ISFSI	Independent Spent Fuel Storage Installation
NOV	Notice of Violation
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records System