

July 11, 2006

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SEQUOYAH NUCLEAR PLANT - RECORDS OF SPILLS AND UNUSUAL OCCURENCES IMPORTANT TO DECOMISSIONING. Memorandum for inclusion in 10CFR50.75(g)(1) required decommissioning file.

This memorandum documents the identification and evaluation of radioactive spills and unusual occurrences to outdoor environs of the plant site. The time frame of the evaluation involves the spread of contamination from initial unit 1 start up in July of 1981 to July of 2006. Identification was performed by retrieval of spill reports for a portion of the occurrences and through interviews conducted with Sequoyah Radiation Protection staff for the remaining portion. Radiation Protection staff includes personnel employed at Sequoyah through the time period indicated above.

The spills and occurrences identified by personnel interview also included the unsuccessful research for retrieval of radiological survey records from EDMS and RIMS. Survey record type designators such as "Decommissioning Survey" evidently were not used. Definitive time frame of occurrence information is also lacking. Therefore, the continued research of these spills is necessary to retrieve survey documentation for these events.

The following information is relevant to decommissioning and is contained in an appendix to this report.

Event log:

1. Condensate Demineralizer Waste Evaporator (CDWE) building.

Approximated time: Mid 1980's

Event: Radioactivity leached through concrete wall to outside surface of concrete and to soil of outside building wall.

Remediation performed: Soil excavated and building wall painted with sealant. Area included in Radiation Protection quarterly surveys of outside environs. RMD-FO-35 Environmental Monitoring Surveys.

Documentation: Event logged by Radiation Protection personnel interview. Survey records un-retrieved from EDMS at this time.

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2. Unit 2 Additional Equipment Building (Upper Head Injection) building.

Approximated time: Mid 1980's

Event: Hose burst spraying water through door to outside environ.

Remediation performed: Asphalt outside door coated with sealant. Vehicle and Porta-John toilet decontaminated. Area included in Radiation Protection quarterly surveys of outside environs. RMD-FO-35 Environmental Monitoring Surveys.

Documentation: Event logged by Radiation Protection personnel interview. Survey records un-retrieved from EDMS at this time.

3. Auxiliary Building roof.

Approximated time: Early 1990's

Event: Radioactive contamination found on roof. Radioactivity carried to roof by Auxiliary Building ventilation stack discharge. Origination of contamination determined to be from unfiltered fuel handling ventilation trains.

Remediation performed: Contamination removed from roof. Area included in quarterly surveys of outside environs. RMD-FO-35 Environmental Monitoring Surveys

Documentation: Event logged by Radiation Protection personnel interview. Survey records un-retrieved from EDMS at this time.

4. Unit 2 Refuel Water Storage Tank (RWST) Moat Drain

Event time: May 10, 1995

Event: Performance of Radiation Protection routine directive RMD-FO-35 Environmental Monitoring Surveys identified radioactivity in soil at the out fall of the unit 2 RWST moat drain pipe.

Remediation performed: Follow up sampling identified isotopes of Co58, Co60, Cs134 and Cs137.

Documentation: Radioactivity in soil recorded by survey number D-95-0558 and attached sample gamma analysis paper work.

5. RadDi to 706' el. Railroad Bay Outdoor Environ.

Event time: May 19, 1997

Event: The conductivity probe on the inlet to the Modularized Transfer Demineralization System (MFTDS) located in the 706' elevation Railroad Bay failed. Approximately 3000 gallons was spilled with an estimated 600 - 1000 gallons released to the RadWaste Yard immediately adjacent to the Railroad Bay door.

Remediation performed: Asphalt and soil excavated into LSA boxes. Area included in Radiation Protection quarterly surveys of outside environs. RMD-FO-35 Environmental Monitoring Surveys

Documentation: Scope of spill and remediation documented in RADWASTE YARD SPILL FINAL SURVEY REPORT dated July 31, 1997.

6. Unit 2 Additional Equipment Building (Upper Head Injection) Sump Spill

Event time: January 19, 1998

Event: Unit 2 Additional Equipment Building (Upper Head Injection) sump overflowed to the door way leading to the outdoor environ. Outdoor spill path way include asphalt and soil leading to a storm drain.

Remediation performed: Asphalt and soil excavated into LSA boxes. Area included in Radiation Protection quarterly surveys of outside environs. RMD-FO-35 Environmental Monitoring Surveys.

Documentation: Scope of spill and remediation documented in UNIT 2 ADDITIONAL EQUIPMENT BUILDING SUMP SPILL RECOVERY REPORT dated January 22, 1998.

7. Unit 1 Refuel Water Storage Tank (RWST) Moat Drain

Event time: April 3, 2002

Event: Pre-excavation samples of the steam generator replacement crane foundation area identified radioactivity in the soil surrounding the unit 1 Refuel Water Storage Tank (RWST) moat drain.

Remediation performed: Soil excavated into LSA boxes. Area included in Radiation Protection quarterly surveys of outside environs. RMD-FO- 35 Environmental Monitoring Surveys.

Documentation: Map and sample gamma analysis data.

8. Identification of Tritium in Unit 1 and 2 RWST Moat Collected Rain Water

Event time: July 17, 2006

Event: Action item performance to determine sources of tritium in ground water included the evaluation of unit 1 and 2 moat rain water.

Remediation performed: Problem event report 106937 generated to initiate corrective actions to ensure rain water does not escape to environ outside of moats.

Documentation: Moat water sample and analysis information documented in report RWST MOAT WATER as a POTENTIAL TRITIUM in GROUND WATER SOURCE dated July 17, 2006. Report includes needs for process improvements to prevent release of moat water to environ outside of moats.

Appendix's

- Appendix 1, Unit 2 Refuel Water Storage Tank (RWST) Moat Drain, 10 pages
- Appendix 2, Radwaste Yard Spill Final Survey Report, 57 pages
- Appendix 3, Unit 2 Additional Equipment Building Sump Spill Recovery Report, 56 pages
- Appendix 4, Unit 1 Refuel Water Storage Tank (RWST) Moat Drain, 33 pages
- Appendix 5, RWST Moat Water as a Potential Tritium in Ground Water Source, 4 pages



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Appendix

cc (Appendix):

EDMS, WT CA-K