



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406

November 3, 2008

James Lenois
ISFSI Manager
Connecticut Yankee Atomic Power Company
362 Injun Hollow Road
East Hampton, CT 06424-3099

SUBJECT: INSPECTION 07200039/2008001, CONNECTICUT YANKEE ATOMIC POWER
COMPANY, EAST HAMPTON, CT

Dear Mr. Lenois:

On September 18, the United States Nuclear Regulatory Commission completed an announced inspection at your Connecticut Yankee Atomic Power Company facility. The inspector conducted an onsite inspection on August 20, 2008. The preliminary results of the inspection were discussed with you and James Connell on August 20, 2008, and on September 18, 2008, the inspector conducted an exit meeting via telephone with you and Mr. Connell. The enclosed report presents the results of this inspection.

This inspection was an examination of activities conducted under your license as they relate to safety and security, compliance with the Commission's rules and regulations, and with the conditions of your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel. Based on the results of this inspection, no violations were identified.

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No response to this letter is required. Your cooperation with us is appreciated.

Sincerely,

/RA/

Raymond Lorson, Chief
Decommissioning Branch
Division of Nuclear Materials Safety

Docket No. 07200039

License No. SFGL-21

Enclosure 1: Inspection Report No. 07200039/2008001

Enclosure 2: Security Attachment to Inspection Report No. 07200039/2008001

cc:

W. Norton, President and Chief Executive Officer

R. Capstick, Communications Manager

J. Fay, General Counsel

J. Connell, QA Manager

C. Pizzella, Treasurer

J. Brooks, Connecticut Attorney General Office

T. Bondi, Town of Haddam

State of Connecticut, SLO Designee

cc w/o encl 2:

H. Curley, SFAC

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H. Curley, SFAC

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DATE	10/30/08		11/03/08				

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 07200039/2008001

Docket No. 07200039

License No. SFGL- 21

Licensee: Connecticut Yankee Atomic Power Company

Facility: Connecticut Yankee Atomic Power Station

Location: 362 Injun Hollow Road
East Hampton, CT

Inspection Date: August 20, 2008

Dates Follow-up
Information Reviewed: September 16 - 18, 2008

Inspector: Mark C. Roberts, Senior Health Physicist
Decommissioning Branch
Division of Nuclear Materials Safety

Approved By: Raymond Lorson, Chief
Decommissioning Branch
Division of Nuclear Materials Safety

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Enclosure 1

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EXECUTIVE SUMMARY

Connecticut Yankee Atomic Power Company
NRC Inspection Report No. 07200039/2008001

The inspection was a review of the operation of the Independent Spent Fuel Storage Installation (ISFSI). The report covers an announced safety inspection conducted by one regional inspector. The inspection consisted of field observations and an evaluation of the licensee's programs for radiation protection, self-assessment and corrective actions, surveillance and maintenance, environmental monitoring, fire protection, emergency planning, training, and security.

The licensee implemented its radiation protection, environmental monitoring, and fire protection programs in accordance with its license, Technical Specifications, and applicable regulations. The licensee maintains appropriate surveillance and maintenance programs to ensure that equipment is adequately maintained and tested. Emergency plan drills, equipment inventories, and emergency contact list updates were performed at designated frequencies. The licensee performed a self-assessment and maintained an adequate program for documenting issues and developing corrective actions. The licensee's training records indicated that all personnel were trained to perform their designated tasks.

A. NRC Identified Findings

None

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REPORT DETAILS**1.0 Operation of an Away-from-Reactor Independent Spent Fuel Storage Installation****1.1 Radiation Protection Program****a. Inspection Scope**

The inspector reviewed the facility's radiation protection program to verify compliance with the license, Technical Specifications (TS), and applicable regulations. The inspector evaluated personnel monitoring records, radiation and contamination surveys, radiological survey meter calibration, and the radiological work control process (radiation work permits (RWPs)).

b. Observations and Findings

No findings of significance were identified.

The licensee utilizes a contractor to provide most of its radiological protection needs, including personnel monitoring, environmental monitoring, radiation survey meter calibration, and radiological and contamination surveys. Work within the radiologically controlled area was controlled through the use of RWPs. An annual review of the radiation protection program was conducted by the contractor's nuclear services manager. The reviewer made several recommendations for program enhancement, but no significant findings were identified. The licensee monitored site personnel through the use of thermoluminescent dosimeters (TLDs). The inspector evaluated the licensee's personnel monitoring records for 2007 - 2008 and determined that the site personnel receive much less than 10 percent of the annual regulatory limit during operation of the ISFSI.

The licensee performed cask surface dose rate and contamination surveys on a quarterly basis. The ISFSI routine survey documentation indicated that the surface dose rates and contamination levels were well below regulatory limits and TS values. The ISFSI Manager indicated that previous radiation readings on the casks were not performed at the same location, but has instructed the contractor to make measurements in the same areas during each quarterly survey to allow trending of cask radiation exposure rates over time.

The licensee kept a sealed radioactive check source, in a locked cabinet, for radiation survey meter performance checks. Radiological survey meters for both contamination and radiation exposure rate measurements were maintained for routine and emergency use. Instruments were calibrated annually by the contractor and were checked prior to and after each use. All instruments examined had been calibrated within the previous twelve months.

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c. Conclusion

The licensee implemented its radiation protection program in accordance with its license, TS, and applicable regulations.

1.2 Self-Assessment and Corrective Action Programa. Inspection Scope

The inspector reviewed the facility's corrective action program and the annual quality assurance (QA) audit results. The inspector interviewed individuals and reviewed selected procedures and condition reports (CRs) related to ISFSI performance.

b. Observations and Findings

No findings of significance were identified.

The licensee maintained a corrective action program that is used to identify potential safety issues and areas for quality improvement. Issues were identified through specific self-assessments (e.g., the annual QA audit and the annual radiation protection program assessment) or from observations during daily activities. Deficiencies and areas of improvement from the most recent QA audit had been entered into the corrective action program. The inspector selected several closed condition reports for review and determined that closure documents were readily retrieved and adequately described resolution of issues and actions to prevent recurrence.

c. Conclusion

The licensee maintained adequate programs for self-assessment, documentation of issues, and development of corrective actions.

1.3 Surveillance and Maintenancea. Inspection Scope

The inspector reviewed the licensee's surveillance and maintenance program associated with the dry storage of the spent fuel to verify compliance with the license, TS, and applicable regulations. The inspector toured the ISFSI pad, interviewed individuals, and reviewed selected procedures and records.

b. Observations and Findings

No findings of significance were identified.

The inspector conducted a walk-down of the ISFSI with licensee staff. Logs and past survey records indicated that the casks operated as designed with no abnormalities in temperatures and no elevated radiation or contamination levels. As part of the daily surveillance activities, the licensee staff performed a visual examination of the cask

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vents to ensure that the vent openings were not blocked. The temperature of the air exiting the cask vents is continuously monitored and recorded.

The licensee uses the master list in ISFSI Procedure OP-8, ISFSI Preventive Maintenance and Surveillance Program to track periodic surveillance and maintenance requirements. Specific surveillance requirements are conducted in accordance with approved procedures. Completed surveillance procedures are reviewed by the ISFSI Manager and the records retained in accordance with the records retention program. A CR and a Trouble Report/Work Request are generated to implement corrective actions for surveillances that do not meet the acceptance criteria. The inspector reviewed the master list from the procedure and found that the licensee was tracking and performing required surveillances of vertical concrete casks, fire protection equipment, and emergency system components. Required daily performance checks are incorporated into the daily security logs. The licensee did not encounter any major issues during maintenance activities.

c. Conclusion

The licensee implemented its surveillance and maintenance program in accordance with the license and the TS.

1.4 Environmental Monitoring

a. Scope

The inspector reviewed the licensee's ISFSI Annual Radioactive Effluent Release Report, the ISFSI Annual Radiological Environmental Operating Report, and the environmental monitoring program TLD results for 2007 and 2008.

b. Observations and Findings

No findings of significance were identified.

The licensee monitored direct radiation from the ISFSI using TLDs located near and along the perimeter of the site. The environmental TLDs are exchanged on a quarterly basis. The licensee determined that the annual dose equivalent to any individual who is located at the boundary of the controlled area would not exceed 25 millirem to the whole body from direct radiation from the ISFSI as required by 10 CFR 72.104.

The inspector reviewed the ISFSI Annual Radioactive Effluent Release Report that is required to be transmitted to the NRC. Decommissioning activities at the former Connecticut Yankee Atomic Power Plant have resulted in the removal of gaseous and liquid effluent sources and pathways for potential radioactive effluent releases. Operation of the ISFSI facility therefore did not result in any effluent releases during 2007.

Although not required by the Connecticut Yankee Offsite Dose Calculation Manual (ODCM), samples of water run-off from the ISFSI pad were collected and analyzed for

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gamma-emitting radionuclides. All sample results were less than the radionuclide detection concentrations.

c. Conclusions

The licensee established and maintained an environmental monitoring program in accordance with TS and 10 CFR Part 50 and 72 requirements.

1.5 Fire Protection and Emergency Planning

a. Inspection Scope

The inspector reviewed the facility's fire protection and emergency planning programs to verify compliance with the applicable regulations. The inspector interviewed licensee personnel, reviewed records and documents, and toured the facility.

b. Observations and Findings

No findings of significance were identified.

The inspector performed a walkdown of the ISFSI pad and verified the absence of any transient combustibles on the pad and in the vicinity of the casks. The licensee's fire hazard analysis provided administrative controls for limiting the quantity of fuel in vehicles authorized near the ISFSI concrete pad and also provided minimum brush clearing cutback distances to limit the impact of a wildfire. The licensee has procedures for fire-fighting, reporting fires and emergencies, and maintaining equipment required in the event of a fire. The licensee established letters of agreement with a local volunteer fire department and a volunteer ambulance association, as well as the State of Connecticut and a local hospital to provide fire-fighting and emergency support. The licensee conducted emergency drills that incorporated responses by the offsite fire department and the offsite ambulance association. Critiques following completion of each of the drills documented strengths and areas of improvement. Overall assessments were positive with only minor areas of improvement noted.

The licensee's emergency plan and emergency plan implementing procedures were current. Emergency plan drills, equipment inventories, and emergency contact list updates were performed at the designated frequencies.

c. Conclusions

The licensee implemented its fire protection and emergency planning program in accordance with its TS and applicable regulations.

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1.6 Training**a. Inspection Scope**

The inspector reviewed the licensee's training program to ensure personnel were trained to perform their designated tasks. The inspector interviewed licensee personnel and reviewed selected training materials and records.

b. Observations and Findings

No findings of significance were identified.

The licensee conducted initial training for a new employee and refresher training for the remaining site employees. The training program addressed the areas of site organization, radiation protection, industrial safety, fire protection, quality assurance program, security plan, ISFSI emergency plan, and fitness for duty. Refresher training incorporated input from the corrective action program. During the observations, the licensee staff was knowledgeable regarding the objectives of performed activities, the equipment being used, and the processes used on site to document and resolve issues.

c. Conclusions

The licensee's training records indicated all personnel were trained to perform their designated tasks.

3.0 Exit Meeting

On August 20, 2008, the inspector presented the preliminary inspection results to James Lenois and James Connell. The inspector confirmed that proprietary information was not provided or examined during the inspection. On September 18, 2008, the inspector conducted an exit meeting via telephone with Mr. Lenois and Mr. Connell.

ATTACHMENT: SUPPLEMENTAL INFORMATION

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SUPPLEMENTAL INFORMATION**PARTIAL LIST OF PERSONS CONTACTED****Licensee**

J. Connell, ISFSI Radiation Protection/Quality Assurance Manager
R. Cox, Senior Security Supervisor
R. Desmarais, ISFSI Shift Supervisor
J. Lenois, ISFSI Operations Manager
C. Rival, Securitas Security Services Project Manager
S. Salisbury, ISFSI Shift Supervisor

INSPECTION PROCEDURES (IPs) USED

IP 60855 Operation of an Independent Spent Fuel Storage Installation
IP 60858 Away-from-reactor ISFSI Inspection Guidance

ITEMS OPENED, CLOSED, AND DISCUSSED**Items Opened, Discussed and Closed**

None

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
CFR	Code of Federal Regulations
CR	Condition Report
IP	Inspection Procedure
ISFSI	Independent Spent Fuel Storage Installation
ODCM	Offset Dose Calculation Manual
QA	Quality Assurance
RWP	Radiation Work Permit
TLD	Thermoluminescent Dosimeter
TS	Technical Specifications

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LIST OF DOCUMENTS REVIEWED

Radiation Protection

Occupational Radiation Exposure Report - Monitoring Periods 7/1-2007 – 12/31/2007 and 1/1/2008-6/30/2008

Connecticut Yankee Atomic Power Company ISFSI Procedure RP-2, Radiological Surveys and Postings, Rev. 2, September 17, 2008

ISFSI Routine Surveys, 2007 and 2008

Radiation Survey Meter and Air Sampler Calibration Records, 2007 and 2008

Radiation Work Permit No. 2008-401, Routine ISFSI Activities

Radiation Protection Assessment, Connecticut Yankee ISFSI, August 5-8, 2008

Surveillance and Maintenance

Connecticut Yankee Atomic Power Company ISFSI Procedure OP-8, ISFSI Preventive Maintenance and Surveillance Program, Rev. 1, June 18, 2008

Connecticut Yankee, Haddam Neck ISFSI, Updated Final Safety Analysis Report, CY-07-129, January 10, 2008

Connecticut Yankee Atomic Power Company ISFSI Procedure AD-7, Corrective Action Program, Rev. 3, June 24, 2008

Report for Quality Assurance Audit CY-08-A03-01, "ISFSI Operations Audit", April 14, 2008

Environmental Monitoring

Haddam Neck Independent Spent Fuel Storage Installation Annual Radioactive Effluent Release Report, January – December 2007; (Includes Haddam Neck Plant Independent Spent Fuel Storage Installation Offsite Dose Calculation Manual, Rev. 22), April 2008

Haddam Neck Independent Spent Fuel Storage Installation Annual Radiological Environmental Operating Report, January – December 2007; April 2008

Haddam Neck Environmental Dosimetry Reports – 2007 and 2008

Fire Protection and Emergency Planning

Connecticut Yankee Atomic Power Company ISFSI Procedure FP-2, ISFSI Fire Hazards Analysis, Rev. 1, May 18, 2008

ISFSI Emergency Plan Drill, Fire/Support Drill 07, October 18, 2007

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ISFSI Emergency Plan Drill, Medical/Rad Monitoring/Support Drill 2007, December 29, 2007

Connecticut Yankee Atomic Power Company, Haddam Neck Plant Emergency Plan, Rev. 9, February 27, 2008

Connecticut Yankee Atomic Power Company ISFSI Emergency Operating Procedures; November 15, 2006 and July 30, 2007

Letters of Agreement between Connecticut Yankee Atomic Power Company and volunteer fire department, volunteer ambulance association, State of Connecticut and nearby hospital