



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

June 4, 2001

Docket No. 05000245

License No. DPR-21

Raymond P. Necci
Vice President - Nuclear Technical Services
Dominion Nuclear Connecticut, Inc.
Millstone Nuclear Power Station, Unit 1
c/o Mr. David A. Smith, Process Owner - Regulatory Affairs
Rope Ferry Road
Waterford, CT 06385

SUBJECT: INSPECTION 05000245/2000018, DOMINION NUCLEAR CONNECTICUT,
INC., MILLSTONE NUCLEAR POWER STATION, UNIT 1, WATERFORD,
CONNECTICUT

Dear Mr. Necci:

On April 27, 2001, the NRC completed an inspection at your Millstone Unit 1 facility. The findings of the inspection were discussed with your staff on April 26, 2001. The enclosed report presents the results of that inspection.

During the four month period covered by this inspection, you conducted decommissioning activities at Millstone Unit 1 in a safe manner, and maintained appropriate focus on the safe storage of fuel in the spent fuel pool.

In accordance with 10 CFR 2.790, a copy of this letter will be placed in the NRC Public Document Room and will be accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html>. No reply to this letter is required.

Your cooperation with us is appreciated.

Sincerely,

Original signed by Marie Miller

Ronald R. Bellamy, Chief
Decommissioning and Laboratory Branch
Division of Nuclear Materials Safety

Enclosure:
Inspection Report No. 05000245/2000018

R. Necci
Dominion Nuclear Connecticut, Inc.

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cc w/encl:

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R. Necci
Dominion Nuclear Connecticut, Inc.

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000245/2000018
Docket No. 05000245
License No. DPR-21
Licensee: Dominion Nuclear Connecticut, Inc.
Location: Millstone Power Station, Unit 1
Rope Ferry Road
Waterford, CT 06385
Inspection Dates: December 10, 2000 - April 27, 2001

Inspectors: Todd Jackson, CHP, Health Physicist
Anthony Dimitriadis, Health Physicist
Paul Cataldo, Resident Inspector

Approved By: ***Original signed by***
Ronald R. Bellamy ***May 31, 2001***
Ronald R. Bellamy, Chief
Decommissioning and Laboratory Branch
Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Dominion Nuclear Connecticut, Inc.
NRC Inspection Report No. 05000245/2000018

This integrated inspection included aspects of licensee operations and plant support during decommissioning activities. The report covers a three-month period of announced inspections by two regional inspectors and a resident inspector. No violations were identified.

Operations

The inspector found the Plan for Unit 1 management transition from the previous owner to Dominion Nuclear Connecticut addressed all organizational areas at Unit 1 in an organized and coherent approach. Closing of the sale of Unit 1 and Millstone Station occurred at the end of March, with no significant problems noted in the management transition. (O1.1)

Plant Support

The completed investigation and evaluation of condition report CR M1-00-0290 regarding personnel contaminations was examined by the inspector and found to be acceptable. No safety concerns were identified. This closes IFI 50-245/00-010-01. (R1.1)

The inspectors found the licensee's process and review for abandonment of the liquid radwaste systems was thorough and complete. The new evaporator is expected to be operable when the balance of plant HVAC system balancing is completed. Liquid wastes from the reactor building sumps are being collected and stored in the evaporator staging tank or in drums until that time. The actions taken by the licensee have eliminated the remaining previously identified deficiencies in the liquid radwaste processing facilities and equipment. Final system abandonment for liquid radwaste systems and changes to the reactor building liquid waste collection system have not yet been subjected to final review by the licensee's system evaluation and re-classification team (SERT) process. When SERT is completed for these systems and the Defueled Safety Analysis Report changes have been completed, violation 01172/EEI 50-245/96-003-01 will be closed. (R2.1)

The licensee had established redundant capability to maintain spent fuel pool (SFP) cooling. The decay heat removal system was operable and performing as designed. No safety concerns were identified. (R2.2)

Licensee management increased the scope of the investigation into two unaccounted-for spent fuel rods when the missing rods were not found in the expected locations within the spent fuel pool. The investigation effort was progressing in a thorough and systematic manner, with a projected completion of approximately July 2001. Results of the investigation will be reviewed as they become available. (R2.3)

The inspector observed licensee activities related to physical searches for the unaccounted-for spent fuel rods being conducted in the spent fuel pool. No safety concerns were identified. (R2.4)

An unresolved item (URI) concerning spent fuel issues was reviewed. All issues in the URI have been addressed. The URI is therefore closed. (**URI 1995-034-01**) (R2.5)

The inspector noted that the licensee had effectively implemented the Unit 1 procedure for identifying records important to decommissioning, and that the requirements of 10 CFR 50.75(g) were appropriately satisfied. (R2.6)

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REPORT DETAILS

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71801)

During this inspection period Unit 1 personnel completed ongoing decommissioning projects and implemented cold and dark conditions (electricity shut-off) in most facilities other than the spent fuel pool island (SFPI). Cold and dark was successfully achieved on March 28, 2001.

The Unit 1 organization also completed significant changes in management structure related to the change in ownership of Millstone Station, following the sale to Dominion Nuclear Connecticut, Incorporated (DNC) at the end of March. Entergy's contract with Millstone Station for management of Unit 1 was terminated on March 30, 2001.

The Unit 1 control room was abandoned and replaced with a new central monitoring station (CMS) near the south end of Unit 1 structures. Shift staffing is unchanged, supervised by a Shift Manager. Instrumentation in the CMS focuses on equipment for monitoring systems associated with the SFPI, including cooling system components, water level, and ventilation system flow and radiation monitoring instruments. Control room operators have limited remote operational capability from the CMS.

O1.2 Transition to New Organizational Management

a. Inspection Scope (36801)

The inspector reviewed the licensee's plan for transition of Unit 1 organization and management from Northeast Nuclear Energy Company (NNECo) to the new owner of Millstone Station, DNC.

b. Observations and Findings

Millstone Station and Unit 1 management (Entergy) had prepared a formal transition plan for the site ownership change. The plan was sponsored by the Millstone Senior Vice President and Chief Nuclear Officer, and identified individual managers responsible for assuring an orderly transition in their respective areas of plant operations. The Plan included detailed descriptions of responsibilities, identified by name the individuals in the old organization who would turn over responsibility to specifically named individuals in the new organization, and contained checklists of actions necessary to complete during the transition.

c. Conclusions

The inspector found the plan for Unit 1 management transition addressed all organizational areas at Unit 1 in an organized and coherent approach. Closing of the sale of Unit 1 and Millstone Station occurred at the end of March, with no significant problems noted in the transition of management.

II. Plant Support

R1 Radiation Protection & Chemistry (RP&C) Controls

R1.1 Radiation Protection Program

a. Inspection Scope (83750)

The inspector reviewed the licensee's radiation protection program including contamination prevention, routine surveys, and timely and effective corrective actions. Information was gathered by a review of procedural guidance, condition reports (CRs), and discussions with Radiation Protection (RP) supervisors and RP technicians.

b. Observations and Findings

The inspectors reviewed the Unit 1 organization and its proposed transition from a unit specific project to a site approach. The inspectors performed a walk-down of the reactor building, turbine building and associated areas and observed the changes in the radiation control areas (RCAs) and new boundaries established for "cold and dark" areas. The inspectors observed the installation of string lighting in areas that would continue to be observed during surveillance activities and walk-down activities.

The inspector observed the posting and control of the restricted areas. The inspector observed two of the Tech Spec Locked High Radiation Areas and discussed access controls to them with the Health Physics Manager. During this inspection period, the licensee consolidated all the radwaste from the radwaste building to the warehouse. This resulted in only one Tech Spec Locked High Radiation Area remaining in the Unit 1 reactor building.

Contamination Incidents

The inspector reviewed the CR M1-00-0286 describing the investigation of the spread of contamination in the Unit 1 reactor building in July 2000. The licensee established an investigation team that interviewed workers and contractors, reviewed the Radiation Work Permits (RWPs) and CRs, evaluated the workers' understanding of the importance of preventing the spread of contamination, and examined the overall organization structure as it pertained to the responsibilities and authorities delegated to this activity. The investigation team provided a clear and concise report, outlined the root and contributing causes, and provided an effective set of corrective actions and recommendations.

c. Conclusion

The completed investigation and evaluation of CR M1-00-0290 was examined by the inspector and found to be thorough and precise. No safety concerns were identified. This closes the associated follow up item. **(IFI 50-245/00-010-01)**

R2 Status of RP&C Facilities and Equipment

R2.1 (Update) Violation 01172/EEI 50-245/96-003-01: Liquid Radwaste Management System

a. Inspection Scope (37801)

The inspector reviewed the licensee's plans and ongoing work to entirely replace the existing liquid radwaste processing systems with a new system designed to accommodate the reduced processing requirements of Unit 1 after reaching the "cold and dark" status.

b. Observations and Findings

The licensee developed Project Plan M10061, "Collection and Processing of Radwaste Post Cold and Dark", describing the design of liquid radwaste processing systems intended to replace the existing liquid radwaste processing facilities and equipment for treatment of water collected in the reactor building sumps. The inspector observed the installation of the system equipment, including a 1000 gallon staging tank and an evaporator designed to process 8 gal/h. Water will continue to collect as it has in the two reactor building sumps. The "B" sump contents will be pumped into the "A" sump, and the combined water will be pumped into the staging tank to be fed into the evaporator in batch mode. The evaporator will operate automatically when sufficient water is collected in the staging tank, and the products will be vapor discharged into the reactor building ventilation exhaust (a monitored release path) and evaporator solids.

No alternative to the existing liquid radwaste processing systems is planned for Unit 1 structures other than the reactor building. Prior to reaching the cold and dark condition in the other structures, the licensee's efforts were focused on eliminating the input sources of water to the liquid radwaste systems. Other than the reactor building sumps, the sources were identified as rainwater and groundwater. One project to eliminate an input water source was the removal of the moat walls around the condensate storage tank and the waste storage tank, located outside the turbine building. Both tanks were drained, making the moats unnecessary to contain a spill of tank contents. The moats were collecting significant amounts of rainwater, which was drained to radwaste where it mixed with other water sources and was processed for discharge to Long Island Sound. The final planned discharge from Unit 1 liquid radwaste processing was made on March 22, 2001, after which the radwaste systems were removed from service.

Removal from service of the liquid radwaste processing systems and the changes to the reactor building liquid collection systems will be subjected to the licensee's system evaluation and re-classification team (SERT) process. The SERT review will assure the licensee completes appropriate changes to revise the Defueled Safety Analysis Report

(DSAR) so that the installed plant equipment is accurately described in the DSAR. The DSAR had not been updated at the time of the inspection, and the document change process associated with the engineering changes was not yet completed.

The changes to the Unit 1 liquid radwaste processing systems eliminate the need to implement other aspects of the licensee's improvement plan, developed in response to significant deficiencies in the liquid radwaste processing systems documented by the NRC in Inspection Reports 50-245/95-35 and 50-245/96-03, and identified as violation 01172/EEI 50-245/96-003-01.

c. Conclusions

The inspectors found the licensee's process and review for abandonment of the liquid radwaste systems was thorough and complete. The new evaporator is expected to be operable when the balance of plant heating, ventilation, and air-conditioning (HVAC) system balancing is completed. Liquid wastes from the reactor building sumps are being collected and stored in the evaporator staging tank or in drums until that time.

The actions taken by the licensee have eliminated the remaining previously identified deficiencies in the liquid radwaste processing facilities and equipment. Final system abandonment for liquid radwaste systems and changes to the reactor building liquid waste collection system have not yet been subjected to final review by the licensee's system evaluation and re-classification team SERT process. When SERT is completed for these systems and the Defueled Safety Analysis Report changes have been completed violation 01172/EEI 50-245/96-003-01 will be closed.

R2.2 Spent Fuel Pool Cooling

a. Inspection Scope (60801)

The inspector reviewed the licensee's program for monitoring and controlling spent fuel pool (SFP) cooling. Information was gathered through tours of the spent fuel floor, walkdowns of associated structures, systems and components, and through discussions with cognizant personnel.

b. Observations & Findings

The inspector reviewed the licensee's decay heat removal (DHR) system for cooling the SFP. The primary cooling system circulates coolant through heat exchangers, transferring decay heat to the secondary cooling system. The inspector walked down the DHR system and observed the "A" and "B" DHR pumps, expansion tank, air separator, associated piping and bank of heat exchangers. The secondary system piping runs to the roof of an adjacent building and through fan driven air-coolers. The inspector observed the system indication displays and controls in the new CMS and discussed the system with the Operations Shift Manager. Operators in the CMS can stop or start the DHR cooling water pumps, or select the lead fan for automatic mode of the fan coolers. Other fan cooler controls are local only.

The inspector reviewed the licensee's installation of the new garage doors installed in the equipment hatch on the reactor building 65' elevation that could be opened to draw ventilation from the 14' 6" elevation and cool the SFP via natural convection. The inspector also observed the ventilation system on the 108' elevation surrounding the perimeter of the spent fuel pool area. The inspector observed that the 108' elevation was clean, neat and free of debris. Contaminated areas were barricaded and properly posted. Prior to entry into the area, health physics support personnel provided the inspector with an update of the radiological conditions of the area around the spent fuel pool.

c. Conclusion

The licensee had established redundant capability to maintain SFP cooling. The DHR system was operable and performing as designed. No safety concerns were identified.

R2.3 Fuel Rod Accountability Project (FRAP)

a. Inspection Scope (60801)

The inspector observed the activities of the FRAP staff and progress in the investigation to account for two spent fuel rods.

b. Observations and Findings

The licensee submitted Licensee Event Report 2000-002 to the NRC on December 14, 2000, providing information that two spent fuel rods were not properly accounted for in the special nuclear material (SNM) records and could not be located in the Unit 1 SFP. The licensee initiated an investigation to locate the two rods, performing searches within the spent fuel pool in locations thought to be the most likely for storage. The rods were not located, and the licensee increased the investigation effort and resources to sustain a more protracted and extensive project.

The inspector reviewed the licensee's plans for conducting the investigation. The dedicated staffing for the investigation expanded through the end of the inspection period, with 21 professional/technical staff working on the project as of April 23, 2001. The licensee had also created an independent oversight review team, which was involved in reviewing activities of the FRAP investigation as the activities developed. The oversight group had reviewed procedures for tracking spent fuel at Units 2 and 3 to determine if a similar problem was possible at the other Millstone units, and concluded that procedures at the other units were adequate to assure full accountability.

c. Conclusions

Licensee management increased the scope of the investigation when the missing rods were not found in the anticipated locations within the spent fuel pool. The investigation effort was progressing in a thorough and systematic manner, with a projected completion by approximately July 2001. Results of the investigation will be reviewed as they become available.

R2.4 Spent Fuel Inspections During Misplaced Fuel Pin Search

a. Inspection Scope (60710)

The inspector observed licensee activities related to physical searches being conducted in the spent fuel pool.

b. Observations and Findings

The inspector observed irradiated fuel assembly inspections during the licensee's search for two misplaced fuel pins. The inspector observed various inspections conducted on a number of unchannelled fuel assemblies on January 19, 2001. The inspection included a review of the adequacy of radiation protection practices during the fuel movement, as well as overall spent fuel pool activities during the inspection.

c. Conclusions

No safety concerns were identified during this inspection.

R2.5 (Closed) Unresolved Item 1995-034-01: Spent Fuel Issues

a. Inspection Scope (60801)

The inspector reviewed the licensee's actions related to the SFP described in Inspection Report 50-245/1995-034.

b. Observations and Findings

This unresolved item discussed six engineering issues related to the SFP as follows:

1. Seismic qualification of SFP cooling makeup
2. Seismic qualification of SFP cooling connection to the reactor cavity
3. SFP cooling system thermal stress design error
4. Anti-siphon holes not installed in the fuel pool cooling piping
5. Application of single failure requirements during refueling operation
6. SFP cooling flange deficiency

Issues 1 through 5 were closed in subsequent NRC inspection reports. Issue 6 was discussed in NRC Inspection Report 50-245/95-82, Section 2.0. The NRC concluded that the identified design deficiencies were adequately resolved, however the referenced URI was never closed. The closure references for each of these issues is as follows:

<u>Issue</u>	<u>Closed or resolved in IR number:</u>
1	50-245/95-82
2	50-245/95-82

3	50-245/95-82
4	50-245/99-08
5	50-245/98-216
6	50-245/95-82

c. Conclusions

All issues in the URI have been addressed. The URI is therefore closed (**URI 1995-034-01**)

R2.6 Records Important to Decommissioning

a. Inspection Scope (71801)

The inspector reviewed the licensee's information collected in accordance with NRC regulations in 10 CFR 50.75(g), as well as the procedure for assuring the collection of pertinent records.

b. Observations and Findings

The inspector reviewed Unit 1 procedure RPM 1.5.7, "Decommissioning Records Pursuant to 10 CFR 50.75(g), Rev. 0, dated February 13, 2001. The inspector discussed with the licensee how the procedure was implemented, including the approach to capturing the information about current projects related to the Unit 1 waste storage tank and condensate storage tank. These projects involved draining the tanks, removing the protective concrete moats surrounding them, laying the moat wall segments into the below grade moat floors, and covering the area with soil to bring it to the same level as the surrounding grading. The goal of the project was to eliminate the various sources of rainwater into the radwaste building, requiring treatment of large volumes of water that did not originate as radwaste.

Low levels of fixed radioactive contamination were identified on some of the moat walls being placed on the moat floors, which were then covered by soil. The licensee included in the 50.75(g) file references to the engineering packages for the project so the information on the contaminated materials under soil would be preserved.

c. Conclusions

The inspector noted that the licensee had effectively implemented the Unit 1 procedure, and that the requirements of 10 CFR 50.75(g) were appropriately satisfied.

II. Management Meetings

X1 Exit Meeting Summary

The inspectors met with licensee management representatives following each site visit during the inspection period and discussed the results of the inspection. The licensee acknowledged the findings presented. Additional information was discussed on April 23, 2001 during the management meeting conducted in Region I.

X2 Management Meeting in Region I, April 23, 2001: Summary

On April 23, 2001, NRC management met with the licensee's new site organization management to discuss the current status of the investigation to determine the location of two unaccounted-for spent fuel rods in the Millstone 1 spent fuel pool. The licensee discussed an exhaustive search undertaken to identify all documents that could contain information pertaining to the location of the two spent fuel rods, and described the development of all possible scenarios to explain how the rods could have been misplaced. The licensee stated these scenarios will address the possibility that the rods were mistakenly sent as waste from Millstone to a low level burial site.

The licensee stated that it was expected the investigation would be complete by the end of June 2001, with a report to be submitted after that date. Slides were used by the licensee during the presentation, and these are included in this report as Appendix A.

As part of the ongoing NRC inspection activities, NRC Region I management has also conducted weekly conference calls with the licensee to discuss current status and recent developments of the investigation. These calls include participation by representatives of the states of Washington, South Carolina, and Connecticut.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

L. Temple, Unit 1 General Manager
W. E. Perks, Director, Unit 1 Operations
D. Meekhoff, Unit 1 General Manager
B. Ford, Director, Decommissioning & Nuclear Safety and Regulatory Affairs
J. Veglia, Manager, Engineering Decommissioning, Unit 1
W. Axelson, Manager, Health Physics
S. Thickman - Corrective Actions
F. Neff - Radwaste Shift Manager
L. Linden - Health Physics
R. Radasch - Spent Fuel Project
F. Perry - Radwaste
F. White - Regulatory Affairs
P. Messina - HP Technician
P. Willoughby - Regulatory Affairs
B. Leach - Millstone Health Physics
T. Tritch - Health Physics Technician
W. McCollum - Manager, Unit 1 Operations
A. Hay - Operations Shift Manager
R. Kennedy - Operations Coordinator
M. Novak - Health Physics
W. Eakin - Manager, Station Effluents and Environmental Monitoring Group

INSPECTION PROCEDURES USED

36801	Organization, Management, and Cost Controls at Permanently Shutdown Reactors
37801	Safety Reviews, Design Changes, and Modifications at Permanently Shutdown Reactors
60710	Refueling Activities (Spent Fuel Handling)
60801	Spent Fuel Pool Safety at Permanently Shutdown Reactors
71801	Decommissioning Performance and Status at Permanently Shutdown Reactors
83750	Occupational Radiation Exposure
84750	Radioactive Waste Treatment, and Effluent and Environmental Monitoring

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

IFI 00-010-01 Followup review of contamination events and completed CR M1-00-0290

URI 95-034-01 Spent Fuel Issues

Discussed

IFI 00-010-01 Followup review of contamination events and completed CR M1-00-0290

VIO 01172/EEI 96-003-01 Liquid Radwaste Management System

LIST OF ACRONYMS USED

CMS	Central Monitoring Station
CR	Condition Reports
DHR	Decay Heat Removal
DNC	Dominion Nuclear Connecticut, Incorporated
DSAR	Defueled Safety Analysis Report
FRAP	Fuel Rod Accountability Project
HVAC	Heating, Ventilation, and Air-Conditioning
NNECo	Northeast Nuclear Energy Company
RCA	Radiation Control Area
RP	Radiation Protection
RP&C	Radiation Protection & Chemistry
RWP	Radiation Work Permit
SERT	Systems Evaluation and Re-classification team
SFP	Spent Fuel Pool
SFPI	Spent Fuel Pool Island
SNM	Special Nuclear Material
URI	Unresolved Item

APPENDIX

**Handout Materials Presented to NRC on April 23, 2001 by Dominion Nuclear
Connecticut, Incorporated**

**Dominion Nuclear Connecticut
Millstone Unit 1
Fuel Rod Accountability Project Status**

**NRC Region I Presentation
April 23, 2001**

Agenda

- ◆ VP Nuclear Technical Svcs, DNC Ray Necci
- ◆ NU Executive Sponsor Frank Rothen
- ◆ Project Status Bob Fairbank
- ◆ IRT Comments Bruce Hinkley
- ◆ Discussion NRC & Project

April 23, 2001

Introduction

Ray Necci

April 23, 2001

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“Dominion Nuclear Connecticut” Recognizes Responsibility for Public Health & Safety

- ◆ Licensee Responsibilities
- ◆ Investigation by NUSCo
- ◆ Protocol Agreement
 - Support
 - Access

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NU Executive Sponsor

Frank Rothen

April 23, 2001

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NU Executive Sponsor

Frank Rothen

April 23, 2001

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NU Executive Sponsor Perspectives

- ◆ Role of Sponsor
- ◆ Northeast/Dominion Relationship
- ◆ Fuel Rod Accountability Project Purpose

April 23, 2001

Project Status

Bob Fairbank
Project Manager

April 23, 2001

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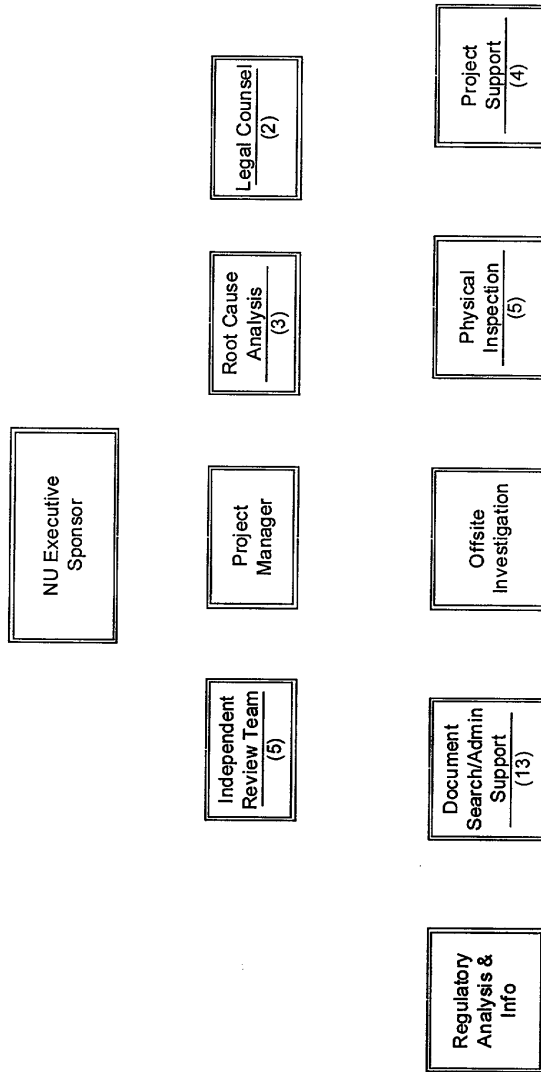
Project Approach is Consistent with High Level of Significance

- ◆ High Priority
- ◆ Protect Public Health & Safety
- ◆ Dedicated Team
- ◆ Comprehensive Scope
- ◆ Robust Process
- ◆ Quality Products
- ◆ Keep NRC & Stakeholders Informed

April 23, 2001

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Dedicated, Multi-Disciplined Team



April 23, 2001

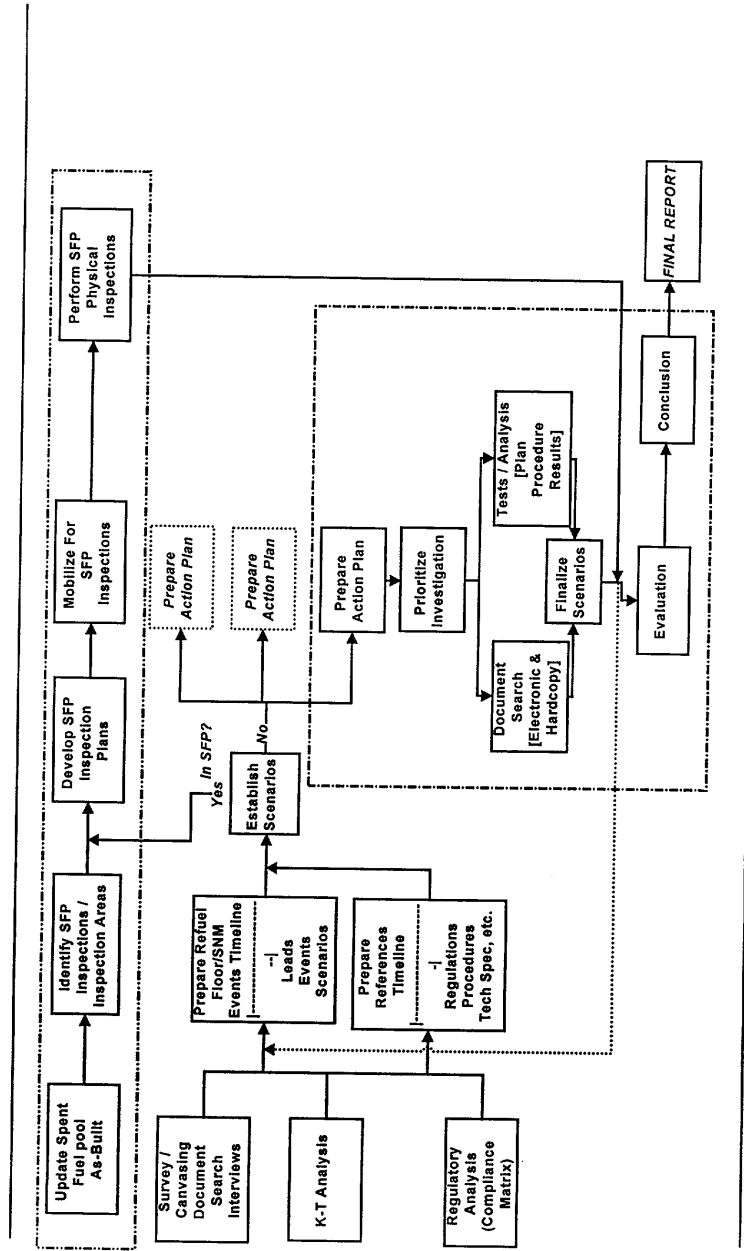
Project Team Profile

- ◆ Professional Staffing: 21 People
- ◆ Avg Professional Exp.: 28 Years
- ◆ # of Nuc Plants/Facilities: 84
- ◆ Experience:
 - Senior Management
 - Supervisory
 - Project Management
 - Independent Assessment

April 23, 2001

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Robust Investigation Process



April 23, 2001

Extensive Investigation Scope

- ◆ Fuel Pool Inspections
- ◆ Confirmatory Inspections
- ◆ Document Reviews
- ◆ Formal Interviews
- ◆ Scenario Development/Analysis
- ◆ Tracked By “KPIs”
- ◆ ~16,000 Staff Hours to Date

April 23, 2001

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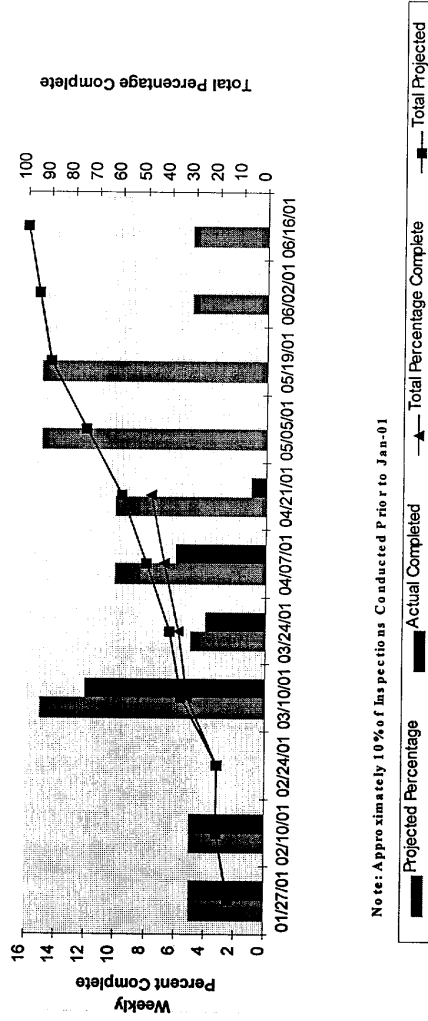
Extensive Fuel Pool Searches

- ◆ Require Careful & Detailed Planning
- ◆ In Progress
- ◆ Rigorously Documented
- ◆ Scheduled to Complete 6/17

April 23, 2001

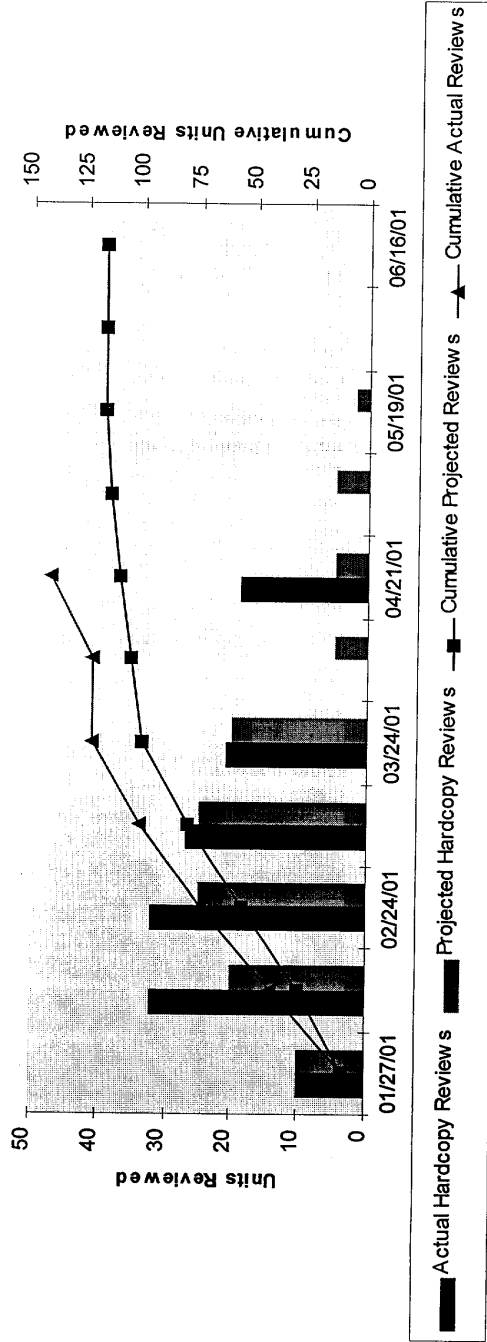
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Spent Fuel Pool Inspections



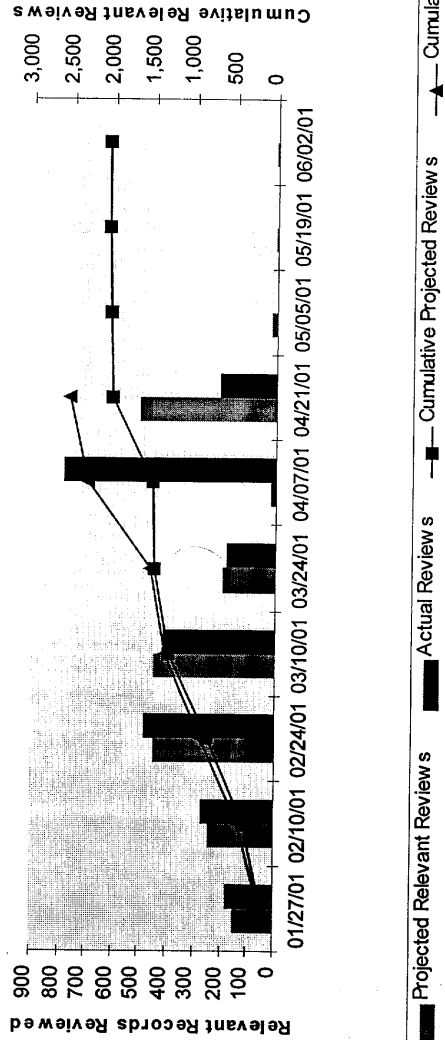
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“Hardcopy” Document Reviews



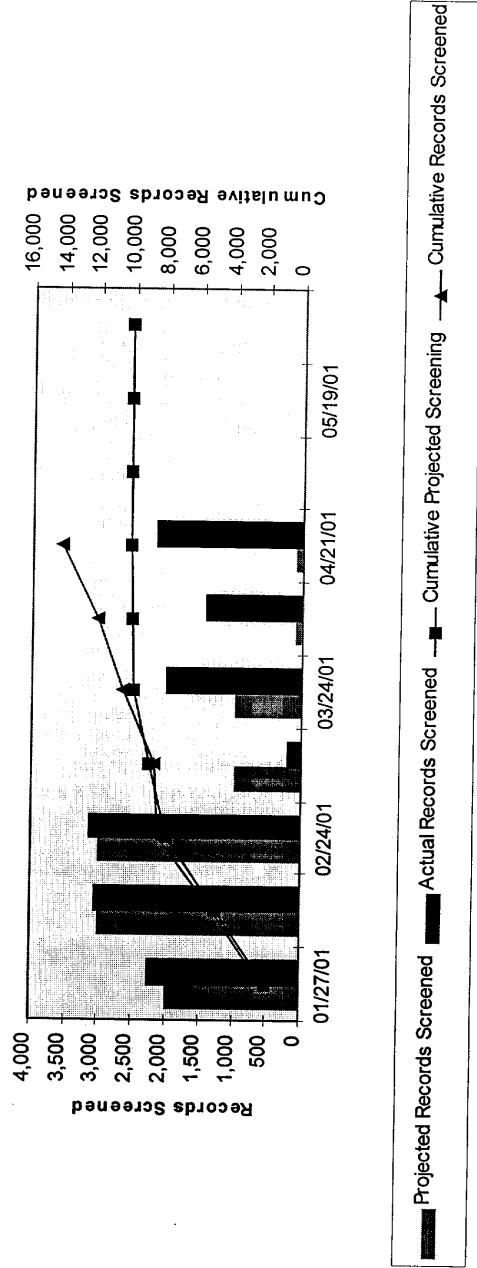
April 23, 2001

Electronic Document Reviews



April 23, 2001

Document Relevancy Reviews



April 23, 2001

Scope Includes Offsite Record Reviews:

- ◆ NU, Berlin, CT
- ◆ Chem-Nuclear, Barnwell, SC
- ◆ U.S. Ecology, Hanford, WA
- ◆ GE-Morris, IL
- ◆ GE-San Jose, CA
- ◆ GE-Vallecitos, CA
- ◆ GE-Wilmington, NC

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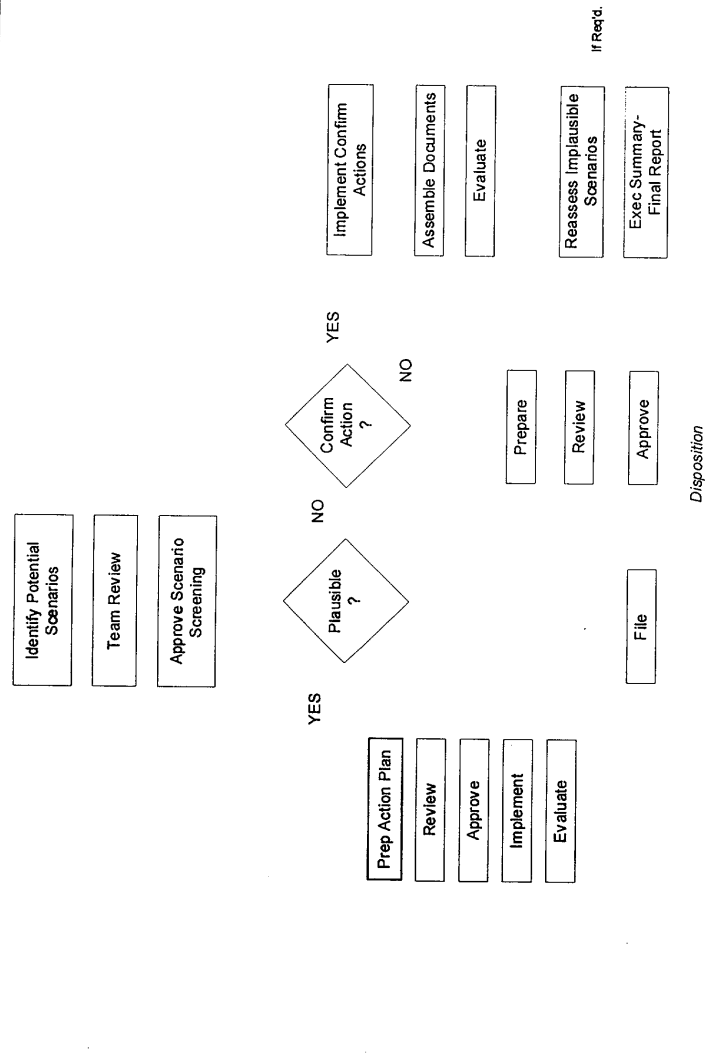
Comprehensive Project Time Line

- ◆ Event Road Map
- ◆ Relates Information Chronologically
- ◆ Captures Scenario Milestones
- ◆ Key Analysis Tool
 - Shows Relationships Among Who/What/Where
 - Identifies Info Gaps
 - Directly Supports Scenario Development

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Scenario Development Process



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Exhaustive Scenario Evaluation

Preliminary Disposition:

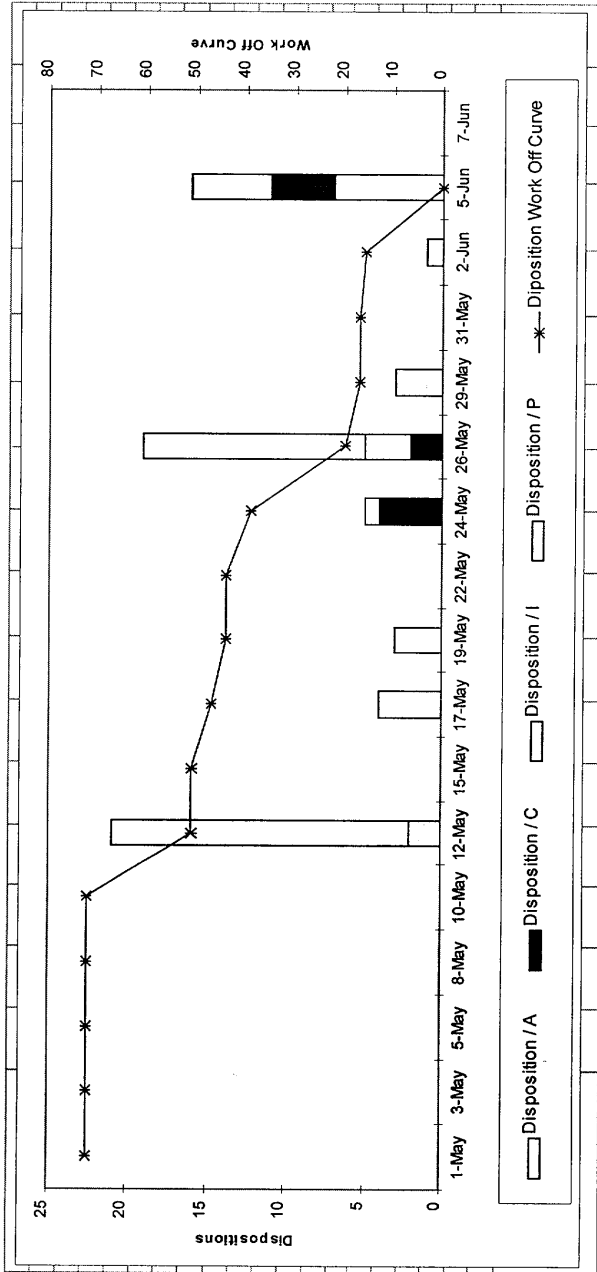
Physical Inspection:	38
Action Plan:	7
Confirmatory Action:	10
No Further Action:	<u>17</u>

Total Scenarios: 72

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Scenario Development Tracking



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Independent Root Cause Assessment

- ◆ RCA In Progress
- ◆ Focused on:
 - Compliance to Regulations
 - Lost Accountability
 - Most Likely Scenario(s) (When Determined)
- ◆ Based on Project Conclusions
- ◆ Industry-Experienced Evaluator

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Effective Communications: A Project Priority

- ◆ **Internal Communications**
- ◆ **Site Visits**
- ◆ **Inquiry Response**
- ◆ **Status Reports**
- ◆ **Community Meetings**

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Current Schedule

<u>Activity</u>	<u>Target</u>
Scenario Screening	4/19
Physical Inspections	6/17
Scenario Disposition	6/18
Root Cause (Accountability)	6/29
Root Cause (Likely Scenario(s))	6/29

Investigation Quality >> Schedule !!!!

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Current Schedule

<u>Activity</u>	<u>Target</u>
Scenario Screening	4/19
Physical Inspections	6/17
Scenario Disposition	6/18
Root Cause (Accountability)	6/29
Root Cause (Likely Scenario(s))	6/29

Investigation Quality >> Schedule !!!!

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Ensuring Project Quality

- ◆ Experienced Professionals
- ◆ Formal Project Guidelines
- ◆ Training
- ◆ Self Assessments
- ◆ Independent Review Team

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Independent Review Team Perspective

Bruce Hinkley

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Independent Review Team

- ◆ Industry Experienced, Multi-disciplined Team
- ◆ Senior Industry Management Experience
- ◆ Augmented by Specialists as Required
- ◆ Members:
 - Bruce Hinkley - Team Leader
 - Hugh Thompson
 - Joe Callan
 - Jeff Jeffries
 - John Mayer

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Independent Review Team

◆ Roles & Responsibilities

- Ensure comprehensive, technically sound processes
- Ensure technically sound, defensible conclusions

◆ Focused Assessments

- Procedural Compliance
- Communication
- Training
- Physical Inspections

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Independent Review Team

- ◆ Oversight of Site Visits
 - GE, Morris, IL
 - Chem-Nuclear, Barnwell, SC
 - U.S. Ecology, Hanford, WA
 - GE, Vallecitos, CA (Planned)

- ◆ Observations to Date

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Project Approach is Consistent with High Level of Significance

- ◆ High Priority
- ◆ Protect Public Health & Safety
- ◆ Dedicated Team
- ◆ Comprehensive Scope
- ◆ Robust Process
- ◆ Quality Products
- ◆ Keep NRC & Stakeholders Informed

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Closing Remarks

Ray Necci
VP, Nuclear Technical Services
Dominion Nuclear Connecticut

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Discussion

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