Northeast
Utilities System

107 Selden Street, Berlin, CT 06037

Northeast Utilities Service Company
P.O. Box 270
Hartford, CT 06141-0270
(203) 665-5000

October 23, 1995

Docket No. 50-336
B15403

Re: 10CFR50.90

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

Millstone Nuclear Power Station, Unit No. 2
Additional Information Regarding
Proposed Revision to Technical Specifications
Cycle-Specific A.C. Sources Allowed Outage Time Extension

On October 6, 1995, Northeast Nuclear Energy Company (NNECO) proposed to amend the Millstone Nuclear Power Station, Unit No. 2 Technical Specifications by extending the Allowed Outage Time (AOT) when an offsite circuit is inoperable from the current 72 hours to seven days for the remainder of Cycle 13.[1] This change would avert a Millstone Unit No. 2 shutdown should offsite power obtained from the Millstone Unit No. 1 cross-tie become unavailable for more than 72 hours.

In a telephone conversation on October 12, 1995, the NRC Staff identified the need for the following additional information regarding the proposed revision to the Technical Specifications:

- Description of the scope of work to be performed on the Millstone Unit No. 1 electrical cross-tie equipment, including drawings, an estimate of man-hours for each task, the potential for exceeding the current 72 hour AOT, and the potential for the work to cause an inadvertent loss of normal power to Millstone Unit No. 2;

- Description of any compensatory actions that would enhance the reliability of the other sources of A.C. power to Millstone Unit No. 2 when the Millstone Unit No. 1 cross-tie is unavailable, including restricting work on the 345 kV lines into the Millstone Unit No. 2 switchyard, the Millstone Unit

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(1) J. F. Opeka letter to U.S. Nuclear Regulatory Commission, "Millstone Nuclear Power Station, Unit No. 2, Proposed Revision to Technical Specifications Cycle-Specific A.C. Sources Allowed Outage Time Extension," dated October 6, 1995.

A001

No. 2 reserve station service transformer, and the Millstone Unit No. 2 diesel generators, which can be otherwise postponed;

- Details regarding the dominant sequences affecting overall Millstone Unit No. 2 plant risk when the Millstone Unit No. 1 cross-tie is unavailable.

Attachment 1 to this letter transmits the requested additional information regarding the proposed license amendment as listed above.

Also, NNECO had previously requested that the NRC Staff process and issue the proposed amendment prior to November 5, 1995, when the work on the relevant electrical cross-tie equipment was scheduled to start. Presently, work on the cross-tie equipment has been rescheduled and is not expected to begin prior to November 29, 1995. Accordingly, NRC action on the proposed amendment by November 22, 1995, will provide ample time to avert a potential Millstone Unit No. 2 shutdown should the Millstone Unit No. 1 cross-tie become unavailable for more than 72 hours.

Additionally, NNECO requested that the original proposed change be applicable for the remainder of Millstone Unit No. 2 Cycle 13 (which is currently scheduled to end in May 1997). The NRC staff, however, considers that if the proposed AOT extension to 7 days is approved it should be limited to the immediate need (i.e., the upcoming Millstone Unit No. 1 outage). Accordingly, NNECO agrees to further revise the proposed Technical Specifications change to Section 3.8.1.1 by replacing the words "Except that for Cycle 13 only" with "During the Millstone Unit No. 1 Refueling Outage 15."

In view of the above limitation on the applicability of the proposed AOT extension, NNECO has also revised the proposed change to the Technical Specification BASES section as a footnote to page B 3/4 8-1 which reads as follows:

> "A probabilistic safety assessment has examined the affect of extending the allowed outage time to seven (7) days for the electrical cross-tie from Unit 1 to Unit 2 during the Unit 1 Refueling Outage 15. The results show that the increase in risk is acceptable provided that two diesel generators are available."

Attachment 2 to this letter is a copy of the revised marked-up version of the appropriate sections of the current Technical Specifications. Attachment 3 is the retyped Technical Specifications sections.

It should be emphasized that the additional information provided by this letter and the revised Technical Specifications changes do not alter the content or conclusion of the safety assessment, the environmental consideration or the determination of no significant hazards consideration previously provided in our letter to the Staff of October 6, 1995. Specifically, NNECO has determined that the proposed change does not involve any significant affect on public health and safety.

The following is an amplification to NNECO's commitment B15380.1 Other statements within this letter are provided for information only.

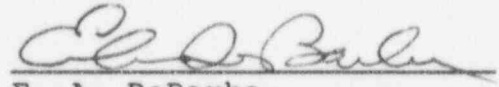
> B15403.1 NNECO will limit work on the other sources of A.C. power to Millstone Unit No. 2 when the electrical cross-tie to Millstone Unit No. 1 is unavailable during the upcoming Millstone Unit No. 1 Refueling Outage 15. This includes work on the 345 kV lines, the switchyard, the Millstone Unit No 2 RSST, and the Millstone Unit No. 2 diesel generators. This restriction will be enforced as part of our on-line maintenance risk reduction program.

If there are any additional questions regarding this submittal, please contact Mr. Mario Robles at (203) 440-2073.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

FOR: J. F. Opeka
Executive Vice President

BY: 
E. A. DeBarba
Vice President

cc: T. T. Martin, Region I Administrator
G. S. Vissing, NRC Project Manager, Millstone Unit No. 2
P. D. Swetland, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3

Subscribed and sworn to before me

this 23rd day of October, 1995

Sherry L Sherman

Date Commission Expires: 8/31/98

Docket No. 50-336
B15403

Attachment 1

Millstone Nuclear Power Station, Unit No. 2

Additional Information Regarding
Proposed Revision to Technical Specifications
Cycle-Specific A.C. Sources Allowed Outage Time Extension

October 1995

**Additional Information Regarding
Proposed Revision to Technical Specifications
Cycle-Specific A.C. Sources Allowed Outage Time Extension**

WORK TO BE PERFORMED ON UNIT 1 ELECTRICAL CROSS-TIE EQUIPMENT

Bus 4160-14H is scheduled to be de-energized for 48 hours, beginning November 29, 1995, and ending November 30, 1995. The workscope includes inspecting, cleaning, and testing the buswork and cubicle. Power-Vac circuit breakers from this bus will also be inspected, serviced (i.e., preventative maintenance) and tested. Specific manhours for each task are not relevant.

The likelihood for exceeding the 72 hour Allowed Outage Time (AOT) in the Unit 2 Technical Specifications for this bus is considered small. Unit 1 personnel believe that the scheduled works fits within the outage window. In the unlikely event that unanticipated problems arise, personnel from General Electric's Apparatus Service Center will be on-site to help expedite the resolution of these problems.

A review of the work to be performed on bus 14H indicates that there is no potential for causing a Unit 2 loss of normal power (LNP) since no Unit 2 LNP circuitry is located in this area. Drawings showing the 14H bus are also provided herein.

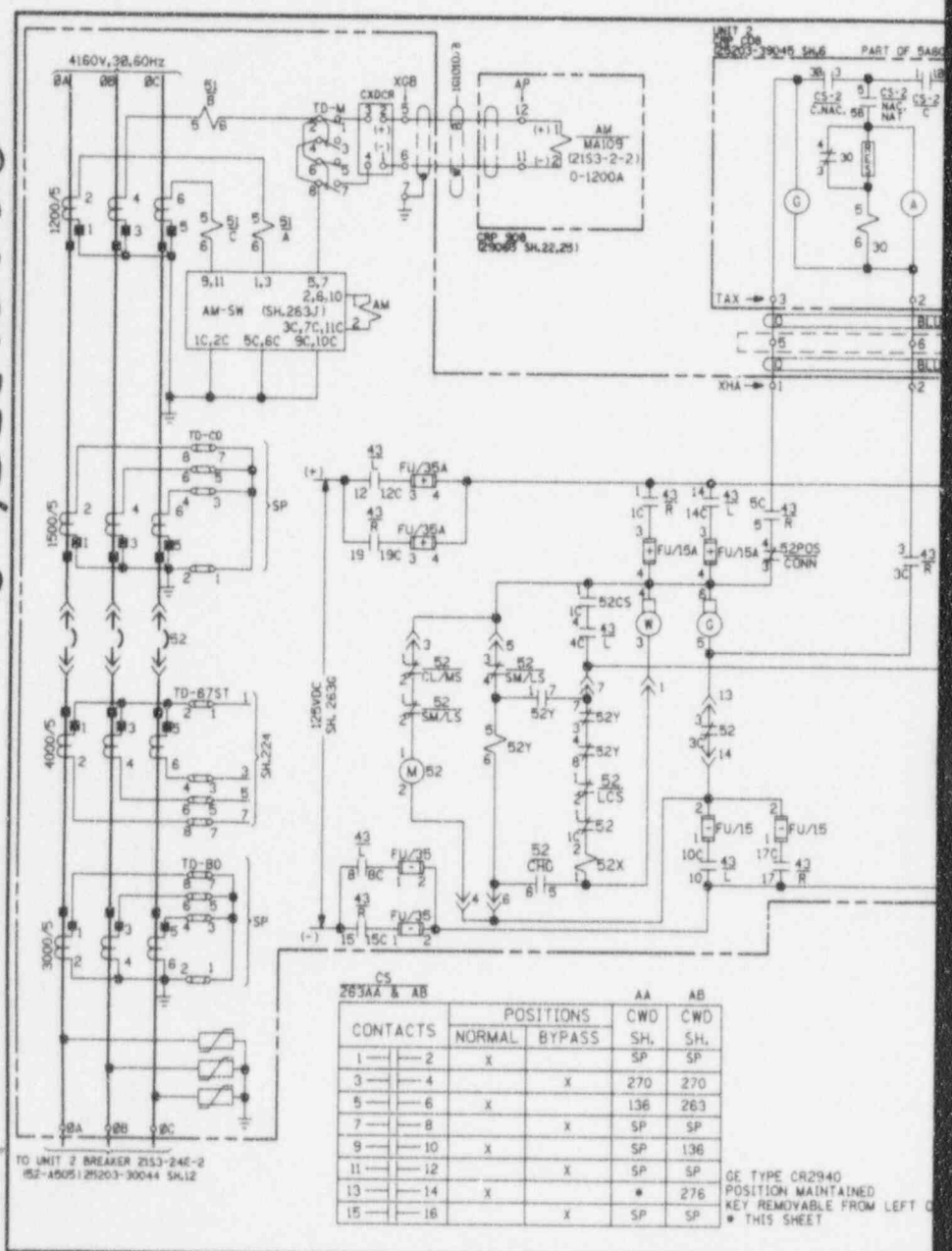
ACTIONS TO ENHANCE RELIABILITY OF A.C. POWER TO UNIT 2

In order to monitor and control the risk of varying plant configurations, Unit 2 has instituted an on-line risk monitoring program. This program quantifies the risk attributed to maintenance and surveillance activities using the Unit 2 probabilistic risk assessment model on a forward-looking weekly basis. On a daily basis, changes to the work schedule are evaluated to account for any changes that may occur during the course of the week. As such, this program will consider maintenance activities on the Unit 1 to Unit 2 cross-tie and will ensure planned maintenance and surveillance activities are carefully managed to minimize plant risk.

When the electrical cross-tie to Millstone Unit No. 1 is unavailable during the upcoming Unit 1 refueling outage 15, NNECO will limit work on the other sources of A.C. power to Unit 2. This includes work on the 345 kV lines, the switchyard, the Unit 2 reserve station service transformer, and the Unit 2 diesel generators. This restriction will be enforced as part of the on-line maintenance risk monitoring program described above.

DOMINANT SEQUENCES AFFECTING PLANT RISK WHEN CROSS-TIE UNAVAILABLE

Also provided herein are the dominant sequences associated with requantifying the Unit 2 LNP event tree with A.C. power recovery scenarios modified to reflect the configuration when the Unit 1 cross-tie is unavailable. The increase in the frequency of Core Melt Frequency (CMF) due to an LNP is approximately 10 percent. In other words, with the MP1 cross-tie unavailable, the contribution that an LNP initiating event has to CMF increases from approximately 25 percent of the baseline CMF (3.41E-05 event/year) to 35 percent of the baseline CMF. As shown, the emergency diesel generators and auxiliary fcedwater system are important to these sequences.

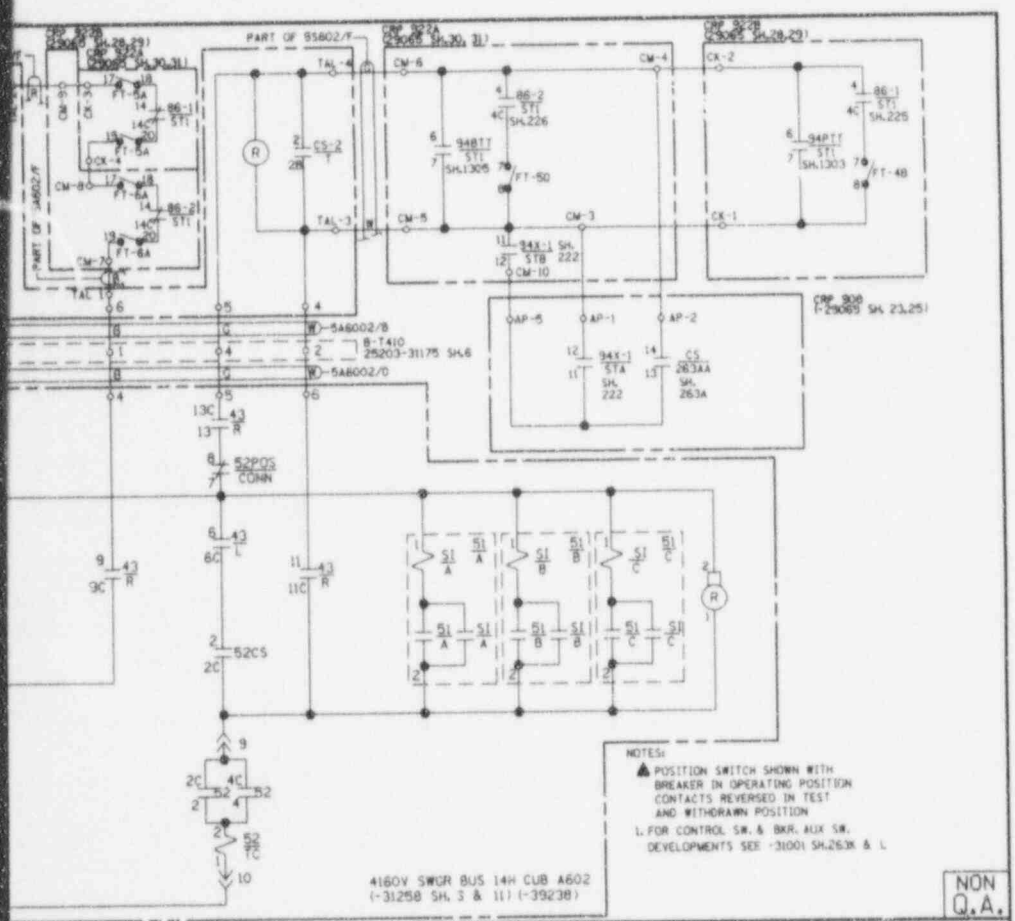


CONTACTS	POSITIONS NORMAL	POSITIONS BYPASS	AA CWD SH.	AB CWD SH.
1 — 2	X		SP	SP
3 — 4		X	270	270
5 — 6	X		136	263
7 — 8		X	SP	SP
9 — 10	X		SP	136
11 — 12		X	SP	SP
13 — 14	X		*	276
15 — 16		X	SP	SP

CS 263AA & AB

GE TYPE CR2940
POSITION MAINTAINED
KEY REMOVABLE FROM LEFT O
* THIS SHEET

IQ-98209201Sb



NON Q.A.

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NOTE:
MANUAL REVISIONS TO THIS DOCUMENT WHEN AS-BUILT ARE PROHIBITED.

REVISIONS DURING CONSTRUCTION | P.A.*

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	90-098	3	5-12-94	INCORPORATED DM1-S-932-94, 635-94 PER DCR-M1-S-2330-93	DM	JKY	GAT	GAT
	80-135	2	9-11-89	AS BUILT PER DCR-M1-S-1048-89	GT	[illegible]	[illegible]	RJH
	83-156	1	8-23-89	AS BUILT PER DSR-M1-S-1062-88	GT	[illegible]	GJF	RH

Northeast Utilities System

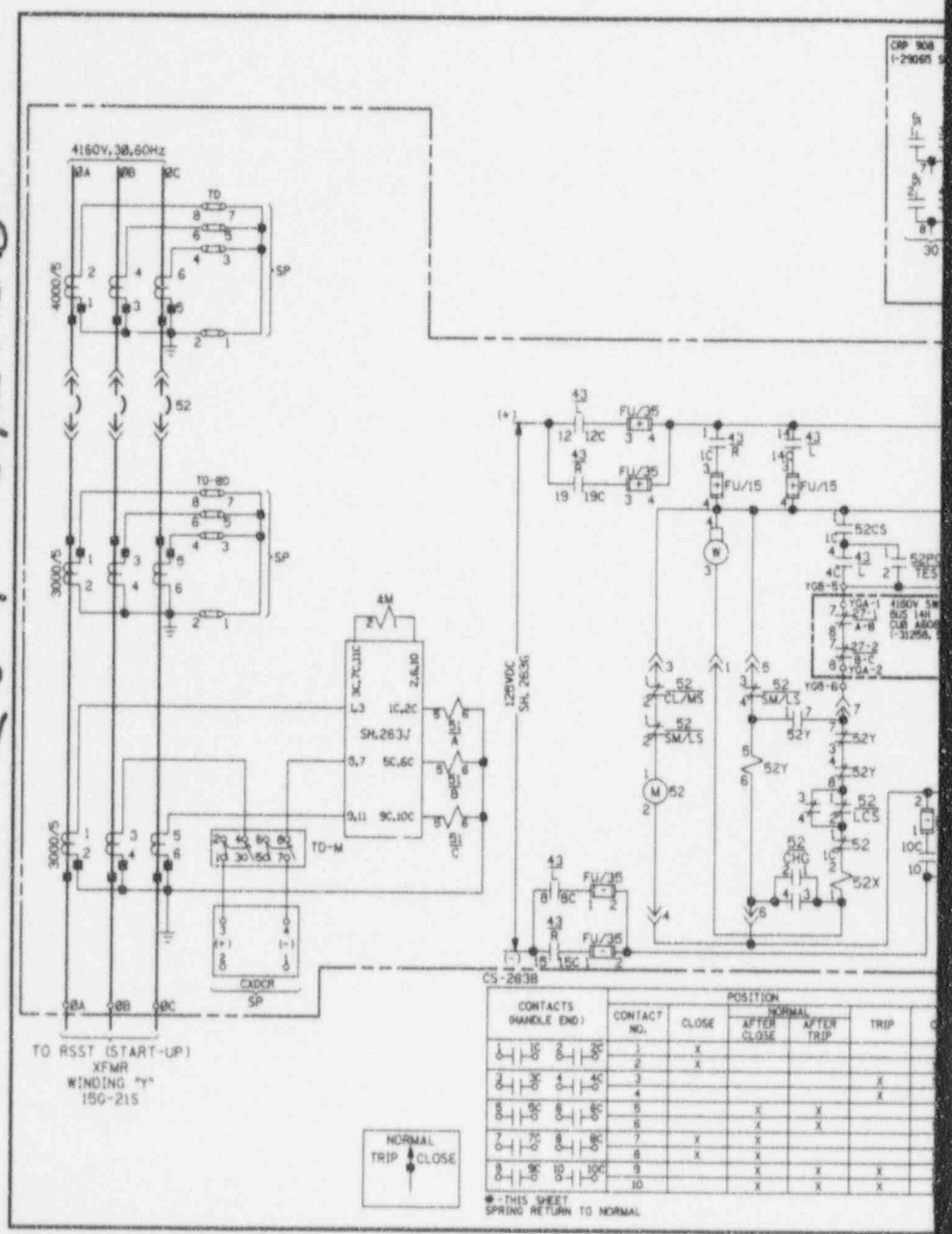
FOR NORTHEAST NUCLEAR ENERGY CO.

TITLE
MILLSTONE UNIT 1
4160V SWGR BUS 14H CUB A602
14H TO U2 BUS 24E TIE
WATERFORD, CONN.

BY DLM	CHKD. JKY	APP. GJF	APP. RJH
DATE 2-3-88	DATE 8-23-89	DATE 8-24-89	DATE 8-24-89

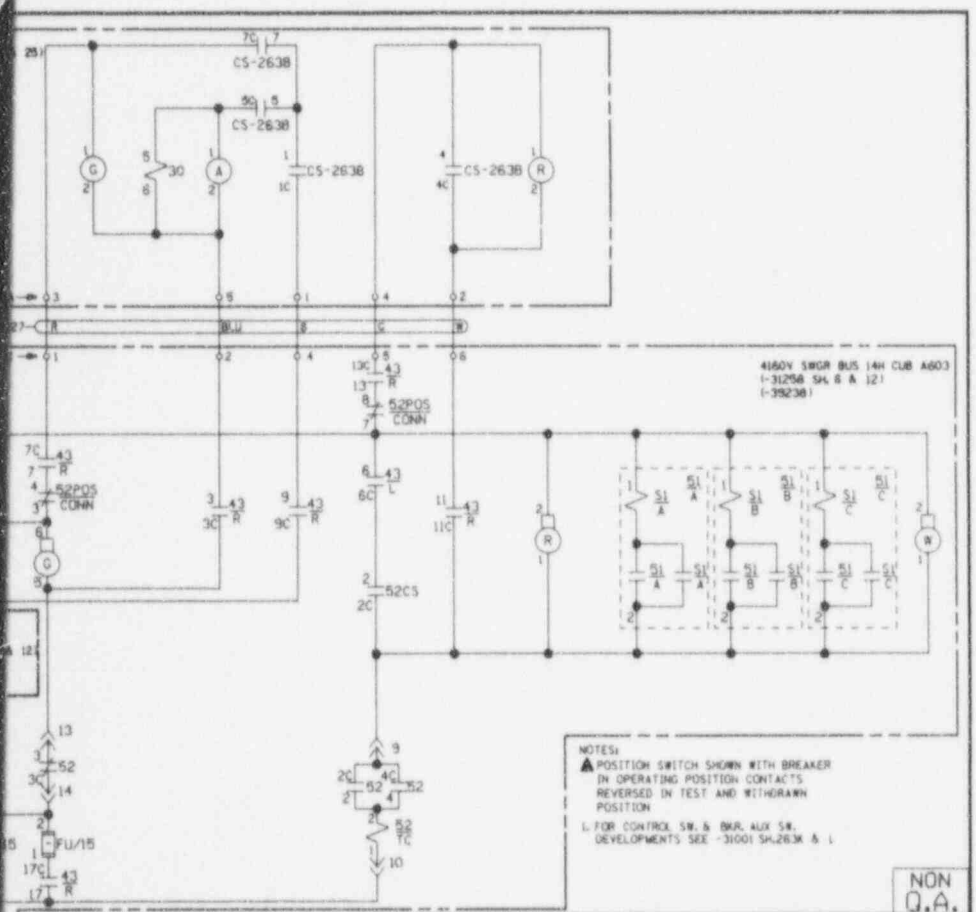
SCALE NONE
P.A.* 83-156
DWG. NO. 25202-31001 SH.263A

20-9820920156



CONTACTS (HANDLE END)	CONTACT NO.	POSITION NORMAL CLOSE	POSITION NORMAL AFTER CLOSE	POSITION NORMAL AFTER TRIP	TRIP
1C 3C 2C 4C	1	X			
	2	X			
3C 4C 4C 2C	3				X
	4				X
5C 6C 6C 5C	5		X	X	
	6		X	X	
7C 8C 8C 7C	7	X	X		
	8	X	X		
9C 10C 10C 9C	9		X	X	X
	10		X	X	X

*-THIS SHEET SPRING RETURN TO NORMAL



NON Q.A.

CAD

NOTE: MANUAL REVISIONS TO THIS DOCUMENT WHEN AS-BUILT ARE PROHIBITED.

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	83-156	1		AS BUILT PER DSR-MI-S-1062-88	GT	[illegible]	GJF	RH

Northeast Utilities System

FOR NORTHEAST NUCLEAR ENERGY CO.

TITLE: MILLSTONE UNIT 1
4160V SWGR BUS 14H CUB A603
RSST FEED TO 14H
WATERFORD, CONN.

BY DLM	CHKD. JKY	APP. GJF	APP. RJH
DATE 2-3-88	DATE 8-23-89	DATE 8-24-89	DATE 8-24-89
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P.A.* 83-156			

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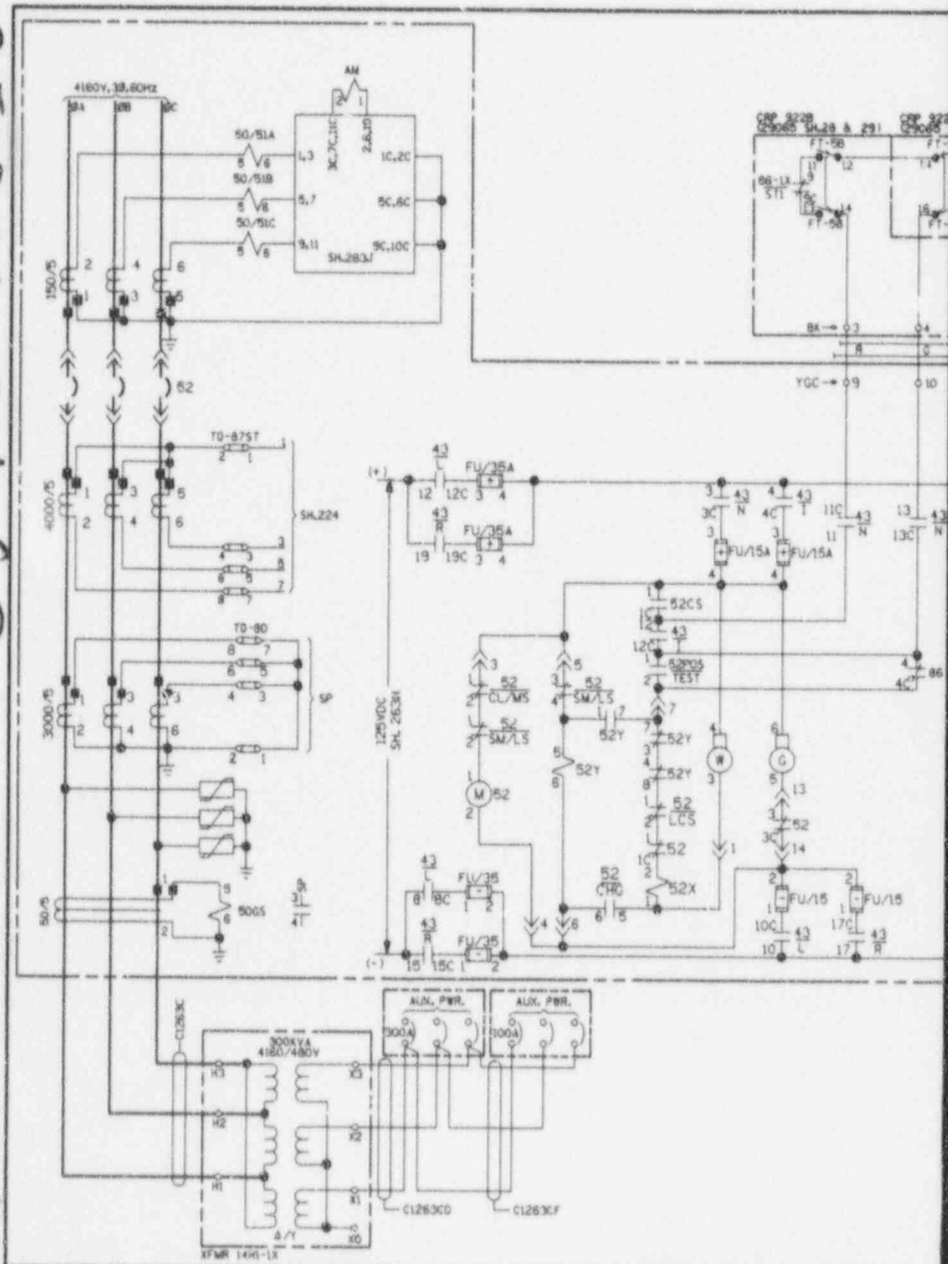

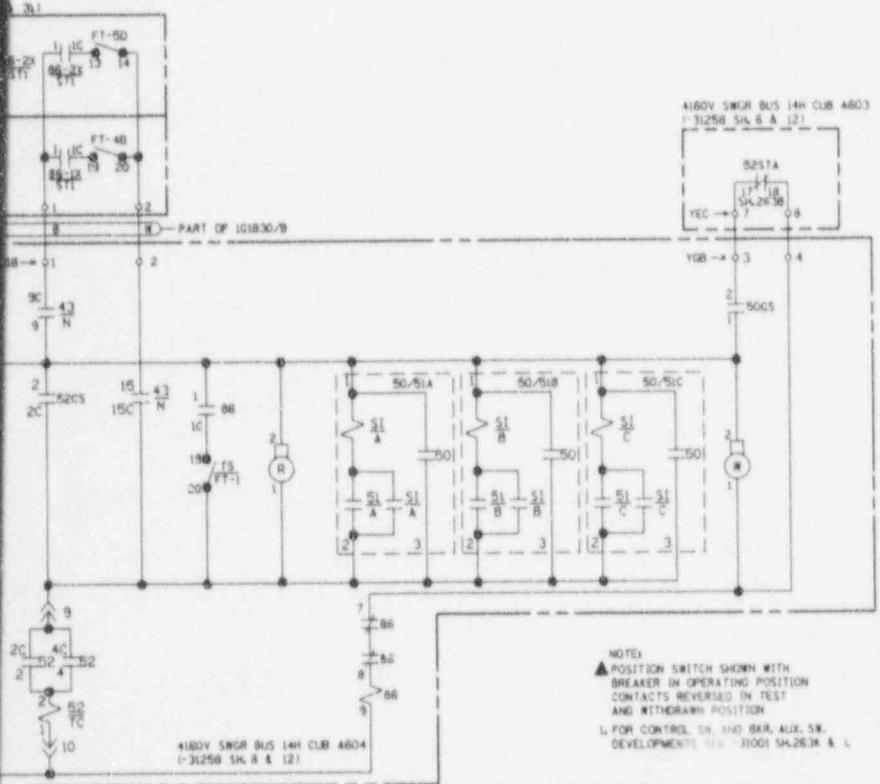

NOTE:
▲ POSITION SWITCH SHOWN WITH BREAKER IN OPERATING POSITION CONTACTS REVERSED IN TEST AND WITHDRAWN POSITION

L FOR CONTROL SW. AND BKR. AUX. SW. DEVELOPMENTS SEE (-31001 SH.263R & L

NON Q.A.

CAD

NOTE:
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	83-156	1		AS BUILT PER DSR-MI-S-1062-88	GT	[illegible]	GJF	RH

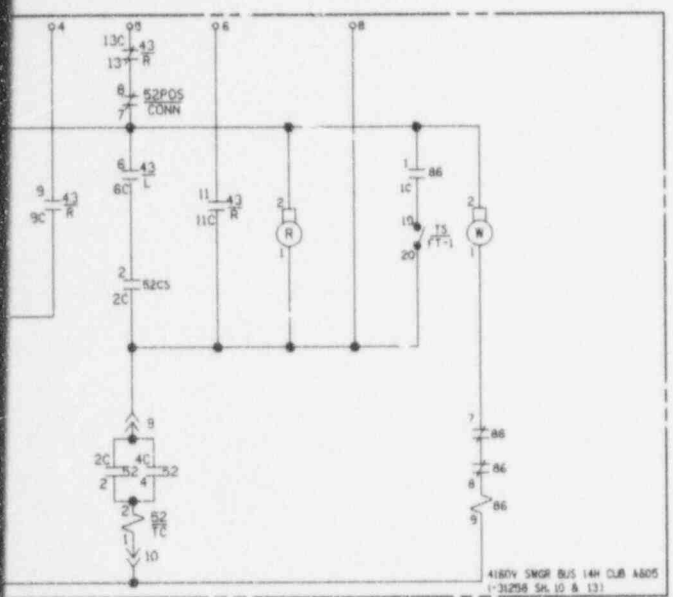
Northeast Utilities System

FOR NORTHEAST NUCLEAR ENERGY CO.

TITLE
MILLSTONE UNIT 1
4160V SWGR BUS 14H CUB A604
300KVA SHUTDOWN XFMR (14H1-1X)
WATERFORD, CONN.

BY DLM	CHKD JKY	APP. GJF	APP. RJH
DATE 3-14-88	DATE 8-23-89	DATE 8-24-89	DATE 8-24-89
SCALE NONE	DWG. NO. 25202-31001 SH.263C		
P.A.# 83-156			

hQ-9826920154



NOTE:
▲ POSITION SWITCH SHOWN WITH BREAKER IN OPERATING POSITION CONTACTS REVERSED IN TEST AND WITHDRAWN POSITION
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NON Q.A.

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NOTE:
MANUAL REVISIONS TO THIS DOCUMENT WHEN AS-BUILT ARE PROHIBITED.

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	83-156	1		AS BUILT PER DSR-M1-S-1062-88	GT	GJF	RH	

Northeast Utilities System

FOR NORTHEAST NUCLEAR ENERGY CO.

TITLE MILLSTONE UNIT 1
4160V SWGR BUS 14H CUB A605
SPARE
WATERFORD, CONN.

BY DLM	CHKD. JKY	APP. GJF	APP. RJH
DATE 3-8-88	DATE 8-23-89	DATE 8-24-89	DATE 8-24-89
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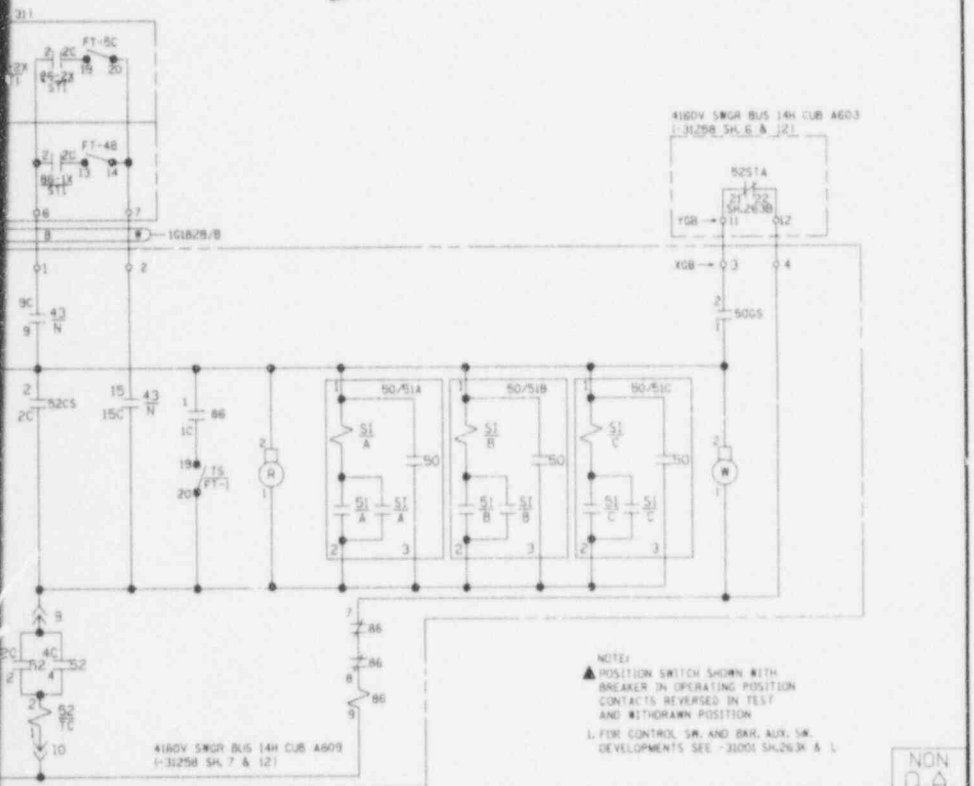
P.A.# 83-156			

SO-9820920158



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▲ POSITION SWITCH SHOWN WITH BREAKER IN OPERATING POSITION CONTACTS REVERSED IN TEST AND WITHDRAWN POSITION

1. FOR CONTROL SW. AND BKR. AUX. SW. DEVELOPMENTS SEE -31001 SH.263K & L

NON Q.A.

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NOTE:
MANUAL REVISIONS TO THIS DOCUMENT WHEN AS-BUILT ARE PROHIBITED.

REVISIONS DURING CONSTRUCTION | P.A.*

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	83-156	1		AS BUILT PER DSR-MI-S-1062-88	GT	[illegible]	CJF	RJH

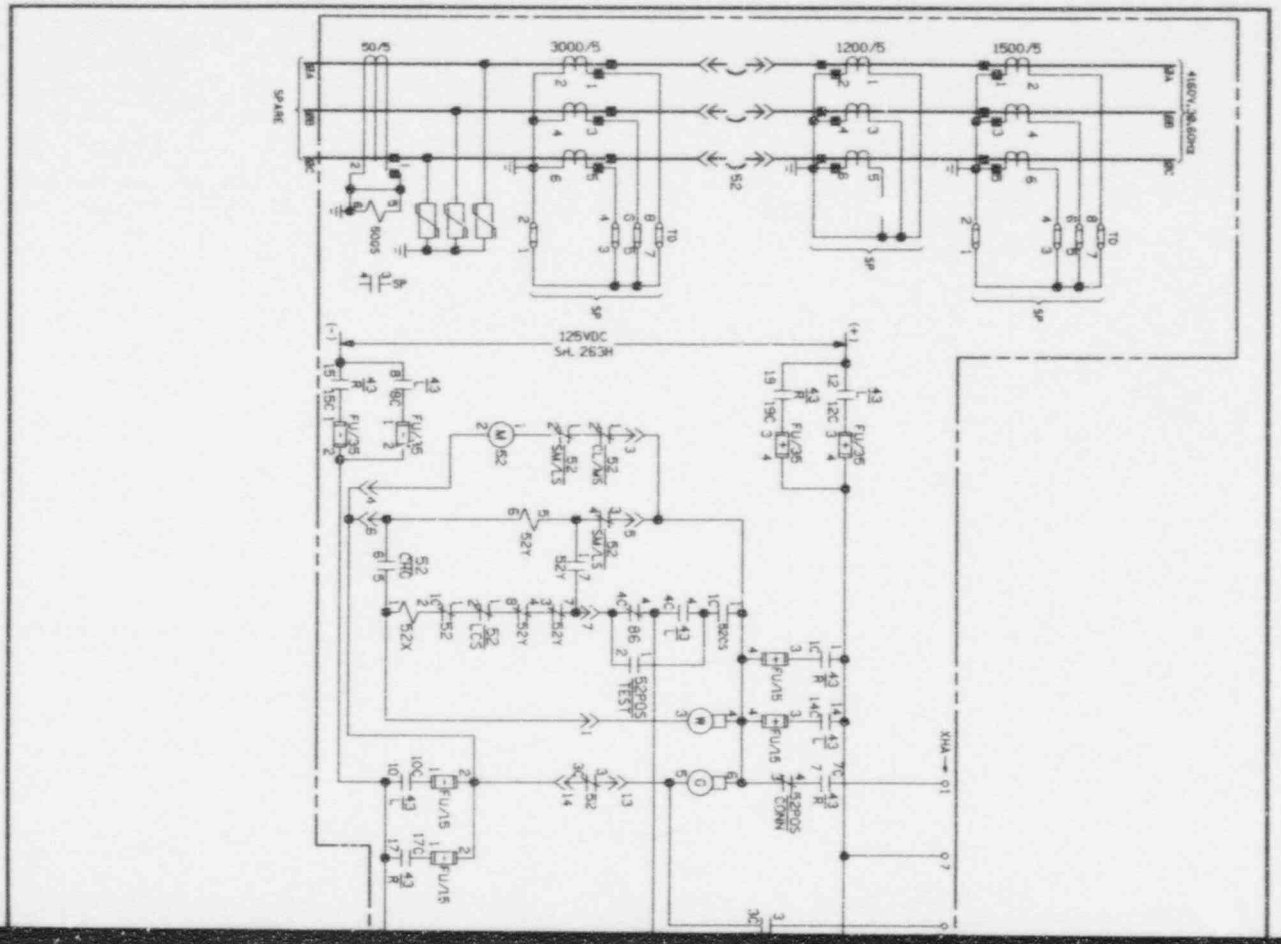
Northeast Utilities System
FOR NORTHEAST NUCLEAR ENERGY CO.

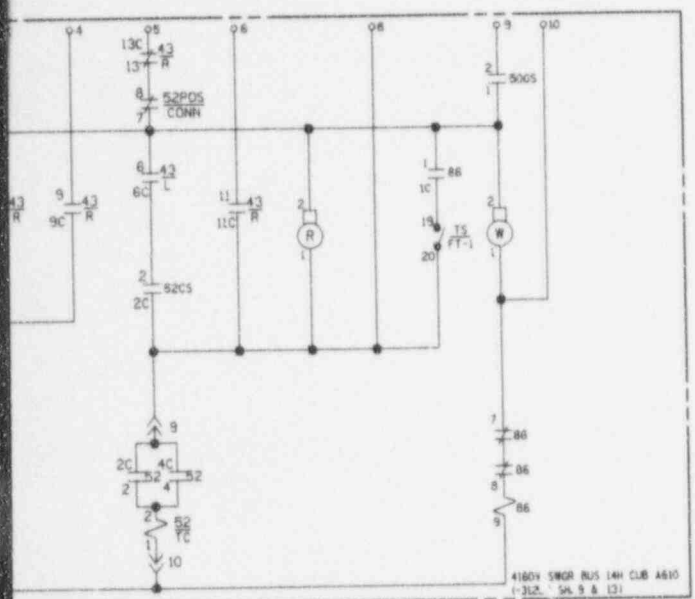
TITLE
MILLSTONE UNIT 1
4160V SWGR BUS 14H CUB A609
EMERG FEED TO A CRD PUMP (M8-21A)
WATERFORD, CONN.

BY DLM	CHKD. JKY	APP. CJF	APP. RJH
DATE 3-14-88	DATE 8-23-89	DATE 8-24-89	DATE 8-24-89

SCALE NONE | DWG. NO. 25202-31001 SH.263E
P.A.* 83-156

9Q-9820920156





NOTE:
▲POSITION SWITCH SHOWN WITH BREAKER IN OPERATING POSITION CONTACTS REVERSED IN TEST AND WITHDRAWN POSITION
1. FOR CONTROL SW. AND BKR. AUX. SW. DEVELOPMENTS SEE -31001 SH.263F & L

NON Q.A.

CAD
NOTE:
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REVISIONS DURING CONSTRUCTION | P.A.*

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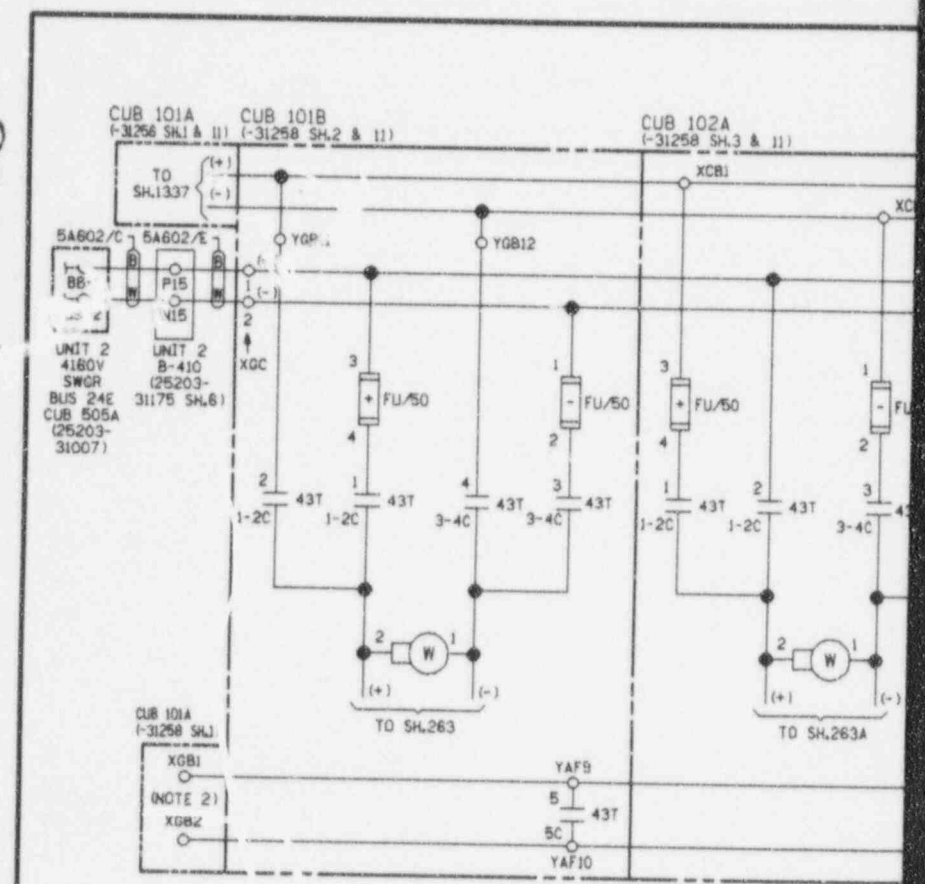
Northeast Utilities System
FOR NORTHEAST NUCLEAR ENERGY CO.
TITLE MILLSTONE UNIT 1
4160V SWGR BUS 14H CUB A610
SPARE
WATERFORD, CONN.

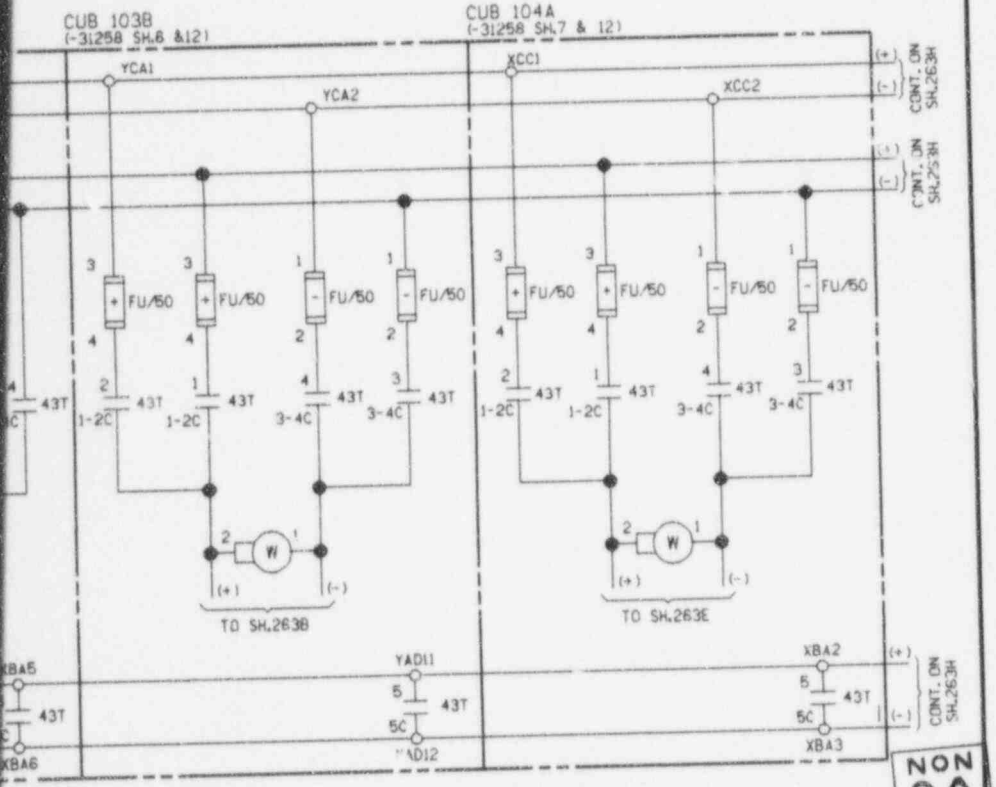
BY DLM	CHKD. JKY	APP. GJF	APP. RJH
DATE 3-8-88	DATE 8-23-89	DATE 8-24-89	DATE 8-24-89

SCALE NONE | DWG NO. 25202-31001 SH.263F
P.A.* 83-156



NOTES:

1. FOR SW DEVELOPMENTS SEE -3.001 SH.263K & L
2. ALARM CONTACTS NOT USED



C.A.D.

NOTE:
MANUAL REVISIONS TO THIS AS-BUILT DOCUMENT ARE PROHIBITED. REFER TO GED 3.01 FOR REVISION DURING CONSTRUCTION MANUAL REVISIONS.

REVISIONS DURING CONSTRUCTION	P.A.*

MF	P.A.*	NO.	DATE	REVISIONS	BY	CHK	APP	APP
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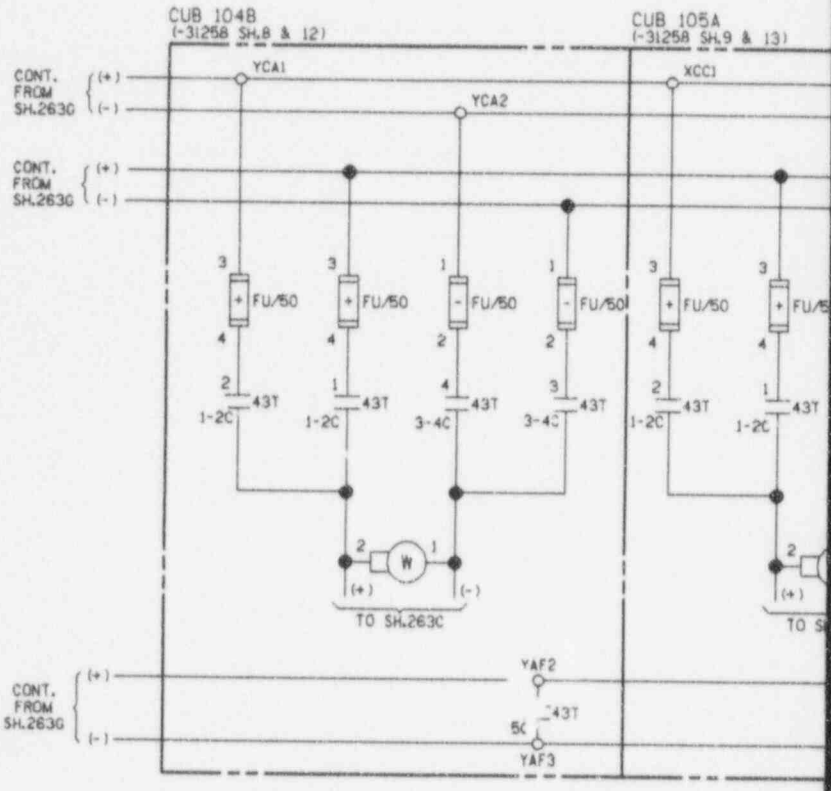
NORTHEAST UTILITIES SERVICE CO.
FOR NORTHEAST NUCLEAR ENERGY CO.
MILLSTONE UNIT 1
TITLE
4160V SWGR. BUS 14H 125VDC CONTROL POWER FOR CUBS 101B,102A,103B & 104A
WATERFORD, CT.

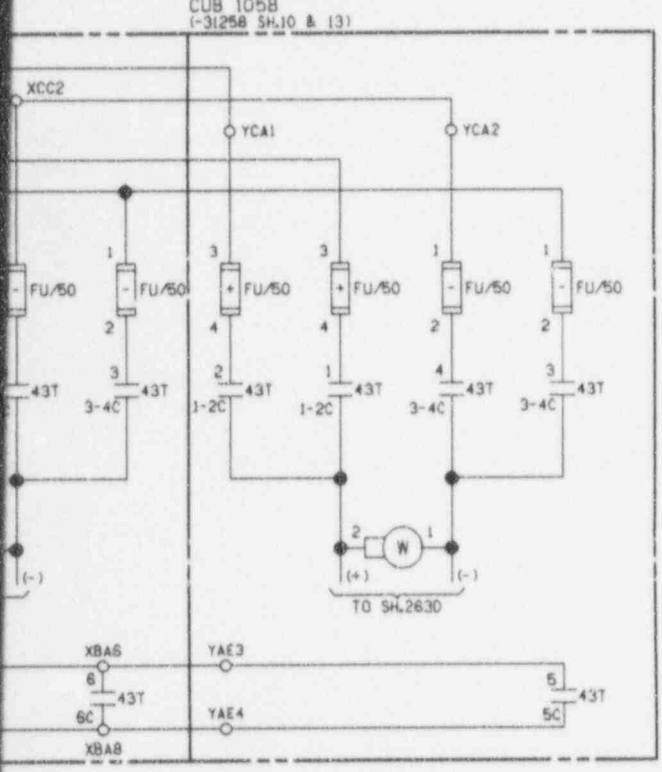
BY	CHKD.	APP.	APP.
DLM			
DATE 9-15-87	DATE 8-23-88	DATE	DATE
SCALE NONE	DWG. NO. 25202-31001 SH.263G		
P.A.* 83-156			

MR

8D-9826020154



NOTE:
1. FOR SWITCH DEVELOPMENTS SEE -31001 SH.263K & L



NON Q.A.

C.A.D.

NOTE: MANUAL REVISIONS TO THIS AS-BUILT DOCUMENT ARE PROHIBITED. REFER TO GED 3.01 FOR REVISION DURING CONSTRUCTION MANUAL REVISIONS.

REVISIONS DURING CONSTRUCTION	P.A.#

MF	P.A.#	NO.	DATE	REVISIONS	BY	CHK	APP	APP
	83-156	1	8-23-88	AS BUILT PER DSR-M1-S-1062-88	GT			

NORTHEAST UTILITIES SERVICE CO.
FOR NORTHEAST NUCLEAR ENERGY CO.

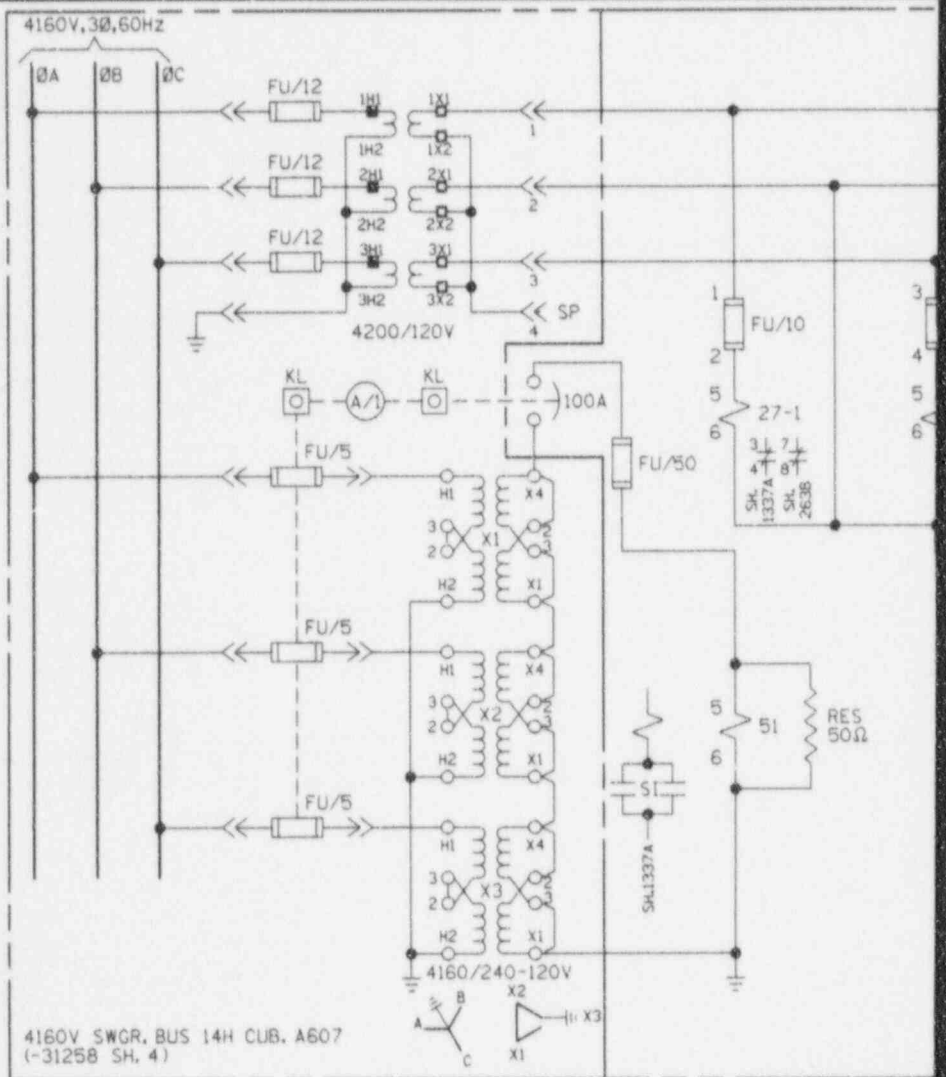
TITLE
MILLSTONE UNIT 1
4160V SWGR. BUS 14H 125VDC
CONTROL POWER FOR CUB'S 104B,105A & 105B
WATERFORD, CT.

BY	CHKD.	APP.	APP.
DLM	JK	MG	RJH
DATE 9-15-87	DATE 8-23-88	DATE 8/24/88	DATE 9/1/88

SCALE NONE
DWG. NO. 25202-31001 SH.263H
P.A.# 83-156

MR

bQ-98209201Sb



NOTES:
1. KL - KIRKLOCK SWITCH

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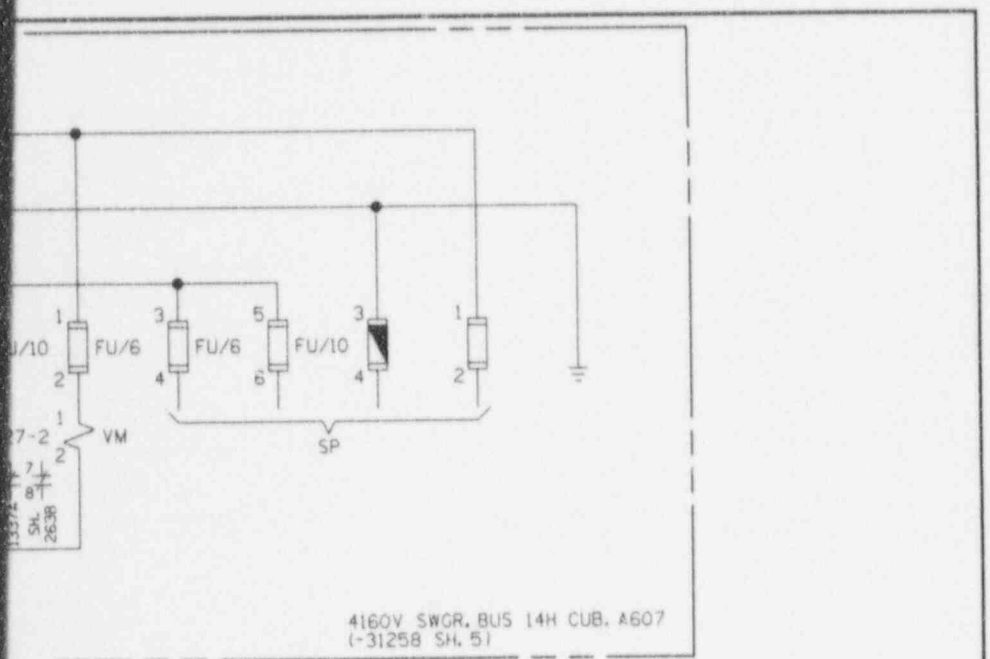
MF	P.A.*	NO.	DATE	REVISIONS	BY

REVISIONS DURING CONSTRUCTION | P.A.*



	NON Q.A.	CAD MANUAL REVISIONS TO THIS DOCUMENT WHEN AS-BUILT ARE PROHIBITED	Northeast Utilities System		
			FOR NORTHEAST NUCLEAR ENERGY CO.		
	TITLE MILLSTONE UNIT 1 4160V SWGR. BUS 14H CUBS A607, A608 AUXILIARY COMPARTMENT POT. AND GRND XFMRS UV RELAYS WATERFORD, CT	BY G.TARDIE	CHKD. JKY	APP. GJF	APP. RH
		DATE 8-9-89	DATE 2-23-89	DATE 2-24-89	DATE 2-24-89
		SCALE N/A	DWG. NO. 25202-31001 SH.263J		
		P.A.# 83-156			

Q1-9820920150

52STA

CONTACTS		POSITION		CUB. 101B	CUB. 102A	CUB. 103B	CUB. 104A	CUB. 104B	CUB. 105A	CUB. 105B
CRANK END	NO.	BKR. OPEN	BKR. CLOSED	CWD 3/4	CWD 3/4	CWD 3/4	CWD 3/4	CWD 3/4	CWD 3/4	CWD 3/4
1 2 3 4	1-2	X		288	SP	288	SP	SP	SP	SP
	3-4		X	△	△	SP	SP	SP	SP	SP
5 6 7 8	5-6	X		SP	SP	243	SP	SP	SP	SP
	7-8		X	SP	SP	SP	SP	SP	SP	SP
9 10 11 12	9-10	X		289	SP	289	SP	SP	SP	SP
	11-12		X	SP	SP	SP	SP	SP	SP	SP
13 14 15 16	13-14	X		SP	SP	263	SP	SP	SP	SP
	15-16		X	SP	SP	SP	SP	SP	SP	SP
17 18 19 20	17-18	X		SP	SP	263C	SP	SP	SP	SP
	19-20		X	SP	SP	SP	SP	SP	SP	SP
21 22 23 24	21-22	X		SP	SP	263E	SP	SP	SP	SP
	23-24		X	SP	SP	SP	SP	SP	SP	SP

S812-0226A92870010

43T

CONTACTS		POSITION		CUB. 101B	CUB. 102A	CUB. 103B	CUB. 104A	CUB. 104B	CUB. 105A	CUB. 105B
HANDLE END	NO.	UNIT 2	UNIT 1	CWD 3/4	CWD 3/4	CWD 3/4	CWD 3/4	CWD 3/4	CWD 3/4	CWD 3/4
1-2C	1	X		263G	263G	263G	263G	263H	263H	263H
	2		X	263G	263G	263G	263G	263H	263H	263H
3-4C	3	X		263G	263G	263G	263G	263H	263H	263H
	4		X	263G	263G	263G	263G	263H	263H	263H
5C 6C	5	X		263G	263G	263G	263G	263H	263H	263H
	6		X	SP	SP	SP	SP	SP	SP	SP

S81-CD213SSM2V

52POS

CONTACTS		POSITION		CUB. 101B	CUB. 102A	CUB. 103B	CUB. 104A	CUB. 104B	CUB. 105A	CUB. 105B
CRANK END	NO.	BKR. IN	BKR. OUT	CWD 3/4	CWD 3/4	CWD 3/4	CWD 3/4	CWD 3/4	CWD 3/4	CWD 3/4
1 2 3 4	1-2		X	SP	SP	263D	263K	263C	263F	263D
	3-4	X		263	263A	263B	SP	SP	263F	263D
5 6 7 8	5-6		X	SP	SP	SP	SP	SP	SP	SP
	7-8	X		263	263A	263B	SP	SP	263F	263D
9 10 11 12	9-10		X	SP	SP	SP	SP	SP	SP	SP
	11-12	X		SP	SP	SP	SP	SP	SP	SP

S812-0226A92870010

NOTES:
1. △ - 25203-31212 SH.119

	83-156	1	[illegible]	AS BUILT PER DSR-M1-S-1062-88	C
MF	P.A.*	NO.	DATE	REVISIONS	B

REVISIONS DURING CONSTRUCTION | P.A.*

CS

CONTACTS HANDLE END	NO.	POSITION TRIP	NORMAL	CLOSE	CUB. 101B CWD Sh's	CUB. 102A CWD Sh's	CUB. 103B CWD Sh's	CUB. 104A CWD Sh's	CUB. 104B CWD Sh's	CUB. 105A CWD Sh's	CUB. 105B CWD Sh's
1C 2C	1			X	263	263A	263B	263E	263K	263F	263D
1C 2C	2	X			263	263A	263B	263E	263K	263F	263D

1AB303
RING RETURN TO NORMAL

2 BKR. AUX. SWITCHES

CONTACTS CRANK END	NO.	POSITION BKR. OPEN	BKR. CLOSED	CUB. 101B CWD Sh's	CUB. 102A CWD Sh's	CUB. 103B CWD Sh's	CUB. 104A CWD Sh's	CUB. 104B CWD Sh's	CUB. 105A CWD Sh's	CUB. 105B CWD Sh's
1C	1	X		263	263A	263B	263E	263K	263F	263D
2C	2		X	263	263A	263B	263E	263K	263F	263D
3C	3	X		263	263A	263B	263E	263K	263F	263D
4C	4		X	263	263A	263B	263E	263K	263F	263D
5C	5	X		SP	SP	SP	SP	SP	SP	SP
6C	6		X	SP	SP	SP	SP	SP	SP	SP
7C	7	X		SP	SP	SP	SP	SP	SP	SP
8C	8		X	SP	SP	SP	SP	SP	SP	SP

NON Q.A.

C.A.D. MANUAL REVISIONS TO AS-BUILTS ARE PROHIBITED, SEE QED 3.01

NORTHEAST UTILITIES SERVICE CO.
FOR NORTHEAST NUCLEAR ENERGY CO.

TITLE MILLSTONE UNIT 1
4160V SWGR. BUS 14H
CONTROL SW. & TEST SW. DEVELOPMENTS SH.1
WATERFORD, CT

BY G.YARDIE	CHK'D. JK	APP. [illegible]	APP. [illegible]
DATE 8-11-89	DATE 8-23-89	DATE 9/14/89	DATE 9/21/89
SCALE N/A	DWG. NO. 25202-31001 SH.263K		
P.A.# 83-156			

APP APP

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11-9820920154

86/86B

HAND RESET SHOWN IN RESET POSITION	NO.	CUB. 101B	CUB. 104A	CUB. 104B	CUB. 105A	CUB. 105B
		CWD 5/64	CWD 5/64	CWD 5/64	CWD 5/64	CWD 5/64
	1	263	263C	263C	263W	2630
	2	SP	SP	SP	SP	SP
	3	275	SP	SP	SP	SP
	4	263	263C	263C	263W	2630
	5	270	SP	SP	SP	SP
	6	275	SP	SP	SP	SP
	7	263	263C	263C	263W	2630
	8	263	263C	263C	263W	2630
	9	263	263C	263C	263W	2630

HEA81A223X2

AM

CONTA
HANDLE END
1 2C
3 3C
5 5-6C
7 7C
9 9-10C
11 11C

18SB1CA15

43

CONTACTS		POSITION		CUB. 101B	CUB. 102A	CUB. 103B	CUB. 104A	CUB. 104B	CUB. 105A	CUB. 105B
CRANK END	NO.	REMOTE (NORMAL)	LOCAL (ISOLATE)	CWD 5/64	CWD 5/64	CWD 5/64	CWD 5/64	CWD 5/64	CWD 5/64	CWD 5/64
1C 2C	1	X		263	263A	263B	263E	263C	263W	2630
	2		X	SP	SP	SP	263E	263C	SP	SP
3C 4C	3	X		263	263A	263B	263E	263C	263W	2630
	4		X	263	263A	263B	263E	263C	263W	2630
5C 6C	5	X		263	263A	SP	263E	263C	SP	SP
	6		X	263	263A	263B	263E	263C	263W	2630
7C 8C	7	X		SP	SP	263B	263E	263C	263W	2630
	8		X	263	263A	263B	263E	263C	263W	2630
9C 10C	9	X		263	263A	263B	263E	263C	263W	2630
	10		X	263	263A	263B	SP	SP	263W	2630
11C 12C	11	X		263	263A	263B	263E	263C	263W	2630
	12		X	263	263A	263B	263E	263C	263W	2630
13C 14C	13	X		263	263A	263B	263E	263C	263W	2630
	14		X	263	263A	263B	SP	SP	SP	SP
15C 16C	15	X		263	263A	263B	263E	263C	263W	2630
	16		X	SP	SP	SP	SP	SP	SP	SP
17C 18C	17	X		263	263A	263B	SP	SP	263W	2630
	18		X	SP	SP	SP	SP	SP	SP	SP
19C 20C	19	X		263	263A	263B	SP	SP	263W	2630
	20		X	SP	SP	SP	SP	SP	SP	SP
21C 22C	21	X		SP	SP	SP	SP	SP	SP	SP
	22		X	SP	SP	SP	SP	SP	SP	SP

18SB1MB2A00L

REVISIONS DURING CONSTRUCTION	P.A.#

MF	P.A.#	NO.	DATE	REVISIONS
	83-156	1	8/2/84	AS BUILT PER DSR-MI-S-1062-88

POSITION										CUB. 101B	CUB. 102A	CUB. 103B	CUB. 104A	CUB. 104B	CUB. 105A	CUB. 105B
L	3	19	OFF	18	2	16	OFF	17	1	CWD	CWD	CWD	CWD	CWD	CWD	CWD
	X	X	X	X	X	X	X	X		263	263A	263B	263E	263C	263F	263D
								X	X	263	263A	263B	263E	263C	263F	263D
								X	X	263	263A	263B	263E	263C	263F	263D
										263	263A	263B	263E	263C	263F	263D
	X	X	X	X		X	X	X	X	263	263A	263B	263E	263C	263F	263D
				X	X	X				263	263A	263B	263E	263C	263F	263D
				X	X	X				263	263A	263B	263E	263C	263F	263D
										263	263A	263B	263E	263C	263F	263D
		X	X	X	X	X	X	X	X	263	263A	263B	263E	263C	263F	263D
	X	X								263	263A	263B	263E	263C	263F	263D
	X	X								263	263A	263B	263E	263C	263F	263D
										263	263A	263B	263E	263C	263F	263D

NON Q.A.	C.A.D. MANUAL REVISIONS TO AS-BUILTS ARE PROHIBITED. SEE QED 3.01	NORTHEAST UTILITIES SERVICE CO.	
		FOR NORTHEAST NUCLEAR ENERGY CO.	
TITLE MILLSTONE UNIT 1		BY G.TARDIE	CHKD. JY	APP. JGT	APP. RTH
4160V SWGR. BUS 14H		DATE 8-11-89	DATE 8-23-89	DATE 8/24/89	DATE 8/24/89
CONTROL SW. & TEST SW. DEVELOPMENTS SH.2		SCALE N/A	DWG. NO. 25202-31001 SH.263L	
WATERFORD, CT		P.A.# 83-156		

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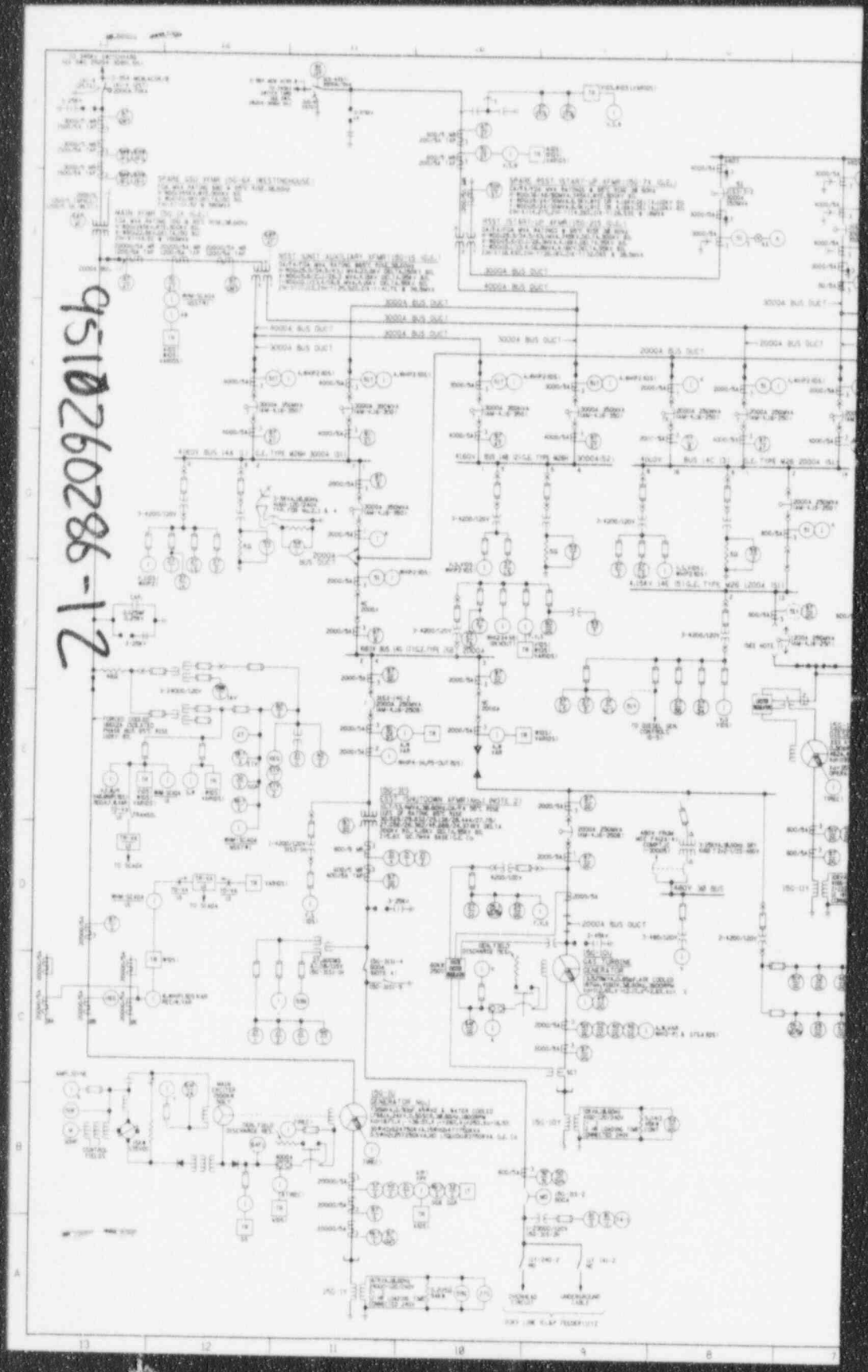
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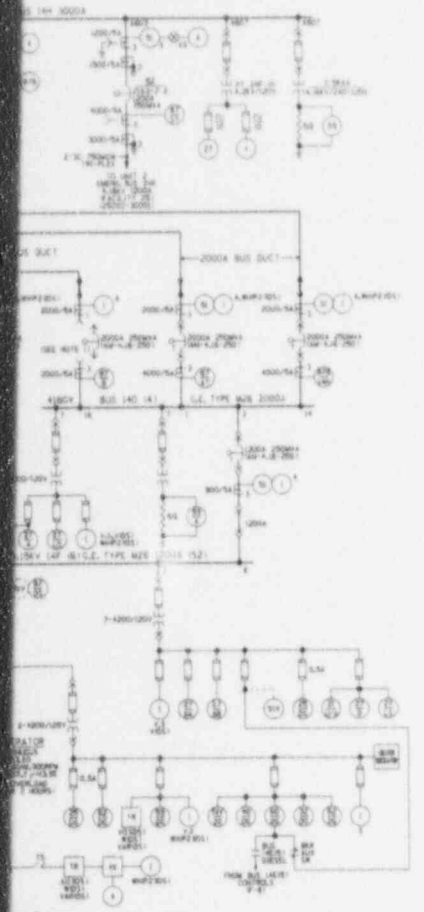


LEGEND

DEVICE NO. FUNCTION	RELAY TYPE	DESCRIPTION

SYMBOLS:

1. INDICATES TRIPPED ON LOSS OF NORMAL POWER.
2. INDICATES TRIPPED ON LOSS OF NORMAL POWER & RECLOSED FOR LHP CONDITION.
- PI - PRINTING (BOARD METER)
- TX - TRANSDUCER FOR COMPUTER DATA SYSTEM
- CD - COMPUTER DATA SYSTEM
- REMOVABLE LINK
- G - GENERATOR
- AT - AUXILIARY TRANSFORMER
- DG - DIESEL GENERATOR
- GT - GAS TURBINE GENERATOR
- MT - MAIN TRANSFORMER
- R - REACTOR
- ST - STATION TRANSFORMER
- UT - UNIT AUX TRANSFORMER
- CT - CURRENT TRANSMITTER

REFERENCE DRAWINGS:

25202-30001 SH.2	PHASOR DIAGRAM
25202-30002 SH.1	4160V & 480V SINGLE LINE DIAGRAM
25202-30002 SH.2	4160V & 480V SINGLE LINE DIAGRAM
25202-30003 SH.1	4160V & 480V SINGLE LINE DIAGRAM
25202-30003 SH.2	4160V & 480V SINGLE LINE DIAGRAM

NOTES:

1. BREAKER TO BE LOWERED AND ELEVATING MECHANISM TO BE INSPECTED TO PREVENT IT FROM BEING USED TO RAISE BREAKER TO OPERATING POSITION.
2. [illegible]
3. SEE DRAWINGS 25205-30001 SH.1 & FOR INDEX OF DRAWINGS FOR TRANSFORMER REPLACEMENTS.
4. ELECTRICAL CONTROLS FOR MOTOR OPERATED DISCONNECT ITEMS [illegible]

OPERATIONS CRITICAL

Q.A.

CAD

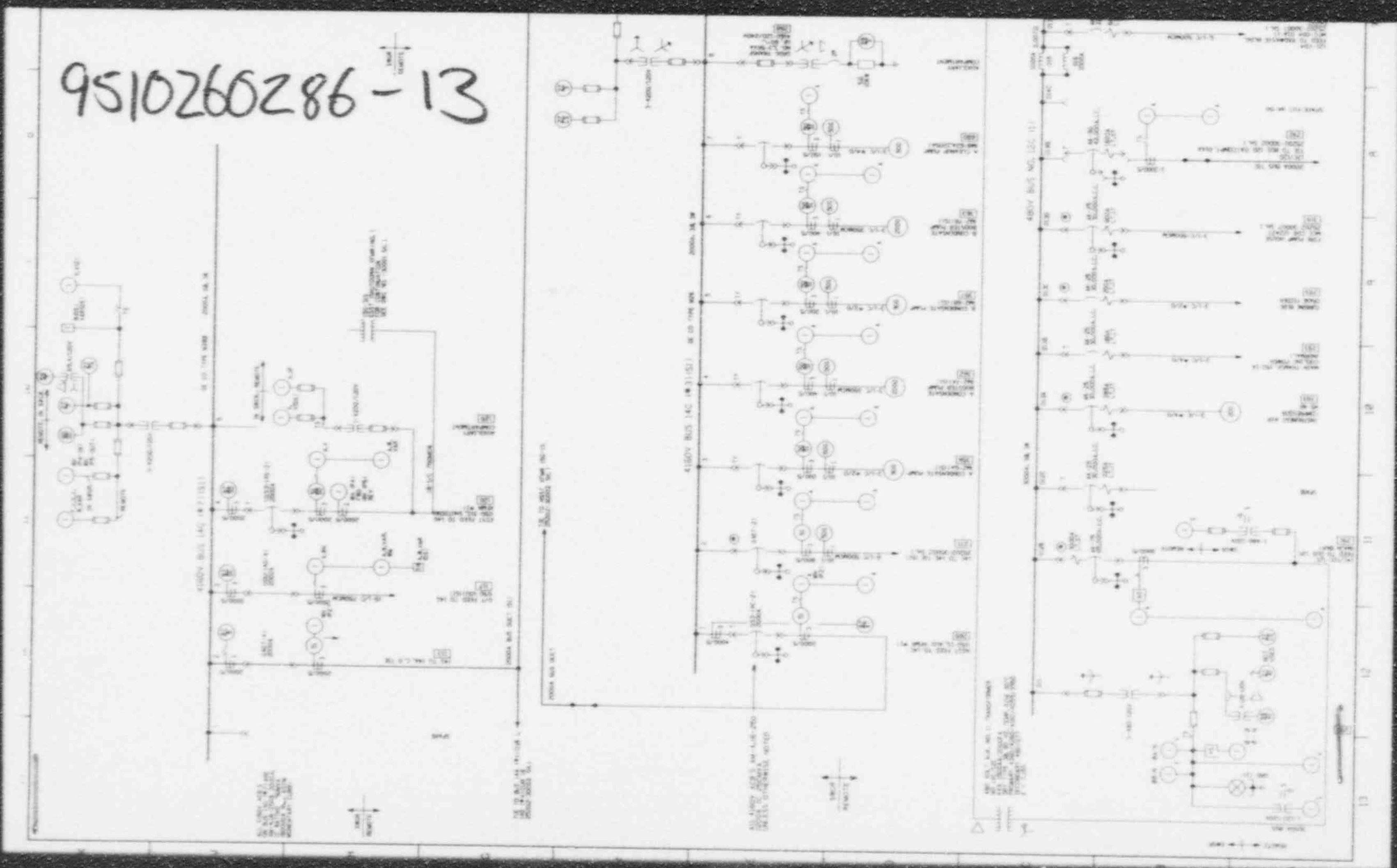
Northeast Utilities System

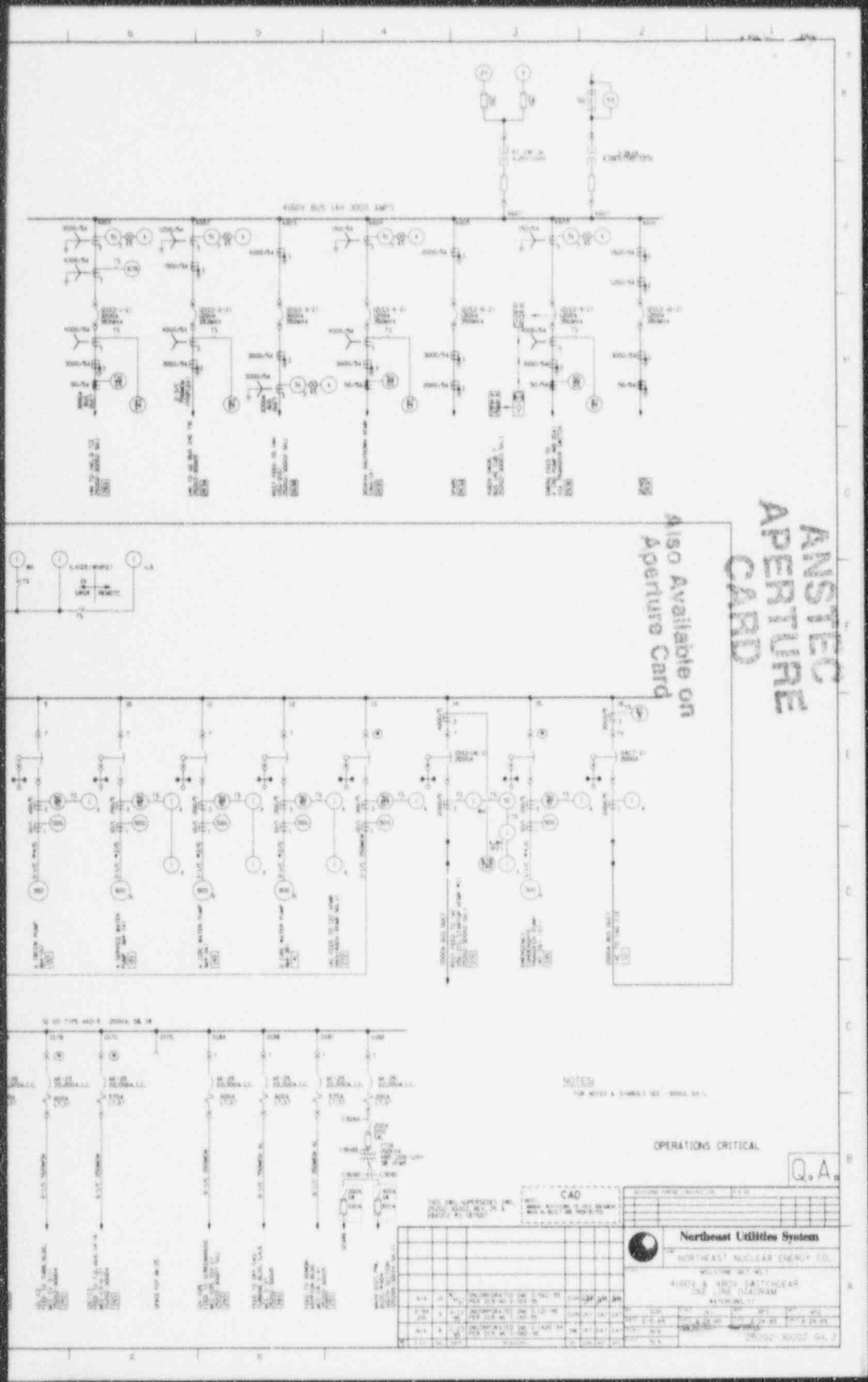
NORTHEAST NUCLEAR ENERGY CO.

MAIN ONE LINE WIRING DIAGRAM

25202-30001 SH.1

9510260286-13





NOTES

OPERATIONS CRITICAL

Q.A.

CAD

Northeast Utilities System

NORTHEAST NUCLEAR ENERGY CO.

Initiator	Core Melt	Any Rel.	Sig. Rel.	Econ Risk	Risk 5	Risk 6
T8	1.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total Freq:	1.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Sequence Name	Plant Damage Class	Freq. Measure	Percent (%)	Accident Sequence Events
TEH1	TEH	5.91E-07	4.9	T8 LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGBFLTKI <module> D/G 1SG-13U FAULTS
				FMODMDADELCA <MODULE> MD PUMP TRAIN A FAILS TO DELIVER
				FMODSDPDELD <MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
TER1	TEH	5.91E-07	4.9	T8 LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGAFLTJI <module> D/G 1SG-12U FAULTS
				FMODMDBDELCB <MODULE>MD PUMP 9B FAILS TO DELIVER
				FMODSDPDELD <MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
TLGL1	TLGL	5.57E-07	4.6	T8 LOSS OF NORMAL POWER INITIATING EVENT
				ACREC13 RECOVERY OF AC POWER IN 13 HOURS (MEAN COPING TIME)
				AMODCCFLNPJKAB <module> COMMON CAUSE FAILURE OF AC POWER GIVEN AN LNP
TLGL1	TLGL	4.22E-07	3.5	T8 LOSS OF NORMAL POWER INITIATING EVENT
				ACREC13 RECOVERY OF AC POWER IN 13 HOURS (MEAN COPING TIME)
				AMODDGAFLTJI <module> D/G 1SG-12U FAULTS
				AMODDGBFLTKI <module> D/G 1SG-13U FAULTS
TEH1	TEH	4.20E-07	3.5	T8 LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGBFLTKI <module> D/G 1SG-13U FAULTS
				FMODMDADELCA <MODULE> MD PUMP TRAIN A FAILS TO DELIVER
				FQ1PXCP4 COGNITIVE ERROR FOR OPS. FAILING TO INIT. SD PUMP.
TER1	TEH	4.20E-07	3.5	T8 LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGAFLTJI <module> D/G 1SG-12U FAULTS
				FMODMDBDELCB <MODULE>MD PUMP 9B FAILS TO DELIVER
				FQ1PXCP4 COGNITIVE ERROR FOR OPS. FAILING TO INIT. SD PUMP.
TEH1	TEH	3.61E-07	3.1	T8 LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGBFLTKI <module> D/G 1SG-13U FAULTS
				FMODMDADELCA <MODULE> MD PUMP TRAIN A FAILS TO DELIVER
				FQ1QXOP4 SD AFW PUMP P4 IS O.O.S. FOR MAINT.
TER1	TEH	3.61E-07	3.1	T8 LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGAFLTJI <module> D/G 1SG-12U FAULTS
				FMODMDBDELCB <MODULE>MD PUMP 9B FAILS TO DELIVER
				FQ1QXOP4 SD AFW PUMP P4 IS O.O.S. FOR MAINT.
TEH1	TEH	3.34E-07	2.8	T8 LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGAFLTJI <module> D/G 1SG-12U FAULTS
				FMODSDPDELD <MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
				FP9QX09B AFW MD PUMP 9B IS O.O.S. DUE TO MAINT.
TER1	TEH	3.34E-07	2.8	T8 LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGBFLTKI <module> D/G 1SG-13U FAULTS
				FMODSDPDELD <MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
				FP9QX09A AFW MD PUMP 9A IS O.O.S. DUE TO MAINT.
TEH1	TEH	2.73E-07	2.3	T8 LOSS OF NORMAL POWER INITIATING EVENT
				FMODCCFHDRG <MODULE> CCFs OF THE COMMON INJECTION HEADER VALVES
				OABAFLNP COGNITIVE ERROR TO INITIATE BLEED AND FEED/LNP INITIATOR
TSGM1	TSGH	2.62E-07	2.2	T8 LOSS OF NORMAL POWER INITIATING EVENT
				ACREC54 RECOVERY OF AC POWER IN 54 MINUTES
				AMODCCFLNPJKAB <module> COMMON CAUSE FAILURE OF AC POWER GIVEN AN LNP
				FMODSDPDELD <MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
TEH1	TEH	2.37E-07	2.0	T8 LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGAFLTJI <module> D/G 1SG-12U FAULTS
				FP9QX09B AFW MD PUMP 9B IS O.O.S. DUE TO MAINT.
				FQ1PXCP4 COGNITIVE ERROR FOR OPS. FAILING TO INIT. SD PUMP.
TEH1	TEH	2.37E-07	2.0	T8 LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGBFLTKI <module> D/G 1SG-13U FAULTS
				FP9QX09A AFW MD PUMP 9A IS O.O.S. DUE TO MAINT.
				FQ1PXCP4 COGNITIVE ERROR FOR OPS. FAILING TO INIT. SD PUMP.

TEGH1	TEGH	1.99E-07	1.6	T8		LOSS OF NORMAL POWER INITIATING EVENT
				ACREC54		RECOVERY OF AC POWER IN 54 MINUTES
				AMODDGAFLTJI		<module> D/G 15G-12U FAULTS
				AMODDGBFLTKI		<module> D/G 15G-13U FAULTS
				FMODSDPDELD		<MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
TEGH1	TEGH	1.86E-07	1.5	T8		LOSS OF NORMAL POWER INITIATING EVENT
				ACREC54		RECOVERY OF AC POWER IN 54 MINUTES
				AMODCCFLNPJKAB		<module> COMMON CAUSE FAILURE OF AC POWER GIVEN AN LNP
				FQ1PXCP4		GNITIVE ERROR FOR OPS. FAILING TO INIT. SD PUMP.
TEH1	TEH	1.75E-07	1.4	T8		LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGBFLTKI		<module> D/G 15G-13U FAULTS
				FMODMDADELCA		<MODULE> MD PUMP TRAIN A FAILS TO DELIVER
				FQ1PXOP4		OP FAILS TO PLACE THE SD PUMP TRAIN IN SERVICE-PROC. ERRORS.
TEH1	TEH	1.75E-07	1.4	T8		LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGAFLTJI		<module> D/G 15G-12U FAULTS
				FMODMDBDELCB		<MODULE>MD PUMP 9B FAILS TO DELIVER
				FQ1PXOP4		OP FAILS TO PLACE THE SD PUMP TRAIN IN SERVICE-PROC. ERRORS.
TEGH1	TEGH	1.69E-07	1.4	T8		LOSS OF NORMAL POWER INITIATING EVENT
				ACREC54		RECOVERY OF AC POWER IN 54 MINUTES
				AMODCCFLNPJKAB		<module> COMMON CAUSE FAILURE OF AC POWER GIVEN AN LNP
				FQ1QXOP4		SD AFW PUMP P4 IS O.O.S. FOR MAINT.
TEH1	TEH	1.43E-07	1.2	T8		LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGAFLTJI		<module> D/G 15G-12U FAULTS
				FMODCCFHDRG		<MODULE> CCFs OF THE COMMON INJECTION HEADER VALVES
TEH1	TEH	1.43E-07	1.2	T8		LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGBFLTKI		<module> D/G 15G-13U FAULTS
				FMODCCFHDRG		<MODULE> CCFs OF THE COMMON INJECTION HEADER VALVES
TEGH1	TEGH	1.41E-07	1.2	T8		LOSS OF NORMAL POWER INITIATING EVENT
				ACREC54		RECOVERY OF AC POWER IN 54 MINUTES
				AMODDGAFLTJI		<module> D/G 15G-12U FAULTS
				AMODDGBFLTKI		<module> D/G 15G-13U FAULTS
				FQ1PXCP4		COGNITIVE ERROR FOR OPS. FAILING TO INIT. SD PUMP.
TEGH1	TEGH	1.28E-07	1.1	T8		LOSS OF NORMAL POWER INITIATING EVENT
				ACREC54		RECOVERY OF AC POWER IN 54 MINUTES
				AMODDGAFLTJI		<module> D/G 15G-12U FAULTS
				AMODDGBFLTKI		<module> D/G 15G-13U FAULTS
				FQ1QXOP4		SD AFW PUMP P4 IS O.O.S. FOR MAINT.
TEH1	TEH	1.20E-07	1.0	T8		LOSS OF NORMAL POWER INITIATING EVENT
				ADGQX13U		DIESEL GENERATOR 15G-13U OUT OF SERVICE DUE TO MAINTENANCE
				FMODMDADELCA		<MODULE> MD PUMP TRAIN A FAILS TO DELIVER
				FMODSDPDELD		<MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
TEH1	TEH	1.20E-07	1.0	T8		LOSS OF NORMAL POWER INITIATING EVENT
				ADGQX12U		DIESEL GENERATOR 15G-12U OUT OF SERVICE DUE TO MAINTENANCE
				FMODMDBDELCB		<MODULE>MD PUMP 9B FAILS TO DELIVER
				FMODSDPDELD		<MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
TEH1	TEH	9.92E-08	.8	T8		LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGAFLTJI		<module> D/G 15G-12U FAULTS
				FP9QXO9B		AFW MD PUMP 9B IS O.O.S. DUE TO MAINT.
				FQ1PXOP4		OP FAILS TO PLACE THE SD PUMP TRAIN IN SERVICE-PROC. ERRORS.
TEH1	TEH	9.92E-08	.8	T8		LOSS OF NORMAL POWER INITIATING EVENT
				AMODDGBFLTKI		<module> D/G 15G-13U FAULTS
				FP9QXO9A		AFW MD PUMP 9A IS O.O.S. DUE TO MAINT.
				FQ1PXOP4		OP FAILS TO PLACE THE SD PUMP TRAIN IN SERVICE-PROC. ERRORS.
TLGL1	TLGL	8.54E-08	.7	T8		LOSS OF NORMAL POWER INITIATING EVENT
				ACREC13		RECOVERY OF AC POWER IN 13 HOURS (MEAN COPING TIME)
				ADGQX12U		DIESEL GENERATOR 15G-12U OUT OF SERVICE DUE TO MAINTENANCE
				AMODDGBFLTKI		<module> D/G 15G-13U FAULTS
TLGL1	TLGL	8.54E-08	.7	T8		LOSS OF NORMAL POWER INITIATING EVENT

					ACRECI3	RECOVERY OF AC POWER IN 13 HOURS (MEAN COPING TIME)
					ADGQX13U	DIESEL GENERATOR 15G-13U OUT OF SERVICE DUE TO MAINTENANCE
					AMODDGAFLTJI	<module> D/G 15G-12U FAULTS
TEH1	TEH	8.49E-08	.7	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				ADGQX13U		DIESEL GENERATOR 15G-13U OUT OF SERVICE DUE TO MAINTENANCE
				FMODMDADELCA		<MODULE> MD PUMP TRAIN A FAILS TO DELIVER
				FQ1PXCP4		COGNITIVE ERROR FOR OPS. FAILING TO INIT. SD PUMP.
TEH1	TEH	8.49E-08	.7	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				ADGQX12U		DIESEL GENERATOR 15G-12U OUT OF SERVICE DUE TO MAINTENANCE
				FMODMDBDELCB		<MODULE>MD PUMP 9B FAILS TO DELIVER
				FQ1PXCP4		COGNITIVE ERROR FOR OPS. FAILING TO INIT. SD PUMP.
TEGH1	TEGH	7.78E-08	.6	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				ACREC54		RECOVERY OF AC POWER IN 54 MINUTES
				AMODCCFLNPJKAB		<module> COMMON CAUSE FAILURE OF AC POWER GIVEN AN LNP
				FQ1PX0P4		OP FAILS TO PLACE THE SD PUMP TRAIN IN SERVICE-PROC. ERRORS.
TEH1	TEH	7.71E-08	.6	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				ADGQX12U		DIESEL GENERATOR 15G-12U OUT OF SERVICE DUE TO MAINTENANCE
				FMODMDBDELCB		<MODULE>MD PUMP 9B FAILS TO DELIVER
				FQ1QX0P4		SD AFW PUMP P4 IS O.O.S. FOR MAINT.
TEH1	TEH	6.76E-08	.6	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				ADGQX12U		DIESEL GENERATOR 15G-12U OUT OF SERVICE DUE TO MAINTENANCE
				FMODSDPDELD		<MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
				FP9QX09B		AFW MD PUMP 9B IS O.O.S. DUE TO MAINT.
TEH1	TEH	6.12E-08	.5	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				AMOD24CLNPI		<module> FAILURE OF BUS 24C LNP LOGIC
				FMODMDBDELCB		<MODULE>MD PUMP 9B FAILS TO DELIVER
				FMODSDPDELD		<MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
TEGH1	TEGH	5.90E-08	.5	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				ACREC54		RECOVERY OF AC POWER IN 54 MINUTES
				AMODDGAFLTJI		<module> D/G 15G-12U FAULTS
				AMODDGBFLTKI		<module> D/G 15G-13U FAULTS
				FQ1PX0P4		OP FAILS TO PLACE THE SD PUMP TRAIN IN SERVICE-PROC. ERRORS.
TEH1	TEH	5.39E-08	.4	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				AB2GXDT2		TIE BREAKER 24D-IT-2 FAILS TO OPEN
				FMODMDADELCA		<MODULE> MD PUMP TRAIN A FAILS TO DELIVER
				FMODSDPDELD		<MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
TEH1	TEH	5.39E-08	.4	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				AB2GXCT2		TIE BREAKER 24C-IT-2 FAILS TO OPEN
				FMODMDBDELCB		<MODULE>MD PUMP 9B FAILS TO DELIVER
				FMODSDPDELD		<MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
TEH1	TEH	5.23E-08	.4	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				AMOD24DLNPERI		<module> FAILURE OF BUS 24D LNP LOGIC
				FMODMDADELCA		<MODULE> MD PUMP TRAIN A FAILS TO DELIVER
				FMODSDPDELD		<MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
TEH1	TEH	5.15E-08	.4	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				FMODCCFHDRG		<MODULE> CCFs OF THE COMMON INJECTION HEADER VALVES
				MAVG190B		RANDOM MECHANICAL FAILURE OF ADV MS-190B
TEH1	TEH	5.15E-08	.4	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				FMODCCFHDRG		<MODULE> CCFs OF THE COMMON INJECTION HEADER VALVES
				MAVG190A		RANDOM MECHANICAL FAILURE OF ADV MS-190A
TEH1	TEH	4.90E-08	.4	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				ADGQX12U		DIESEL GENERATOR 15G-12U OUT OF SERVICE DUE TO MAINTENANCE
				FP9QX09B		AFW MD PUMP 9B IS O.O.S. DUE TO MAINT.
				FQ1PXCP4		COGNITIVE ERROR FOR OPS. FAILING TO INIT. SD PUMP.
TEH1	TEH	4.68E-08	.4	T8	LOSS	OF NORMAL POWER INITIATING EVENT
				FMODMDBDELCB		<MODULE>MD PUMP 9B FAILS TO DELIVER
				FMODSDPDELD		<MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS
				WMODP5APTSAIW		<module>SW PUMP 5A FAILS TO START OR ESFAS EQUIPMENT FAILS

TEH1	TEH	4.68E-08	.4	T@	LOSS OF NORMAL POWER INITIATING EVENT	
				FMODMDADELCA	<MODULE> MD PUMP TRAIN A FAILS TO DELIVER	
				FMODSDPDELD	<MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS	
				WMODP5CFTSHIW	<module>SW PUMP 5C FAILS TO START OR ESFAS EQUIPMENT FAILS	
TLGL1	TLGL	4.38E-08	.4	T@	LOSS OF NORMAL POWER INITIATING EVENT	
				ACREC13	RECOVERY OF AC POWER IN 13 HOURS (MEAN COPING TIME)	
				AMOD24CLWPI	<module> FAILURE OF BUS 24C LWP LOGIC	
				AMODDGBFLTKI	<module> D/G 15G-13U FAULTS	
TEH1	TEH	4.35E-08	.4	T@	LOSS OF NORMAL POWER INITIATING EVENT	
				AMOD24CLWPI	<module> FAILURE OF BUS 24C LWP LOGIC	
				FMODMDBDELCB	<MODULE>MD PUMP 9B FAILS TO DELIVER	
				FQ1PXCP4	COGNITIVE ERROR FOR OPS. FAILING TO INIT. SD PUMP.	
TEGH1	TEGH	4.03E-08	.3	T@	LOSS OF NORMAL POWER INITIATING EVENT	
				ACREC54	RECOVERY OF AC POWER IN 54 MINUTES	
				ADGQK12U	DIESEL GENERATOR 15G-12U OUT OF SERVICE DUE TO MAINTENANCE	
				AMODDGBFLTKI	<module> D/G 15G-13U FAULTS	
				FMODSDPDELD	<MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS	
TEGH1	TEGH	4.03E-08	.3	T@	LOSS OF NORMAL POWER INITIATING EVENT	
				ACREC54	RECOVERY OF AC POWER IN 54 MINUTES	
				ADGQK13U	DIESEL GENERATOR 15G-13U OUT OF SERVICE DUE TO MAINTENANCE	
				AMODDGAFLTJI	<module> D/G 15G-12U FAULTS	
				FMODSDPDELD	<MODULE> SD PUMP FAILS TO DEL AFW TO HEADERS	
TEH1	TEH	3.95E-08	.3	T@	LOSS OF NORMAL POWER INITIATING EVENT	
				AMOD24CLWPI	<module> FAILURE OF BUS 24C LWP LOGIC	
				FMODMDBDELCB	<MODULE>MD PUMP 9B FAILS TO DELIVER	
				FQ1QX0P4	SD AFW PUMP P4 IS O.O.S. FOR MAINT.	
TLGL1	TLGL	3.85E-08	.3	T@	LOSS OF NORMAL POWER INITIATING EVENT	
				AB2GXCT2	TIE BREAKER 24C-IT-2 FAILS TO OPEN	
				ACREC13	RECOVERY OF AC POWER IN 13 HOURS (MEAN COPING TIME)	
				AMODDGBFLTKI	<module> D/G 15G-13U FAULTS	

TOTAL: 8.67E-06 71.68% of CM Total Frequency 1.21E-05