REFERENCES:

2CNM-38	-6
LSK-4-1.3K	-5
FSK-4-1C	-8
ESK-7CNM04	-5
ESK-10IHA403	-6
EE-4BA	-1
EE-4BH	-1
EE-11HC	-1
EE-4C	-2
EE-3AH	-4
EE-4BJ	-3
EE-3C	-2
EE-3BR	-3
EE-8DA	-3
EE-3RN	-2
0007.161-908-005	-D
0007.520-001-540	-F
0007.520-001-541	-G
0007.520-001-550	-D
0007.520-001-549	-H
0007.520-001-579	-N
0007.520-001-590	-H
0007.159-451-585	-G
0007.159-451-363	-C
E&DCR-F40381	
E&DCR-C43310	

2-JB7683
TB
2BK W — 34
35
36
1BK W — 31
32
33
1BK W
2BK W
COL 5.0AM
EL 250'-0"

2-JB7115
TB
120VAC
Y00 — 2 — W
SV0 — 3 — R
-SOV-38C
COL 7.9Y
EL 277'-0"
COL 8.0Y
EL 277'-0"

CNX013

2CEC*PNL731 | BAY F
TB
2BK W — 4
5
6
1BK W — 1
2
3
J1 | P1
K — 2BK
L — 2W
R
Q — 1BK
X — 1W
Y
T/C 409
-W023
COL 10.7AG
EL 288'-0"

CNC540
CNX004
0-30VDC

2CEC*PNL753 | BAY A
TB-1
W — 2
R — 3
J1 | P1
B — W
C — R
T/C109
-W072
120VAC
COL 10.7AE
EL 288'-0"

0-65 PSIG
VENT
-ZT-38C
4 BK
3 W
1 BK
2 W
COL 8.0Y
EL 277'-0"
CNC545
120VAC
NOTE 6
CNX011
4-20MADC
3-15PSIG
A/S
0
I
S
FO
-FV-38C
COL 8.0Y
EL 278'-0"

2CNM-CND1A
2CNM-CND1B
2CNM-CND1C
FROM CONDENSATE BOOSTER PUMP SUCTION HEADER
-FE-38C
-V60C
-V61C
-P2C CONDENSATE BOOSTER PUMP
TO CONDENSATE BOOSTER PUMP DISCHARGE HEADER

2-JBR206
TB-2
1BK W
-I/P +
-38C —
SH
TB-3
2BK W
-FT +
-38C —
SH
A/S
-I/P-38C
S
0
-FT-38C
+
-
L H
2CES-RAK206
TURBINE BLDG
COL 5.0Y
EL 250'-0"

CONTINUED ON SHEET 2

125VAC
2IHA-W092

2CEC-PNL856
P2 | J620
B
C
BAY A
TB-KK
94
95
1X-2CNMC16
B1
B4
R2
M2
NOTE 5
F1-2CNMC16
1 3A 2
P1 | J124
B
C
BAY F
NOTE 8
TB-L
9
10
62-2CNMC16
L1
L2
6
2
5
3
NOTE 4
TB-MM
81
82
50
TB-KKK
64
J122 | P2
B — BK/W
BAY F
J626 | P2
F — 0
BAY A
2IHA-W232
2IHA-W622

CONTROL BLDG

QA CAT II

COL 11.0AE
EL 288'-6"

NOTES:

1. FOR TEST PURPOSES ONLY-NOT TO BE USED FOR CONSTRUCTION.
2. ALL INSTRUMENT AND EQUIPMENT NUMBERS ARE TO BE PREFIXED WITH "2CNM" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
3. LOOP ACTION: FT-38C MONITORS PUMP SUCTION FLOW AND PROVIDES FLOW SIGNALS TO COMPUTER VIA PWRS-38C AND TO FC-38C, FSL-38C, AND FI-38C VIA PWRS-38C AND FY-38C. FC-38A COMPARES THIS FLOW SIGNAL TO AN INTERNAL SET POINT AND PROVIDES AN ERROR SIGNAL TO MODULATE FV-38C VIA E/I-38C AND I/P-38C. FSL-38C ACTUATES ON LOW FLOW ACTUATING FSLX-38C TO ENERGIZE COMPUTER AND ANNUNCIATOR ALARMS IF P2C HAS BEEN RUNNING FOR A MINIMUM TIME PERIOD. SOV-38C DE-ENERGIZES ALLOWING MODULATION OF FV-38C TO PROVIDE MINIMUM PUMP FLOW WHEN CONDENSATE BOOSTER PUMP 2C CONTROL SWITCH 1-2CNMA02 (SEE ESK-7CNM04) IS PLACED IN THE START POSITION OR P2A HAS BEEN BEEN RUNNING FOR A MINIMUM TIME PERIOD AFTER AN AUTO START. ZT-38C MONITORS FV-38C POSITION AND PROVIDES POSITION SIGNALS TO ZI-38C.
4. CONTACT 3,5 OPEN AND CONTACT 2,6 CLOSE AFTER MINIMUM TIME DELAY (62-2CNMC16 ENERGIZED BY P2C START). SEE ESK-7CNM04.
5. CONTACT OPENS (1X-2CNMC16 ENERGIZED) WHEN SWITCH 1-2CNMC12 OR 1-2CNMC32 IS IN THE START POSITION. SEE ESK-7CNM04.
6. TO ZT-38B. SEE TL2CNM-076.
7. NORMALLY OPEN (NO) CONTACTS OPEN ON LOW FLOW. NORMALLY CLOSED (NC) CONTACT CLOSE ON LOW FLOW.
8. 120VAC FROM 2SCI-PNLA101 CKT# 1.

SI APERTURE CARD

TEST LOOP DIAGRAM
CONDENSATE BOOSTER PUMP P2C SUCT FLOW
2CNM-FT-38C, -FV-38C

NINE MILE POINT NUCLEAR STATION-UNIT 2

NIAGARA MOHAWK POWER CORPORATION

4	3	2	1	0
DATE	DATE	DATE	DATE	DATE 26OCT82
PREPARED	PREPARED	PREPARED	PREPARED	PREPARED WJE
APPROVED	APPROVED	APPROVED	APPROVED	0 APPROVED LJM

STONE & WEBSTER ENGINEERING CORPORATION

SHEET 1 OF 2

12177-TL2CNM-077

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9305040260-D

INFORMATION ONLY