

New Hampshire Yankee

Ted C. Feigenbaum
Senior Vice President and
Chief Operating Officer

NYN-89134
October 31, 1989

United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Document Control Desk

References: (a) Facility Operating License NPF-67, Document No. 50-443

(b) NHY Letter NYN-89078 dated June 30, 1989, "FSAR Amendment 62", T. C. Feigenbaum to USNRC

Subject: Request for Additional Information

Gentlemen:

In Reference (b), New Hampshire Yankee (NHY) submitted Amendment 62 to the Seabrook Station Final Safety Analysis Report (FSAR). Amendment 62 reflected control circuit enhancements which have been made to preclude automatic sequencing of the Startup Feedwater Pump (SUFF) onto an emergency diesel generator. During the review of this FSAR change the NRC Staff requested clarification of the SUFF loading sequence on to Emergency Bus E5. The purpose of this letter is to document a discussion held with the NRC Staff on October 17, 1989.

During a review of the SUFF control circuit, NHY determined that in the unlikely situation where the SUFF had under contingency conditions been manually transferred by operator action to Bus E5, was operating on Bus E5 and a loss of offsite power occurred, the SUFF would be shed from Bus E5 along with other loads and then automatically reconnected to Bus E5 during diesel load sequencing.

To prevent this unlikely event from occurring, a control circuit enhancement was made as indicated on the attached schematic diagrams. If the SUFF is operating on Bus E5 and a loss of offsite power occurs then the following typical operator action would be taken in accordance with applicable procedures:

- The pump trips on Bus E5 undervoltage.
- The pump is prevented from restarting until the diesel generator has completed sequencing and the operator has depressed the Remote Manual Override (RMO) reset pushbutton and the operator has placed the pump control switch in stop/pull to lock and the operator then returns the pump control switch to auto.

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PDR ADLOCK 05000443
F PDC

New Hampshire Yankee Division of Public Service Company of New Hampshire
P.O. Box 300 • Seabrook, NH 03874 • Telephone (603) 474-9521

A001
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Procedures E-0, ES-0.1, E-3, FR-H.1, ECA-0.1 and ECA-0.2 were revised to address concerns identified in NRC Inspection Report Unresolved Item 87-16-13 and subsequently closed in Inspection Report Number 50-443/88-10. These procedures were revised to ensure that operators would verify that emergency diesel generator 1A would have adequate load carrying capability before loading the SUPP onto Bus E5.

Therefore, before the SUPP is manually started by the operator, if required, it will be assured that sufficient emergency diesel generator capacity exists.

NHY believes that the above clarification adequately addresses the Staff's request, and should you have any questions regarding this matter, please contact Mr. Robert E. Sweeney at (301) 656-6100.

Very truly yours,

T. J. Feigenbaum for
Ted C. Feigenbaum

Enclosure

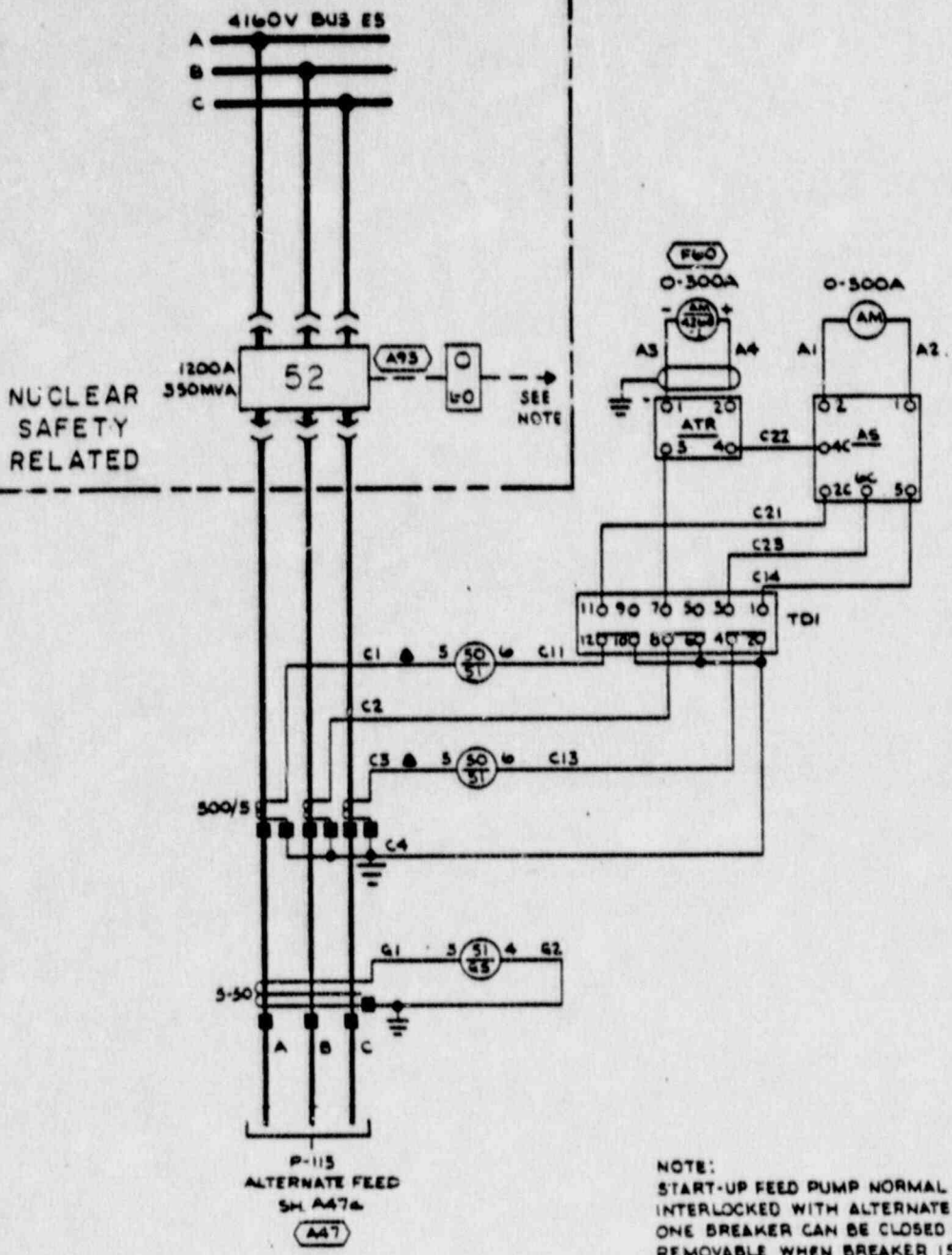
cc: Mr. William T. Russell
Regional Administrator
United States Nuclear Regulatory Commission
Region I
425 Allendale Road
King of Prussia, PA 19406

Mr. Victor Nerses, Project Manager
Project Directorate I-3
Division of Reactor Projects
United States Nuclear Regulatory Commission
Washington, DC 20555

NRC Senior Resident Inspector
Seabrook Station
Seabrook, NH 03874

ATTACHMENT TO NYN-89134

Schematic Diagrams of Startup Feedwater Pump



NOTE:
START-UP FEED PUMP NORMAL BREAKER (A47) IS MECHANICALLY INTERLOCKED WITH ALTERNATE BREAKER (A93) SO THAT ONLY ONE BREAKER CAN BE CLOSED AT ANY TIME. THE KEY IS REMOVABLE WHEN BREAKER IS RACKED OUT.

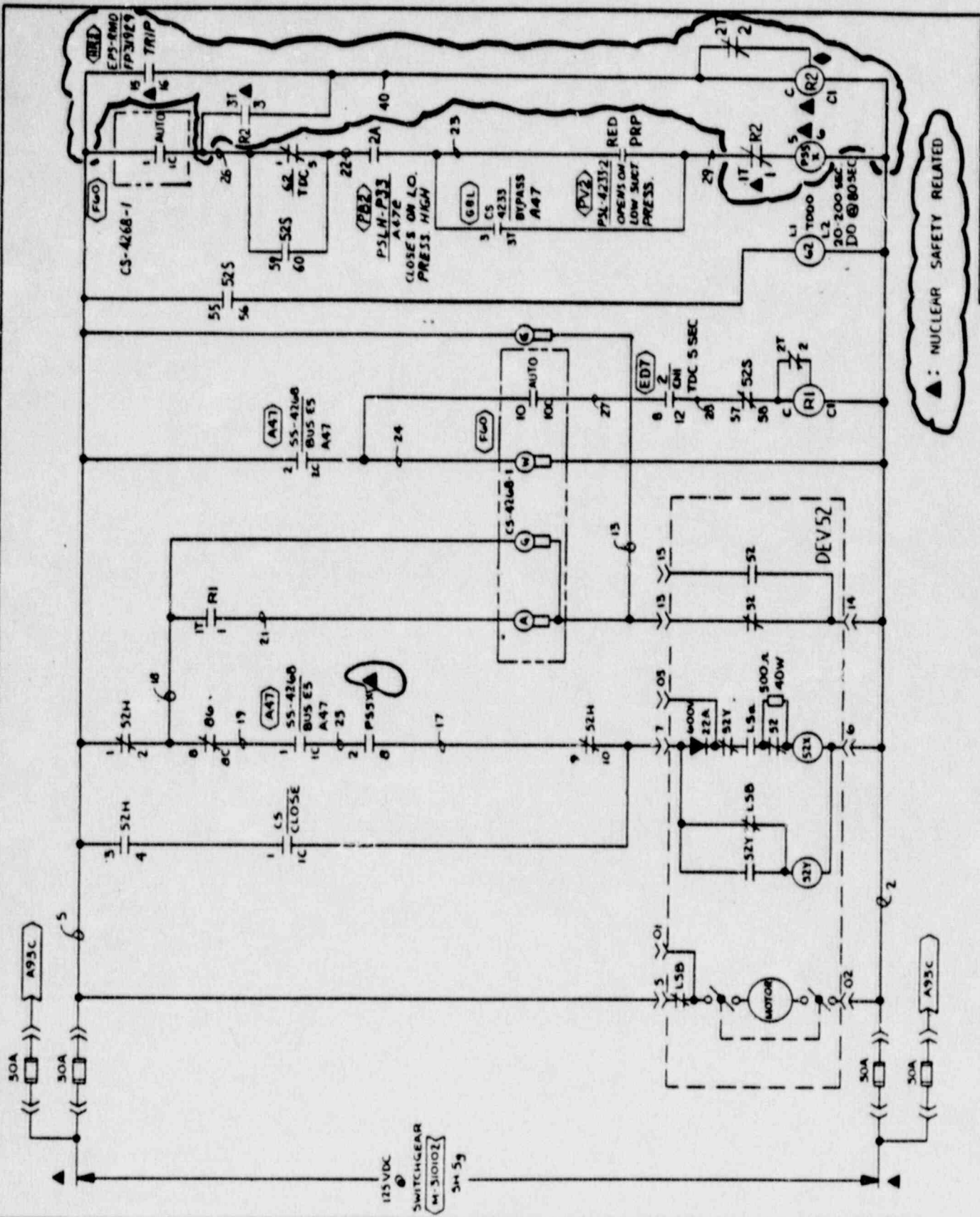
NUCLEAR SAFETY RELATED
A TRAIN LOAD GROUP

START-UP FEED WTR PP 1-P-113
ALTERNATE FEED
THREE LINE DIAGRAM SH A47a

New Hampshire
Yankee
Seabrook
Station

2	1/24/66	JH	3763-M-310844 SH A93a SUPERCEDES UE&C DWG.1
REV	DATE	DRWN	DESCRIPTION

1-NHY-310844 SH-A93a



▲ : NUCLEAR SAFETY RELATED

1-NHY-310844 SH-A93b

1	5	11/24/66	WV	11854A	1
2	4	01/25/64	FL	REV PER ECA 99/1982B	
10	2/1/85	HP	AMG	INCORP DCR 87-124 CA01	
9	4/6/80	NP	CEM	INCORP DCR 87-280	
8	4/1/87	ABP	CEM	INCORP DCR 87-0058 CA-02	
7	11/24/66	GH	RL	1-NHY-310844 SH-A93b SUPERCEDES UE&C DWG 1	

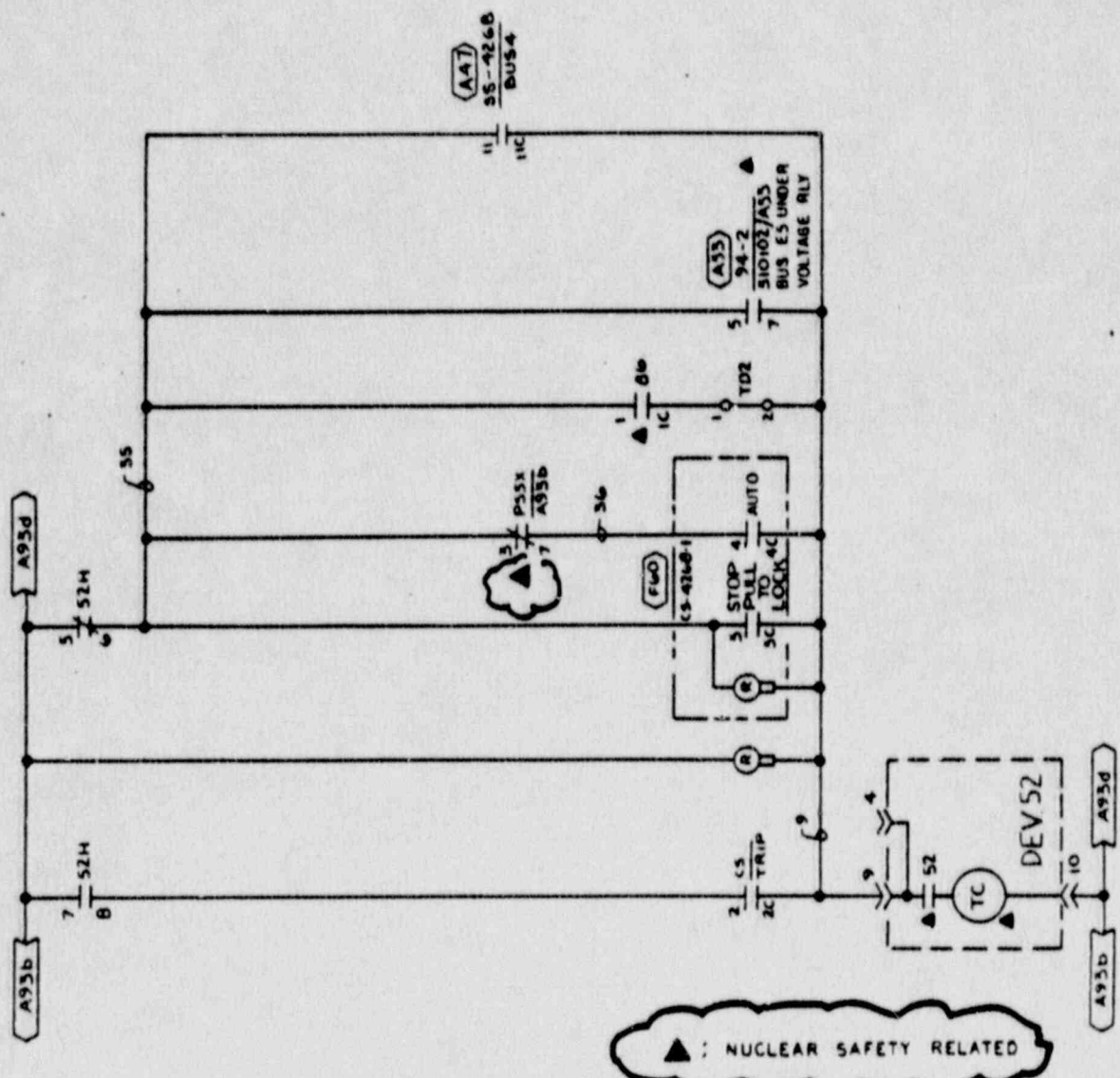
START-UP FEED WTR PP I-P-13
ALTERNATE FEED
CLOSE SCHEMATIC

New Hampshire
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Seabrook
Station

1-NHY-310844 SH-A93b

6 81086 REV PER ECA 99/116625B 27 2



▲ : NUCLEAR SAFETY RELATED

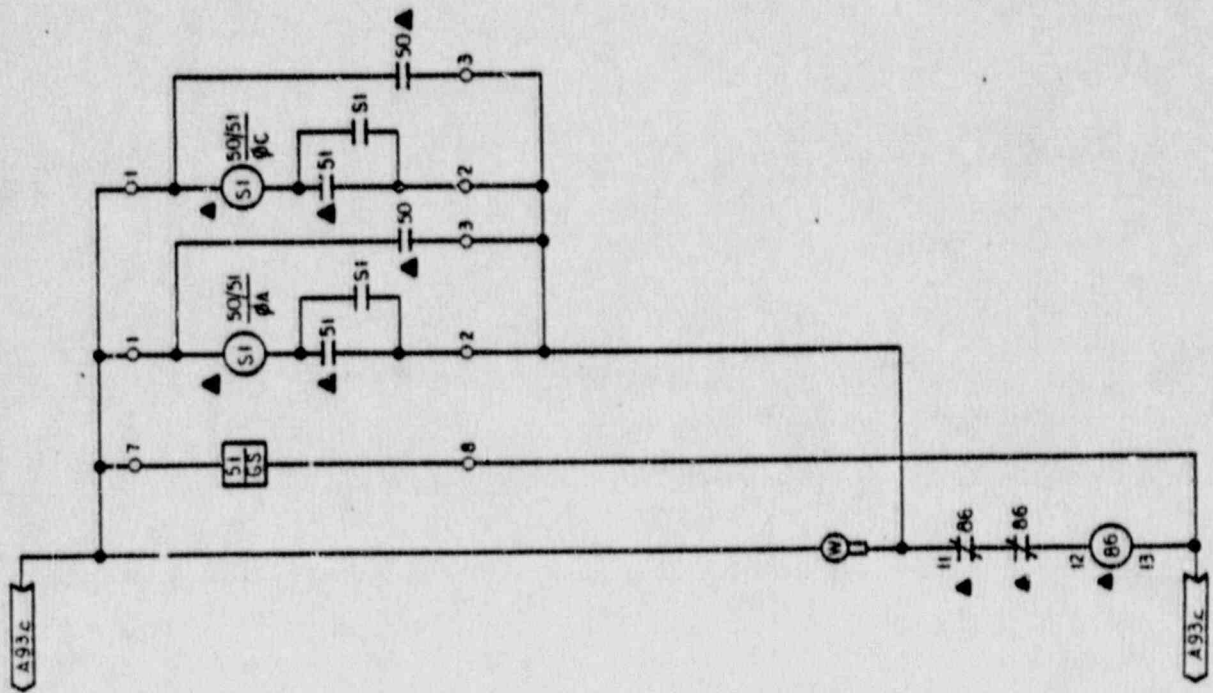
3	8/88	REV PER ECA 97/116625B	27	1/4
6	2/88	HP AMR	INCOR DCR 87-124 CA	
5	11/87	ABP CCA	INCOR DCR 87-0068	
4	1/24/86	JK	9763-M-310844 SH-A93C SUPERCEDES UE&C DWG. 1	
REV	DATE	DRWN	CHKD	DESCRIPTION

START-UP FEED WTR PP I-P 113
ALTERNATE FEED
TRIP SCHEMATIC

New Hampshire
Yankee

Seabrook
Station

1-NHY-310844 SH-A93C



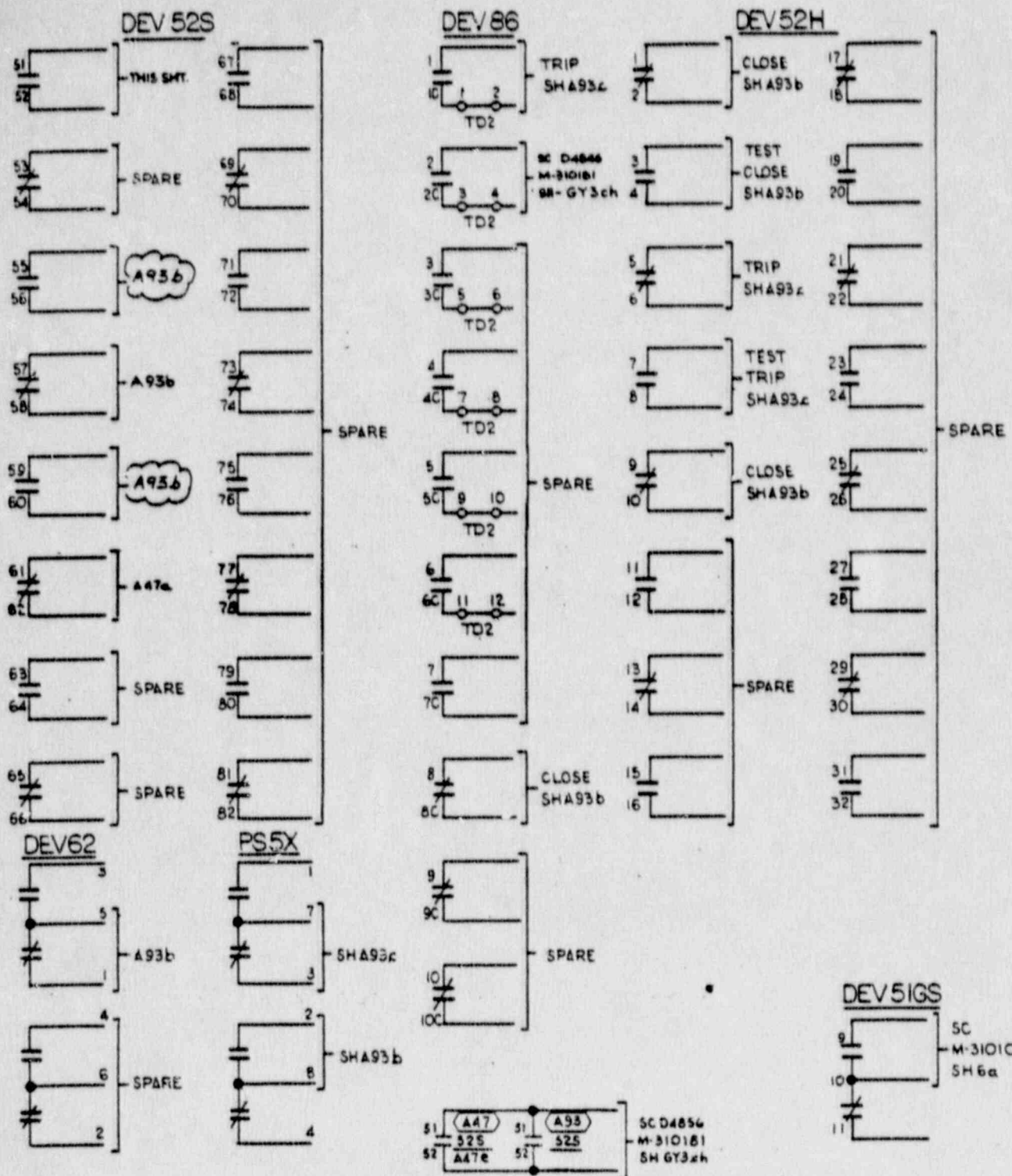
START-UP FEED WTR PP 1-P-113
 ALTERNATE FEED
 PROTECTION SCHEMATIC 46146

New Hampshire
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 Seabrook
 Station

2	11/20/86	JCH	3763-M-310844 SHA93d SUPERCEDES UE&C DWG.1
REV	DATE	DRWN	DESCRIPTION

1 - NHY-310844 SHA93d

1-NHY-310844 SHA93e



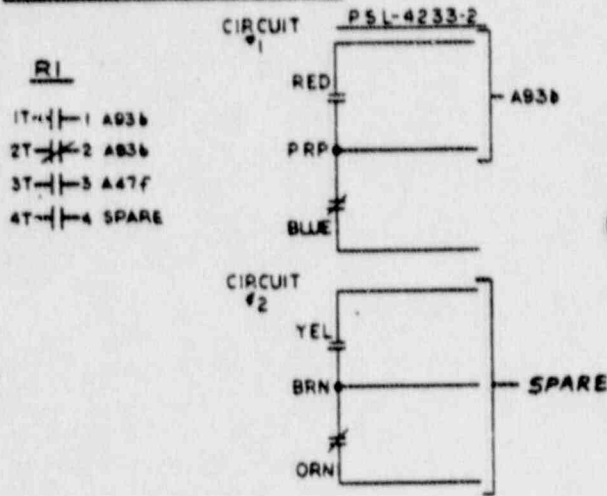
STARTUP FEED WTR PP 1-P-113 ALTERNATE FEED AUXILIARY CONTACTS 44-47			
New Hampshire Yankee		Seabrook Station	
5	9/1/87	ABP/CM	INCOR DCR-87-006B
4	11/24/86	GH/SL	3753-M-310844 SHA93e SUPERCEDES UE&C DWG.1
REV	DATE	ORWN	CHKD
DESCRIPTION			

1-NHY-310844 SHA93e

CIRCUIT BREAKER CONTROL SW CS 426B-1

GE CO TYPE SBM SPECIAL ORDER		CONTACTS HANDLE END			CONTACT	PULL TO LOCK	STOP	AUTO	REF DWGS
1	1C	2C	3	1			X	A93b	
				2	X	X		SPARE	
3	3C	4C	4	3	X	X		A93c	
				4			X	A93c	
5	5C	6C	6	5		X	X	SPARE	
				6			X	CN1a	
7	7C	8C	8	7	X	X		SPARE	
				8		X	X	SPARE	
9	9C	10C	10	9	X	X		SPARE	
				10			X	A93b	

SPRING RETURN



BREAKER TEST CONTROL SW CS

GE CO TYPE SBM SIMILAR TO MODEL: 10CC088		CONTACTS HANDLE END			CONTACT	TRIP	NORMAL	CLOSE	REF DWGS
1	1C	2C	2	1			X	A93b	
				2	X			A93c	
3	3C	4C	4	3	X			SPARE	
				4			X	SPARE	

SPRING RETURN

AMMETER SWITCH (A5)

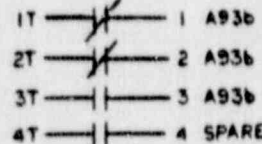
GE CO TYPE SBM SIMILAR TO MODEL: 10AA009		CONTACTS HANDLE END					CONTACT	OFF	A	B	C
1	1C	2C	2	1	X	X		X	X	X	X
				2		X	X	X			
3	3C	4C	4	3	X	X	X	X		X	X
				4			X	X	X		
5	5C	6C	6	5	X	X	X	X	X	X	X
				6					X	X	X

MAINTAINED POSITIONS * INTERMEDIATE POSITIONS

LEGEND

DEV	DESCRIPTION	MFG	TYPE
51G	GROUND FAULT SENSOR RELAY	ITE	GR5
50/51	INST. TIME OVERCURRENT RELAY	GE	IAC
52	CIRCUIT BREAKER	ITE	HK
52H	TRUCK OPERATED CONTACT	ITE	
52S	MECH OPERATED CONTACT	ITE	
56	HAND RESET LOCKOUT RELAY	GE	HEA
94	UNDervOLTAGE AUX RELAY	GE	HFA
AM	MILLI-AMMETER	INT INSTR	1151VB
AM	AMMETER	GE	4B-40
A5	AMMETER SWITCH	GE	SBM
ATR	CURRENT TRANSDUCER	RIS	ECC1A
CS	CONTROL SWITCH	GE	SBM
TD1	TEST DEVICE	GE	PK-2
PSL-55	LUBE OIL PRESSURE SWITCH	SQ-D	ACW-24
2	PRE-LUBE OIL PMP STARTING AUX TD RELAY	AGA	7012 ADLL
62	P55 BLOCKING STARTING TD RELAY	AGA	7022 PE
P55X	AUX RELAY	GE	HGA
55	SELECTOR SWITCH	GE	SBI
R1, R2	AUX RELAY	ITE	J13
PSL	LOW SUCTION PRESS SWITCH	BD	021-0055
RMO	EMERG. POWER SEQ. RELAY (K27)	ITE	J13

R2



1-NHY-310844 SHA93F

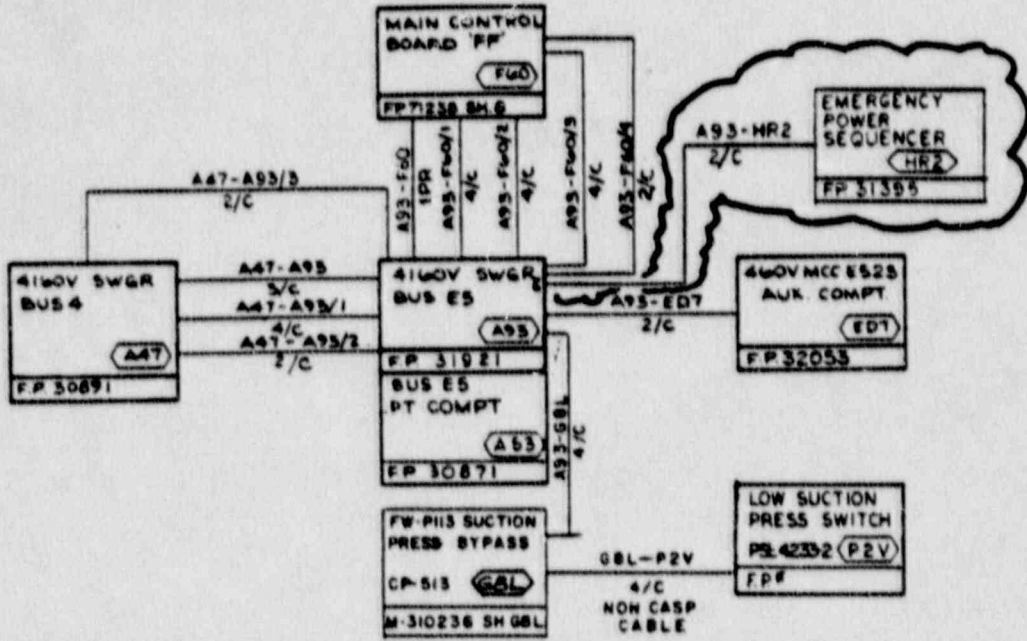
5	1/20/86	REV PER ECA 99/11854A	WW	START UP FEED WTR PP 1-P-113
4	8/15/84	REV PER ECA 99/1982B	PL	ALTERNATE FEED
9	2/1/85	HP	AMC	INCORP DCR 87-124, CAB1
8	1/1/85	HP	CCB	INCORP DCR 87-280, CAB1
7	1/1/85	ABP	COM	INCORP DCR 87-0068
6	1/24/84	JHT	HL	3763 M-310844 SHA93F SUPERCEDES UE&C DWG 1
REV DATE DRWN CHGD				DESCRIPTION

1-NHY-310844 SHA93F

LEGEND & SW DEVELOPMENT

New Hampshire
Yankee

Seabrook
Station



CABLE NO.	RA7	AD6M	RA7	AD6P	JAG	JC6E	RA7	AD6M
A93	-	F60/1	A93	-	F60/2	A47	-	A93
TERMINAL BOARD NO.	TA		RC	TA				
TERMINAL NO.	WIRE NO.	TERMINAL NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.
BLACK	RJ1 15	60	12	9	59	A	A	A
WHITE	RJ6 5	58	4	35	66	B	B	B
RED	RG4 18	61	3	36	67	C	C	C
GREEN	RH2 24	68	-	5P	-	GRD	SH	GRD
ORANGE						GRD	SH	GRD
BLUE						GRD	SH	GRD
WHITE W/ BLACK								
WHITE W/ BLACK								
WHITE W/ BLACK								
WHITE W/ BLACK								
WHITE W/ BLACK								
WHITE W/ BLACK								
WHITE W/ BLACK								
WHITE W/ BLACK								

CABLE NO.	RA7	AB6P	RA7	AD6M	RA7	AB6P	RA7	AB6M
A93	-	ED7	A93	-	F60/3	A47	-	A93/2
TERMINAL BOARD NO.	TA		TA	TA		RX	TA	
TERMINAL NO.	WIRE NO.	TERMINAL NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.
BLACK	RH1 27	80	-	5P	-	3	5	RJ6 1
WHITE	AB7 28	81	AH3 21	63	4	24	RH2	27 68
RED			RJ3 26	65				
GREEN			RC13 2	97				
ORANGE								
BLUE								
WHITE W/ BLACK								
WHITE W/ BLACK								
WHITE W/ BLACK								
WHITE W/ BLACK								
WHITE W/ BLACK								
WHITE W/ BLACK								
WHITE W/ BLACK								
WHITE W/ BLACK								

REV	DATE	BY	DESCRIPTION
7	2/1/89	HP	INCORP DCR 87-124 CA#1
6	1/10/89	HP	INCORP DCR 87-280 SA
5	1/1/87	ABP	INCORP DCR 87-006B
4	1/1/86	ABP	1723 M-310844 SH-A93 2 SUPERCEDES UE&C DWG 1

START-UP FEED WTR PP I-P-113
ALTERNATE FEED
CABLE SCHEMATIC

New Hampshire Seabrook
Yankee Station

1-NHY-310844 SH-A93 9

1 - NHY-310844 SHA93h

CABLE NO.		VA6		MA6R							
TERMINAL WIRE NO.		A93-F60		TA							
	TERMINAL NO.	WIRE NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.
1	WHITE	7	A3	89							
	BLACK	6	A4	88							
	SHIELD	8	SH	90							
2	WHITE										
	SHIELD										
3	WHITE										
	SHIELD										
4	WHITE										
	SHIELD										

CABLE NO.		RA7		AB6P		RA7		AD6M		RA6		AD6P		RA7		AB6P	
TERMINAL WIRE NO.		A47-A93/3		RC		A93 -		GBL		GBL		P2V		A93 - NR2		NR2	
	TERMINAL NO.	WIRE NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.	WIRE NO.	TERMINAL NO.
1	BLACK	12	9	12		SP					SP			7	40	2	
	WHITE	11	35	4	RJ5	23		7	7	23	RED			8	5	1	
	RED				RJ7	29		9	9	29	PKP						
2	GREEN					SP					SP						
	SHIELD																
3	WHITE																
	SHIELD																
4	WHITE																
	SHIELD																

RA7 AB6P
A93 - NR2
NR2

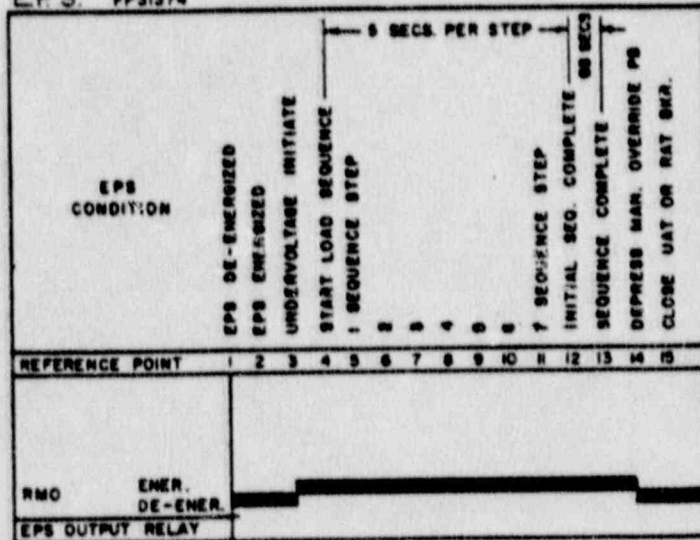
7	2/1/88	HP	AMR	INCORP DEC 87-124 (CA-01)
6	1/1/87	AB	CCM	INCORP DEC 87-006B
5	1/1/86	QA	AL	9723-M-310844 SHA93h SUPERCEDES UE&C DWG 1
REV	DATE	BY	CHKD	DESCRIPTION

START-UP FEED WTR PUMP I-P-113
ALTERNATE FEED
CABLE TABLE ... 50

New Hampshire
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Seabrook
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1 - NHY-310844 SHA93h

EPS FP31374



SM 502

START-UP FEED WTR. PUMP
1-P-113 ALTERNATE FEED
CONTACT DEVELOPMENT

New Hampshire
Yankee
Seabrook
Station

0	2/1/88	HP	AMR	TUCOR DCR 87-124 CA-91
REV	DATE	DRWN	CHKD	DESCRIPTION

1-NHY-310844 SHA93i