

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 07200031/2010001
Docket No. 07200031
License No. SFGL-13
Licensee: Yankee Atomic Electric Company
Location: 49 Yankee Road
Rowe, MA 01367
Inspection Date: November 30, 2010
Inspectors: Stephen Hammann
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EXECUTIVE SUMMARY

Yankee Atomic Electric Company
NRC Inspection Report No. 07200031/2010001

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 two regional inspectors. The inspection was an evaluation of the licensee's programs for radiation protection, fire protection, emergency preparedness, surveillance, environmental monitoring, training, and quality assurance (QA) activities.

The licensee implemented its radiation protection, environmental monitoring, and fire protection programs in accordance with the Certificate of Compliance (CoC), CoC Technical Specifications (TS), and applicable regulations. The licensee maintains appropriate surveillance activities to ensure the spent fuel storage casks are adequately maintained. 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 QA program for documenting issues and developing corrective actions. The licensee's training records indicated all personnel were trained to perform their designated tasks.

Based on the results of this inspection, no findings were identified.

REPORT DETAILS

1.0 Operation of an Away-from-Reactor Independent Spent Fuel Storage Installation

1.1 Radiation Protection and Environmental Monitoring

a. Inspection Scope

The inspectors reviewed the facility's radiation protection and environmental monitoring programs to verify compliance with the CoC, the CoC TS, and applicable regulations. The inspectors toured the ISFSI, interviewed personnel, and reviewed the licensee's relevant procedures, records, and reports.

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 radiation work permits (RWPs). Also, an annual review of the radiation protection program is performed by the contractor. The licensee monitored site personnel through the use of thermoluminescent dosimeters (TLDs). The inspectors evaluated personnel monitoring records, radiation and contamination surveys, and RWPs issued since the last inspection completed on September 18, 2008.

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 inspectors reviewed the Annual Radiological Environmental Operating Reports and the Annual Radioactive Effluent Release Reports that were transmitted to the NRC as required. The reports did not indicate any dose to the public or effluent releases.

c. Conclusions

The licensee implemented its radiation protection and environmental monitoring programs in accordance with its license, CoC TS, and applicable regulations.

1.2 Fire Protection and Emergency Planning

a. Inspection Scope

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

b. Observations and Findings

No findings of significance were identified.

The inspectors 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 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.

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 programs in accordance with its CoC TS and applicable regulations.

1.3 Surveillance Activities

a. Inspection Scope

The inspectors reviewed the licensee's surveillance activities program associated with the dry storage of the spent fuel to verify compliance with the CoC, CoC TS, Final Safety Analysis Report (FSAR), and applicable regulations. The inspectors toured the ISFSI pad, interviewed individuals, and reviewed selected procedures and records.

b. Observations and Findings

No findings of significance were identified.

The inspectors conducted a walk-down of the ISFSI with licensee staff. Temperature logs and survey records indicated that the casks operated as designed with no abnormalities in temperatures and no elevated radiation or contamination levels. Specific surveillance requirements are conducted in accordance with approved procedures. As part of the daily surveillance activities, the licensee staff performed a visual examination of the cask vents to ensure that the vent openings were not blocked. The temperature of the air exiting the cask vents is continuously monitored and is recorded twice per day. Required daily performance checks are incorporated into the daily security logs. The annual visual inspection of the vertical concrete cask (VCC) is performed as required. A Condition Report (CR) and a Trouble Report/Work Request are generated to implement corrective actions for surveillances that do not meet the acceptance criteria.

c. Conclusions

The licensee implemented its surveillance program in accordance with the CoC, CoC TS, and the FSAR.

1.4 Training

a. Inspection Scope

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

b. Observations and Findings

No findings of significance were identified.

The licensee has created a training matrix that has modules for each ISFSI related procedure. The training can include computer-based, classroom, and/or on the job training modules. The training is performed by shift supervisors and is given initially and then annually thereafter. During the interviews, the licensee staff was knowledgeable regarding their assigned duties.

Training is also given annually to offsite emergency responders.

c. Conclusions

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

1.5 Quality Assurance

a. Inspection Scope

The inspectors reviewed the facility's QA program to verify compliance with the CoC and applicable regulations. The inspectors interviewed individuals and reviewed selected procedures, audits, and reports related to the licensee's QA program.

b. Observations and Findings

No findings of significance were identified.

The licensee maintains a QA program that utilizes a corrective action program to identify potential safety issues and areas for quality improvement. Issues were identified through specific self-assessments (e.g., the annual QA audit) 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 inspectors selected several open and several closed CRs for review. Most of the CRs reviewed were related to the emergency program and represented areas for improvement rather than deficiencies. The closed CRs adequately described resolution of issues and actions to prevent recurrence.

c. Conclusions

The licensee QA program is adequate to meet the requirements of the CoC and applicable regulations.

Exit Meeting Summary

On November 30, 2010, the inspectors presented the inspection results to Robert Mitchell, James Connell, and David Yorke. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Connell, ISFSI Quality Assurance Manager
R. Mitchell, ISFSI Operations Manager
D. Yorke, ISFSI Operations Specialist

INSPECTION PROCEDURES USED

60858 Away-From-Reactor ISFSI Inspection Guidance

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

AD-02, Conduct of ISFSI Operations
AD-15, ISFSI Surveillance and Report Program
AD-16, ISFSI Personnel Training and Qualifications
AD-21, Emergency Plan Drills
AD-27, Emergency Plan Administration
Annual Radiological Environmental Operating Reports, 2008 and 2009
CR-09-011, Emergency Plan Critique Tracking
CR logs, 2009 and 2010
FP-01, ISFSI Fire Protection Program
FP-04, ISFSI Fire Hazards Analysis
ISFSI 2009 Emergency Plan Exercise – Fire, Medical, Radiological (scenario)
ISFSI Emergency Plan (EP)
ISFSI Memo – 09-025, E-Plan Independent Review
ISFSI Memo – 09-046, Emergency Exercise Critique close out
ISFSI Memo – 09-051, 2009 Yankee Rowe Emergency Plan Assessment
ISFSI Memo – 09-053, Review of Emergency Plan Implementing Procedures
ISFSI Memo – 09-054, Letter of Agreement Review
ISFSI Memo – 10-022, Develop and Maintain Emergency Plan Lesson Plan
ISFSI Memo – 10-026, “Distribution of Quality Assurance Audit Y-10-AO4-01 – ISFSI Operations Audit”
ISFSI Memo – 10-027, “Distribution of the 2010 Yankee Atomic Electric Company Independent Management Assessment Report of the Effectiveness of the Quality Assurance Program”
ISFSI Memo – 10-054, State and Local Authorities EAL Review Documentation

ISFSI Memo – 10-058, Annual Radiation Protection Drill
ISFSI Quality Assurance Program
ISFSI Training Program Evaluation 2010
Maintenance/Work Request 09-032
OP-6, ISFSI Operating Procedure Vertical Concrete Cask Repair
OP-7, ISFSI Annual Inspection Program
SP-07, Communications

LIST OF ACRONYMS USED

ADAMS	Agency Wide Document Access and Management System
CFR	Code of Federal Regulations
CoC	Certificate of Compliance
CR	Condition Report
FSAR	Final Safety Analysis Report
ISFSI	Independent Spent Fuel Storage Installation
NRC	Nuclear Regulatory Commission
QA	Quality Assurance
RWP	Radiation Work Permit
TLD	Thermoluminescent Dosimeters
TS	Technical Specifications
VCC	Vertical Concrete Cask