



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

April 7, 2009

Docket No. 05000245

License No. DPR-21

David A. Christian
President and Chief Nuclear Officer
Dominion Nuclear Connecticut, Inc.
5000 Dominion Boulevard
Glenn Allen, VA 23060-6711

SUBJECT: NRC INSPECTION REPORT NO. 05000245/2009007, DOMINION NUCLEAR
CONNECTICUT, INC., MILLSTONE POWER STATION UNIT 1, WATERFORD,
CT

Dear Mr. Christian:

On March 9-11, 2009, Laurie Kauffman of this office conducted a safety inspection of activities authorized by the above listed NRC license. The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations and the license conditions. The inspection consisted of observations by the inspector, interviews with personnel, and a selective examination of representative records. The findings of the inspection were discussed with Mr. L. Morris and other members of your organization on March 11, 2009 at the conclusion of the inspection.

Within the scope of this inspection, no violations were identified.

In accordance with 10 CFR Part 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web Site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Randolph C. Ragland Jr., Chief
Decommissioning Branch
Division of Nuclear Materials Safety

cc w/ encl:
see next page

cc w/ encl:

A.J. Jordan, Site Vice President, Millstone Station
W. R. Matthews, Senior Vice President - Nuclear Operations
R. Griffin, Director, Nuclear Safety and Licensing, Millstone Station
C. L. Funderburk, Director, Nuclear Licensing and Operations Support
L. Morris, Plant Manager, Millstone Station
W. Bartron, Supervisor, Station Licensing
P. J. Parulis, Manager - Nuclear Oversight
L. M. Cuoco, Senior Nuclear Counsel
J. Spence, Manager Nuclear Training
C. Brinkman, Manager, Washington Nuclear Operations
J. Roy, Director of Operations, Massachusetts Municipal Wholesale Electric Company
First Selectmen, Town of Waterford
B. Sheehan, Chair, NEAC
P. Rathbun, Vice-Chair, NEAC
E. Wilds, Jr., Ph.D, Director, State of Connecticut SLO Designee
J. Buckingham, Department of Public Utility Control
C. Meek-Gallagher, Commissioner, Suffolk County, Department of Environment and Energy
V. Minei, P.E., Director, Suffolk County Health Department, Division of Environmental Quality
R. Shadis, New England Coalition Staff
S. Comley, We The People
D. Katz, Citizens Awareness Network (CAN)
R. Bassilakis, CAN
P. Eddy, Electric Division, Department of Public Service, State of New York
F. Murray, SLO Designee, President and CEO, New York State Energy Research and
N. Burton, Esq.

April 7, 2009

Docket No. 05000245

License No. DPR-21

David A. Christian
President and Chief Nuclear Officer
Dominion Nuclear Connecticut, Inc.
5000 Dominion Boulevard
Glenn Allen, VA 23060-6711

SUBJECT: NRC INSPECTION REPORT NO. 05000245/2009007, DOMINION NUCLEAR
CONNECTICUT, INC., MILLSTONE POWER STATION UNIT 1, WATERFORD,
CT

Dear Mr. Christian:

On March 9-11, 2009, Laurie Kauffman of this office conducted a safety inspection of activities authorized by the above listed NRC license. The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations and the license conditions. The inspection consisted of observations by the inspector, interviews with personnel, and a selective examination of representative records. The findings of the inspection were discussed with Mr. L. Morris and other members of your organization on March 11, 2009 at the conclusion of the inspection.

Within the scope of this inspection, no violations were identified.

In accordance with 10 CFR Part 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web Site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Randolph C. Ragland Jr., Chief
Decommissioning Branch
Division of Nuclear Materials Safety

cc w/ encl:
see next page

Distribution:
See next page

DOCUMENT NAME: G:\WordDocs\Current\Insp Letter\LDPR-21.2009007.doc

SUNSI Review Complete: LKauffman

After declaring this document "An Official Agency Record" it will be released to the Public.

To receive a copy of this document, indicate in the box: "C" = Copy w/o attach/encl "E" = Copy w/ attach/encl "N" = No copy

OFFICE	DRP/RI	DNMS/RI	DNMS/RI
NAME	*RBellamy/LKauffman f/	LKauffman/LKauffman	RRagland/RCR
DATE	04/07/09	04/07/09	04/07/09

OFFICIAL RECORD COPY

*concurrence via email

D. Christian

2

1

Distribution w/encl: via email

S. Collins, RA

M. Dapas, DRA

J. Kinneman, DNMS

D. Collins, DNMS

J. Hickman, FSME

D. Screnci, PAO

D. Holland, NMSS

R. Bellamy, DRP

S. Barber, DRP

C. Newport, DRP

S. Shaffer, SRI

B. Haagensen, RI

J. Krafty, RI

C. Kowalshyn, OA

D. Bearde, DRP

S. Campbell, RI OEDO

M. Kowal, NRR

R. Nelson, NRR

C. Sanders, NRR, PM

ROPreports@nrc.gov

Region I Docket Room (with concurrences)

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000245/2009007
Docket No. 05000245
License No. DPR-21
Licensee: Dominion Nuclear Connecticut, Inc.
Location: Millstone Power Station, Unit 1 (U1)
Rope Ferry Road
Waterford, CT 06385
Inspection Dates: March 9-11, 2009

Inspector: /RA/ 4/7/2009
Laurie A. Kauffman
Health Physicist date

Approved By: /RA/ 4/7/2009
Randolph C. Ragland Jr., Chief
Decommissioning Branch
Division of Nuclear Materials Safety date

EXECUTIVE SUMMARY

Dominion Nuclear Connecticut, Inc.
NRC Inspection Report No. 05000245/2009007

A routine announced safety inspection was conducted from March 9-11, 2009, at Millstone Power Station Unit 1. The inspection reviewed operations, maintenance, and plant support activities associated with the Unit 1 plant while in Safestore status. Within the scope of this inspection, no safety concerns or violations were identified.

Operations and Decommissioning

The licensee maintained an effective spent fuel pool safety program that included routine operator inspections and oversight, chemistry monitoring and control, and maintenance of equipment important to safety. This program ensured that equipment and chemistry operational parameters were maintained within technical specification limits.

The licensee effectively utilized the established corrective action program to self-identify, evaluate, and resolve deficiencies associated with the Unit 1 facility. Condition reports were properly prioritized and corrective actions were tracked in accordance with approved procedures.

Maintenance and Surveillance

The licensee effectively implemented the preventive maintenance and surveillance program to ensure that systems and components important for maintaining the safe storage of spent fuel are operable and reliable. Established controls and measures to plan, schedule, and perform Unit 1 work activities were adequate.

Plant Support and Radiological Controls

The licensee provided adequate controls to limit exposures of workers to external sources of radiation. Posting and labeling of radioactive materials and radiation areas met regulatory requirements. Radiological controls and dose estimates associated with Unit 1 tasks were effective to achieve dose goals. The licensee maintained adequate radioactive effluent control and radiological environmental monitoring programs in accordance with regulatory requirements. The licensee effectively implemented the radioactive waste management and transportation programs.

REPORT DETAILS

I. Operations and Decommissioning

1. Spent Fuel Pool Safety

a. Inspection Scope (Inspection Procedure (IPs) 60801 and 71801)

The inspector reviewed the condition and operational status of equipment and components important to the safe storage of spent fuel. The inspection consisted of tours of plant areas, visual observation of plant equipment, review of surveillance records, and interviews with responsible personnel. The inspector reviewed selected records of Operator logs for the first quarter 2009, associated with Unit 1 systems and components important to the safe storage of spent fuel. The inspector reviewed Surveillance Procedure SP 852, *Spent Fuel Pool Chemistry Control*, Revision 002 that specifies the sampling and analysis requirements for the spent fuel pool water and associated systems and the associated monthly sample and analysis data for the spent fuel pool water chemistry from January 2008 through February 2009. The inspector reviewed Operating Procedure C OP 200.13, *Cold Weather Preparations*, Revision 002-02 that specifies preparations to maintain the operability of systems and equipment identified as important to the safe storage of spent fuel during the cold weather season. The inspector reviewed the U1 Defueled Safety Analysis Report (DSAR) and Technical Specifications (TS) and compared these requirements with associated procedures to ascertain that procedures were consistent with the DSAR and TS.

b. Observations and Findings

The inspector toured the facility, and verified that components and equipment important to the safe storage of spent fuel were operable and adequately maintained. The inspector observed a plant equipment operator during shift rounds. The plant equipment operator was knowledgeable of the surveillance requirements and adequately inspected components and equipment for proper operation. During the tour, the inspector observed several telltale leak detection stations during the tour and noted there was no indication of active spent fuel pool leakage. The leak detection system collects any leakage through the spent fuel pool stainless steel liner and routes the leakage to one of the various telltale stations for visual observation. The inspector also reviewed selected records of Operator logs and noted that the equipment and operational parameters were maintained within the expected ranges. The inspector also noted that the material condition of the plant equipment and building areas was adequate.

During the facility tour, the inspector verified that heaters were energized where required and space heaters were appropriately stationed. The inspector noted that the licensee implemented the cold weather preparation procedure in August 2008, prior to the cold weather, as required by the procedure. The inspector also noted that equipment required to be operable during cold weather conditions in support of safe storage of spent fuel, was operable. No safety concerns were identified.

The inspector noted that the spent fuel pool temperature and water level and the decay heat removal system flow rates were monitored in accordance with established

procedures. The inspector noted that TS 3.1.1., which establishes the spent fuel pool water level, was met.

From a review of the monthly sample and analysis data for the spent fuel pool water chemistry, the inspector noted that the licensee trended the data and verified that the data indicated no obvious degradation of spent fuel. The inspector noted that TS 5.6.3., which established the spent fuel pool water chemistry parameters, was met.

c. Conclusions

The licensee maintained an effective spent fuel pool safety program that included routine operator inspections and oversight, chemistry monitoring and control, and maintenance of equipment important to safety. This program ensured that equipment and chemistry operational parameters were maintained within technical specification limits.

2. Corrective Action Program

a. Inspection Scope (IP 40801)

The licensee's program for identifying, resolving, and preventing issues that degrade safety or the quality of decommissioning activities was evaluated. The inspector reviewed selected Unit 1 condition reports that were issued since the last inspection for safety-related issues. The condition reports were reviewed to evaluate the licensee's effectiveness in identifying issues that could impact the safe storage of spent fuel and the implementation of associated corrective actions. The inspector discussed the tracking, current status, and closure of selected corrective actions with cognizant personnel.

b. Observations and Findings

The inspector noted that the priority for addressing condition reports and implementation of corrective actions was adequate and based upon safety significance. The inspector noted that the threshold for identification of issues entered into the corrective action program was adequate. The inspector noted that adequate corrective actions were established to address identified issues, and that corrective actions were being tracked to closure utilizing established corrective action program. No adverse trends or safety concerns were identified.

c. Conclusions

The licensee effectively utilized the established corrective action program to self-identify, evaluate, and resolve deficiencies associated with the Unit 1 facility. Condition reports were properly prioritized and corrective actions were tracked in accordance with approved procedures.

II. Maintenance and Surveillance

a. Inspection Scope (IPs 62801)

The inspector reviewed the licensee's preventive maintenance and surveillance program including planned and completed maintenance and surveillance activities of systems and components important for maintaining the safe storage of spent fuel. The inspector reviewed selected annual inspection work packages for the spent fuel pool cooling pumps and motors, the decay heat removal pumps and motors, the ventilation supply fans and motors, and the standby diesel generator, to verify that work was being performed within the established frequencies and that the equipment was being properly maintained. The inspector toured plant areas, observed a balance of plant ventilation system annual inspection, and discussed system and component performance with personnel.

b. Observations and Findings

The Unit 1 equipment important for maintaining the safe storage of spent fuel is maintained utilizing established work planning and scheduling processes. The inspector noted that the Unit 1 personnel planned and coordinated maintenance activities with the appropriate departments in a timely manner, and work orders and specific procedures were provided in advance. The work packages were complete and included pre-job briefings and governing procedures. The annual inspections of equipment such as pumps and motors, were thorough and performed within the established frequencies and the results of tests met acceptance criteria. Informational tags on equipment were appropriate and housekeeping was adequate. The inspector noted that the individuals performing the annual inspection on the balance of plant ventilation fans and motors were knowledgeable of motors and fans, including the electrical aspects, and implemented established safety practices during the inspection.

c. Conclusions

The licensee effectively implemented the preventive maintenance and surveillance program, to ensure that systems and components important for maintaining the safe storage of spent fuel are operable and reliable. Established controls and measures to plan, schedule, and perform Unit 1 work activities were adequate.

III. Plant Support and Radiological Controls

1. Occupational Exposure Controls

a. Inspection Scope (IP 83750)

The inspector reviewed implementation of the occupational exposure program associated with Unit 1 activities to determine the licensee's capability to monitor and control radiation exposure to employees, and to determine adequacy of the radiation protection program. The inspection consisted of interviews with responsible individuals, reviews of radiological survey plans and survey maps of the radiologically controlled area, and field observations of radiological postings. The inspector reviewed the 2008

and 2009 year-to-date exposure reports and the 2008 as low as reasonably achievable evaluation for the Unit 1 asset recovery program.

b. Observations and Findings

The inspector noted that the radiologically controlled area was appropriately posted and labeled for radioactive material. Radiological postings were readily visible, well-maintained, and reflected radiological conditions. The radiological survey maps and related information maintained at the Unit 1 access point were current. High radiation areas and technical specification locked high radiation areas were properly posted and locked as required. No safety concerns were identified. The Unit 1 dose total for 2008 was 0.222 rem and the dose total for 2009 year-to-date was 0.025 rem. These dose totals were significantly below the dose goals. The inspector noted that appropriate exposure controls were established and methods to track and trend dose performance were commensurate with the radiological significance of the tasks.

c. Conclusions

The licensee provided adequate controls to limit exposures of workers to external sources of radiation. Posting and labeling of radioactive materials and radiation areas met regulatory requirements. Radiological controls and dose estimates associated with Unit 1 tasks were effective to achieve dose goals.

2. Radioactive Effluent Control and Radiological Environmental Monitoring Programs

a. Inspection Scope (IP 84750)

The inspector reviewed the Unit 1 radioactive effluent control program and the station radiological environmental monitoring program. The evaluation included a review of the annual radioactive effluent release report for 2007, the annual radiological environmental operating report for 2007, and the associated analytical results for each program from January through December 2008.

b. Observations and Findings

The annual radioactive effluent release report was submitted to the NRC in a timely manner in accordance with TS 5.7.3. The inspector verified that the effluent control program was implemented in accordance with TS 5.6.4 and that all calculated doses were well below regulatory dose criteria of 10 CFR 50, Appendix I. The annual radiological environmental operating report was submitted in a timely manner in accordance with TS 5.7.2.

c. Conclusions

The licensee maintained adequate radioactive effluent control and radiological environmental monitoring programs in accordance with regulatory requirements.

IV. Radioactive Waste Management and Transportation

a. Inspection Scope (IP 86750)

The inspector evaluated the radioactive waste management and transportation programs to determine whether the licensee properly processed, packaged, stored, and shipped radioactive materials. The inspector reviewed the low specific activity radioactive waste shipments from 2008, including a dry active waste shipment and four water shipments. The inspector reviewed the 2008 waste stream analysis for dry active waste, required by 10 CFR 61.

b. Observations and Findings

Radioactive waste shipment records included copies of characterization reports and waste manifest shipping papers and were complete. The licensee met the applicable radioactive waste and transportation requirements for the shipments reviewed. No significant safety issues or concerns identified.

c. Conclusions

The licensee effectively implemented the radioactive waste management and transportation programs.

V. Exit Meeting

On March 11, 2009, the inspector presented the inspection results to Mr. L. Morris, Plant Manager, and members of his staff. Mr. Morris acknowledged the inspection findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.

PARTIAL LIST OF PERSONS CONTACTED

Licensee personnel

B. Bartron	Supervisor, Licensing
B. Bowen	Shift Supervisor, Health Physics
G. D'Auria	Supervisor, Nuclear Chemistry
D. DelCore	Supervisor, Health Physics Operations
J. Doroski	Nuclear Engineer III
D. Dvorak	Supervisor, Nuclear Maintenance Unit 1
R. Kennedy	Nuclear Technical Specialist, Nuclear Maintenance
B. Krauth	Technical Specialist, Licensing
J. Laine	Manager, Radiation Protection and Chemistry
L. Morris	Plant Manager
W. Ng	Health Physicist, Radiation Protection and Chemistry
M. O'Connor	Manager, Engineering
J. Semancik	Manager, Operations
D. Smith	Acting Director, Nuclear Station Safety & Licensing
G. Sturgeon	Nuclear Technical Specialist III, Unit 1/2
S. Torf	Nuclear Engineering III
P. Tulba	Supervisor, Radioactive Waste
S. Turowski	Supervisor, HP Technical Services

INSPECTION PROCEDURES USED

40801	Self Assessment and Corrective Action
60801	Spent Fuel Pool Safety at Permanently Shutdown Reactors
62801	Maintenance and Surveillance at Permanently Shutdown Reactors
71801	Decommissioning Performance and Status Reviews at Permanently Shutdown Reactors
83750	Occupational Radiation Exposure
84750	Radioactive Waste Treatment and Effluent and Environmental Monitoring
86750	Solid Radioactive Waste Management and Transportation

ITEMS OPEN, CLOSED, AND DISCUSSED

Opened, Closed and Discussed – None

LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
DSAR	defueled safety analysis report
NRC	Nuclear Regulatory Commission
U1	Millstone Unit 1
TS	technical specification