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SVPLTR # 06-0042

July 28, 2006

Mr. Stuart A. Richards, Deputy Director
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dresden Nuclear Power Station Units 1, 2, and 3
Facility Operating License No. DPR-2
Renewed Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-010, 50-237, and 50-249

Subject: Groundwater Protection Initiative Voluntary
Data Collection Questionnaire

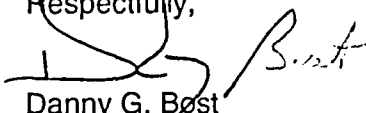
Dear Mr. Richards:

The nuclear industry, in conjunction with the Nuclear Energy Institute, has developed a questionnaire to facilitate the collection of groundwater data at commercial nuclear reactor sites. The objective of the questionnaire is to compile baseline information about the current status of site programs for monitoring and protecting groundwater and to share that information with NRC. The completed questionnaire for Dresden Nuclear Power Station is enclosed.

This submittal contains no new regulatory commitments.

Should you have any questions concerning this letter, please contact Mr. Jim Ellis, Regulatory Assurance Manager, at (815) 416-2800.

Respectfully,


Danny G. Bost
Site Vice President
Dresden Nuclear Power Station

Enclosure

cc: USNRC Document Control Desk
Regional Administrator - NRC Region III
NRC Senior Resident - Dresden Nuclear Power Station
Ralph Andersen, Nuclear Energy Institute

**Industry Groundwater Protection Initiative
Voluntary Data Collection Questionnaire**

Plant: Dresden Nuclear Power Station

1. Briefly describe the program and/or methods used for detection of leakage or spills from plant systems, structures, and components that have a potential for an inadvertent release of radioactivity from plant operations into groundwater.

- As part of a fleet-wide systematic assessment, Dresden Station performed a technical review of each plant system and structure to determine if inadvertent releases from these systems could potentially impact the environment. Each system was evaluated and those system components that contain or could potentially contain radioactively contaminated liquids were identified and assessed to determine if a potential pathway to the environment existed. A cross-functional collegial team made up of personnel from Operations, Engineering, Chemistry, and Radiation Protection performed the technical review.
- The plant systems, structures, processes, and components that have a potential for an inadvertent release are routinely monitored to detect leakage or spills through an expansive radiation monitoring system (RMS), operator rounds and employee observations. Additionally, engineering control systems such as secondary containment, spill prevention, overflow detection and leak detection are used to detect and prevent releases from entering the environment.
- Examples of the surveillance programs and engineering controls employed at Dresden are provided below:
 - The Dresden Nuclear Power Station (DNPS) Units 2 and 3 aboveground spent fuel pools use a Spent Fuel Leakage Detection system to monitor for leakage from the spent fuel pools.
 - Unit 1 spent fuel pool is an in-ground pool with 18-inch thick reinforced walls. The pool does not have a direct leakage monitoring system but is monitored via onsite monitoring wells. The Unit 1 spent fuel pool is defueled.
 - Operations personnel perform routine surveillance rounds each shift. These rounds include the requirement to identify and report leaks and spills. Leaks and spills are addressed through: immediate clean-up, notifying supervision for assistance, writing a work request or initiating a Corrective Action Report.
 - System Engineers perform periodic walkdowns of the systems for which they are responsible. These rounds include the requirement to identify and report leaks and spills. Leaks and spills are addressed through: immediate clean-up, notifying supervision for assistance, writing a work request or initiating a Corrective Action Report.

2. Briefly describe the program and/or methods for monitoring onsite groundwater for the presence of radioactivity released from plant operations.

For the purpose of monitoring groundwater on-site, DNPS has a total of 57 monitoring wells, both inside the protected area (PA) and outside of the PA. DNPS plans to add 21 additional wells to the monitoring plan in the third quarter of 2006.

- The Lower Limits of Detection (LLDs) used during the fleet wide assessment were:

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Nuclide	Typical MDA (pCi/l)
Tritium (H-3)	200
Total Strontium – 89/90	2
Manganese (MN-54)	15
Ferrous Citrate (FE-59)	30
Cobalt (CO-58)	15
Cobalt (CO-60)	15
Zinc (ZN-65)	30
Zirconium (ZR-95)	15
Niobium (NB-95)	15
Cesium (CS-134)	15
Cesium (CS-137)	18
Barium (BA-140)	60
Lanthanum (LA-140)	15

3. If applicable, briefly summarize any occurrences of inadvertent releases of radioactive liquids that had the potential to reach groundwater and have been documented in accordance with 10 CFR 50.75(g).

The Dresden Station records inadvertent release of radioactive liquids in accordance with 10 CFR 50.75(g). As part of the fleet wide assessment, a third party environmental engineering firm was contracted to evaluate historic releases, if any, and determine if a potential pathway to the environment existed. Those releases that were determined to have potentially impacted groundwater were subsequently investigated as part of the fleet wide assessment. Based on the results of the hydrogeologic investigation, the historical releases that may have a current impact on groundwater are:

- - Unit 1 Fuel Pool overflowed in 1989.
 - Leaks in the High Pressure Core Injection (HPCI) piping in 1994, 2004 and 2006.
 - Contaminated Demineralized Water line leak in 1994.
 - Unit 2/3 River Water discharge isolation valve leak in 1999.

4. If applicable, briefly summarize the circumstances associated with any onsite or offsite groundwater monitoring result indicating a concentration in groundwater of radioactivity released from plant operations that exceeds the maximum contaminant level (MCL) established by the USEPA for drinking water.

- Leaks from the High Pressure Core Injection piping have resulted in some on-site groundwater tritium concentrations that exceeded the USEPA groundwater drinking limit for tritium of 20,000 pCi/L. However, no other radionuclides above MCL have been detected in these wells.
- There have been no sample results from any wells outside of the PA that exceeded the USEPA MCL for drinking water.

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- 5. Briefly describe any remediation efforts undertaken or planned to reduce or eliminate levels of radioactivity resulting from plant operations in soil or groundwater onsite or offsite.**
- Past remediation has included excavating and removing soil/ blacktop in areas of spills.