

0240

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS LIGHT & POWER COMPANY
NEW ENGLAND WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORFOLK AND NORFOLK POWER COMPANY

General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 665-5000

October 16, 1991

Docket No. 50-336
A09829

Re: Employee Concerns

Mr. Charles W. Hehl, Director
Division of Reactor Projects
U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Dear Mr. Hehl:

Millstone Nuclear Power Station, Unit No. 2
RI-91-A-0210

We have completed our review of an identified issue concerning activities at Millstone Station. As requested in your transmittal letter, our response does not contain any personal privacy, proprietary, or safeguards information. The material contained in this response may be released to the public and placed in the NRC Public Document Room at your discretion. The NRC transmittal letter and our response have received controlled and limited distribution on a "need-to-know" basis during the preparation of this response. Additional time in which to respond to this issue was granted by the Region I Staff in a telephone conversation on October 2, 1991.

ISSUE 210-2:

"Circuit changes had been made to the Millstone 2 main generator hydrogen monitor without the preparation of a modification package. As a result, the calibration procedure is inadequate, and appropriate procedure and drawing changes have not been made."

REQUEST:

"Please discuss the validity of the above assertion. If the above conditions are valid, please notify us of the corrective actions you have taken to prevent recurrence. Please provide us with an assessment of the safety significance of any identified deficiencies, including any generic considerations."

RESPONSE:

This assertion is valid in stating that procedure changes were not made. There is no step-by-step procedure for the calibration of this monitor. For the majority of balance-of-plant (BOP) instrumentation, calibrations are

performed based on loop folder and vendor technical manual information. The procedure that addresses the calibration of the BOP components contains generic information only and lists the instruments to be calibrated. There is no specific step-by-step procedural guidance for the calibration of the main generator hydrogen purity indicator. Instead, the technical manual for the main generator hydrogen purity indicator (GEK 4674A--One Cell Thermal Gas Analyzer Equipment) provides calibration guidance for this model thermal gas analyzer. The technical manual also identifies the need to initially modify the circuit design to allow the optional use of a remote meter. As Millstone Unit No. 2 has such a remote meter, it is likely that this was done during the initial installation activity. It would not be expected for vendor manuals to have been revised with this information at that time.

This concern was identified to the Millstone Unit No. 2 I&C manager in late July 1991 and responded to within 2 days. During a work assignment, the need for specific procedure guidance was identified and discussed. The instrument specialist assigned to the task thought that a step-by-step procedure was needed. He also felt that changes may have been made and not properly documented. The work activity was stopped before any calibration efforts were undertaken. The I&C manager's response indicated that a procedure would be developed and any documentation deficiencies would be addressed. This verification and modification of the documentation will be a department activity carried out as part of the procedure upgrade program and is expected to be completed in 1992.

The lack of a step-by-step procedure for the main generator hydrogen purity indicator does not compromise nuclear safety. The existing vendor manual instruction contains adequate guidance, and the monitor performs no safety related function. No modification deficiencies or generic issues have been identified.


We appreciate the opportunity to respond and explain the basis of our actions. Please contact my staff if there are further questions on any of these matters.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

FOR: Edward J. Mroczka
Senior Vice President

BY:


J. F. Opeka
Executive Vice President

cc: W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3
E. C. Wenzinger, Chief Projects Branch No. 4, Division of Reactor Projects
E. M. Kelly, Chief, Reactor Projects Section 4A
J. T. Shedlosky, U.S. Nuclear Regulatory Commission, Millstone

#0219

NAMCO
Because nothing else works better.

Namco Controls
7567 Tyler Boulevard
Mentor, Ohio 44060
(216) 946-9900
Telex 24-1566
Fax (216) 946-1228

April 7, 1989

Mr. Donald E. Moody
Station Manager
New Hampshire Yankee Division
Seabrook Station
P. O. Box 300
Seabrook, New Hampshire 03874

This is a new approach to EQ maintenance. ASCO should follow this approach also, I hope.
At C. Co. of

Dear Mr. Moody:

After a comprehensive review of Namco's involvement in Maintenance Training, Maintenance Procedures and Maintenance Kits programs and in anticipation of increased regulatory and nuclear power industry requirements, Namco no longer recommends maintenance tear-down and replacement of parts in its nuclear qualified limit switches.

In keeping with this decision, Namco will no longer supply maintenance kits with two exceptions: The Top Cover Gasket Kits and O'Ring Replacement Kits for Connector/Cable Assemblies.

This action is effective immediately.

Namco believes it is in the best interest of the operators of nuclear power generation plants as well as Namco to do so. Namco has found it commercially, economically and technically impractical to continue to support the maintenance of its limit switches. In the long term, this decision is expected to provide savings to the utilities in their overall maintenance programs.

At the end of the qualified life of a given Namco product, it should be replaced with a new and identical qualified product. The appropriate Namco Qualification Test Report should be consulted for the qualified life of the product in question.

Namco wishes to assure you that it will continue to offer a full line of qualified limit switches and connector seals.

We ask that the people who have a need to know within your organization be advised of this change in Namco's operating policy.

Very truly yours,

E. L. Roob

E. L. Roob
Product & Marketing Manager
Industry Products

ELR/msg

5/78

John Humphreys - Thanks for info 2/21 64

NORTHEAST UTILITIES

The Connecticut Light And Power Company
Western Massachusetts Electric Company
Holyoke Water Power Company
Northeast Utilities Service Company
Northeast Nuclear Energy Company

MEMO

February 20, 1991
MM-91-028

TO: Bob Rowe
MP2 Maintenance Supervisor

FROM: *John Humphreys*
John Humphreys
MP2 Maintenance

SUBJECT: ASCO Solenoid Valves and Namco Limit Switches

REFERENCES: 1. ASCO Service Bulletin, Discontinuation of Rebuild Kits for ASCO "NP" Series Valves, Dated May 23, 1989

2. Namco Letter, E. L. Roob to Donald E. Moody, Dated April 7, 1989

References (1) and (2) indicate that ASCO and Namco will no longer support general tear down and replacement of component parts for their solenoid valves and limit switches. In keeping with this change in philosophy, I recommend the following:

1. MP 2720S - ASCO Solenoid Spare Parts Kit Installation (EQ), be revised to delete information concerning installation of the spare parts kits. The procedure should provide instructions for SOV replacement and replacement of the SOV coil.
2. MP 2720R1 - Namco Limit Switch Maintenance (EQ), be revised to delete information concerning installation of the various spare parts kits. The procedure should address limit switch inspection, replacement and installation of top cover gaskets. *Caution - EQ Gaskets instead*
3. The PMMS data base for ASCO solenoid valves be completed and sufficient quantities of spare coils and solenoid valves be ordered and placed on repeating requisitions.
4. The PMMS data base for valves with Namco limit switches be completed and sufficient quantities of spare limit switches be ordered and placed on repeating requisitions.

Attached is a list of ASCO solenoid valves and Namco limit switches that was prepared by Chris Ferris. The list may not be complete, but at least it is a start. Dave Knopf is providing a list of Cat 1 and EEQ solenoid valve BOMs for verification.

cc: J. Riley
J. Scheeler

5/79

SAMPLE RECORD OF ALLEGATION PANEL DECISIONS

SITE: Millstone

ALLEGATION NO.: EI-91-A-0219

DATE: 23 Aug 91 (Panel No. 02 3 4 5)

PRIORITY: High Medium Low

SAFETY SIGNIFICANCE: Yes No Unkn

CONCURRENCE

TO CLOSEOUT: DD BC SC

CONFIDENTIALITY GRANTED: Yes No

(See Allegation Receipt Report)

IS THERE A HARASSMENT/DISCRIMINATION

ISSUE:

Yes No

IF YES,

- 1) has the individual been informed of the DOL process and the need to file a complaint within 30 days
- 2) has the individual filed a complaint with DOL
- 3) has a letter been sent to the complainant seeking any safety concerns

Yes No

Yes No

Yes No

IS A CHILLING EFFECT LETTER WARRANTED:

Yes No

IF YES, HAS IT BEEN SENT

Yes No

HAS THE LICENSEE RESPONDED TO THE CHILLING

EFFECT LETTER:

Yes No

ACTION:

- 1) Issue 1 (Namco): Tom to ask what we are doing about issue
Refer formally in a letter.
- Issue 2) Turnover to licensee, DRESS inspect when there for the
exercise props
- Issue 3) Review internal audit, call named engineer and ask
him specifically what the problem is
- 4) _____
- 5) _____

NOTES:

SAMPLE RECORD OF ALLEGATION PANEL DECISIONS

SITE: Millstone
ALLEGATION NO.: EI-91-A-0219
DATE: 23 Aug 91 (Panel No. D2 3 4 5)
PRIORITY: High Medium Low
SAFETY SIGNIFICANCE: Yes No Unkn
CONCURRENCE
TO CLOSEOUT: DD BC SC
CONFIDENTIALITY GRANTED: Yes No
(See Allegation Receipt Report)
IS THERE A HARASSMENT/DISCRIMINATION
ISSUE: Yes No
IF YES,
1) has the individual been informed of the DOL
process and the need to file a complaint within 30 days Yes No
2) has the individual filed a complaint
with DOL Yes No
3) has a letter been sent to the complainant seeking
any safety concerns Yes No
IS A CHILLING EFFECT LETTER WARRANTED: Yes No
IF YES, HAS IT BEEN SENT Yes No
HAS THE LICENSEE RESPONDED TO THE CHILLING
EFFECT LETTER: Yes No

PANEL ATTENDEES:
Chairman - Mehl
Branch Chief -
Section Chief (AOC) - Kelly
Sr. Allegation Coord (SAC) Fuhrmeister
OI Representative - C. White
(Other) Anderson

ACTION:

- 1) Issue 1 (Nanco): Tom to ask what we are doing about issue
Refer formally in a letter.
- Issue 2) Turnover to licensee, DRESS Impact when there for the
exercise props
- Issue 3) Review internal audit, call named engineer and ask
him specifically what the problem is
- 4) _____
- 5) _____

NOTES: _____

5/81

from the desk of

8/26/91

GENE KELLY

To: Bill Hell Jim Wiggins

Telecon with Paul Blanchard NU

Reference: Allegation RI-A-91-0219 (item 3)

Per the Panel's decision on 8/22, I contacted Mr. Blanchard to discuss the alleged problems with "Appendix K" power supplies.

Mr. Blanchard stated that the issue does involve "serious safety concerns" which "... need looking into" regarding Millstone 1 Reg. Guide 1.97 Flow instrumentation for LPCI and Core Sprng. His concern is for single failure potential of these instruments - all powered from the same vital bus - relied upon for EOP decision-making on throttling LPCI/CS (now because of well known NPSH considerations & trans temperature concerns).

Mr. Blanchard stated that he felt this issue was being appropriately

cover
5/8/66

August 27, 1991

MEMORANDUM FOR FILE

TELECON ~~P. BLANCH~~ to D. DEMPSEY: August 27, 1991 @ 9:10 a.m.

~~Mr. Blanch~~ called me regarding an allegation which concerned Appendix R instrumentation power supplies at Millstone 1. ~~Mr. Blanch~~ stated that the allegation is in error in that there are no Appendix R audit problems associated with instrumentation power supplies of which he is aware. He has been assigned a project dealing with Regulatory Guide 1.97 instrumentation. ~~Mr. Blanch~~ made the following points:

-- NUSCO has identified no safety or non-compliance issues associated with RG 1.97 at this time. However, there are questions associated with lack of redundant power supplies to LPCI and CS flow instruments which are being addressed, among others, on a priority basis. (Instrument AC power supply--single shared breaker)

-- By original design little manual operator action was required to operate LPCI/CS systems during design basis events. Hence, a common power supply was specified. Since the advent of LPCI heat exchanger flow limits, new and higher post-accident torus temperatures, and revision 4 EOPS, operators now rely more on these flow instruments to guide manual actions. Hence, redundant power supplies may be appropriate.

-- LPCI/CS flows are not Type A variables at this time. They are being reevaluated at this time.

-- The focus of the RG 1.97 project goes beyond the compliance issue to that of the ability of the systems to perform the safety function given the worst single failure. A recent operability determination (REF) resulted in a finding that the systems were operable.

~~Mr. Blanch~~ also discussed briefly the recent unusual event at Millstone which involved loss of emergency assessment capability. During the hurricane, the Berlin computer mainframe was lost resulting in dumping of dose assessment formulas, weather information, OFIS, etc. He indicated that there was some resistance at the corporate EOF to declare the UE since backup methods supposedly available. At any rate, ~~Mr. Blanch~~ stated that management is giving the computer issue appropriate attention now.

ASSESSMENT: There are no new allegations. The purpose of the conversation was to clarify information previously identified to NRC.

Allegation item number 3 of August 14, 1991 @ 1300

5/83

from TOL regarding Unit 1 Appendix F Instrument power supplies
should be closed as unsubstantiated.

from the desk of

9/9/91

To: Joyner, Lazarus, ^{GENE KELLY} Anoto

Subject: Millstone Allegations 91-219 & 236

Re: allegations @ Millstone asset problems w/ the reliability of data and the EDF diesel generator for Emergency Response Activities @ Northeast Utilities.

The allegations panel recommended inclusion of an inspection for these as part of the EP&R pipe schedule during the week of September 23rd.

Your support is appreciated

Gene

cc Cooper, Wiggins, Raymond

5/84

(69)

A L L E G A T I O N M A N A G E M E N T S Y S T E M

ALLEGATION NUMBER - RI-91-A-0219

RUN DATE: 09/11/91

DOCKET/FACILITY/UNIT: 05000336 / MILLSTONE 2
 DOCKET/FACILITY/UNIT: 05000245 / MILLSTONE 1
 DOCKET/FACILITY/UNIT: /
 DOCKET/FACILITY/UNIT: /

/ 2
 / 1
 /
 /

ACTIVITY TYPES - REACTOR

MATERIAL LICENSES -

FUNCTIONAL AREAS - OPERATIONS

DESCRIPTION - 1) VENDOR INFORMATION RELATED TO EQ MAINTENANCE (NAMCO
 SWITCHES AND VALVES) NOT INCORPORATED IN TIMELY MANNER
 2) EOF DIESEL LOAD TEST PROCEDURE INADEQUATE AND NOT
 CONCERNS - PROPERLY IMPLEMENTED.
 3 3) NO REDUNDANCY EXISTS FOR APPENDIX R POWER SUPPLIES FOR
 UNIT 1 (ASSOCIATED WITH INSTRUMENTATION)

SOURCE - LICENSEE EMPLOYEE

CONFIDENT - NO

RECEIVED - 910814 BY - PJ HABIGHORST / RI

ACTION OFFICE CONTACT - EM KELLY - (FTS) 346-5183

SAFETY SIGNIFICANCE - UNKNOWN BOARD NOTIFICATION - NO

STATUS - OPEN SCHED COMPLETION - 911231 DATE CLOSED -

ALLEGATION SUBSTANTIATED - ALLEGER NOTIFIED -

OI ACTION - OI REPORT NUMBER -

REMARKS - ALLEGER PROVIDED COPIES OF INTERNAL MEMORANDA AND PROCEDURES
 TO SUPPORT HIS CLAIM. __PANELED 23AUG91.

SUPPORT OFFICE: RPS-4A
 ACTION PENDING: REFER TO LICENSEE
 DOCUMENTATION:
 ALLEGER LAST CONTACTED: 14AUG91
 REFERENCE:
 KEYWORD: PROCEDURES

ENTERED SYSTEM - 910822 CLOSED SYSTEM -

RECORD CHANGED - 910823

5/85

TW 10/9/91

(72)

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Issue 91-219-01

Changes to vendor maintenance and surveillance instructions are not evaluated and needed procedure changes are not being made in a timely manner. In particular, MP 2720R1, NAMCO Limit Switch Maintenance (EQ), references NAMCO EA 189-90051 (December, 1980) whereas the vendor has superseded EA 189-90051 with EA 189-90060 (February 4, 1991). This new information warns that removal of the bottom cover of the limit switch will negate the qualification (EEQ). In addition, NU was notified in May, 1989 that the vendor would no longer support re-work and spare part kits for their solenoid valves and limit switches. The concern is that key craft personnel are not aware of these changes.

Issue 91-219-02

MP 2722B, Annual EOF Diesel Generator Load Run, is deficient in that the division of work responsibilities among electricians, mechanics, and contractors have never been evaluated as appropriate. Further, AWO M2-89-09594, for the annual load test, does not reference MP 2722B or the other controlling procedure, EPIP 4303, and, there appears to be the following discrepancies in the drawings associated with the test:

- 1) Electrical circuit breaker positions on electrical panels KLP1 and KLP2 do not agree with drawing 25205-30007. Circuit breaker No. 26 is in question on ELP1; breakers 10 and 12 are in question on ELP2;
- 2) An electrical remote control panel, PN1 is shown on drawing 25205-30007; but does not appear to exist;
- 3) The schematic portion of drawing 25205-39002, sheet 3 (or 25205-32008) appears incorrect and is confusing;
- 4) A utility plug is located at the bottom of the electrical power distribution system automatic bus transfer device (ABT). This conflicts with drawing 25205-32008;
- 5) The vendor representative and mechanic involved with the annual load test of the EOF emergency diesel generator are not qualified to perform the electrical portions of the test; and,
- 6) The review of procedures made by PORC is inadequate.

Request:

Please discuss the validity of the above assertions. If any deficiencies are identified, please provide us with the corrective actions you have taken to prevent recurrence. Please provide us with an assessment of the significance with regard to safety of any identified deficiencies.

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5/87

10/9/87

Page 7

MILLSTONE POINT UNIT 2

EED MASTER LIST
REVISION NO. 2

Sorted by Component Type

PLANT ID NO	COMPONENT TYPE	EED ZONE	MANUFACTURER	MODEL NUMBER	EED FILE	DUAL LEVEL	NOTES
25-6731 (1)	LIMIT SWITCH	A-2	NAMCO	EA740-20100	-125	0588	Vlv RB-68.1A NA
25-6731 (2)	LIMIT SWITCH	A-2	NAMCO	EA740-20100	-125	0588	Vlv RB-68.1A NA
25-6735 (1)	LIMIT SWITCH	A-3	NAMCO	EA740-20100	-125	0588	Vlv RB-68.1B NA
25-6735 (2)	LIMIT SWITCH	A-3	NAMCO	EA740-20100	-125	0588	Vlv RB-68.1B NA
25-7311 (1)	LIMIT SWITCH	A-18	NAMCO	EA-740-20100	-125	0588	Vlv FMW-43C NA
25-7312 (1)	LIMIT SWITCH	A-17	NAMCO	EA-740-20100	-125	0588	Vlv SI-312 NA
25-7312 (2)	LIMIT SWITCH	A-17	NAMCO	EA-740-20100	-125	0588	Vlv SI-312 NA
25-7696 (1)	LIMIT SWITCH	A-18	NAMCO	EA-740-20100	-125	0588	Vlv AC-45 NA
25-8082 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv AC-5 NA
25-8121 (1)	LIMIT SWITCH	A-50	NAMCO	EA-180-11302	-109	0588	Vlv AC-47 NA
25-8121 (2)	LIMIT SWITCH	A-50	NAMCO	EA-180-12302	-109	0588	Vlv AC-47 NA
25-8122 (1)	LIMIT SWITCH	A-51	NAMCO	EA-180-11302	-109	0588	Vlv AC-12 NA
25-8122 (2)	LIMIT SWITCH	A-51	NAMCO	EA-180-12302	-109	0588	Vlv AC-12 NA
25-8124 (1)	LIMIT SWITCH	A-51	NAMCO	EA-180-11302	-109	0588	Vlv AC-15 NA
25-8124 (2)	LIMIT SWITCH	A-51	NAMCO	EA-180-12302	-109	0588	Vlv AC-15 NA
25-8125 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv AC-6 NA
25-8150 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv EB-88 NA
25-8150 (2)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv EB-88 NA
25-8151 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv EB-89 NA
25-8151 (2)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv EB-89 NA
25-8306A (1)	LIMIT SWITCH	A-2	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-326 NA
25-8306A (2)	LIMIT SWITCH	A-2	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-326 NA
25-8306B (1)	LIMIT SWITCH	A-2	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-325 NA
25-8306B (2)	LIMIT SWITCH	A-2	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-325 NA
25-8306C (1)	LIMIT SWITCH	A-2	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-326 NA
25-8306C (2)	LIMIT SWITCH	A-2	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-326 NA
25-8306D (1)	LIMIT SWITCH	A-2	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-327 NA
25-8306D (2)	LIMIT SWITCH	A-2	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-327 NA
25-8312A (1)	LIMIT SWITCH	A-3	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-314 NA
25-8312A (2)	LIMIT SWITCH	A-3	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-314 NA
25-8312B (1)	LIMIT SWITCH	A-3	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-313 NA
25-8312B (2)	LIMIT SWITCH	A-3	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-313 NA
25-8312C (1)	LIMIT SWITCH	A-3	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-315 NA
25-8312C (2)	LIMIT SWITCH	A-3	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-315 NA
25-8312D (1)	LIMIT SWITCH	A-3	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-316 NA
25-8312D (2)	LIMIT SWITCH	A-3	MICRO SWITCH	LSK-4L-8C	-164	DOR	Dmpr HV-316 NA
25-8377 (1)	LIMIT SWITCH	A-50	NAMCO	EA-740-80000	-125	0588	Vlv EB-99 NA
25-8377 (2)	LIMIT SWITCH	A-50	NAMCO	EA-740-80000	-125	0588	Vlv EB-99 NA
25-8377 (3)	LIMIT SWITCH	A-50	NAMCO	EA-740-80001	-125	0588	Vlv EB-99 NA
25-8378 (1)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv EB-100 NA
25-8378 (2)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv EB-100 NA
25-8379 (1)	LIMIT SWITCH	A-50	NAMCO	EA-740-80000	-125	0588	Vlv EB-92 NA
25-8379 (2)	LIMIT SWITCH	A-50	NAMCO	EA-740-80000	-125	0588	Vlv EB-92 NA
25-8379 (3)	LIMIT SWITCH	A-50	NAMCO	EA-740-80001	-125	0588	Vlv EB-92 NA

5/88

MILLSTONE POINT UNIT 2

EQ MASTER LIST
REVISION NO. 2

Sorted by Component Type

PLANT ID NO	COMPONENT TYPE	EQ ZONE	MANUFACTURER	MODEL NUMBER	EE2 FILE	QUAL LEVEL	NOTES
25- 198 (1)	LIMIT SWITCH	A-18	NAMCO	EA-740-20000	-125	0588	Vlv CH-198 91-7
25- 198 (2)	LIMIT SWITCH	A-18	NAMCO	EA-740-20001	-125	0588	Vlv CH-198
25- 505 (1)	LIMIT SWITCH	A-18	NAMCO	EA-740-20100	-125	0588	Vlv CH-505
25- 506 (1)	LIMIT SWITCH	C-05	NAMCO	EA 740	-125	0588	Vlv CH-506 MA
25- 506 (2)	LIMIT SWITCH	C-05	NAMCO	EA 740	-125	0588	Vlv CH-506
25- 515 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv CH-515 MA
25- 516 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv CH-516 M
25- 517 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv CH-517 MA
25- 518 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv CH-518 N
25- 519 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv CH-519 N
25- 614 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv SI-614 N
25- 618 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv SI-618 A
25- 624 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv SI-624 A
25- 628 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv SI-628 A
25- 634 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv SI-634
25- 638 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv SI-638
25- 644 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv SI-644 N
25- 648 (1)	LIMIT SWITCH	C-05	NAMCO	EA-180	-109	0588	Vlv SI-648 A
25-1060 (1)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv RC-003 N
25-1060 (2)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv RC-003
25-1062 (1)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv RC-002 A
25-1062 (2)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv RC-002
25-1064 (1)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv RC-001 N
25-1064 (2)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv RC-001
25-2525 (1)	LIMIT SWITCH	A-18	NAMCO	EA180-11302	-109	0588	Vlv CH-089 N
25-4246 (1)	LIMIT SWITCH	A-17	NAMCO	EA-740-20100	-125	0588	Vlv MS-220A 91-
25-4246 (2)	LIMIT SWITCH	A-17	NAMCO	EA-740-20100	-125	0588	Vlv MS-220A
25-4248 (1)	LIMIT SWITCH	A-17	NAMCO	EA-740-20100	-125	0588	Vlv MS-220B N
25-4248 (2)	LIMIT SWITCH	A-17	NAMCO	EA-740-20100	-125	0588	Vlv MS-220B
25-4250 (1)	LIMIT SWITCH	A-18	NAMCO	EA180-11302	-109	0588	Vlv MS-191A MA
25-4251 (1)	LIMIT SWITCH	A-18	NAMCO	EA180-11302	-109	0588	Vlv MS-191B A
25-5276 (1)	LIMIT SWITCH	T-10	NAMCO	EA180-11302	-109	0588	Vlv FW-43A A
25-5276 (2)	LIMIT SWITCH	T-10	NAMCO	EA180-11302	-109	0588	Vlv FW-43B
25-5279 (1)	LIMIT SWITCH	T-10	NAMCO	EA180-11302	-109	0588	Vlv FW-43B
25-5279 (2)	LIMIT SWITCH	T-10	NAMCO	EA180-11302	-109	0588	Vlv FW-43B
25-6050 (1)	LIMIT SWITCH	A-2	NAMCO	EA740-20100	-125	0588	Vlv RB-13.1A
25-6050 (2)	LIMIT SWITCH	A-2	NAMCO	EA740-20100	-125	0588	Vlv RB-13.1A
25-6080 (1)	LIMIT SWITCH	A-17	NAMCO	EA-740-20100	-125	0588	Vlv RB-28.0A N
25-6084 (1)	LIMIT SWITCH	A-18	NAMCO	EA-740-20100	-125	0588	Vlv RB-28.3B N
25-6088 (1)	LIMIT SWITCH	A-17	NAMCO	EA-740-20100	-125	0588	Vlv RB-28.3C A
25-6092 (1)	LIMIT SWITCH	A-18	NAMCO	EA-740-20100	-125	0588	Vlv RB-28.3D A
25-6306 (1)	LIMIT SWITCH	A-18	NAMCO	EA-180	-109	0588	Vlv SW-B.1C N
25-6307 (1)	LIMIT SWITCH	A-18	NAMCO	EA-180	-109	0588	Vlv SW-B.1B N
25-6308 (1)	LIMIT SWITCH	A-18	NAMCO	EA-180	-109	0588	Vlv SW-B.1A MA

MILLSTONE POINT UNIT 2

EQ MASTER LIST
REVISION NO. 2

Sorted by Component Type

PLANT ID NO	COMPONENT TYPE	EQ ZONE	MANUFACTURER	MODEL NUMBER	EEQ FILE	QUAL LEVEL	NOTES
IS-8380 (1)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv EB-91 NA
IS-8380 (2)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv EB-91 NA
IS-8656 (1)	LIMIT SWITCH	A-50	NAMCO	EA180-32302	-109	0588	Vlv AC-20 NA
IS-8656 (2)	LIMIT SWITCH	A-50	NAMCO	EA180-32302	-109	0588	Vlv AC-20 NA
IS-9015 (1)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv LRR-43.1 NA
IS-9015 (2)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv LRR-43.1 NA
IS-9016 (1)	LIMIT SWITCH	A-17	NAMCO	EA-740-20100	-125	0588	Vlv LRR-43.2 NA
IS-9016 (2)	LIMIT SWITCH	A-17	NAMCO	EA-740-20100	-125	0588	Vlv LRR-43.2 NA
IS-9125 (1)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv GR-11.1 M
IS-9125 (2)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv GR-11.1 M
IS-9126 (1)	LIMIT SWITCH	A-17	NAMCO	EA-740-20100	-125	0588	Vlv GR-11.2 NA
IS-9150 (1)	LIMIT SWITCH	A-18	NAMCO	EA-740-20100	-125	0588	Vlv SSP-16.2 NA
IS-9150 (2)	LIMIT SWITCH	A-18	NAMCO	EA-740-20100	-125	0588	Vlv SSP-16.2 NA
IS-9151 (1)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv SSP-16.1 NA
IS-9151 (2)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv SSP-16.1 NA
IS-9230 (1)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv LRR-61.1 NA
IS-9230 (2)	LIMIT SWITCH	C-05	NAMCO	EA-740	-125	0588	Vlv LRR-61.1 NA
IS-9506 (1)	LIMIT SWITCH	A-52	NAMCO	EA180-21302/22302	-109	0588	Dopr HV-495 NA
IS-9507 (1)	LIMIT SWITCH	A-52	NAMCO	EA180-21302/22302	-109	0588	Dopr HV-496 NA
IS-9508 (1)	LIMIT SWITCH	A-52	NAMCO	EA180-21302/22302	-109	0588	Dopr HV-497 NA

GENERAL EQUIPMENT-HISTORY REPORT

H.C. ...: M2 01 03033

TR NO.: 05M2143953

EQUIPMENT DESCRIPTION: #1 STEAM GENERATOR BLOWDOWN CONTROL VALVE ASSEMBLY

DATE COMPLETED: 08/23/91

FMMS ID: M2 02 STG ADV CHL 2-MS

LOCAL ID: M2 2-MS-270A

LOCAL SYS: 2316

PROBLEM DESC: VALVE POSITION INDICATOR LIMIT SWITCH ACTUATOR DOES NOT
WORK PROPERLY. REPEATEDLY HAVE DUAL INDICATION AFTER CYCLING VALVE
E

SUSPECT

CAUSE...:

ORIGINATOR.....: M SANDERS

ORIGINATING DEPARTMENT.: OPS

DATE ORIGINATED...: 04/05/91

JOB DESC: 1) ADJUST LIMIT SWITCHES ONLY. IF OTHER WORK IS REQUIRED CONTACT
FMMS FOR A NEW AWO.

CAUSE OF PROBLEM:

FAILURE CODE:

DELAYS / COMMENTS:

DELAY CODE..:

JOB SUPERVISOR: R BAGOS

WORK : R BAGOS

R CASTLE

K PICKLES

PERF BY :

SPECIAL EQUIPMENT..:

SERIAL NUMBER.....:

PROJECT REFERENCE...: SDWL11E

PROJECT DESCRIPTION:

PLANT TAG.: Y PROCEDURES
CONVEY TAG: N SHEWS-49-B
EVAL:CD-190

CAUTIONS
SECTION XI

CAUTION NOTES
IF JOB SCOPE CHANGES, CONSULT
ENGINEER FOR SECTION XI RE

AU CCC ACC SU C CMS W.O. ACT RE AC%

ACCOUNTS.:

P.O. NO.:

FDCR NO.:

ACTUAL WORK / REMARKS / PARTS USED : VALVE WORKS FINE

GENERAL EQUIPMENT-HISTORY REPORT

W.O. ...: M2 91 08230
TR NO...: 07M2135031

EQUIPMENT DESCRIPTION: LOOP "2A" NON-RETURN CHECK LEAKOFF DRAIN STOP VALVE

DATE COMPLETED: 08/08/91

PMMS ID: MC 02 HP1 AOP DRN 2-SI-6
LOCAL ID: MC 2-SI-6380
LOCAL SYS: 2008

PROBLEM DESC: DUEL IND. ON VALVE WITH FULL CLOSED SIGNAL FROM
CONTROLLER.

PRP 035761

SUSPECT
CAUSE...:

ORIGINATOR.....: M RADICE
DATE ORIGINATED...: 08/07/91

ORIGINATING DEPARTMENT.: OPS

JOB DESC: 1) TROUBLESHOOT DUAL INDICATION.
2) ADJUST LIMIT SWITCHES AS NECESSARY TO RECTIFY PROBLEM.
3) IF FURTHER REPAIRS ARE REQUIRED, RETURN TO OSD FOR APPROVAL.
4) PERFORM REPAIRS AS INDICATED NECESSARY FROM TROUBLESHOOTING.

CAUSE OF PROBLEM: COMMENTS: WOULD HAVE INSTRUCTED THEM TO PRESS THE
RESET AFTER A POWER LOSS.

FAILURE CODE:

DELAYS / COMMENTS: SUCCESS WAS THWARTED ON FIRST 2 ENTRIES DUE TO AWO
DELAY CODE...: STICKER BEING PLACED OVER WARNING TO OPERATORS THAT

JOB SUPERVISOR: J HEISLER

WORK : J HEISLER R CASTLE
PERF BY :

SPECIAL EQUIPMENT...:
SERIAL NUMBER.....:

PROJECT REFERENCE...: SDWL11D
PROJECT DESCRIPTION:

428090040

PROCEDURES
PLANT TAG.: N 2720R
CONVEY TAG: N SKEWS-10-A
EVAL:CD-180

CAUTIONS

CAUTION NOTES
THIS WORK ORDER IS OSD RE
TO ACP-04-2.16, PG.21, IT

AU CCC ACC SU C CMS W.O. ACT RE AC%

ACCOUNTS.:

F.O. NO.:
FDCR NO.:

ACTUAL WORK / REMARKS / PARTS USED : MADE 3 ENTRIES INTO CTMT TO
TROUBLESHOOT AND ADJUST VALVE INDICATION. ON 3RD ENTRY ADJUSTED LIMIT
SWITCH ARM TO GIVE PROPER INDICATION AND OPS RETESTED AND TIMED VALVE
OPERATION SAT. NO EEO BOUNDARIES WERE BREACHED.

GENERAL EQUIPMENT HISTORY REPORT

W.O. NO.: MC 51 05434
TR NO.: CMC140317

EQUIPMENT DESCRIPTION: LOOP "2A" NON-RETURN CHECK LEAKOFF DRAIN STOP VALVE

DATE COMPLETED: 06/04/91

FNMS ID: MC 02 HFI ACC DRN 2-51
LOCAL ID: MC 2-51-030
LOCAL SYS: 2300

PROBLEM_DESC: VALVE HAS DUAL INDICATION ON CO-2. FR# 36358

SUSPECTED
CAUSE...:

ORIGINATOR.....: S BAKER
DATE ORIGINATED...: 05/26/91

ORIGINATING DEPARTMENT.: UDS

JOB_DESC: 1) INVESTIGATE AND ADJUST LIMIT SWITCHES TO PROVIDE ACCURATE
VALVE POSITION

NOTE-MAKE ADJUSTMENTS ONLY REPAIRS REQUIRE A 3 PAGE AWD

CAUSE_OF_PROBLEM:

FAILURE CODE:

DELAYS / COMMENTS:
DELAY CODE..:

JOB_SUPERVISOR: R BAGOS

WORK : T O'SULLIVAN B STANGLE
PERF BY :

SPECIAL EQUIPMENT...:
SERIAL NUMBER.....:

PROJECT REFERENCE...: SDWL11B
PROJECT DESCRIPTION:

928090040

	PROCEDURES
PLANT TAG.: N	2701J-40
CONVEX TAG: N	2702B2
	2720R

CAUTIONS

CAUTION NOTE

ACCOUNTS.: AU CCC ACC SU C CMS W.O. ACT RE AC%
72

P.O. NO.:
PDCR NO.:

ACTUAL WORK / REMARKS / PARTS USED : CYCLED THE VALVE 4 TIMES AND
INDICATED CORRECTLY. ADJUSTED SWITCH. NEEDS MORE FINE TUNING.
ADJUSTED LIMIT SWITCH.

GENERAL EQUIPMENT HISTORY REPORT

W.O. NO.: M2 91 07730

TR NO.: 24M2144957

EQUIPMENT DESCRIPTION: REACTOR COOLANT PUMPS BLEADOFF CONTROL VALVE ASSEMBLY

DATE COMPLETED: 08/27/91

PMMS ID: M2 91 CVC ACC 2-14

LOCAL ID: M2 C-CH-198

LOCAL SYS: 2304A

PROBLEM_DESC: GREEN LIGHT LIT ON COC W/ VALVE 1/2 OPEN (SHOULD BE OUT). LIMIT SWITCH(ES) NEED ADJUSTING.

P.R. #36462

SUSPECTID

CAUSE...:

ORIGINATOR.....: K NASH

ORIGINATING DEPARTMENT.: OPS

DATE ORIGINATED...: 07/24/91

JOB_DESC: 1) ADJUST LIMIT SWITCHES TO INDICATE PROPER POSITION
IF LIMIT SWITCHES REQUIRE DISCONNECTING, RETURN PHG TO
PMMS/ENGR.

CAUSE_OF_PROBLEM:

FAILURE CODE:

DELAYS / COMMENTS: GREEN LIGHT SHOULD REMAIN LIT UNTIL VALVE'S
DELAY CODE...: FULLY OPEN.

JOB_SUPERVISOR: R BAGOS

WORK : R BAGOS R CASTLE
PERF_BY :

SPECIAL EQUIPMENT...:

SERIAL NUMBER.....:

PROJECT REFERENCE...: SDWL11E

PROJECT DESCRIPTION:

PROCEDURES
PLANT TAG.: N EVAL:CD-179
CONVEY TAG: N NOTIFY-ENG

CAUTIONS

CAUTION NOTES

AU CCC ACC SU C CMS W.O. ACT RE ACZ

ACCOUNTS.:

P.O. NO.:

PDCR NO.:

ACTUAL WORK / REMARKS / PARTS USED : INVESTIGATED PROBLEM, FOUND VALVE
TO BE WORKING PER PRINT #25203-32009, SH. 30. GREEN LIGHT SHOULD BE
ON UNTIL VALVE IS FULLY OPEN.

**PIR INVESTIGATION
NOT REPORTABLE**

TO: Brendan J. Duffy

FROM: Unit 2 PIR Report Coordinator (Tel. x4423)

You have been assigned as investigator for PIR 91-117, dated 10/31/91.

This PIR has been initially assessed to be not reportable under 10CFR50.73. To support the PIR administrative routing process, a timely response is imperative. The PIR investigation is to be completed by 02/16/92.

INSTRUCTIONS FOR PIR INVESTIGATORS

1. Per ACP-QA-10.01, 6.2.4, the assigned Investigator shall
 - a. Complete Section 3 of the PIR.
 - b. Verify (if applicable) the use of emergency operating procedures and document their review and use.
2. Ensure that if a PIR is generated due to a failure of any RPS/ESF channel on a quarterly test program, that an evaluation for a common cause mode will be performed under the ICR program IC 2437A.
3. Section III of the PIR must be filled out in its entirety. All PIRs that require PORC approval must be reviewed by the appropriate department head prior to PORC presentation.
4. Particular attention should be paid to identifying correctly the root cause of the event. The root cause may be defined as "the cause which, had it been prevented, would have prevented the event."

NOTE: If, during the course of your investigation, you determine that this event may be reportable, notify the Unit 2 Operations Manager or Duty Officer.

5. Forward the completed PIR investigation to the report coordinator.

cc: LER Coordinator, S. E. Scace, R. J. Factora, S. M. Temple

5/89

PLANT INCIDENT REPORT - PART A

Report Date: 11/1/91 No 91-117

I. PIR INITIATION		INCIDENT DATE 10/31/91		INCIDENT TIME 1330	
Event Title ECF DIESEL GENERATOR FAILURE TO LOAD					
Description of Event: ECF DIESEL GENERATOR FAILED TO LOAD AUTOMATICALLY DURING SURVEILLANCE EPIP-4606					
Description of Cause (If known): DIRTY CONTROL CIRCUIT CONTACTS					
System Affected: ECF		System Number: N/A		PMMS ID Number: N/A	
		Name of Initiator: D. MOONEY		Signature: [Signature]	
II. PLANT INFORMATION					
Plant Conditions		Mode: 1		Power (%): 100	
		Temp: 575		Pressure: 2262	
Description of Initial Action: NOTIFIED MAINTENANCE					
Safety Implications: ECF BACKUP POWER NOT AVAILABLE					
Security Implications: NONE					
Incident Category: <input type="checkbox"/> A. Immediate <input type="checkbox"/> B. 30-Day LER <input type="checkbox"/> C. Public Interest <input checked="" type="checkbox"/> D. Not reportable to NRC					
Basis: EPIP-4701-4 pg 12 sect. II					
Operations Manager Notified (Normal Hours) of A, B, C Incidents: <input type="checkbox"/> Yes <input type="checkbox"/> No Name: N/A Date: N/A Time: N/A					
Duty Officer Notified: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Name: B. DUFFY Date: 10/31/91 Time: 1400					
SSSA Notified and EPIP 4112 Notifications Made: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Name: N/A Date: N/A Time: N/A					
Security Shift Supervisor (Potential Security Threat): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Name: N/A Date: N/A Time: N/A					
Procedures Used: EPIP-4606 Shift Supervisor Signature: [Signature] Date: 11/01/91					
III. INVESTIGATION INFORMATION					
Personnel Questionnaires Attached: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No List: S. SCHLACHTER + J. HEISLER					
Trouble Reports Submitted: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Procedure Changes: NONE					
Photographs: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Material Being Held: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Location: N/A					
AWO Cop. Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Safety Tag Sheet Copy Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Information Gathered By: B. MOONEY Signature: [Signature] Date: 11/01/91					
IV. DUTY OFFICER REVIEW					
Immediate Investigation Necessary: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Signature: [Signature] Date: 11/1/91					
V. UNIT DIRECTOR					
Assigned Incident Category: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input checked="" type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> PSSH					
Remarks:					
PIORC Review: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No NRB Review: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No NEO : 25 Initiated: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Investigator Assigned: B. Duffy Unit Director: John Skene Date: 12/3/91					

PLANT INCIDENT REPORT - PART B

PERSONNEL QUESTIONNAIRE

NAME _____
(PRINT)

POSITION _____

PLANT EVENT TITLE _____

EVENT DATE/TIME _____

PIR NUMBER (IF KNOWN) _____

1. Describe the event:

2. When did you know there was a problem, and how did you find out?

3. What were your actions?

4. What could be done or changed to prevent this problem from happening again?

5. Any other information you consider important:

Signature

Date

Time

Supervisor Signature

Date

Time

PLANT INCIDENT REPORT - PART C

Report No. 91-117

IMMEDIATE FOLLOW-ON INVESTIGATION (CIRCLE ONE)

I. PIR INVESTIGATION (Attach additional sheets as necessary)

Cause Presumed contact resistance on timer card contacts.

Corrective Action Cleaned timer card contacts.

CAT I ☐ Yes ☒ No

RWOA ☐ Yes ☒ No

Procedures Properly Followed ☒ Yes ☐ No

FPOA ☐ Yes ☒ No

ATWSOA ☐ Yes ☒ No

PSSH Exists see note ☐ Yes ☒ No

Review of Similar Incidents NA

Root Cause (Attach Part D):

NPRDS Component ☐ Yes ☒ No NPRDS Query Completed ☐ Yes ☒ Not Desired - NPRDS Tech or Dept. Head

Action to Prevent Recurrence:

CR No.

NCR No.

PDCR No.

Procedure Change No.

AWO No.

Commitment No.

Other:

Investigator:

Date:

II. REVIEWS

Management Review:

Date:

Attendees:

(PORC Review):

Meeting No.

Date:

Comments/Action Items

Follow-On Investigation Needed

☐ Yes ☐ No

Root Cause Analysis Planned ☐ Yes ☐ No

Presenter:

Date:

Approved: Unit Director

Date:

III. REPORT COORDINATOR

LER No.

Date Required

Date Sent:

Ref: ACP-QA-10.01

SF 1001

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PLANT INCIDENT REPORT - PART D

Report No. _____

I. Personnel Error

- a. Verbal communication
- b. Written communication
- c. Interface design/equipment condition
- d. Environmental conditions
- e. Work schedule
- f. Work practices
 - 1. Procedure not used.
 - 2. Procedure not followed.
 - 3. Verification not done.
 - 4. No self-checking
- g. Work organization/planning
- h. Supervisory methods
- i. Training/qualification methods
- j. Training/qualification content
- k. Change management
- l. Resource management
- m. Managerial methods

II. Equipment Failure

- a. Inadequate design
- b. Incorrect procedure
- c. Manufacturing defect
- d. Installation error
- e. Operating error
- f. Improper maintenance
- g. Improper testing
- h. Wear out
- j. Misoperation of another component or system

(k) Other increased contact
resistance.
normal wear.

III. Program Failure

- a. Procedure deficiencies:
 - 1. Lack of detail
 - 2. Technical error
 - 3. Administrative error
 - 4. Incomplete
 - 5. Data from wrong source
- b. Insufficient planning
- c. Management deficiency
 - 1. Standards/expectations not set
 - 2. Standards/expectations not monitored
 - 3. Inappropriate decision

IV. Activity

- (a) Surveillance
- b. Maintenance
- c. Equipment restoration (including retest)
- d. Plant startup/shutdown
- e. Safety tagging
- f. Fire protection
- g. Steady state plant ops
- h. Hot shutdown outage
- i. Cold shutdown outage

Investigator Signature/Date

PLANT INCIDENT REPORT - PART B

PERSONNEL QUESTIONNAIRE

NAME STEVE SCHLACHTER
(PRINT)

POSITION UNIT 2 PEO

PLANT EVENT TITLE ECF D/G FAILURE TO LOAD

EVENT DATE/TIME 10/31/91 1330

PIR NUMBER (IF KNOWN) 91-117

- Describe the event:
When performing SURV 4606, I placed the test transfer switch in "TEST" and the ABT failed to transfer after 5 minutes. Repeated the SURV. a 2nd time and the transfer failed. Unit 2 SS informed Elect. Maintenance for troubleshooting.
- When did you know there was a problem, and how did you find out?
When I didn't hear the ABT shift and the RED Emergency light was not lit and the AC AMPS WAS 0, I SECURED the DIESEL.
- What were your actions?
Secured the DIESEL, Informed the Unit 2 SS
- What could be done or changed to prevent this problem from happening again?
D Regularly scheduled PM's by Electrical Maintenance. (i.e., Clean electrical components, Inspect etc)
- Any other information you consider important:
Submitted Non-Intent Change to Enhance the procedure. (EPIP 4606)

Steve Schlachter
Signature

[Signature]
Supervisor Signature

11/1/91
Date

11/1/91
Date

1345
Time

1345
Time

PLANT INCIDENT REPORT - PART B

PERSONNEL QUESTIONNAIRE

NAME Jack Heister
(PRINT)

POSITION Electrician

PLANT EVENT TITLE EOF D/G FAILURE TO LOAD

EVENT DATE/TIME 10/31/91 1330

PIR NUMBER (IF KNOWN) 91-117

1. Describe the event: EOF D/G FAILURE TO LOAD

2. When did you know there was a problem, and how did you find out?
1415 overheard conversation between
boss & on call electrician

3. What were your actions?
went to EOF - observed problem -
cleaned contacts on timer module card
ops retested

4. What could be done or changed to prevent this problem from happening again?
N/A

5. Any other information you consider important:
Ops needs a procedure for manual operation of
A.T. (2) spare parts & electricians tools should be
stored at EOF (Designated locker required)

[Signature]
Signature
[Signature]
Supervisor Signature

11/1/91
Date
11/1/91
Date

Time
1145
Time

PAGE 1 OF 2

MS ID: M2 02 EOF EAG EMG EOFD/G

WORK ORDER: M2 91 12093

ICAL ID: EOFD/G

ICAL SYS: EOF

PRDS:

BLDG: YD ROOM: EOF BUILDING

LEV: 0014 FT 06 IN GRID: 2651

R NO:

O. NO:

COUNT:

PRIORITY.....: 3

AWD TYPE.....: CM

UNIT STATUS...: U MODE: ZZ

FREQUENCY.....:

SCHED START...: 11 / 06 / 91

REQ COMPL.....: 12 / 31 / 91

PROJ REF.....: CY11-FS-7

EQUIP DESC: EMERGENCY OPERATIONS FACILITY DIESEL GENERATOR ASSEMBLY

PROBLEM DESC: D/G WON'T SHIFT LOAD.

JSF. CAUSE:

ORIGINATOR: R GAUZZA

DEPT: OPS DATE: 11 / 08 / 91 TR TAG HUNG: N

 AT-1...: N TAGGING: N SECURITY...: N QC REQ...: N CONVEX...: N
 EQ...: N RWP REQ: N FIRE WATCH: N HOUSEKEEP...: N PARTS LIST: N
 PQA...: N ALARA...: N LLRT...: N CLEANNESS...: N TOOL LIST...: N
 PQA...: N SHIELD...: N ISI...: N ASME CLASS: STAGING...: N
 TAGQA...: N REMOVAL...: N MOV TEST...: N END VOLUME: N

MEASURES: 1701J-43

EVAL: CD-228

CAUTION
 NOTES:

08 1) REPAIR LOADING PROBLEM.
 EEC:

TASK	DEPT	# WKR	MAN HR	TASK	DEPT	# WKR	MAN HR
REPAIR	ELEC	---	---			---	---
		---	---			---	---
		---	---			---	---

SUPERVISOR: B ROME

ASSIGN TO: _____

EPT APPROVAL: _____

DATE: 11 / 8 / 91

PS PRE-APPROVAL: *NA*

TIME: _____

DATE: *NA*

TRBLSHT/FABRICATE ONLY

AG CLEARANCE: *NA*

LCO: *NA*

DURATION: *NA*

JUMPER: *NA*

IPS APPROVAL: _____

TIME: 1570

DATE: 11 / 8 / 91

5/90

TAGGING VERIFIED BY: _____

ACTUAL WORK / PARTS: _____

CAUSE/COMMENTS: _____

FAIL CODE: _____

PERFORMED _____

BY: _____

M & TE: _____

SER NO: _____

CAL DUE: ____/____/____

WORK COMPLETE: _____ COMP DATE: ____/____/____ TR TAG REMOVED: N/A

RETEST/FUNCTIONAL VERIFICATION
METHOD/PROCEDURE

RETEST RESULTS

RETEST #1 IAW 2701X-3.

SAT - UNSAT
DATA

ACCEPT CRITERIA: IAW 2701X-3.

PERFORMED BY: _____ DEPT: _____ DATE: ____/____/____

TAGS CLEARED BY: _____ DATE: ____/____/____ TIME: _____

ACCEPTED BY OPS: _____ DATE: ____/____/____

FMMS REVIEW: _____ DATE: ____/____/____

DEPT REVIEW: _____ DATE: ____/____/____

PAGE 1 OF 2

FMMS ID: M2 02 EOF EAG EMG EOFD/G

WORK ORDER: M2 91 12093

LOCAL ID: EOFD/G

LOCAL SYS: EOF

NPRDS:

BLDG: YD ROOM: EOF BUILDING

ELEV: 0014 FT 06 IN GRID: 2651

TR NO:

P.O. NO:

ACCOUNT:

=====

I PRIORITY.....: 3

I AWD TYPE.....: CM

I UNIT STATUS...: U MODE: ZZ

I FREQUENCY.....:

I SCHED START...: 11 / 06 / 91✓

I REQ COMPL.....: 12 / 31 / 91

I

I PROJ REF.....: CY11-FS-7

=====

EQUIP DESC: EMERGENCY OPERATIONS FACILITY DIESEL GENERATOR ASSEMBLY

PROBLEM DESC: D/G WON'T SHIFT LOAD.

SUSP. CAUSE:

ORIGINATOR: R GAUZZA

DEPT: OPS DATE: 11 / 08 / 91 TR TAG HUNG: N

CAT-1....: N	TAGGING: N	SECURITY..: N	QC REQ....: N	CONVEX....: N
EEQ.....: N	RWP REQ: N	FIRE WATCH: N	HOUSEKEEP.: N	PARTS LIST: N
FPGA....: N	ALARA...: N	LLRT.....: N	CLEANNESS.: N	TOOL LIST.: N
RWQA....: N	SHIELD.: ---	ISI.....: N	ASME CLASS: ---	STAGING....: ---
ATWSQA..: U	REWORK..: N	MOV TEST..: ---	ENC VOLUME: N	

PROCEDURES: 2701J-43

EVAL: CD-228

CAUTION

NOTES:

JOB 1) REPAIR LOADING PROBLEM.

DESC:

TASK	DEPT	# WKR	MAN HR.	TASK	DEPT	# WKR	MAN HR.
1. REPAIR	ELEC	1	3.0	4.			
2. <i>GLT DR</i>				5.			
3.				6.			

SUPERVISOR: B ROWE

ASSIGN TO: _____

DEPT APPROVAL: _____

DATE: 11 / 8 / 91

OPS PRE-APPROVAL: *up* TIME: _____ DATE: *11/8/91*

TRBLSHT/FABRICATE ONLY

TAG CLEARANCE: *up* LCO: *up* DURATION: *NA* JUMPER: *up*

OPS APPROVAL: *[Signature]* TIME: 1570 DATE: 11 / 8 / 91

PAGE 2 OF 2

TAGGING VERIFIED BY: N/AACTUAL WORK / PARTS: Replaced transfer and deTransfer
BOARD PN 300-1188 ONT. Run Diesel for
1 Hour -

CAUSE/COMMENTS: _____

FAIL CODE: _____

PERFORMED GLT Industries LagosBY: CASTLE

M & TE: _____

SER NO: _____

CAL DUE: 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1WORK COMPLETE: U. Reg COMP DATE: 12/05/91 TR TAG REMOVED: N/A

RETEST/FUNCTIONAL VERIFICATION
METHOD/PROCEDURE

RETEST RESULTS

RETEST #1 IAW 2701X-3.

4606-1SAT - UNSAT
DATA4606-1 Attached

ACCEPT CRITERIA: IAW 2701X-3.

PERFORMED BY: R. BrownDEPT: OPS2DATE: 12/5/91

TAGS CLEARED BY: _____

DATE: 1 / 1 / 1

TIME: _____

ACCEPTED BY OPS: F. DubayDATE: 12/5/91FMMS REVIEW: jmDATE: 12/6/91DEPT REVIEW: Robert LoweDATE: 12/6/91

EMERGENCY OPERATION FACILITY EMERGENCY DIESEL GENERATOR OPERABILITY TEST SURVEILLANCE COVER SHEET

GRN: JPPHC-20		DATE	4/15/91	PAGE	1 OF 1
REFERENCE SPEC.	NA	REFERENCE PROCEDURE	EPIP 4606		
SCHEDULE DATE		APPLICABLE MODE	All		
TEST AUTHORIZED BY	<i>[Signature]</i> (SS/SCO)	DATE	12-5-91	ACCEPTANCE CRITERIA MET:	
COMPLETED BY	<i>[Signature]</i>	DATE	12-5-91	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
ACCEPTED BY	<i>[Signature]</i> (SS)	DATE	12/5/91		
APPROVED BY (DEPARTMENT HEAD)	<i>[Signature]</i>	DATE			

☐ TECH SPEC SURVEILLANCE
 ☐ MAINTENANCE RESTORATION
 ☐ SYSTEM ALIGNMENT
 ☒ NON-TECH SPEC SURVEILLANCE
 ☐ ISI TESTING

TEST EQUIPMENT	QA NUMBER	CAL DUE DATE
N/A	N/A	N/A

ACCEPTANCE CRITERIA

1. With the Transfer Control Test Panel Selector Switch in the "WITH LOAD" position, and the Test Transfer Switch placed in the "TEST" position, the Emergency Operations Facility Emergency Diesel Generator should perform as follows:
 - 1.1 Start automatically
 - 1.2 Pick up the load
 - 1.3 Run for one hour

IN ACCORDANCE WITH REFERENCE PROCEDURE	INITIALS
1. PREREQUISITES/INITIAL CONDITIONS COMPLETED	<i>[Signature]</i>
2. PRECAUTIONS NOTED	<i>[Signature]</i>
3. COMMENTS (IF MAINTENANCE RESTORATION, INDICATE BELOW WORK ORDER #, ETC.)	
Note: Forward completed data sheet to Station Emergency Coordinator. Forward completed <u>copy</u> of data sheet to Operations Technician	
4. DATA	
1. One hour operability run complete	<i>[Signature]</i> (Initials) 9/16
2. Diesel Fuel Storage Tank Level	

MISCELLANEOUS EQUIPMENT RETEST MATRIX

	#1	#2	#3	#4 ^a
	Perform routine Operational Checks and ensure any operability requirements are met.	Perform General Leak Test. Monitor component for no leakage at mechanical joints.	Monitor component Vibration. (if component is included in Unit's Vibration Program)	Record component Amperage and ensure value is = to or less than 1.1x name-plate value.
ACCUMULATORS		X		
AIR-CIRCUIT BREAKER	X			
AIR-CONDITIONING	X	X		X
AUXILIARY BOILER	X	X		
BACK FLOW PREVENTER		X		
BATTERIES	X			
BREAKERS	X			
CHARGER	X			
CHILLERS	X	X		X

Maint Form 2701X-3
Rev. 0
Page 1 of 4

	#1	#2	#3	#4 ^a
	Perform routine Operational Checks and ensure any operability requirements are met.	Perform General Leak Test. Monitor component for no leakage at mechanical joints.	Monitor component Vibration. (if component is included in Unit's Vibration Program)	Record component Amperage and ensure value is = to or less than 1.1x name-plate value.
COMPRESSORS	X	X	X	X
CRANE OR HOIST	X			
DAMPER	X			
DEMINERALIZER		X		
DIESEL GENERATOR	X			
EXPANSION JOINT		X		
FAN	X		X	X
FILTER	X	X		
FIRE PROTECTION	X			

Maint Form 2701X-3
Rev. 0
Page 2 of 4

**PIR INVESTIGATION
NOT REPORTABLE**

TO: Brendan J. Duffy

FROM: Unit 2 PIR Report Coordinator (Tel. x4423)

You have been assigned as investigator for PIR 91-123, dated 11/8/91.

This PIR has been initially assessed to be not reportable under 10CFR50.73. To support the PIR administrative routing process, a timely response is imperative. The PIR investigation is to be completed by 02/16/92.

INSTRUCTIONS FOR PIR INVESTIGATORS

1. Per ACP-QA-10.01, 6.2.4, the assigned Investigator shall
 - a. Complete Section 3 of the PIR.
 - b. Verify (if applicable) the use of emergency operating procedures and document their review and use.
2. Ensure that if a PIR is generated due to a failure of any RPS/ESF channel on a quarterly test program, that an evaluation for a common cause mode will be performed under the ICR program IC 2437A.
3. Section III of the PIR must be filled out in its entirety. All PIRs that require PORC approval must be reviewed by the appropriate department head prior to PORC presentation.
4. Particular attention should be paid to identifying correctly the root cause of the event. The root cause may be defined as "the cause which, had it been prevented, would have prevented the event."

NOTE: If, during the course of your investigation, you determine that this event may be reportable, notify the Unit 2 Operations Manager or Duty Officer.

5. Forward the completed PIR investigation to the report coordinator.

cc: LER Coordinator, S. E. Scace, R. J. Factora, S. M. Temple

5/92

PLANT INCIDENT REPORT - PART A
INITIATIONReport No.: 2-91-123
Unit Year Number

I. PIR INITIATION (To be completed by Responsible Supervisor)		INCIDENT DATE: 11-8-91	INCIDENT TIME:	REPORT DATE: 11-8-91
Event Title: EOP Diesel Generator Failure to Load				
Description of Event: EOP Diesel Generator Failed to Load Automatically During Seawallower - EPIP 4606				
Description of Suspected Cause: (If Known)				

Personnel Questionnaires Attached: (Part B) ☐ Yes ☐ No

System Affected: System Number: PMMS ID Number: Signature: Date:

II. PLANT INFORMATION (To be completed by SS)

Plant Conditions: Mode: 3 Power(%): 0 Temp.: 533 Pressure: 2259

Description of Initial Action: Notified MAINTENANCE

Safety Implications: EOP BACKUP POWER NOT AVAILABLE

Security Implications: None

Incident Category:

☐ A. Immediate ☐ B. 30-Day LER ☒ D. Not reportable to NRC☐ C. Public Interest ☐ E. Fitness for Duty

Basis (Not Required for D)

EPIP 4701-4 PS 12 SET VI

Operations Manager Notified

(Normal Hours) of A, B, C Incidents:

☒ Yes ☐ No Name: J Smith Date: 11-8-91 Time: 1600

Duty Officer Notified:

☒ Yes ☐ No Name: J BROWN Date: 11-8-91 Time: 1640

SSSA Notified and EPIP 4112 Notifications Made:

☐ Yes ☒ No Name: Date: Time:

Security Shift Supervisor (Potential Security Threat):

☐ Yes ☒ No Name: Date: Time:

Procedures Used:

EPIP 4606

Shift Supervisor Signature:

H. Quinn

Date: 11-8-91

III. DUTY OFFICER REVIEW

Reportability Verified ☒ Yes ☐ NoImmediate Investigation Required ☐ Yes ☒ No

Investigator Assigned: J. Smith (Provide Copy of Part A SF 1001)

(Required for Emergency Plan Activation, Unplanned RPS/ESF Actuation, Reportable Oil/Chemical Spill, Serious Injury/Fatality)

Duty Officer Signature:

J. Smith

Date: 11/8/91

IV. UNIT DIRECTOR REVIEW

Reportability Verified: ☒ Yes ☐ NoSORC Review: ☐ Yes ☒ No (Required for RPS/ESF Actuation)PORC Review: ☐ Yes ☒ No (Required for Tech Spec violations, reportable events, PSSH)PSSH: ☐ Yes ☒ NoNRB Review: ☐ Yes ☒ NoNEO 2.25 Initiated: ☐ Yes ☒ No

Investigator Assigned:

B. Duffy

Unit Director Signature:

John S. Hanna

Date: 12/3/91

V. INVESTIGATION INFORMATION (To be completed by Investigator)

Trouble Reports Submitted: ☐ Yes ☐ No

Procedure Changes:

Photographs: ☐ Yes ☒ NoMaterial Being Held: ☐ Yes ☒ No

Location:

AWO Copy Attached: ☐ Yes ☒ NoSafety Tag Sheet Copy Attached: ☐ Yes ☒ No

Investigator Signature:

Date:

PLANT INCIDENT REPORT - PART C Report No. _____
PHASE I INVESTIGATION

Similar PIRs: (Within last 12 months) List or attach list.

Open PM/CMs: List or attach list.

Recent Work History: (Within last 6 months) List or attach list.

Pending Design Changes: List or attach list.

Other Pertinent Information:

Trends Identified: ☐ Yes ☐ No

Phase II Investigation Complete: ☐ Yes ☐ No

If NO expected completion date ____ / ____ / ____ (Not to exceed 3 months)

Management Review: (Required within a few working days)

Date: ____ / ____ / ____

Investigator Signature: _____ Date: ____ / ____ / ____

PLANT INCIDENT REPORT - PART E
ROOT CAUSE

Report No. _____

Select at least one major and one minor root cause category. (Circle applicable items)

I. Personnel Error

- a. Verbal communication
- b. Written communication
- c. Interface design/equipment condition
- d. Environmental conditions
- e. Work schedule
- f. Work practices
 - 1. Procedure not used.
 - 2. Procedure not followed.
 - 3. Verification not done.
 - 4. No self-checking
- g. Work organization/planning
- h. Supervisory methods
- i. Training/qualification methods
- j. Training/qualification content
- k. Change management
- l. Resource management
- m. Managerial methods

II. Equipment Failure

- a. Inadequate design
- b. Incorrect procedure
- c. Manufacturing defect
- d. Installation error
- e. Operating error
- f. Improper maintenance
- g. Improper testing
- h. Wear out
- j. Misoperation of another component or system
- k. Other _____

III. Program Failure

- a. Procedure deficiencies:
 - 1. Lack of detail
 - 2. Technical error
 - 3. Administrative error
 - 4. Incomplete
 - 5. Data from wrong source
- b. Insufficient planning
- c. Management deficiency
 - 1. Standards/expectations not set
 - 2. Standards/expectations not monitored
 - 3. Inappropriate decision

Issue 91-219-01

Changes to vendor maintenance and surveillance instructions are not evaluated and needed procedure changes are not being made in a timely manner. In particular, MP 2720K1, NAMCO Limit Switch Maintenance (EQ), references NAMCO EA 189-90051 (December, 1980) whereas the vendor has superseded EA 189-90051 with EA 189-90060 (February 4, 1991). This new information warns that removal of the bottom cover of the limit switch will negate the qualification (EEQ). In addition, NU was notified in May, 1989 that the vendor would no longer support re-work and spare part kits for their solenoid valves and limit switches. The concern is that key craft personnel are not aware of these changes.

Issue 91-219-02

MP 2722B, Annual EOF Diesel Generator Load Run, is deficient in that the division of work responsibilities among electricians, mechanics, and contractors have never been evaluated as appropriate. Further, AWO M2-89-09594, for the annual load test, does not reference MP 2722B or the other controlling procedure, EPIP 4303, and, there appears to be the following discrepancies in the drawings associated with the test:

- 1) Electrical circuit breaker positions on electrical panels KLP1 and KLP2 do not agree with drawing 25205-30007. Circuit breaker No. 26 is in question on ELP1; breakers 10 and 12 are in question on ELP2;
- 2) An electrical remote control panel, PN1 is shown on drawing 25205-30007; but does not appear to exist;
- 3) The schematic portion of drawing 25205-39002, sheet 3 (or 25205-32008) appears incorrect and is confusing;
- 4) A utility plug is located at the bottom of the electrical power distribution system automatic bus transfer device (ABT). This conflicts with drawing 25205-32008;
- 5) The vendor representative and mechanic involved with the annual load test of the EOF emergency diesel generator are not qualified to perform the electrical portions of the test; and,
- 6) The review of procedures made by PORC is inadequate.

Request:

Please discuss the validity of the above assertions. If any deficiencies are identified, please provide us with the corrective actions you have taken to prevent recurrence. Please provide us with an assessment of the significance with regard to safety of any identified deficiencies.



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

NOV 06 1991

Conner 9

91-210

Docket Number: 50-336

Northeast Nuclear Energy Company
ATTN: Mr. John F. Opeka
Executive Vice President - Nuclear
Engineering and Operations Group

P.O. Box 270
Hartford, Connecticut 06141-0270

Dear Mr. Opeka:

Thank you for informing us of the results of your reviews of the concerns listed in the enclosed table. We have performed verification inspections on selected issues, find your responses generally acceptable, and plan no further actions on these issues at this time. This is not to say that further independent reviews of these issues will not take place in the future. You will be kept informed of such verification inspections and independent reviews by the normal inspection report process.

A copy of this letter as well as the referenced correspondence is being placed in the Public Document Rooms and sent to the State of Connecticut. We appreciate your cooperation in these matters.

Edward Wenzinger
Edward Wenzinger, Chief
Reactor Projects Branch-4

Enclosure: Table of NU's Responses

cc w/encl:
Public Document Room (PDR)
Local Public Document Room (LPDR)
State of Connecticut

9202040081 11

5/77

NORTHEAST UTILITIES

THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 665-5000

September 30, 1991

Docket No. 50-336
A09829

Mr. Charles W. Hehl, Director
Division of Reactor Projects
U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Dear Mr. Hehl:

Millstone Nuclear Power Station, Unit No. 2
RI-91-A-0210

We have completed our review of an identified issue concerning activities at Millstone Station. As requested in your transmittal letter, our response does not contain any personal privacy, proprietary, or safeguards information. The material contained in this response may be released to the public and placed in the NRC Public Document Room at your discretion. The NRC transmittal letter and our response have received controlled and limited distribution on a "need-to-know" basis during the preparation of this response.

ISSUE 210-1:

"Millstone 2 turbine sampling system valves with a prefix of '2-S' are not labeled in the field. In addition, the sodium analyzer 'AE 7764 A5', is incorrectly labeled as 'AE 7764 A6' on sheet 3 of drawing 25203-26025."

REQUEST:

"Please discuss the validity of the above assertion. If the above conditions are valid, please notify us why this was not previously corrected by your labeling program and what corrective actions you have taken to prevent recurrence. Please provide us with an assessment of the safety significance of any identified deficiencies, including any generic considerations."

RESPONSE 210-1:

The assertion concerning the sampling system valve labels is valid if the stated analyzer is AE7784 rather than AE 7764. We were made aware of the drawing problem in early September, 1991. The Millstone Unit No. 2 Engineering Department has identified that the Piping and Instrument Diagram (P&ID) does not agree with the as-built condition and is in the process of updating the drawings to reflect the as-built conditions.

9202 240124 3/1

Mr. Charles W. Hehl
A09829/Page 2
September 30, 1991

In March 1991, a new Administrative Control Procedure, ACP-6.22--System and Component Labeling--was written and issued to provide guidance on a standardized labeling program for the Millstone site. Also in March, a Controlled Routing (CR 8139) was issued to track the progress of each of the units in complying with the requirements of the ACP. The labeling effort includes valves, major components, and instrument and gauge labeling. The sampling system valves identified in the assertion are part of this program. The valve labeling efforts are expected to be completed by the end of 1992. Currently the Operations Department is holding discussions with other departments in the unit in an effort to establish who will normally operate and be responsible for labeling valves such as those associated with radiation monitors, sample systems, etc.

As part of the program implemented under ACP 6.22 a label request form has been generated which allows anyone finding a missing, incorrect, or deteriorating label to bring it to the attention of the label coordinator or Operations Manager for prompt action.

As part of the labeling program under ACP-6.22, the initial labeling of a system is to be verified by a complete walkdown of the system using system checklists and P&IDs to determine that all system components are labeled and that the label nomenclature matches the P&ID identification and system checklist description for each component. Thus, if other similar problems exist, they should be routinely identified and corrected as part of this program.

ISSUE 210-2:

"Circuit changes had been made to the Millstone 2 main generator hydrogen monitor without the preparation of a modification package. As a result, the calibration procedure is inadequate, and appropriate procedure and drawing changes have not made."

REQUEST:

"Please discuss the validity of the above assertion. If the above conditions are valid, please notify us of the corrective actions you have taken to prevent recurrence. Please provide us with an assessment of the safety significance of any identified deficiencies, including any generic considerations."

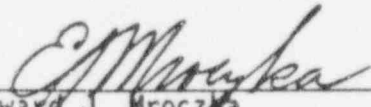
RESPONSE:

We are still investigating this matter and will respond when the investigation is complete. We currently plan to respond by October 14, 1991.

Mr. Charles W. Hehl
A09829/Page 3
September 30, 1991

After our review and evaluation of this issue, we find that it did not present any indication of a compromise of nuclear safety. We appreciate the opportunity to respond and explain the basis of our actions. Please contact my staff if there are further questions on any of these matters.

Very truly yours,
NORTHEAST NUCLEAR ENERGY COMPANY



Edward J. Mroczka
Senior Vice President

cc: W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3
E. C. Wenzinger, Chief Projects Branch No. 4, Division of Reactor
Projects
E. M. Kelly, Chief, Reactor Projects Section 4A
J. T. Shedlosky, U.S. Nuclear Regulatory Commission, Millstone



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

Docket Number: 50-336 OCT 09 1991
File Number: RI-91-A-219

Northeast Nuclear Energy Company
ATTN: Mr. John F. Opeka
Executive Vice President - Nuclear
Engineering and Operations Group
P.O. Box 270
Hartford, Connecticut 06141-0270

Dear Mr. Opeka:

The U.S. Nuclear Regulatory Commission recently received information concerning activities at the Millstone Nuclear Power Facility, Unit 2. The details are enclosed for your review and follow-up.

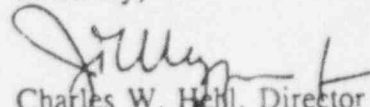
We request that the results of your review and disposition of these matters be submitted to Region I within 30 days of the date of receipt of this letter. We request that your response contain no personal privacy, proprietary, or safeguards information so it can be released to the public and placed in the NRC Public Document Room. If necessary, such information shall be contained in a separate attachment which will be withheld from public disclosure. The affidavit required by 10 CFR 2.790(b) must accompany your response if proprietary information is included. Please refer to file number *filename* when providing your response.

The enclosure to this letter should be controlled and distribution limited to personnel with a "need to know" until your investigation of the concern has been completed and reviewed by NRC Region I. The enclosure to this letter is considered Exempt from Public Disclosure in accordance with Title 10, Code of Federal Regulations, Part 2.790(a). However, a copy of this letter excluding the enclosure will be placed in the NRC Public Document room.

The response requested by this letter and the accompanying enclosure are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

Your cooperation in this matter will be appreciated. We will gladly discuss any questions you have concerning this information.

Sincerely,


Charles W. Hahl, Director
Division of Reactor Projects

Enclosure: 10 CFR 2.790(a) Information
Issues and Requests

9110240065 PP

5/86

cc w/o encl:

Public Document Room (PDR)

Local Public Document Room (LPDR)

State of Connecticut

Letter to Northeast Nuclear Energy Company

bcc:

Allegation File: RI-91-A-219 & RI-91-A-037-01

E. Kelly

W. Raymond

T. Sheddlosky

E. Conner

0249

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYoke WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 865-5000

November 15, 1991

Docket No. 50-245

B13963

Re: RG 1.97
Inspection 50-245/91-20

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Gentlemen:

Millstone Nuclear Power Station, Unit No. 1
Regulatory Guide 1.97, Revision 2 (TAC No. 51106)

An inspection of Millstone Unit No. 1 compliance with the provisions of Regulatory Guide (RG) 1.97, Revision 2, was conducted by the NRC Staff from September 30, 1990, to October 4, 1991. In Northeast Nuclear Energy Company's (NNECO) September 11, 1991, (1) response to the Staff's Safety Evaluation, (2) NNECO committed to provide the Staff with pertinent changes regarding additional Type A variables by the end of the year. During Inspection 91-20 NNECO made a more specific commitment to provide the status of its review by November 15, 1991. The purpose of this letter is to satisfy that commitment. The following RG 1.97 variables are now considered to be additional Type A variables for Millstone Unit No. 1.

- Torus bottom pressure
- Drywell temperature
- Low-pressure coolant injection (LPCI) flow
- Core spray flow
- Emergency service water (ESW) to LPCI differential pressure

(1) E. J. Mroccka letter to U.S. Nuclear Regulatory Commission, "Conformance to Regulatory Guide 1.97, Revision 2 (TAC No. 51106)," dated September 11, 1991.

(2) M. L. Boyle letter to E. J. Mroccka, "Millstone Unit 1--Request for Additional Information Regarding Conformance to Regulatory Guide 1.97, Revision 2 (TAC No. 51106)," dated April 24, 1991.

9111220280-2PP

9/93

The first two of these five variables, torus bottom pressure and drywell temperature, completely satisfy the provisions of RG 1.97 for Type A variables.

The other three variables, LPCI flow, core spray flow, and ESW to LPCI differential pressure, have areas where deviations from the provisions of RG 1.97 will be taken by NNECO. Details of these deviations are provided below.

- LPCI flow: RG 1.97 specifies redundant flow measurement loops. Millstone Unit No. 1 has one flow measurement loop in the selected path (by the loop selection logic) for LPCI injection into the reactor pressure vessel. Also, the measurement loops are powered by the instrument AC Circuit Breaker No. 45, while the RG calls for redundant power supplies.
- Core spray flow and ESW to LPCI differential pressure are not recorded as recommended by the RG. Also, these variables do not have redundant power supplies as recommended by the RG.

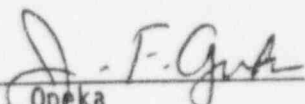
An evaluation, which was performed as part of preparations for start-up from the 1991 refueling outage, concluded that the instrument redundancy and power source deviations described above do not detract from the safe operation of Millstone Unit No. 1. Lack of recording of core spray flow and ESW to LPCI differential pressure as recommended by RG 1.97 also does not detract from the safe operation of Millstone Unit No. 1.

NNECO plans to finalize a course of action to address the deviations for the variables discussed here by the end of March 1992.

Please contact us if you have any questions.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



J. F. Opeka
Executive Vice President

cc: T. T. Martin, Region I Administrator
D. H. Jaffe, NRC Project Manager, Millstone Unit No. 1
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3

R. Paolino



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

NOV 26 1991

Docket No. 50-245

Mr. John F. Opeka
Executive Vice President - Nuclear
Northeast Nuclear Energy Company
P. O. Box 270
Hartford, Connecticut 06141-0270

Dear Mr. Opeka:

Subject: Inspection Report No. 50-245/91-20

The report is enclosed of the inspection conducted by Mr. R. Paolino of this office on September 30 through October 4, 1991, of safe shutdown equipment, Regulatory Guide 1.97, at Millstone, Unit 1 in Waterford, Connecticut. These activities are authorized by NRC Operating License No. DPR-21. Discussions of the inspection findings were held by Mr. Paolino with Mr. L. Davison and other members of your staff at the conclusion of the inspection.

Specific areas examined during the inspection included your compliance with the orders issued to implement Regulatory Guide 1.97. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

Based on this inspection, it was determined that the post-accident monitoring program implemented by your staff is consistent with the recommendations of Regulatory Guide 1.97, Revision 2, with the following exception. One unresolved item, involving missing environmental qualified (EQ) components from the current EQ master list, Revision 4, was observed. We note that the draft, Revision 5, of the EQ master list, includes the missing EQ components.

In discussions with instrumentation and control engineering personnel, it was indicated that a comprehensive review was in process regarding the status of five probable additional type A variables. We understand that final resolution of this review is scheduled for November 15, 1991, at which time the NRC would be notified.

Within the scope of this inspection no violations were identified.

*This is the
allegation issue*

9112090104 2pp

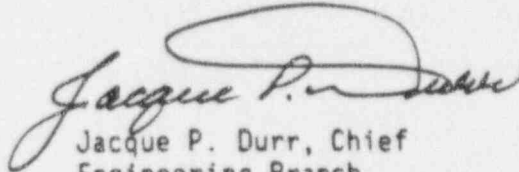
NOV 26 1991

Mr. John F. Opeka

2

No reply to this letter is required. Your cooperation with us in this matter is appreciated.

Sincerely,



Jacque P. Durr, Chief
Engineering Branch
Division of Reactor Safety

Enclosure: NRC Region I Inspection Report No. 50-245/91-20

cc w/encl:

W. D. Romberg, Vice President, Nuclear Operations
S. E. Scace, Nuclear Station Director
H. F. Haynes, Nuclear Unit Director
R. M. Kacich, Manager, Nuclear Licensing
D. O. Nordquist, Director of Quality Services
Gerald Garfield, Esquire
Nicholas Reynolds, Esquire
K. Abraham, PAO (2) All Inspection Reports
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
NRC Resident Inspector
State of Connecticut

bcc w/encl:

Region I Docket Room (with concurrences)
Management Assistant, DRMA (w/o encl)
J. Joyner, DRSS
E. Kelly, DRP
E. Wenzinger, DRP
W. Raymond, SRI, Millstone
A. Asars, SRI, Haddam Neck
R. Lobel, EDO
D. Jaffe, PM, NRR
DRS SALP Coordinator
DRSS SALP Coordinator
R. Arrighi, DRP

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-245/91-20

Docket No. 50-245

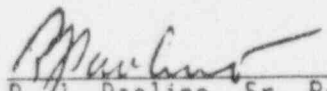
License No. DPR-21

Licensee: Northeast Nuclear Energy Company
P.O. Box 270
Hartford, Connecticut 06140-0270

Facility Name: Millstone Nuclear Power Station, Unit 1

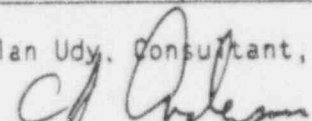
Inspection At: Berlin, Connecticut

Inspection Conducted: September 30, 1991 - October 4, 1991

Inspectors:  11-6-91
R.J. Paolino, Sr. Reactor Engineer, date
Electrical Section, EB, DRS

Other Participant and Contributor to this Report

Alan Udy, Consultant, EG&G Idaho, Inc.

Approved by:  11/12/91
C. J. Anderson, Chief, Electrical Section, date
Engineering Branch, DRS

Inspection Summary

Areas Inspected: Special announced inspection to review the licensee's implementation of the post-accident monitoring instrumentation in accordance with Regulatory Guide 1.97, Revision 2.

Results: Based on this inspection, the inspectors determined that the licensee has a program that meets the recommendations of Regulatory Guide 1.97, Revision 2, with the following exceptions. The licensee's current EQ Master List, Revision 4, did not list all of the EQ components located in a harsh environment. This was identified by the licensee who was in the process of issuing a revised EQ Master List, Revision 5, that included the missing components.

DETAILS

1.0 Introduction

Background

The purpose of this inspection was to verify the implementation of Regulatory Guide 1.97, Revision 2, for instrument systems used to assess plant conditions during and following an accident. These systems were inspected to determine if they were installed in accordance with the requirements of Generic Letter 82-33, "Requirements for Emergency Response Capability" (Supplement No. 1 to NUREG-0737). This letter, issued on December 17, 1982, specifies those requirements for emergency response capabilities approved by the NRC for implementation. This supplement also discusses, in part, the application of Regulatory Guide 1.97 to the emergency response facilities, including the control room, the technical support center (TSC), and the emergency response facility (EOF) at nuclear power plants. Regulatory Guide 1.97 identifies the plant variables to be measured and the instrumentation criteria for assuring acceptable emergency response capabilities during and following an accident.

Regulatory Guide 1.97 divides post-accident instrumentation into three categories and five types. The three design categories are Categories 1, 2, and 3. Category 1 has the most stringent design requirements and Category 3 the least stringent. The five types of instrumentation identified in Regulatory Guide 1.97 are Types A, B, C, D, and E. Type A variables are plant specific and classified as such by the licensee. Type B variables indicate the accomplishment of plant safety functions. Type C variables provide information on the breach of barriers to fission product release. Type D variables evidence the operation of individual safety systems. Type E variables are those used to determine the magnitude of the release of radioactive materials. Each variable is assigned to a design category by the regulatory guide. However, Type A variables can only be design Category 1.

Correspondence

The licensee responded to Regulatory Guide 1.97 for Unit 1 in submittals dated April 9, 1984, October 25, 1985, November 25, 1985, and July 31, 1986. These submittals address conformance to Regulatory Guide 1.97, Revision 2, along with supporting justification or alternatives.

References

The specific references used to assess the licensee's response to Regulatory Guide 1.97 are identified below:

- Regulatory Guide 1.97, Revision 2, "Instrumentation for Light-water-cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following Accident."
- Millstone-1 Safety Evaluation Report - Conformance to Regulatory Guide 1.97, April 24, 1991.
- Supplement No. 1 to NUREG-0737, "Requirements for Emergency Response Capability (Generic Letter No. 82-33), "December 17, 1982.

Inspection Scope

The NRC inspection scope included: equipment qualification (seismic and environmental), redundancy of power sources, measured variables, display and recording methods used, independence and separation of electrical circuits, range and overlapping features of multiple range instruments, equipment identification for Regulatory Guide 1.97 instruments, service, test, and surveillance frequency, and direct versus indirect measurements of parameters of interest. The plant maintenance and monitoring system (PMMS) printout and the EQ master list were reviewed for the instruments selected to ascertain whether the instruments had been evaluated and tested to the appropriate environmental and seismic qualification requirements. The inspectors also reviewed the QA procurement of these instruments.

2.0 Inspection Details

The inspectors held discussions with various members of the licensee's staff, reviewed drawings, procedures, and plant lists for selected variables. The inspectors performed a walkdown of the control room instruments to assess the implementation of Regulatory Guide 1.97, Revision 2, for Millstone 1.

The inspectors found all instrument loops in calibration. Calibration records show that calibration and surveillance is performed at the specified frequencies.

The licensee has green borders on the right and left sides of the instrument tags for the primary readout device. Thus, where a variable has both indicator and recorder on the same instrument loop, only the preferred readout is marked in this manner. The inspectors found this acceptable. The inspectors also noted that calibration stickers have a vertical green band on them. This preponderance of vertical green borders could be potentially confusing to the operator in finding the instruments associated with the regulatory guide. However, the inspectors found no basis for finding this condition unacceptable, as the calibration stickers are distinguishable from the instrument tag labels.

The inspectors reviewed design, operational, and surveillance details for the following variables.

- Reactor pressure vessel pressure, Type A, B, and C, Category 1
- Reactor pressure vessel water level, Type A and B, Category 1
- Torus water temperature, Type A and D, Category 1
- Torus water level, Type A, C, and D, Category 1
- Drywell pressure, Type A, B, and C, Category 1
- Neutron flux, Type B, Category 1
- Drywell area radiation level - high range, Type E, Category 1
- Containment isolation valve position, Type B, Category 1

Characteristics examined for each variable include identity, location, function, separation (electrical and physical), isolation, power sources, environmental qualification, seismic qualification, and instrument range.

The items examined for compliance with Regulatory Guide 1.97, Revision 2, are discussed in the remainder of this report.

2.1 Reactor Pressure Vessel Pressure

The licensee determined this variable is a Type A variable. Two redundant instrument channels, each powered by a separate DC power source, indicate this variable with a range of zero to 1500 psig. Two other channels provide the recording function on a single recorder. The signal is recorded for either of these two loops, dependent on the position of a selector switch. The selected signal is also recorded by the plant computer. The signal is isolated as recommended by the regulatory guide. These channels, with a range of zero to 2500 psig, have an instrument AC power source. Considering these channels as a single recording channel with two additional independent Category 1 channels, the Category 1 requirements have been met.

No deficiencies were identified.

2.2 Reactor Pressure Vessel Water Level

The licensee determined this variable is a Type A variable. Two redundant instrument channels, each powered by a separate instrument AC power source, indicate this variable with a range from -340 inches to a +60 inches. Both channels are recorded by the plant computer. The signals to the plant recorder are isolated from the instrument loops as recommended by the regulatory guide.

The inspectors verified conformance with the Category 1 requirements. No deficiencies were identified.

2.3 Torus Water Temperature

The licensee determined the torus water temperature is a Type A variable. The licensee monitors the torus water temperature with 26 resistance temperature detectors (RTDs) distributed throughout the torus. Four of these RTDs are divided into two channels of instrumentation. Each channel has a separate instrument AC power source and is indicated on a dual indicator. These four signals are also recorded by the plant computer which are isolated from the instrument channels. The other 22 RTDs are recorded on two multipoint recorders, each with a separate instrument AC power supply, eleven RTDs per recorder. The inspectors determined this variable to be in conformance with Category 1 requirements.

The inspectors noted that the indicators and their computer inputs have a range of zero to 300°F, while the licensee's submittals show a range of 30°F to 300°F. The multipoint recorders have scales of 30°F to 230°F. Regulatory Guide 1.97 recommends a range of 30°F to 230°F and, therefore, all indication of the torus water temperature meet or exceed the regulatory guide recommendation. Therefore, the inspectors concluded that this instrumentation is acceptable.

2.4 Torus Water Level

The licensee determined the torus water level is a Type A variable. The licensee has two instrument channels for this variable with a range of 2.2 feet to 27.2 feet. Each channel is displayed on a dual pen recorder shared with the variable drywell pressure and is also recorded by the plant computer. The computer inputs are isolated from the instrument channels. Each channel is powered by a separate instrument AC power source.

The inspectors determined the Category 1 requirements have been met. No deficiencies were identified.

2.5 Drywell Pressure

The licensee determined the drywell pressure is a Type A variable. The licensee has two instrument channels for this variable with a range of -5 psig to +250 psig. Each channel is displayed on a dual pen recorder shared with the variable torus water level. Each channel is powered by a separate instrument AC power source.

The inspectors determined the Category 1 requirements have been met. No deficiencies were identified.

2.6 Neutron Flux

The Regulatory Guide 1.97 classifies neutron flux monitoring as a Type B, Category 1 variable. The neutron flux instrumentation channels are powered by redundant electrical buses which are backed up by the gas turbine or the diesel generator. Two source range monitor (SRM) channels and four intermediate range monitor (IRM) channels receive power from a DC power source. Two other independent SRM channels and four additional independent IRM channels receive power from a second DC power source. The six average power range monitor (APRM) channels receive power from reactor protection system 120-Vac buses, three channels per bus. Environmental and seismic qualification were not in evidence, though some components are in a mild post-accident environment.

The licensee is part of the Boiling Water Reactor Owners Group (BWROG) and part of the appeal on neutron flux instrumentation Category 1 requirements. The resolution of the BWROG appeal is pending. In the meantime, interim operation with the SRM, IRM, and APRM channels is acceptable per the safety Evaluation Report.

2.7 Drywell Area Radiation - High Range

Regulatory Guide 1.97 classifies this as a Category 1 variable. Two channels, each powered by separate instrument AC power sources, monitor from 1 R/hr to 10^8 R/hr. Each channel has an indicator and one channel is also recorded by a dedicated strip chart recorder.

The inspectors determined the Category 1 requirements have been met. No deficiencies were identified.

2.8 Containment Isolation Valve Position

Regulatory Guide 1.97 classified containment isolation valve position as a Category 1 variable. The inspectors audited material related to the position indication of the containment isolation valves. High reliability is achieved in containment isolation valve's position indication by a combination of redundancy and diversity of power sources. Power for a typical pair of valves consists of 480V AC bus power to one motor-operated valve motor and indication and 125 volt DC bus power for the corresponding DC motor-operated valve motor and indication.

The inspectors determined the Category 1 requirements have been met. No deficiencies were identified.

2.9 Isolation Devices

Where a Category 1 signal inputs a non-category 1 system, Regulatory Guide 1.97 specifies the use of isolation devices that are qualified for use in Category 1 circuits. Circuits examined during this inspection have proper isolation. The separation criteria was implemented appropriately. Instrument loops that interface with computer circuits have appropriate isolation amplifiers. Circuits that feed annunciators use relay contacts for isolation. Relays are acceptable isolation devices.

No deficiencies were identified.

3.0 Physical Inspection

The inspectors examined the control room instrumentation discussed in Section 2.0 of this report. The inspectors verified that each indicator and recorder was as documented, had the range recommended by the regulatory guide, and was mounted and located to support electrical and physical separation of redundant instrument channels.

Specific identification of Regulatory Guide 1.97 instrumentation was accomplished with vertical green borders of the instrument tag on the control panel.

No deficiencies were identified.

4.0 Potential R.G 1.97 Type A Variable

In a letter to the NRC (A09507), dated September 11, 1991, NNECO indicates that a comprehensive review of its position regarding R.G. 1.97 has been initiated. As a result, several other variables, listed below, are being evaluated for potential classifications as Type A variables. Licensee internal memorandum NE-91-SAB-235, dated September 23, 1991, concludes that the following five variables be classified as Type A. These variables are: LPCI Flow, Torus Bottoms Pressure, ESW to LPCI Differential Pressure and Drywell Temperature. The memorandum also concludes, based on its evaluation, that changes could be made that could eliminate LPCI Flow, Core Spray Flow and ESW to LPCI Differential Pressure as Type A variables. However, in the case of LPCI and Core Spray Flow the licensee is not comfortable with establishing long term pump cavitation as a design basis. The licensee expects to complete their evaluation by November 15, 1991, at which time it will provide the NRC with its final position regarding additional Type A variables.

5.0 Environmental Qualification Master List

The environmental qualification (EQ) Master List, Revision 4, dated January 20, 1991, was reviewed to ascertain whether the instruments selected for review were evaluated and tested to the appropriate environmental and seismic qualification requirements.

The inspector noted that the EQ Master List did not identify all the containment isolation valve (limit) switches. In addition, the terminology used in listing the limit switches and solenoid valves was identical, making it difficult to track these components.

The licensee did provide a draft copy of a revised EQ Master List, Revision 5, which identifies the missing containment isolation valves. The draft copy includes other changes that are being considered to the EQ Master List to provide a complete, accurate and current listing of qualified EQ components located in harsh environments.

This item is unresolved pending the NRC's review of the licensee's evaluation and revised EQ Master List. 50-245(91-20-01)

6.0 Unresolved Item

Unresolved items are matters needing more information to determine whether an item is acceptable or a violation. An unresolved item is identified in paragraph 5.0.

7.0 Exit Meeting

The inspectors met with the licensee's representatives (listed in Appendix A) at the conclusion of the inspection on October 4, 1991. The lead inspector summarized the scope of the inspection, the inspection findings, and confirmed with the licensee that the documents reviewed by the inspectors did not contain any proprietary information.

ATTACHMENT 1
Persons Contacted

Northeast Utilities Service Company

- * P. Blanch, Instrumentation and Controls Engineering Supervisor
- * R. Bumstead, Instrumentation and Controls
- * L. Davison, Millstone Point-1 PSD Manager
- * R. Joshi, Principal Licensing Engineer
- R. Kacich, Nuclear Licensing Manager
- C. Kousik, Millstone Point-1 PSE I&C Engineer
- A. Maso, Electrical Engineer
- * S. Oates, Senior Engineering Technician
- * P. Santoro, Nuclear Safety Concern Program Director
- T. Thull, Plant Engineer
- B. Tuthill, Electrical, Instrumentation, and Control Programs Supervisor
- * D. Vail, Electrical Engineering Supervisor

Northeast Nuclear Energy Company

- P. Blasioli, Millstone Point-1 Engineering Manager
- * J. Summa, Millstone Point-1 Engineering Supervisor

* Denotes those participating in the exit meeting on October 4, 1991.

The inspectors contacted other persons as a matter of course during the inspection.