August 31, 2004

Mr. David A. Christian, Sr. Vice President
and Chief Nuclear Officer
Dominion Resources
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION UNIT 3 - NRC TRIENNIAL FIRE PROTECTION INSPECTION REPORT 05000423/2004012

Dear Mr. Christian:

On August 19, 2004, the NRC completed a triennial fire protection inspection at your Millstone Power Station Unit 3 facility. The enclosed report documents the inspection findings that were discussed on August 19, 2004, with Mr. J. A. Price, Site Vice President, and other members of your staff.

This inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

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

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARs) component of 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).

We appreciate your cooperation. Please contact me at 610-337-5146 if you have any questions regarding this letter.

Sincerely,

/RA/

John F. Rogge, Chief
Electrical Branch
Division of Reactor Safety

Docket No. 50-423
License No. NPF-49

Enclosure: NRC Inspection Report 05000423/2004012

w/Attachment: Supplemental Information

cc w/encl:
J. A. Price, Site Vice President - Millstone
C. L. Funderburk, Director, Nuclear Licensing and Operations Support
D. W. Dodson, Supervisor, Station Licensing
L. M. Cuoco, Senior Counsel
C. Brinkman, Manager, Washington Nuclear Operations
W. Meinert, Massachusetts Municipal Wholesale Electric Company
First Selectmen, Town of Waterford
V. Juliano, Waterford Library
J. Markowicz, Co-Chair, NEAC
E. Woollacott, Co-Chair, NEAC
E. Wilds, Director, State of Connecticut SLO Designee
J. Buckingham, Department of Public Utility Control
G. Proisio, Suffolk County Planning Dept.
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NAME	KYoung KAY		JRogge						
DATE	08/23/04		08/30/04						

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U.S. NUCLEAR REGULATORY COMMISSION

REGION 1

Docket No:	50-423
License No:	NPF-49
Report No:	05000423/2004012
Licensee:	Dominion Nuclear Connecticut, Inc.
Facility:	Millstone Power Station, Unit 3
Location:	P. O. Box 128 Waterford, CT 06385
Inspection Period:	July 26 - August 19, 2004
Inspectors:	Keith Young, Senior Reactor Inspector, DRS (Team Leader) Roy Fuhrmeister, Senior Reactor Inspector, DRS Larry Scholl, Senior Reactor Inspector, DRS Leonard Cheung, Senior Reactor Inspector, DRS Patrick Finney, Reactor Inspector (In-Training), DRS
Approved by:	John F. Rogge, Chief Electrical Branch Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000423/2004-012; 07/26/2004 - 08/19/2004; Millstone Nuclear Power Station Unit 3; Triennial Fire Protection Inspection.

The report covered a two week team inspection by specialist inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None

Report Details

Background

This report presents the results of a triennial fire protection inspection conducted in accordance with NRC Inspection Procedure (IP) 71111.05, "Fire Protection." The objective of the inspection was to assess whether Dominion Nuclear Connecticut, Inc. has implemented an adequate fire protection program and that post-fire safe shutdown capabilities have been established and are being properly maintained at the Millstone Power Station Unit 3. The following fire areas (FAs) were selected for detailed review based on risk insights from the Millstone Power Station Unit 3 Individual Plant Examination (IPE)/ Individual Plant Examination of External Events (IPEEE):

- Instrument Rack Room (FA CB-11)
- North Cable Tunnel (FA SB-2)
- South Cable Tunnel (FA SB-3)
- North Emergency Diesel Generator Enclosure (FA EG-3)

This inspection was a reduced scope inspection in accordance with the March 6, 2003, revision to IP 71111.05, "Fire Protection." Issues regarding equipment malfunction due to fire-induced failures of associated circuits were not inspected. Criteria for review of fire-induced circuit failures are currently the subject of a voluntary industry initiative. The definition of associated circuits of concern used was that contained in the March 22, 1982, memorandum from Mattson to Eisenhut, which clarified the requests for information made in NRC Generic Letter 81-12.

1. REACTOR SAFETY
Cornerstones: Initiating Events, Mitigating Systems

1R05 Fire Protection

1. Fire Area Boundaries and Barriers

a. Inspection Scope

The team walked down accessible portions of the selected fire areas to observe material condition and the adequacy of design of fire area boundaries, fire doors, and fire dampers. The team reviewed engineering evaluations, as well as surveillance and functional test procedures for selected items. The team also reviewed the licensee submittals and NRC safety evaluation reports (SERs) associated with fire protection features at Millstone Power Station Unit 3. Additionally, the team reviewed the design and qualification testing of selected barriers and reviewed surveillance procedures for structural fire barriers, penetration seals and structural steel. These reviews were performed to ensure that the passive fire barriers were properly maintained and met the licensing and design bases as described in the licensee submittals, NRC SERs, and the Millstone Power Station Unit 3 Final Safety Analysis Report (FSAR).

b. Findings

No findings of significance were identified.

2. Post-Fire Safe Shutdown Lighting and Communications

a. Inspection Scope

The team observed the placement and coverage area of eight-hour emergency lights throughout the selected fire areas to evaluate their adequacy for illuminating access and egress pathways and any equipment requiring local operation for post-fire safe shutdown. The team also reviewed preventive maintenance procedures and various documents, including the vendor manual and surveillance tests, to determine if adequate surveillance testing and periodic battery replacements were in place to ensure reliable operation of the emergency lights.

The team reviewed radio repeater location, power sources and preventive maintenance procedures to ensure fire department and operator communications could be maintained for fire fighting and post-fire safe shutdown conditions.

b. Findings

No findings of significance were identified.

3. Programmatic Controls

a. Inspection Scope

During tours of the facility, the team observed the material condition of fire protection systems and equipment, the storage of permanent and transient combustible materials, and control of ignition sources. The team also reviewed the procedures that controlled hot-work activities and combustibles at the site. Additionally, the team reviewed a sample of ignition source permits and fire prevention permits. These reviews were accomplished to ensure that Dominion Nuclear Connecticut, Inc. was maintaining the fire protection systems, controlling hot-work activities, and controlling combustible materials in accordance with the FSAR, administrative procedures and other fire protection program procedures.

b. Findings

No findings of significance were identified.

4. Fire Detection Systems and Equipment

a. Inspection Scope

The team reviewed the adequacy of the fire detection systems in the selected plant fire areas. This included a walkdown of the systems and review of the type of installed detectors as shown per location drawings. The team also reviewed licensee submittals and the NRC SERs associated with the selected fire areas. These reviews were performed to ensure that the fire detection systems for the selected fire areas were installed in accordance with the design and licensing bases of the plant. Additionally, the team reviewed fire detection surveillance procedures to determine the adequacy of the fire detection component testing and to ensure that the detection system would function as required.

b. Findings

No findings of significance were identified.

5. Fixed Fire Suppression Systems

a. Inspection Scope

Carbon Dioxide, Halon, and Sprinkler Systems

The team reviewed the adequacy of the north and south cable tunnel's (FA SB-2 and SB-3) total flooding carbon dioxide (CO_2) systems by performing walkdowns of the systems and the room envelopes. The team also reviewed the design and installation, NFPA 12, "Standard on Carbon Dioxide Extinguishing Systems," initial discharge testing and the adequacy of surveillance procedures. Completed surveillance procedures were also reviewed to ensure periodic testing of the system was being accomplished. These reviews were performed to ensure that the total flooding CO_2 systems met the design and licensing bases as described in the licensee submittals, NRC SERs and the FSAR and that the systems could perform their intended function in the event of a fire in either of these areas.

The team reviewed the adequacy of the instrument rack room (FA CB-11) under floor total flooding halon system by performing walkdowns of the system and the room envelope. The team also reviewed the design and installation, NFPA 12A, "Standard on 1301 Fire Extinguishing System," initial discharge testing and the adequacy of surveillance procedures. Completed surveillance procedures were also reviewed to ensure periodic testing of the system was being accomplished. These reviews were performed to ensure that the total flooding halon system met the design and licensing bases as described in the licensee submittals, NRC SERs and the FSAR and that the system could perform its intended function in the event of a fire in this area.

The team reviewed the adequacy of the north emergency diesel generator enclosure (FA EG-3) closed head sprinkler system by performing walkdowns of the system. The

team also reviewed the design and installation, NFPA 13, "Standard for the Installation of Sprinkler Systems," and the adequacy of surveillance procedures. Completed surveillance procedures were also reviewed to ensure periodic testing of the system was being accomplished. These reviews were performed to ensure that the sprinkler system met the design and licensing bases as described in the licensee submittals, NRC SERs and the FSAR and that the system could perform its intended function in the event of a fire in this area.

b. Findings

No findings of significance were identified.

6. Manual Fire Suppression Capability

b. Inspection Scope

The team walked down selected standpipe systems and observed portable extinguishers to determine the material condition of the manual fire fighting equipment and verify locations as specified in the fire fighting strategies and fire protection program documents. The team reviewed electric and diesel fire pump flow and pressure tests to ensure that the pumps were meeting their design requirements. The team also reviewed the fire main loop flow tests to ensure that the flow distribution circuits were able to meet the design requirements. The team inspected the fire brigade's protective ensembles, self-contained breathing apparatus (SCBA), and various fire brigade equipment to determine operational readiness for fire fighting.

The team reviewed fire fighting strategies and smoke removal plans for the selected fire areas to determine if appropriate information was provided to fire brigade members and plant operators to identify safe shutdown equipment and instrumentation, and to facilitate suppression of a fire that could impact safe shutdown.

The team performed in-plant walk downs to evaluate the physical configuration of electrical raceway and safe shutdown components in the selected fire areas to determine whether water from an inadvertent fire suppression system pipe rupture or from manual fire suppression activities in the selected areas could cause damage that could inhibit the ability to safely shutdown the plant. This included review of a flooding analysis.

The team reviewed fire brigade initial training and continuing training course materials to verify appropriate training was being conducted for the station firefighting personnel. Additionally, the team reviewed selected fire drills and critiques to ensure that drills were being conducted in risk significant areas. The team toured the Fire Training Facility to observe it's training capability and similarity to plant areas.

The team reviewed the qualifications of several fire brigade leaders and members to ensure that they had met and maintained the requirements to be fire brigade leaders and members.

b. Findings

No findings of significance were identified.

7. Safe Shutdown Capability

a. Inspection Scope

The team reviewed the fire response procedures, alarm response procedures and operating procedures for the selected fire areas to evaluate the methods and equipment used to achieve safe shutdown following a fire. The team also reviewed piping and instrumentation drawings (P&ID) for post-fire safe shutdown systems to identify required components for establishing flow paths, to identify equipment required to isolate flow diversion paths, and to verify appropriate components were properly evaluated and included in the safe shutdown equipment list. The team also reviewed selected remote shutdown components and their control circuits to ensure that proper isolation was provided for remote shutdown capability, in the event of a fire affecting the control room. The team performed field walkdowns to evaluate the protection or separation of the equipment from the effects of fires.

Post-fire shutdown procedures for the selected areas were also reviewed to determine if appropriate information was provided to plant operators to identify protected equipment and instrumentation and if recovery actions specified in post-fire shutdown procedures considered manpower needs for performing required actions. The team also reviewed training lesson plans for the alternative shutdown procedures, discussed training with licensed operators, reviewed selected remote shutdown equipment tests, reviewed the adequacy of shift manning, and evaluated the accessibility of the alternative shutdown operating stations and required manual action locations.

The specific procedure reviewed for alternate safe shutdown from outside the control room was EOP 3509.1, Control Room, “Cable Spreading Area or Instrument Rack Room Fire,” Revision 8. The team performed a walkdown of a portion of this procedure. The walkdown was performed by licensed operator personnel and focused primarily on the portion of the procedure associated with achieving stable hot shutdown conditions. Plant operators were accompanied by NRC team members during the walkdown and the approximate time for critical steps, such as establishing charging, were noted and evaluated to assess the ability of the operators to maintain plant parameters within procedural limits.

b. Findings

No findings of significance were identified.

8. Safe Shutdown Circuits

a. Inspection Scope

The team reviewed the Cable Routing Matrices for post-fire safe-shutdown components (Appendix C to BTP 9.5-1 Compliance Report, Revision 3) to confirm that cables subject to fire damage in the four selected fire areas were identified and adequately addressed. The team also reviewed cable raceway drawings for a sample of components required for post-fire safe shutdown to verify that cables were routed as described in the cable routing matrices.

The team reviewed circuit breaker coordination studies to ensure equipment needed to conduct post-fire safe shutdown activities would not be impacted due to a lack of coordination. The team confirmed that coordination studies had addressed multiple faults due to fire. Additionally, the team reviewed a sample of circuit breaker maintenance and records to verify that circuit breakers for components required for post-fire safe shutdown were properly maintained in accordance with procedural requirements.

The team reviewed the electrical isolation capability of selected equipment needed for post-fire safe shutdown to ensure that such equipment could be operated locally or from the alternate shutdown panels, if needed. The team also reviewed the surveillance test procedure and test records of the fire transfer switch panel to ensure that the functionality of the switch panel had been adequately demonstrated.

Due to the issuance of Change Notice 00-020 to Inspection Procedure 71111.05, “Fire Protection,” the team did not review associated circuit issues during this inspection. This change notice has suspended this review pending completion of an industry initiative in this area.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

1. Corrective Actions for Fire Protection Deficiencies

a. Inspection Scope

The team reviewed the open corrective maintenance work orders for fire protection and safe shutdown equipment, selected condition reports (CRs) for fire protection and safe shutdown issues and recent Unit 3 fire protection systems health report to evaluate the prioritization for resolving fire protection related deficiencies and the effectiveness of corrective actions. The team also reviewed recent Quality Assurance (QA) Audits, self-assessments and field observations of the fire protection program to determine if the licensee was identifying program deficiencies and implementing appropriate corrective actions.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

1. Exit Meeting Summary

The team presented their preliminary inspection results to Mr. J. A. Price, Site Vice President, and other members of the Millstone Power Station Unit 3 staff at an exit meeting on August 19, 2004. The team confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Dominion Nuclear Northeast, Inc. Personnel:

J. A. Price	Site Vice President
J. Armstrong	Fire Protection Engineer
W. Brown	Licensing
T. Cleary	Licensing
S. Garvin	Fire Protection Supervisor
S. Heard	Manager Proc. & Doc. Admin.
M. Jalbert	Technical Specialist
S. Jordan	Engineering Director
T. Kim	Engineer
S. Kuzel	Engineer Technical Programs
J. Laine	Director (Acting)
P. L'Heureux	Manager Nuclear Engineering
J. Mangino	Fire Protection Program
R. McIntosh	Licensing
J. Putman	Supervisor Doc. Admin.
P. Raimondi	Engineer Technical Programs
S. Sarver	Dir. Operations
D. Scott	Engineer

Nuclear Regulatory Commission Personnel:

J. Rogge, Chief, Electrical Branch, Division of Reactor Safety
S. Schneider, Senior Resident Inspector, Millstone Power Station
S. Kennedy, Resident Inspector, Millstone Power Station
K. Mangan, Resident Inspector, Millstone Power Station

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

Fire Protection Licensing Documents

Millstone Nuclear Power Station Unit 3, BRP 9.5-1 Compliance Report, Rev. 3
Millstone Nuclear Power Station Unit 3 FSAR, Fire Protection Evaluation Report, FHA, Safe Shutdown Analysis, Rev. 16
NUREG-1031, Safety Evaluation Report, August 17, 1984
NUREG-1031, SER, Supplement No. 1, March 1985
NUREG-1031, SER, Supplement No. 2, September 1985
NUREG-1031, SER, Supplement No. 4, November 1985
NUREG-1031, SER, Supplement No. 5, November 1985
Letter to the NRC from NU, Millstone Nuclear Power Station, Unit # 3, Response to SER Open Items (14.2 & 14.7)

Calculations/Engineering Evaluations

M3-EV-03-0021,	Risk Assessment of Fire Safe Shutdown Strategy Deficiency for Fire Induced Loss of All AC Event, Rev. 0
M3-97-1984,	Millstone Common Maintenance Rule (a)(1) Evaluation for the Emergency Lighting System
S-04071F3,	MP3 BTP 9.5-1 RELAP5 Fire Shutdown Analysis, Rev. 0
SP-M3-EE-269,	Attachment 4.2, Appendix R Breaker Coordination Study, Rev. 3

PM Change & Deferral Request

Log # 0687,	Replace Appendix R ELU Batteries That Run at $110^{O}F$ and Above
Log # 0689,	Replace ELU Battery, 2003
Log # 0691,	Replace Appendix R ELU Batteries Temp. between $100^{O}F$ & $110^{O}F$
Log # 0695,	Replace ELU Batteries
Log # 0697,	Replace $90^{O}F$ to $100^{O}F$ ELU Batteries
Log # 0699,	Replace ELU Batteries

Operability Determinations

MP3–025-03,	Loss of RCP Cooling, Rev. 4
MP3-038-03,	Pitting & Erosion Found in Fire Pump Casing & Stuffing Box, Rev. 0
MP3-041-03,	MP3 Electric Fire Pump (M7–8) Relief Valve, Rev. 0
MP3-068-04,	ADV Spurious Operation, Rev. 0

Initial Discharge Testing for Halon & CO_2

T3341BP,	Initial Discharge Test for Halon IRR Millstone Unit 3, November 2, 1983
T3341CP,	Initial Discharge Test for CO_2 in North and South Cable Tunnels, November 1, 1985

Design Change Requests

DCR M3-02006,	Design Capacity and Parameters MP3 East and West Switchgear Room Breathing Air System, Rev. 0

MP3-95-052, CO2 Discharge Changed to Manual Actuation (Seven Areas), Rev. 3

Procedures

CMP 780A, GE Model AM Magne-Blast Circuit Breaker PM, Rev. 2
EOP 3509, Fire Emergency, Rev. 18
EOP 3509.1 Control Room, Cable Spreading Area or Instrument Rack Room Fire, Rev. 8
EOP 3509.15, North (A) EDG Enclosure or East (A) F.O. Vault Fire, Rev. 0
EOP 3509.30, Service Bldg., North Cable Tunnel Fire, Rev. 0
EOP 3509.31, Service Bldg., South Cable Tunnel Fire, Rev. 0
MP-PROC-WM-WC-7, Fire Protection Program, Rev. 5
MP-24-ENG-GDL01, System Engineer Performance Monitoring and Trending, Rev. 4
MP-24-FPP-FAP1.1, Performing Detailed Fire Protection Reviews and Developing and Maintaining the Unit Fire Hazards Analysis, Rev. 1
MP-24-FPP-FAP1.2, Performing Detailed Fire Safe Shutdown Reviews, Developing and Maintaining Fire Safe Shutdown Analysis, Rev. 1
MP-24-FPP-FAP1.3, Fire Protection and Appendix R BTP CMEB 9.5-1, GL 86-10 Technical Evaluations, Rev. 1
MP-24-FPP-FAP1.4, Guidance For Fire Fighting Strategies (Pre-fire Plans), Rev. 1
MP-24-FPP-GDL01, Fire Protection Reportability/Operability Evaluation Guidance, Rev. 1
MP-24-FPP-PRG, Time Fire Protection Program, Rev. 3
MP-3782CA, 480 Volt Load Center Breaker PM and Testing, Rev. 12
MP-3782CD, 480 VAC K1600S Electrically Operated Breaker Refurbishment, Rev. 0
MP-3783A, Component Cooling Pump Motor Replacement for Fire Protection Rev. 5

SFP 1, Fire Protection Training Program, Rev. 1
SFP-12, Fire Watch and Impairment Tracking

Surveillance Procedures

C SP 600.7, Electric Fire Pump M7-8 Annual Operability Demonstration, Rev. 1, Completed December 1, 2003
C SP 600.9, Diesel Fire Pump M7-7 Annual Operability Demonstration, Rev. 1, Completed December 22, 2003
C SP 600.14, P-82 Electric Fire Pump Annual Operability Demonstration, Rev. 0, Completed December 16, 2003
PM Change & Deferral Request 0554, PM to Overhaul & Inspect All CO_2 Fire Suppression Selector Valves
SFP 21, Appendix R Fire Cage Inventory, Rev.1
SFP 21, Unit 3 Safe Shutdown Fire Cage Inventory, Rev. 2, Completed January 6, 2003 & July 9, 2004
SFP 26, Functional Check of the CO_2 Fire Protection System, Rev. 2
SFP 26, Functional Check of the CO_2 Fire Protection System, South Electrical Tunnel, Rev. 0, Completed August 9, 2004
SFP 26-006, Functional Check of the CO_2 Fire Protection System, North Electrical Tunnel, Rev. 0, Completed July 30, 2002

SP 3641A.4, Fire Water System Functional Test & Deluge Spray Nozzle Operability, Rev. 11
SP3641A.4-001, Functional Check of Deluge & Sprinkler Systems, Rev. 11, Completed August 16, 2002
SP 3641B.2, Functional Check of the Fire Protection Halon System, Rev. 13
SP3641B.2-001, IRR Halon System Actuation Test, Rev. 7, Completed June 12, 2002
SP 3641B.2-002, IRR Halon System Flow Test, Rev. 5, Completed August 20, 2002, & December 19, 2003
SP 3641 C.1, Fire Protection CO2 System Valve Lineup Verification, Rev. 8
SP 3641C.2-006, Functional Check of the CO_2 Fire Protection System, North Electrical Tunnel, Rev. 7, Completed December 17, 2001
SP 3641D.3, Fire Detection & Control System Operability Check, Rev. 11
SP 3641D.3, Fire Detection Zone Panel 5C Detector Operability Checks, Rev. 4, Completed November 12, 2003
SP 3641D.6, Fire Rated Assemblies, Rev. 9
SP 3641D.3-11, Fire Detection Zone Panel 4E Panel & Detector Operability Checks (IRR and Computer Room), Rev. 4, Completed November 27, 2002 & October 23, 2003
SP 3673.2 Fire Transfer Switch Panel Operational Testing, Rev. 2
SP 3673.2-001, Fire Transfer Switch Panel Operational Testing, Rev. 0, Completed March 6, 2004 & March 12, 2001
SP 3673.2-003, Fire Transfer Switch Panel Operational Testing - 3 HVR*FN14A, Rev. 0, Completed September 8, 2002
SP 3673.2-007, Fire Transfer Switch Panel Operational Testing - 3 SWP*MOV54A & MOV54C, Rev. 0, Completed July 22, 2002
SP 3673.2-010, Fire Transfer Switch Panel Operational Testing - 3 RCS*PCV455A, Rev. 0, Completed September 27, 2002
SP 3673.5-001, Remote Shutdown Monitoring Instrumentation, Rev. 6, Completed February 23, 2004 & March 22, 2004
SP 3673.5-002, Auxiliary Shutdown Panel Source Range Instrumentation Channel Check, Rev. 2
Unit 3 Fire Penetration Seal Inspection - Group 8, SFP 17-017, Rev. 0, Completed January 8, 2003
Unit 3 Fire Protection Seal Inspection - Group 9, SFP 17-018, Rev. 0, Completed July 9, 2004
3641.D.5-1, Fire Damper Operability Verification, Rev. 6, Completed December 1, 1993 & December 16, 1998
85-3-19, Fire Damper Performance Verification, Rev. 0, Completed October 9, 1985

Quality Assurance Audits, Self-Assessments and Field Observations

Millstone Unit 3 Fire Protection/Appendix R Self Assessment, June 7-11, 2004
Nuclear Oversight Audit MP-02-A10, Fire Protection
Nuclear Oversight Audit MP-03-A11, Fire Protection
Nuclear Oversite Audit Report, 04-04, Fire Protection Implementation, May 27, 2004
MPS-ENG -02-002-01, Observation of Site Fire Brigade Training, Drill, & Post Drill Critiques, January, 09-10, 2002, January 14, 2002

MPS-ENG-02-002-05, Observation of House Keeping Conditions and Flammable/Combustible Storage, January 23, 2002
MPS-ENG-02-002-11, Observation of Site Fire Brigade Quarterly Drill, January 30, 2002
MPS-ENG-02-006-01, Observation of an Unannounced Backshift Fire Drill, January 28, 2002, April 1, 2002
MPS-MNG-01-022-10, Observation of a CO2 Puff Test in MP3's South Electrical Tunnel, December 5, 2001, December 5, 2001
MPS-MNG-01-022-12, Observation of Site Firewater Valve Cycling (SFP 23). December 10, 2001, December 17, 2001

Fire Qualification Test Reports

Fire Test of a Steel Composite Wall, March 1986
TR-158, Fire & Hose Stream Test of TCO-002 Medium Density Silicone Elastomer, May 6, 1985
TR-189, Fire & Hose Stream Test of 6", 8" & 10" Thick Specimens of TCO-050 Silicone Foam, April 22, 1985

P&IDs and Drawings

12179-EM-102C, Reactor Coolant System, Rev. 21
12179-EM-102F, Reactor Coolant System, Rev. 15
12179-EM-104A, Chemical & Volume Control, Rev. 45
12179-EM-104B, Chemical & Volume Control, Rev. 17
12179-EM-104C, Chemical & Volume Control, Rev. 30
12179-EM-113A, High Pressure Safety Injection, Rev. 23
12179-EM-123B, Main Steam and Reheat, Rev. 19
12179-EM-123E, Main Steam and Reheat, Rev. 19
12179-EM-130B, Feedwater System, Rev. 38
12179-EM-130C, Feedwater System, Rev. 21
12179-EM-130D, Feedwater System, Rev. 21
12179-EM-146A, P&ID CO2 System
25212-24035, Fire Stops and Seals Map Location
25212-24274, Millstone Nuclear Power Station Unit 3 Wall Penetration Map Cont. Bldg., Shts 1-6
25212-24260, Fire Hazards Analysis Plan EL 3'-8", Rev. 5
25212-24262, Fire Hazards Analysis Plan EL 38'-6", Rev. 7
25212-24263, Fire Hazards Analysis Plan EL 52'-6", Rev. 7
25212-24265, Fire Hazards Analysis Plan Sections, Rev. 2
25212-26946, Piping and Instrumentation Diagram, Fire Protection, Shts. 1-4
25212-27114, Machine Location Emergency Generator Enclosure, Shts. 1-2
25212-27131, Plant Fire Radiation and Pressure Boundaries, EL 3'-8", Rev. 11
25212-27132, Plant Fire Radiation and Pressure Boundaries, EL 24'-6", Rev. 22
25212-27133, Plant Fire Radiation and Pressure Boundaries, EL 38'-6", Rev. 9
25212-29680, TCO-050 Silicone Foam Fire or Air Seals For Sleeve, Conduit, Cast, or Core Bored, Openings Up to 5" Dia., Sht. 23, Rev. 7
25212-29680, TCO-002 Medium Density Silicone Elastomer Seal For Cable Tray Openings in Hollow Steel Walls Detail "E19", Sht. 28, Rev. 4
25212-33031, Arrangement Control Computer and Instrument Rack Rooms

Electrical Drawings

25212-30001,	Main One Line/Phase Diagram Power Distribution System Composite, Rev. 22
25212-30004,	Main One Line Diagram, 4160V Normal and Emergency Buses, Rev. 19
25212-30027,	480V MCC One Line Diagram, Auxiliary Building, Sheet 3, Rev. 31
25212-30076,	One Line Diagram, 125 Vdc & 120 Vac Distribution System Composite, Rev. 23
25212-34145,	Cable Tray Identification, Service Building, Sheet 2, Rev. 9
25212-34189,	Cable Tray Arrangement, Service Building, Normal Switch Area, Rev. 14
25212-34204,	Cable Tray Identification, Control Building, Sheet 1, Rev. 7
25212-34205,	Cable Tray Identification, Control Building, Sheet 2, Rev. 8
25212-34285,	Cable Tray Arrangement, Control Building, Cable Spreading Area, Rev. 14
25212-34287,	Cable Tray Arrangement, Control Building, Emergency Switch and Battery Rooms, Rev. 16
25212-34231,	Conduit Plan, Control Building, El 4'-6'', Rev. 14
25212-34237,	Conduit Plan, Control Building, El 24'-6'', Rev.13
25212-34235,	Conduit Plan, Control Building, El 24'-6'', Sheet 1, Rev. 13
25212-34238,	Conduit Plan, Control Building, El 24'-6'', Sheet 4, Rev. 19

Elementary Diagrams 25212-32001(Series)

-3A thru 3AE	Control Switch Contact Diagram
-3MX, 3MY	Turbine Driven Auxiliary Feedwater Pump Steam Supply Valves 3MSS*AOV 3A&B
-3MZ	Turbine Driven Auxiliary Feedwater Pump Steam Supply Valves 3MSS*AOV 3C
-5CJ	Service Water Pump 3SWP*P1A, Rev. 18
-5CS	Charging Pump 3CHS*P3A, Rev. 13
-5DR	EDG Breaker 3ENS*ACB-G-A, Rev. 22
-6AAK,-6AAL	Nuclear Plant CC Heat Exchanger Service Water Supply Valve 3SWP*MOV50A,B, Rev. 9 & 10
-6AAM	Turbine Plant CC Heat Exchanger Inlet Valve 3SWP*MOV71A, Rev. 11
-6AJJ	Boric Acid Gravity Feed Valve 3CHS*MV8507A,
-6KC	Charging Header Isolation Valve 3CHS*MV8116, Rev. 8
-6PG	Charging Pump to RCS Isolation Valve, 3CHS*MV8105, Rev. 14
-6AJQ	Charging Header Isolation Valve 3CHS*MV8438A, Rev. 13
-6AJS	Charging Header Isolation Valve 3CHS*MV8438C, Rev. 12
-6AAU	Service Water Pump Discharge Valve 3SWP*MOV102A, Rev. 15
-6SM	Cable Vault Area ACU 3HVR*ACU1A&B, Rev. 13
-7DW	Pressurizer Power Relief Valve 3RCS*PCV455A, Rev. 15
-7CM	Charging to RCS Isolation Valve 3CHS*AV8147&8146, Rev. 8
-7VC	Charging Flow Control Valves 3CHS*HCV190A&B, Rev. 7
-8KC	125 Vdc Emergency Generator Start Circuit 3EGSAO1, Rev. 12
-8KD	125 Vdc Emergency Generator Stop Circuit 3EGSAO3, Rev. 15

Fire Fighting Strategies

Fire Area SB-2,	North Cable Tunnel
Fire Area SB-3,	South Cable Tunnel

Fire Area EG-3, Zone A, North Emergency Generator Enclosure
Fire Area EG-3, Zone B, North Emergency Generator Enclosure
Fire Area CB-8, Cable Spreading Area
Fire Area CB-11, Zone A, Instrument Rack Room Under Floor Area
Fire Area CB-11, Zone B, Instrument Rack Room

Fire Drills, Scenarios & Critiques

CFD 02-04, Fire Brigade Drills, Completed June 13, 2002 Thru July 27, 2002
CFD 02-06, Fire Brigade Drills, Unit 3 A/B Diesel, Completed June 27, 2002

Fire Brigade Drill Statistics, 2001 Fire Brigade Drills
Fire Brigade Drill Statistics, 2002 Fire Brigade Drills
Fire Brigade Drill Statistics, 2003 Fire Brigade Drills
Fire Brigade Drill Statistics, 2004 Fire Brigade Drills

Fire Brigade/Operator Training & Offsite Training

Fire Brigade and Leader Qualification Status, August 9, 2004
Student Qualification/Training Status, August 10, 2004
Medical Qualifications, 2004

FB-00017, Site Fire Protection Systems, Rev. 6
FB-00019, Fire Fighting and Electrical Hazards, Rev. 3
FB-00024, Flammable and Combustible Liquids, Rev. 2
FB-00030, Fire Brigade Practice Scenarios, Rev. 2
FB-00033, Fire Brigade Tactical Operations, Rev. 2
FB-00037, Introduction to Fire Brigade Initial Training, Rev. 4
FB-00185, Self Contained Breathing Apparatus Scott 4.5 with Duration Extending Accessory Hose, Rev. 0
Fire Training-SCBA-Scott 4.5 MP-3 OPS DEAH, Close-out Report 2004, March-April

Annual Offsite Assistance Fire Drill, December 10, 2003
Offsite Fire Department Tour, December 13, 2003
2002 Waterford Training Materials, November 26, 2002

JIT-301-001, Just In Time Training DCN DM3-00-0347-01
JIT-302-002, Just In Time Training DCR M3-01008
JIT-302-002, Just In Time Training DCR M3-01008 Student Handout
JIT-304-001, Just In Time Training DCRs M3-02006 & 01008
JPM-3-1, Ch-2 Isolate Emergency Bus 34C iaw EOP 3509.1, Rev. 5
JPM-11, Ch-2 Primary Side PEO Actions on a Control Room Evacuation, Rev. 6
JPM-12, Ch-4 Secondary Side PEO Actions on a Control Room Evacuation, Rev. 5
JPM-15, Ch-3 Secondary Side PEO Actions on a Control Room Evacuation due to a Fire, Rev. 6
JPM-15A, Ch-3 Secondary Side PEO Actions on a Control Room Evacuation due to a Fire, Rev. 4
JPM-43, Borate to Cold S/D from ASP (RWST Suction), Rev. 5
JPM-173, Ch-1 Aligning the Fire Transfer Switch Panel and Auxiliary Shutdown Panel in response to a fire, Rev. 0

JPM-188, Installation of 3CHS-PI102T, Rev.0
E098091C, Lesson Plan, Ch-3 EOP 3509.1 Control Room, Cable Spreading Area or Instrument Rack Room Fire, Rev. 0
E098091D, Lesson Plan, Ch-1 EOP 3509.1 Control Room Fire, Rev. 0
Simulator Exercise Guide S03702L, "Sim #2, Fire Emergency; Control Room Evacuation
25212-ER-04-0030, Validation and Verification of EOP 3509.1 using Simulator, field and table top validation, Rev. 0

Ignition Source Permits

Ignition Source Permit 35612-04-IS
Ignition Source Permit 35230-03-IS
Ignition Source Permit 35325-04-IS
Ignition Source Permit 34507-02-IS
Ignition Source Permit 34669-02-IS
Ignition Source Permit 34872-02-IS

Fire Prevention Permits

Fire Prevention Permit 35794-04-FP
Fire Prevention Permit 35683-04-FP
Fire Prevention Permit 35459-04-FP
Fire Prevention Permit 35487-04-FP
Fire Prevention Permit 35022-02-FP
Fire Prevention Permit 33700-00-FP
Fire Prevention Permit 32681-99-FP
Fire Prevention Permit 32329-98-FP
Fire Prevention Permit 30250-97-FP

Condition Reports

01-07804	02-05083	02-06972	02-07655	02-07899	02-11564
03-00068	03-02407	03-08475	03-10012	04-00524	04-00652
04-00842	04-00872	04-00896	04-00904	04-01037	04-01633
04-01783	04-02201	04-02202	04-02360	04-02686	04-03142
04-03823	04-03946	04-03950	04-04247	04-04247	04-05723
04-05883	04-05889	04-06114	04-06920	04-06922	04-06925
04-06972	04-07038	04-07374	04-07376	04-07379	04-07387
04-07395	04-07424	04-07430	04-07434	04-07435	04-07455

Work Orders

M3 00 13693	M3 00 17229	M3 01 04690	M3 01 04697
M3 01 05531	M3 02 03389	M3 02 06795	M3 02 06796
M3 02 06798	M3 02 06799	M3 02 06814	M3 02 06815
M3 02 06831	M3 02 06832	M3 02 06841	M3 02 06842
M3 02 07006	M3 02 09816	M3 02 11818	M3 02 11819
M3 03 00317	M3 04 04814	MP 03 04799	MP 03 04802
MP 03 04803	MP 04 00174	MP 04 00175	MP 04 00176

GE 1GW7Z/30366-A
GE 1GW7Z/30516-A
GE 1GW7Z/32644

Miscellaneous Documents

Impairment Log, June 29, 2004 & August 10, 2004
FPS086C "Fire Protection, Detection, and Control" Rev.04, Ch-1
MP3 Fire Protection Codes of Record, June 22, 2004
MP3 Organization Chart, June 22, 2004
PM Change and Deferral Request 2003-0554
System Engineer System Health Report, 2nd Quarter, 2004
System Engineer System Health Report, 1st Quarter, 2004
System Engineer System Health Report, 4th Quarter, 2003
Vendor Document - Air Balance Inc., Model 319 Vertical Fire Damper & Model 119 UL - Classified Fire Damper
Vendor Document - Phillips - Aire, Phillips Fire Damper 565-9D
Vendor Tech. Manual, Emergency Light Units, DL Series
Vendor Tech. Manual, Emergency Light Units, Holophane Model-19
Vendor Tech. Manual, Emergency Light Units, Exide Model F-100

LIST OF ACRONYMS USED

BTP	Branch Technical Position
CFR	Code of Federal Regulations
CO_2	Carbon Dioxide
CR	Condition Report
DRS	Division of Reactor Safety
EDG	Emergency Diesel Generator
ELU	Emergency Lighting Unit
EOP	Emergency Operating Procedure
FA	Fire Area
FSAR	Final Safety Analysis Report
IP	Inspection Procedure
IPE	Individual Plant Examination
IPEEE	Individual Plant Examination of External Events
IR	Inspection Report
NFPA	National Fire Protection Association
NRC	Nuclear Regulatory Commission
PAR	Publicly Available Records
P&ID	Piping and Instrumentation Drawing
QA	Quality Assurance
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process
SER	Safety Evaluation Report