

September 14, 2009

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

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

Dear Mr. Pardee:

On September 4, 2009, the Nuclear Regulatory Commission (NRC) completed inspection activities at the 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 onsite inspections on September 23, 2008 and August 18, 2009, and an in-office review August 19 through September 4, 2009, 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 over the previous 14 months. At the conclusion of the on-site inspection on August 18, 2009, the inspectors discussed the inspection findings with members of your staff. At the conclusion of the in-office review, a final telephone exit meeting was conducted on September 4, 2009, to discuss any additional inspection findings with members of your staff.

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

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C. Pardee

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

Sincerely,

/RA/

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

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

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

cc w/encl: Site Vice President - Dresden Nuclear Power Station
Plant Manager - Dresden Nuclear Power Station
Dresden Nuclear Power Station Decommissioning Project Manager
Regulatory Assurance Manager - Dresden
Senior Vice President - Midwest Operations
Senior Vice President - Operations Support
Vice President - Licensing and Regulatory Affairs
Director - Licensing and Regulatory Affairs
Manager Licensing - Clinton, Dresden, and Quad Cities
Associate General Counsel
Document Control Desk - Licensing
Assistant Attorney General
J. Klinger, State Liaison Officer,
Illinois Emergency Management Agency
Chairman, Illinois Commerce Commission

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Regulatory Assurance Manager - Dresden
Senior Vice President - Midwest Operations
Senior Vice President - Operations Support
Vice President - Licensing and Regulatory Affairs
Director - Licensing and Regulatory Affairs
Manager Licensing - Clinton, Dresden, and Quad Cities
Associate General Counsel
Document Control Desk - Licensing
Assistant Attorney General
J. Klinger, State Liaison Officer,
Illinois Emergency Management Agency
Chairman, Illinois Commerce Commission

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Letter to Mr. Charles Pardee from Mrs. Christine A. Lipa dated September 14 , 2009.

SUBJECT: NRC INSPECTION REPORT 050-00010/08-10 (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: 050-00010/08-10(DNMS)

Licensee: Exelon Nuclear

Facility: Dresden Nuclear Power Station Unit 1

Location: 6500 N. Dresden Road
Morris, Illinois 60450

Dates: September 23, 2008
August 18, 2009
August 19 – September 4, 2009 (In-Office Review)

Inspectors: William Snell, Senior Health Physicist
Jeremy Tapp, Health Physicist
Katie Streit, Health Physicist

Approved by: Christine 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 050-00010/08-10(DNMS)

These inspection activities included a routine inspection to evaluate current reactor activities and discuss planned decommissioning activities. During the 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 controlling contamination and radioactive materials with adequate and appropriate radiation postings and boundaries. (Section 1.0)

Radioactive Waste Treatment, and Effluent and Environmental Monitoring

- The licensee was performing the necessary actions to contain the transuranics in the T102A tank while the filtering system equipment is being transferred from the Fuel Building to the Chem-Cleaning Building to subsequently filter and drain the T102A and T102B Tanks. Also, the inspectors verified that the licensee maintained effluent releases from Unit 1 well below 10 CFR Part 20 release limits, thermoluminescent detector (TLD) readings were both consistent and below regulatory requirements, and the 2008 Radioactive Effluent Release Report and 2008 Annual Radiological Environmental Operating Report were completed as required by the Technical Specifications Sections 6.9.A.3 and Section 6.9.A.4. (Section 2.0)

Safety Reviews, Design Changes, and Modifications

- The licensee was adequately completing modifications in accordance with engineering design packages. Reroute of the Unit 1 Radwaste Sump Pump to Unit 1 Turbine Building Drain Tank (TBDT) was completed successfully with a final test run of the sump pump planned for the near future to complete the modification requirements. (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 corrective actions were commensurate with their safety significance. (Section 4.0)

REPORT DETAILS

1.0 Decommissioning Performance and Status Review (71801)

1.1 Inspection Scope

The inspectors conducted site tours to assess conditions of Unit 1 structures and components.

1.2 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 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. Because work on Units 2 and 3 is normally a higher priority due to its operational status, work on Unit 1 is often delayed until workers can be made available. None of the work deferred for Unit 1 resulted in delays to address issues related to safety. The inspectors determined the licensee is making reasonable progress in working towards the end goal of SAFSTOR dormancy through completing required actions described in DDP-17.

During the site tours of the Containment Sphere and Fuel Building 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, 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.

In the Fuel Building, some of the SFP was peeling. The epoxy was painted onto the SFP walls prior to draining, to reduce the potential for airborne contamination. The licensee was working with the vendor who had supplied the epoxy so that the reason for the peeling could be determined and the problem areas repaired. The licensee has contracted to perform an epoxy repair test patch and the work will be conducted in late August 2009. This test will assess the adequacy of the repair material for future use on all areas that are peeling.

During the September 2008 inspection the inspectors had noted some of the insulation was coming off the walls in the Fuel Building. The licensee was continuing to follow up on this concern to ensure the integrity of the insulation while minimizing cost.

1.3 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)

2.1 Inspection Scope

The inspectors reviewed the licensee's activities associated with transferring filtration equipment to the Chem-Cleaning Building for the processing of the T102 Tanks. The inspectors also reviewed the Dresden Nuclear Power Station 2008 Radioactive Effluent Release Report and Offsite Dose Calculation Manual, dated April 24, 2009, for gaseous effluent releases for particulates and tritium from Unit 1 to verify that the licensee met 10 CFR Part 20 effluent release limits. Dresden Nuclear Power Station 2008 Annual Radiological Environmental Operating Report, dated May 8, 2009, was reviewed as well.

2.2 Observations and Findings

The licensee has finished draining the storage and transfer sides of the SFP and is currently transferring the water filtration system to the Chem-Cleaning Building in order to process the water in the T102A and T102B tanks. The T102A tank water contains transuranics that, once filtered, will be shipped to a licensed low-level waste disposal facility. No more water is being added to the T102A tank. The filtered water from both tanks will then be transferred to Units 2 and 3.

Air sampling at the Unit 1 effluence release point did not indicate any unanticipated radionuclides and was well below the 10 CFR Part 20 effluent release limits. Also, TLD readings from around the site were reviewed and found to be consistent around the entire site and well within regulatory requirements. In addition, the two reports referenced in Section 2.1 are reviewed by Radiation Protection Inspectors as part of the Reactor Oversight Process for Dresden Units 2 and 3.

2.3 Conclusions

The licensee was performing the necessary actions to contain the transuranics in the T102A tank, while the filtering system equipment is being transferred from the Fuel Building to the Chem-Cleaning Building to subsequently filter and drain the T102A and T102B tanks. Also, the inspectors verified that the licensee maintained effluent releases from Unit 1 well below 10 CFR Part 20 release limits, TLD readings were both consistent and below regulatory requirements, and the 2008 Radioactive Effluent Release Report and 2008 Annual Radiological Environmental Operating Report were completed as required by the Technical Specifications Sections 6.9.A.3 and 6.9.A.4.

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

3.1 Inspection Scope

The inspectors reviewed Engineering Change (EC) 359540, "Reroute Unit 1 Radwaste Sump Pump to Unit 1 Turbine Bldg Drain Tank (TBDT)," dated May 25, 2009, to determine the adequacy of the details of the safety evaluations, whether the licensee's safety judgments were appropriate, and whether key considerations were effectively evaluated.

3.2 Observations and Findings

As the licensee prepares for SAFSTOR dormancy by isolating buildings and systems that are no longer required, in order to reduce the risk of uncontrolled radioactive release to the environment and maintenance costs, the licensee is routing the Unit 1 radwaste sump pump discharge line to the TBDT, in addition to the current discharge into the Chem-Cleaning Building pipe tunnel sump. The inspectors reviewed the EC 359540 modification (MOD) package referenced in Section 3.1 of this report and associated MOD 50.59 Screening No. 2006-0228, Revision 0, dated June 23, 2007. The inspectors found the licensee's safety evaluation to be comprehensive and appropriate, and inter-relationships between the modification and other systems were evaluated and dispositioned appropriately. Specifically, drain line tie-ins from the Post Incident Drain Line, a Fuel Building floor drain, and the Unit 1 SFP overflow sump drain are currently active. When the radwaste sump pump is in operation, the discharge line will be pressurized, and a means to prevent backflow into these other drain lines is needed. The licensee plans to install a float-type check valve in each of the existing floor drains to prevent water from backing up into the areas served by these drain lines, but also, if necessary, to allow water to flow normally into the drains when the radwaste sump pump is not in operation. The licensee has verified all connections to the modified discharge line and installed appropriate controls where necessary to ensure the rerouted flow does not impact connected equipment or buildings.

3.3 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)**

4.1 Inspection Scope

The inspectors reviewed five selected issue reports (IRs) from the licensee's corrective action item list from the previous 14 months and one IR written due to issues identified by the NRC during the on site inspection performed during September 2008.

4.2 Observations and Findings

The IRs were reviewed by the inspectors to verify the issues were being corrected and actions were being taken in a timely manner and commensurate with safety significance. IRs 919819, *Status Up-Date on Water Intrusion into Unit 1 Chem Cln Bldg*, dated May 14, 2009; 910731, *Evaluation of Unmonitored Radioactive Release not Available*, dated April 23, 2009; 866220, *Request Evaluation of U1, U2, U3 Transuranic Interpretation*, dated January 13, 2009; 827192, *Reducing Environmental Risk*, dated October 6, 2008; 821753, *NRC Annual Inspection for Dresden Unit 1 Identified Issues*, dated September 23, 2008; and 809178, *Deficiencies Identified Around Tank T-105B*, dated August 20, 2008, all contained appropriate corrective actions commensurate with the safety significance of the issue in both scope and timeliness. For example, IR 919819 describes a condition east of the Chemical Cleaning Building where a berm is causing water collection and eventual intrusion into that building. The licensee wrote an action item to develop a plan to address this condition that was due in one month. That due date was met and partial leak repair of the building floor seals have been completed with the second phase currently being planned.

4.3 Conclusions

The inspectors determined that the licensee was adequately capturing issues in its corrective action program and the 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 August 18, 2009. After the in-office review was completed on September 4, 2009, the inspectors presented the remainder of the inspection results to the licensee during a final telephone exit. The licensee acknowledged the observations presented at both meetings.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION
PARTIAL LIST OF PERSONS CONTACTED

Licensee

¹Shane Marik, Plant Manager
¹²Marri Marchionda, Regulatory Assurance Manager
¹Steven Taylor, Decommissioning Project Manager
¹Tim Loch, Unit 1 Engineering Manager
¹Ray Christensen, Unit 1 Project Team
¹²Joseph Griffin, Senior Regulatory Specialist

¹Persons present at the interim exit meeting on August 18, 2009.

²Persons present at the final telephone exit meeting on September 4, 2009.

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

CFR Code of Federal Regulations
DDP Dresden Decommissioning Procedure
DNMS Division of Nuclear Materials Safety
EC Engineering Change
IR Issue Report
MOD Modification
NRC Nuclear Regulatory Commission
SFP Spent Fuel Pool
SSC Systems, Structures and Components
TLD Thermoluminescent Detector
TBDT Turbine Building Drain Tank