

June 10, 2010

Mr. Charles G. Pardee
Senior Vice President,
Exelon Generation Company, LLC
President and Chief Nuclear Officer,
Exelon Nuclear
4300 Winfield Road
Warrenville IL 60555

SUBJECT: NRC INSPECTION REPORT 050-00010/10-08(DNMS) – DRESDEN NUCLEAR
POWER STATION UNIT 1

Dear Mr. Pardee:

On May 13, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed inspection activities at the permanently shutdown Dresden Nuclear Power Station Unit 1. The purpose of the inspection was to determine whether the decommissioning activities were conducted safely and in accordance with NRC requirements. The inspection consisted of a selective examination of procedures and representative records, and interviews with personnel. Specifically, during the on-site inspection on April 27, 2010, and an in-office review May 10 – 13, 2010, the inspectors evaluated decommissioning performance; radioactive waste treatment and effluent and environmental monitoring; safety reviews, design changes, and modifications; and corrective action items relevant to Unit 1 since August 2009. At the conclusion of the on-site inspection on April 27, 2010, the inspectors discussed the interim results with members of your staff. At the conclusion of the in-office review, a final telephone exit meeting was conducted on May 13, 2010, to discuss the final results with members of your staff.

Based on the results of this inspection, the NRC did not identify any violations.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

C. Pardee

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We will gladly discuss any questions you may have regarding this inspection.

Sincerely,

/RA/By George M. McCann Acting For/

Christine A. Lipa, Chief
Materials Control, ISFSI, and
Decommissioning Branch

Docket No. 50-010
License No. DPR-2

Enclosure:
NRC Inspection Report 050-00010/10-08(DNMS)

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- 2 -

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Letter to Mr. Charles Pardee from Mrs. Christine A. Lipa dated June 10, 2010.

SUBJECT: NRC INSPECTION REPORT 050-00010/10-08(DNMS) DRESDEN NUCLEAR
POWER STATION UNIT 1

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 050-00010

License No: DPR-2

Report No: 050-00010/10-08(DNMS)

Licensee: Exelon Nuclear

Facility: Dresden Nuclear Power Station Unit 1

Location: 6500 N. Dresden Road
Morris, Illinois 60450

Dates: April 27, 2010
May 10 – 13, 2010 (In-Office Review)

Inspector: Jeremy Tapp, Health Physicist

Observer: Lionel Rodriguez, General Engineer, NSPDP

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

Enclosure

EXECUTIVE SUMMARY
Dresden Nuclear Power Station, Unit 1
NRC Inspection Report 050-00010/10-08(DNMS)

This routine inspection was conducted to evaluate current reactor activities and discuss planned decommissioning activities. During the U.S. Nuclear Regulatory Commission (NRC) inspection, the inspectors toured the nuclear reactor facilities and examined licensee records and procedures.

Decommissioning Performance and Status Review

- The licensee was adequately maintaining the Unit 1 structures and components and continued to make progress towards SAFSTOR dormancy. (Section 1.0)

Radioactive Waste Treatment, and Effluent and Environmental Monitoring

- The inspectors determined that the licensee was performing the processing of the contaminated liquid in the T-102 A and B Radwaste Receiving Tanks in accordance with the approved procedure. The inspectors also determined the licensee implemented prompt and adequate corrective actions that were appropriate for the significance of an identified procedure discrepancy. (Section 2.0)

Safety Reviews, Design Changes, and Modifications

- The inspectors determined the licensee was adequately completing modifications in accordance with engineering design packages. (Section 3.0)

Self-Assessment, Auditing, and Corrective Action

- The inspectors determined that the licensee was adequately capturing issues in its corrective action program and the scope and timeliness of corrective actions were commensurate with their safety significance. (Section 4.0)

Report Details

1.0 Decommissioning Performance and Status Review (71801)

a. Inspection Scope

The inspectors conducted site tours to assess conditions of Unit 1 structures and components and interviewed personnel with regards to the remaining Unit 1 work.

b. Observations and Findings

The licensee's continuing objective is to place the Unit 1 systems, structures and components (SSCs) in a condition that will minimize the amount of maintenance and potential for degradation while in SAFSTOR for approximately 20 years. SAFSTOR is defined as a method of decommissioning in which the nuclear facility is placed and maintained in such a condition that the nuclear facility can be safely stored and subsequently decontaminated to levels that permit release for unrestricted use. Procedure DDP-17, "SAFSTOR Preparation End State Determination," specifies the process for identifying and determining actions necessary to place SSCs in a condition appropriate for SAFSTOR. The licensee was making reasonable progress in working towards the end goal of SAFSTOR dormancy through completing required actions described in DDP-17. To satisfy SAFSTOR dormancy procedural requirements, the licensee needs to complete the processing of contaminated liquid in the T-102 A and B tanks and remove the resin from the Unit 1 Resin Regeneration Room and tanks.

During the site tours of the Containment Sphere entrance, Laundry Building, and Chemical Cleaning Building (CCB), the inspectors noted that the material condition of facilities and equipment was being maintained, and evidence that housekeeping activities were being performed was readily apparent. For example, general areas were clean and contaminated area boundaries were free of dirt and debris, which greatly reduces the risk of the spread of contamination across boundaries. Also, all radiological and contaminated areas were adequately marked, posted, and locked as required.

c. Conclusion

The licensee was adequately maintaining the Unit 1 structures and components and continued to make progress towards SAFSTOR dormancy.

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

a. Inspection Scope

The inspectors reviewed the licensee's contaminated liquid processing, or cleaning, activities associated with the T-102 A and B Radwaste Receiving Tanks. The inspectors interviewed personnel regarding the process, schedule, and control of the work activity. The inspectors toured the area of the operating process filtration equipment and the temporary piping pathway in the CCB. The inspectors evaluated whether the equipment was being operated in accordance with procedure DM-OP-046-161022, Operation of the Mobile ALPS System at Dresden Unit 1 Station, Revision 3, dated February 16, 2010.

b. Observations and Findings

To achieve SAFSTOR dormancy, the licensee needs to complete the processing of contaminated liquid in the T-102 A and B Radwaste Receiving Tanks. Once the water has been filtered and cleaned to appropriate levels, the tanks will be drained and water transferred to the Unit 2/3 plant. The water that was pumped to these tanks from the CCB sump pump will now be pumped to the Turbine Building Drain Sump instead. Also, to prevent future use of these tanks, administrative controls will be put in place for the applicable valves.

The licensee performed an initial detailed isotopic analysis at an offsite laboratory for the water in both tanks and determined only the T-102A tank contained transuranics. The licensee processed the water in the T-102B tank with a mobile Advanced Liquid Waste Processing System (ALPS), and that processing has been completed. At the time of the inspection, the licensee was processing the water in the T-102A tank. The ALPS System is a closed loop system which recirculates and filters approximately nine to ten thousand gallons per day. In order to determine the amount of processing still required, the licensee performs periodic isotopic analyses for the transuranics identified. Once those levels reach the lower limit of detection, the licensee plans to send another sample to the offsite laboratory for detailed isotopic analysis to verify the water has been cleaned to an appropriate level.

The inspectors verified the ALPS System was in good condition and operating as described in procedure DM-OP-046-161022. Section 5.0 of DM-OP-046-161022 describes the system and discusses the design flow rate to be at a rate of 18 to 35 gallons per minute (gpm). The inspectors noted that the flow rate gauge on the ALPS System was reading approximately 39 gpm. The system operator informed the inspectors that the system operating procedure, Step 6.2.20 instructs the operator to adjust flow between 18 and 40 gpm. This discrepancy in the procedure was evaluated and it was determined that the design flow rate description in section 5.0 was a typographical error. Therefore, the system did not operate outside of its designed flow rate. The evaluation and corrective actions were documented in Action Request (AR) 1062984, Procedure Discrepancy Identified During U/1 NRC Inspection, dated April 29, 2010. The procedure was revised to remove the incorrect system design information.

c. Conclusions

The inspectors determined that the licensee was performing the processing of the contaminated liquid in the T-102 A and B Radwaste Receiving Tanks in accordance with the approved procedure. The inspectors also determined the licensee implemented prompt and adequate corrective actions that were appropriate for the significance of an identified procedure discrepancy.

3.0 Safety Reviews, Design Changes, and Modifications (37801)

a. Inspection Scope

The inspectors reviewed Engineering Change (EC) 359643, "Laundry and Drain Tank Vault Isolations for SAFSTOR Dormancy per Letter #98-0065," Revision 0, along with

the associated 10 CFR 50.59 Screening No. 2009-0033, Revision 0, and toured the areas affected by the EC to verify the work was performed as stated.

b. Observations and Findings

As the licensee prepares for SAFSTOR dormancy by isolating buildings and systems that are no longer required, the licensee retired the laundry ventilation systems, removed the laundry equipment, and removed the steam heat in the Unit 1 Laundry Building. The inspectors toured the Laundry Building and found the modifications described in EC 359643 completed as discussed. Specifically, the heating steam piping was either removed or capped. The abandoned electrical connections were taped appropriately. Also, areas with potential internal contamination were labeled. The inspectors found the licensee's associated 50.59 Screening No. 2009-0033, Revision 0, to be adequate and conclusions appropriate.

c. Conclusions

The inspectors determined the licensee was adequately completing modifications in accordance with engineering design packages.

4.0 Self-Assessment, Auditing, and Corrective Action (40801)

a. Inspection Scope

The inspectors reviewed Action Requests (ARs) selected from the licensee's corrective action item list for Unit 1. The inspectors reviewed ARs generated for Unit 1 since August 2009.

b. Observations and Findings

The inspectors reviewed two ARs related to Unit 1: AR 1056365, Unit 1 Radwaste Basement Needs to be Pumped Out, dated April 14, 2010, and AR 1058836, Unit 1 Project Management Sphere Walkdown, dated April 20, 2010. Both contained appropriate corrective actions commensurate with the safety significance of the issue in both scope and timeliness.

c. Conclusions

The inspectors determined that the licensee was adequately capturing issues in its corrective action program and the scope and timeliness of corrective actions were commensurate with their safety significance.

5.0 Exit Meeting Summary

The inspectors presented the inspection results to licensee management during an interim exit meeting at the conclusion of the onsite inspection on April 27, 2010. After the in-office review was completed, the inspectors presented the remainder of the inspection results to the licensee during a final telephone exit on May 13, 2010. The licensee acknowledged the observations presented at both meetings.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

- ¹S. Marik, Plant Manager
- ¹²P. Queuly, Regulatory Assurance Manager
- ¹²S. Taylor, Decommissioning Project Manager
- ¹T. Loch, Unit 1 Engineering Manager
- ¹²R. Christensen, Unit 1 Project Team
- ¹²J. Griffin, NRC Coordinator

¹Persons present at the interim exit meeting on April 27, 2010.

²Persons present at the final telephone exit meeting on May 13, 2010.

INSPECTION PROCEDURES USED

- IP 71801 Decommissioning Performance and Status Review
- IP 84750 Radioactive Waste Treatment, and Effluent and Environmental Monitoring
- IP 37801 Safety Reviews, Design Changes, and Modifications
- IP 40801 Self-Assessment, Auditing, and Corrective Actions

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened	None
Closed	None
Discussed	None

PARTIAL LIST OF DOCUMENTS REVIEWED

Licensee documents reviewed and utilized during the course of this inspection are specifically identified in the "Report Details" above.

LIST OF ACRONYMS USED

- ALPS Advanced Liquid Waste Processing System
- AR Action Request
- CCB Chemical Cleaning Building
- CFR Code of Federal Regulations
- DDP Dresden Decommissioning Procedure
- DNMS Division of Nuclear Materials Safety
- EC Engineering Change
- gpm gallons per minute
- NRC U.S. Nuclear Regulatory Commission
- SSC Systems, Structures and Components