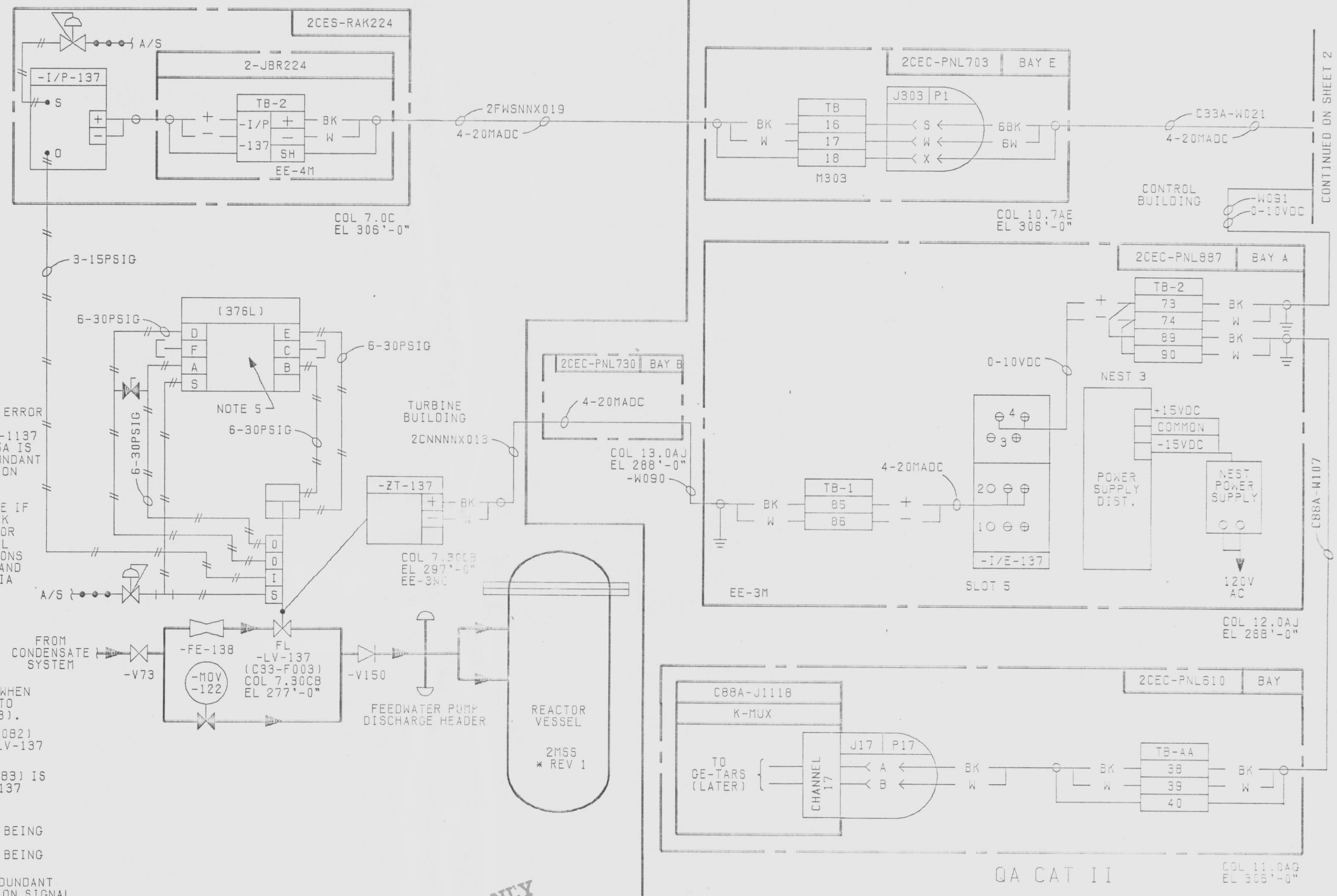


REFERENCES:

| | | | |
|------------------|-----|------------------|-----|
| 2CNM-137 | -6 | 0007.222-001-004 | -M |
| FSK-4-1F | -8 | GE807E160TY SH2 | -21 |
| 0007.510-414-110 | -B | 0007.222-001-007 | -L |
| EE-4G | -3 | GE807E160TY SH5 | -21 |
| EE-3DU | -5 | 0007.222-001-010 | -D |
| EE-3M | -3 | GE807E160TY SH6 | -21 |
| 0007.520-001-357 | -J | 0007.162-453-078 | -B |
| GE793E765 SH18 | -16 | 0007.162-453-079 | -A |
| 0007.520-001-355 | -K | 0007.162-453-089 | -A |
| GE793E765 SH16 | -16 | 0007.159-451-708 | -A |
| 0007.520-001-348 | -G | ESK-10XS19 | -A |
| GE793E765 SH9 | -16 | E&DCR-P21.457 | -4 |
| J007.520-001-374 | -H | EE-3WC | |
| 0007.520-001-394 | -F | | |
| 0007.520-001-395 | -M | | |
| 0007.520-001-398 | -L | | |
| 0007.520-001-399 | -M | | |
| 0007.520-001-400 | -G | | |
| 0007.520-001-401 | -N | | |
| 0007.222-001-003 | -N | | |
| GE807E160TY SH1 | -21 | | |

NOTES:

- FOR TEST PURPOSES ONLY-NOT TO BE USED FOR CONSTRUCTION.
- ALL INSTRUMENT AND EQUIPMENT NUMBERS ARE TO BE PREFIXED WITH "2CNM" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
- LOOP ACTION: 2FWS-LC-1137 PROVIDES A COMPENSATED ERROR SIGNALS TO MODULATE LV-137 VIA LY-1137, LYZ-1137, LYY-1137, I/P-137, AND (376L) TRIP VALVE WHEN LIK-1137 IS IN AUTO. REACTOR WATER LEVEL IS NOT HIGH, LV-55A IS IN MANUAL MODE, LV-55B IS IN MANUAL MODE, AND REDUNDANT REACTOR CONTROL SYSTEM FEEDWATER RUNBACK INITIATION SIGNAL IS NOT PRESENT. LIK-137 IN MANUAL PROVIDES CONTROL SIGNALS TO PUMP LV-137 VIA LZ-1137, LZZ-137, LYY-1137, I/P-137, AND (376L) TRIP VALVE IF REDUNDANT REACTOR CONTROL SYSTEM FEEDWATER RUNBACK INITIATION SIGNAL IS NOT PRESENT. REDUNDANT REACTOR CONTROL SYSTEM FEEDWATER RUNBACK INITIATION SIGNAL OVERRIDES ALL MANUAL AND AUTOMATIC CONTROL FUNCTIONS TO CLOSE LV-137. ZT-137 MONITORS LV-137 POSITION AND PROVIDES POSITION SIGNALS TO ZI-137 AND GE-TARS VIA I/E-137.
- SEE TL2FWS-082.
- (376L) TRIP VALVE ACTUATES ON LOW AIR SUPPLY PRESSURE TO PORT E → F AND B → C TO LOCK LV-137. (376L) TRIP VALVE RESETS ON NORMAL AIR SUPPLY PRESSURE TO PORT D → E AND A → B TO ENABLE LV-137 TO MODULATE.
- CONTACT M1, R1 CLOSED (C33A-K15 DE-ENERGIZED) WHEN REACTOR WATER LEVEL IS NOT HIGH TO ENABLE LV-137 TO MODULATE IN AUTOMATIC MODE. (SEE 0007.222-001-003).
- LX-1055A ACTUATES WHEN 2FWS-LV-55A (SEE TL2FWS-082) IS IN AUTO MODE TO CLOSE CONTACT 9,13 TO PREVENT LV-137 FROM BEING SWITCHED FROM MANUAL TO AUTO.
- LX-1055B ACTUATES WHEN 2FWS-LV-55B (SEE TL2FWS-083) IS IN AUTO MODE TO CLOSE CONTACT 7,15 TO PREVENT LV-137 FROM BEING SWITCHED FROM MANUAL TO AUTO.
- LX-1137 ACTUATES WHEN LV-137 IS IN AUTO MODE TO:
 - OPEN CONTACT 9,13 TO PREVENT 2FWS-LV-55A FROM BEING SWITCHED FROM MANUAL TO AUTO. SEE TL2FWS-082.
 - OPEN CONTACT 7,15 TO PREVENT 2FWS-LV-55B FROM BEING SWITCHED FROM MANUAL TO AUTO. SEE TL2FWS-083.
- CONTACT M1, R1 OPENS (C33A-K22 ENERGIZES) WHEN REDUNDANT REACTOR CONTROL SYSTEM FEEDWATER RUNBACK INITIATION SIGNAL IS PRESENT TO PREVENT LV-137 FROM OPERATING IN AUTO MODE.
- (C33A-K24) ENERGIZES WHEN REDUNDANT REACTOR CONTROL SYSTEM FEEDWATER RUNBACK INITIATION SIGNAL IS PRESENT TO:
 - CLOSE CONTACT M3, T3 TO PROVIDE A CLOSE SIGNAL TO LV-137
 - OPEN CONTACT M4, R4 TO DISABLE MANUAL OPEN SIGNAL TO LV-137.
 (SEE 0007.222-001-003).
- (C33A-K29) ENERGIZES WHEN REDUNDANT REACTOR CONTROL SYSTEM FEEDWATER RUNBACK INITIATION SIGNAL IS PRESENT TO:
 - OPEN CONTACT M1, R1 TO PREVENT LV-137 TO TRANSFER TO MANUAL.
 (SEE 0007.222-001-003).
- 120VAC FROM 2VBS*PNLB101, CKT #15.
- VENDOR IDENTIFICATIONS SHOWN IN PARENTHESIS.



INFORMATION ONLY

SI APERTURE CARD

TEST LOOP DIAGRAM
 LOW PRESSURE LOW FLOW CONTROL VALVE
 2CNM-LV-137, -ZT-137
 NINE MILE POINT NUCLEAR STATION-UNIT 2
 NIAGARA MOHAWK POWER CORPORATION
 STONE & WEBSTER ENGINEERING CORPORATION

| | | | | | | | | | |
|---|---------------|---|---------------|---|---------------|---|---------------|---|---------------|
| 4 | DATE PREPARED | 3 | DATE PREPARED | 2 | DATE PREPARED | 1 | DATE PREPARED | 0 | DATE PREPARED |
| | APPROVED | | APPROVED | | APPROVED | | APPROVED | | APPROVED |

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