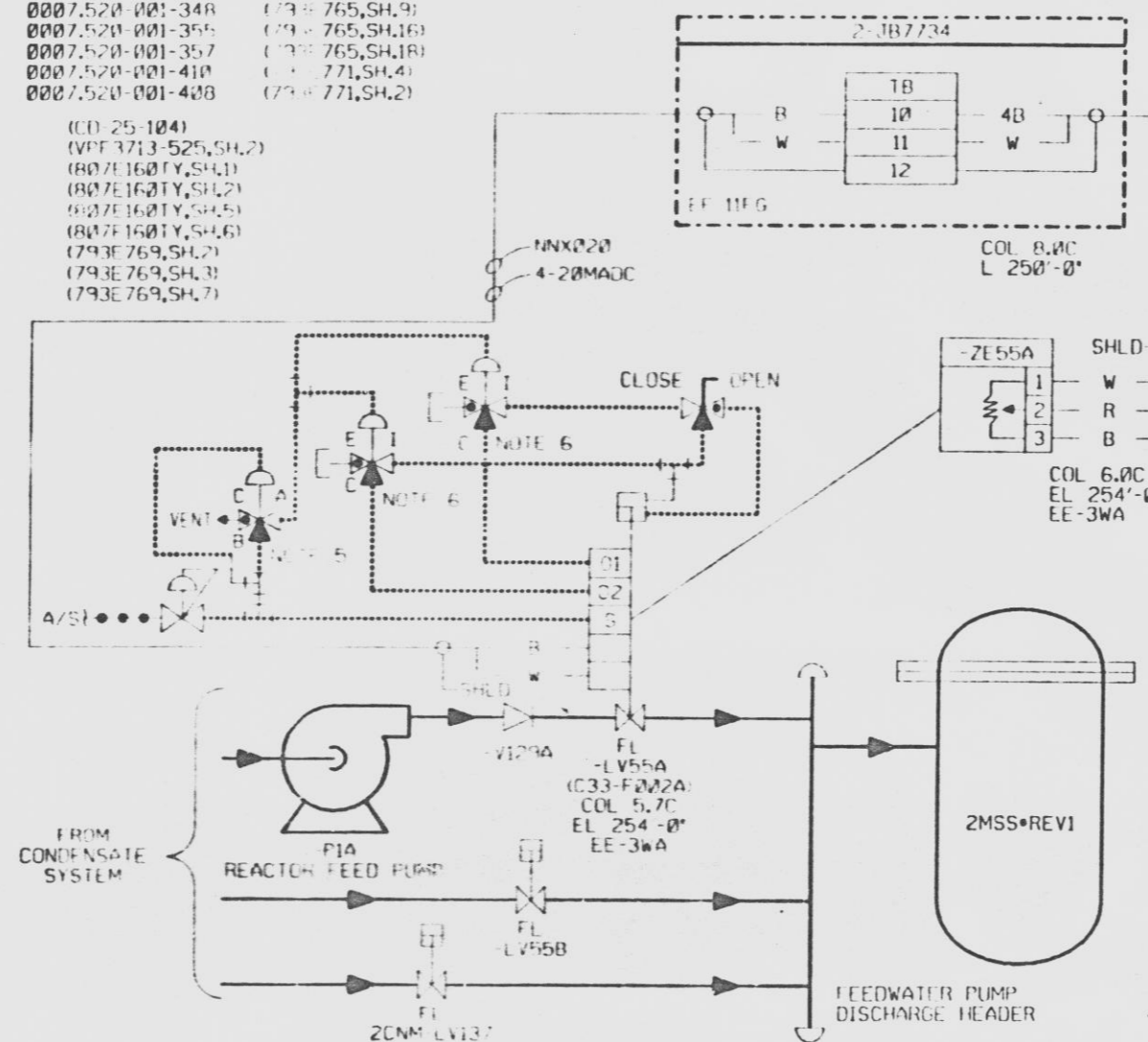
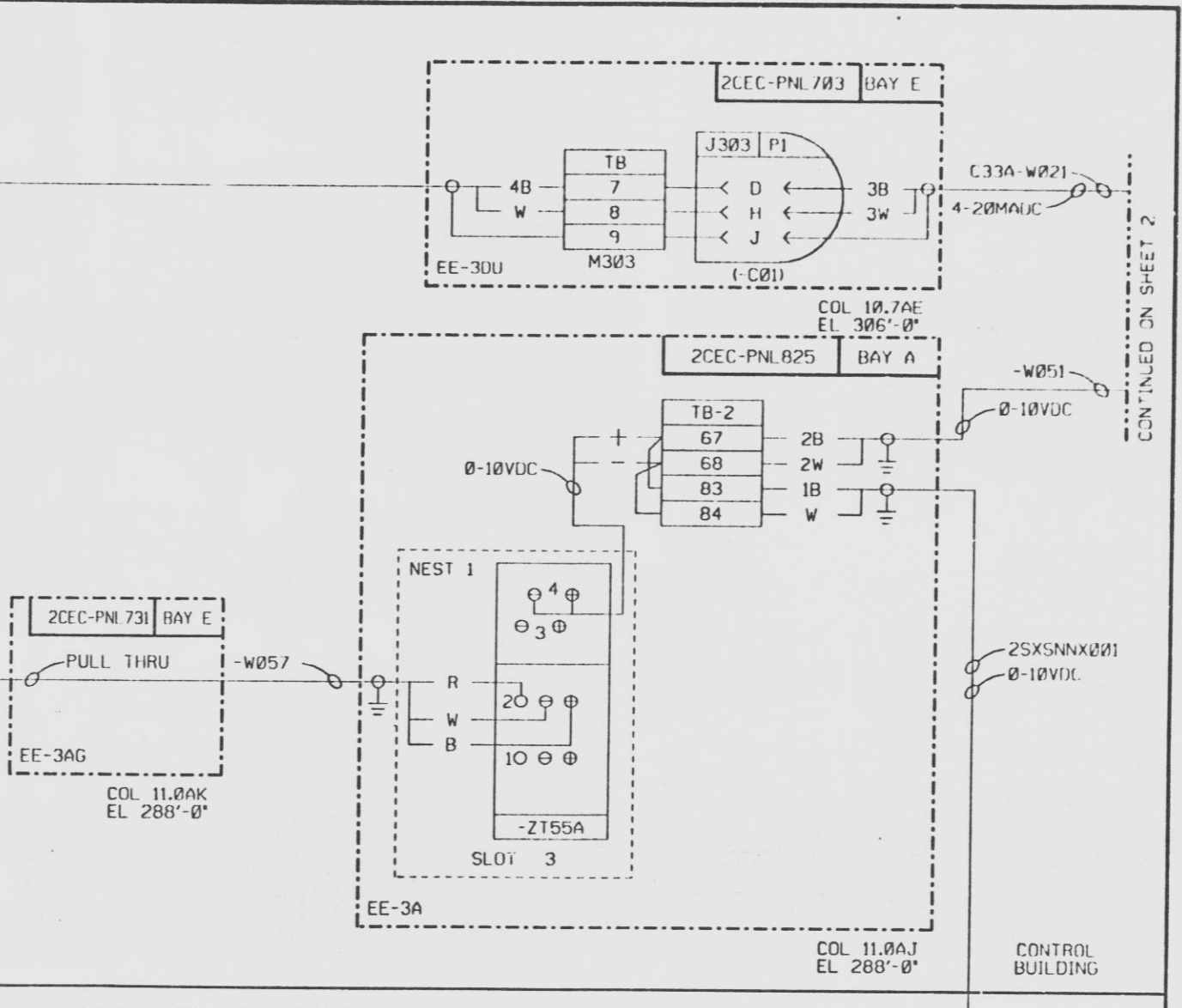


- REFERENCES:
- ESK-105XS05
  - EE-111G
  - EE-30U
  - EE-3WA
  - EE-3AG
  - EE-3A
  - EE-350
  - 0007.520-001-400 (793.769,SH.8)
  - 0007.520-001-401 (793.769,SH.9)
  - 0007.520-001-348 (793.765,SH.9)
  - 0007.520-001-349 (793.765,SH.10)
  - 0007.520-001-357 (793.765,SH.10)
  - 0007.520-001-410 (793.771,SH.4)
  - 0007.520-001-408 (793.771,SH.2)



NOTES:

- PLANT IMPACT: 2FWS-LV55A, ZE55A ARE REQUIRED DURING PLANT START-UP ONLY. NO IMPACT DURING NORMAL PLANT OPERATION.
- ALL INSTRUMENT AND EQUIPMENT NUMBER ARE TO BE PREFIXED WITH 2FWS EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
- LOOP ACTION: LV55A RECEIVES A HIGH WATER LEVEL SIGNAL FROM 2FWS-LV55A COMPARES THAT SIGNAL TO A SETPOINT FROM 2CNM-HIC137 AND PROVIDES AN ERROR SIGNAL TO DE-FEED AND TO MODULATE LV55A VIA LV55A, LV55A, AND TRIP VALVES. WHEN LV55A IS IN AUTO, REACTOR WATER LEVEL IS TOO HIGH, 2CNM-LV137 IS IN MANUAL MODE, LV55B IS IN MANUAL MODE, AND REDUNDANT REACTOR CONTROL SYSTEM FEEDWATER RUNBACK INITIATION SIGNAL IS NOT PRESENT, LV55A IN MANUAL PROVIDES CONTROL SIGNALS TO POSITION LV55A VIA LV55A, LV55A, AND TRIP VALVES. 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 ACTIONS TO CLOSE LV55A. ZE55A MONITORS LV55A'S POSITION AND PROVIDES POSITION SIGNALS TO ZE55A AND DE-FEEDS VIA ZE55A.
- REACTOR WATER LEVEL SIGNAL FROM 2FWS-LV55A. SEE TL2FWS-039.
- TRIP VALVE ACTIVATES ON LOW AIR SUPPLY PRESSURE TO PORT A -> C, CAUSING TRIP VALVE TO LOCK LV55A.
- PILOT VALVE PORT C IN NORMAL OPERABLE POSITION AT THE TRIP VALVE TO MODULATE TRIP VALVE PORT TIME ON LOW AIR SUPPLY PRESSURE TO TRIP VALVE TO LOCK LV55A.
- CONTACT M2,R2 CLOSURE OF TRIP VALVE WHEN REACTOR WATER LEVEL IS NOT HIGH TO LEVEL 2FWS-LV55A TO MODULATE IN THE AUTOMATIC MODE. SEE 0007.222-001-010.
- LV55B ACTIVES WHEN LV55A IS IN THE AUTO MODE TO OPEN CONTACT 9,13 TO PREVENT LV55A FROM BEING SWITCHED FROM MANUAL TO AUTO. SEE TL2FWS-082.
- LV137 ACTIVATES WHEN 2CNM-LV137 IS IN THE AUTO MODE TO OPEN CONTACT 9,13 TO PREVENT LV55A FROM BEING SWITCHED FROM MANUAL TO AUTO. SEE TL2CNM-157.
- LV105A ACTIVATES WHEN LV55A IS IN THE AUTO MODE TO:
  - A) OPEN CONTACT 7,15 TO PREVENT LV55B FROM BEING SWITCHED FROM MANUAL TO AUTO. SEE TL2FWS-083.
  - B) OPEN CONTACT 9,13 TO PREVENT 2CNM-LV137 FROM BEING SWITCHED FROM MANUAL TO AUTO. SEE TL2CNM-157.
- CONTACT M2,R2 OPENS (C33A-K22 ENERGIZED) WHEN REDUNDANT REACTOR CONTROL SYSTEM FEEDWATER RUNBACK INITIATION SIGNAL IS PRESENT TO PREVENT LV55A FROM OPERATING IN THE AUTO MODE.
- (C33A-K27) ENERGIZES WHEN REDUNDANT REACTOR CONTROL SYSTEM FEEDWATER RUNBACK INITIATION SIGNAL IS PRESENT TO:
  - CLOSE CONTACT M1,I1 TO PROVIDE A CLOSE SIGNAL TO LV55A.
  - OPEN CONTACT M2,R2 TO DISABLE MANUAL OPEN SIGNAL TO LV55A. SEE 0007.222-001-010.
- CONTACT M2,R2 OPENS (C33A-K29 ENERGIZED) WHEN REDUNDANT REACTOR CONTROL SYSTEM FEEDWATER RUNBACK INITIATION SIGNAL IS PRESENT TO TRANSFER LV55A TO MANUAL. SEE 0007.222-001-010.
- 120VAC FROM 2VBS\*PNL810,CKT 15.
- VENDOR IDENTIFICATIONS ARE SHOWN IN PARENTHESIS.



TEST LOOP DIAGRAM  
HIGH PRESSURE LOW FLOW CONTROL VALVE  
2FWS-LV55A, ZE55A

NINE MILE POINT NUCLEAR STATION-UNIT 2  
NIAGARA MOHAWK POWER CORPORATION

STONE & WEBSTER ENGINEERING CORPORATION  
SHEET 1 OF 3  
12177- TL2FWS-082

DATE	
PREPARED	
APPROVED	

SI  
APERTURE  
CARD

PLANT USE ONLY - PRINT APPROVAL		
DATE	DATE	DATE
I&C	SSS	CSO

INFORMATION ONLY

NO	DATE	BY	DESCRIPTION	NO	DATE	BY	DESCRIPTION	NO	DATE	BY	DESCRIPTION	NO	DATE	BY	DESCRIPTION	NO	DATE	BY	DESCRIPTION	NO	DATE	BY	DESCRIPTION

APP		APP		APP	
DATE		DATE		DATE	
I&C		SSS		CSO	
SCALE		SCALE		SCALE	
NONE		NONE		NONE	
DWG NO		DWG NO		DWG NO	
TL2FWS-082		TL2FWS-082		TL2FWS-082	
SH,1 OF 3		SH,1 OF 3		SH,1 OF 3	

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