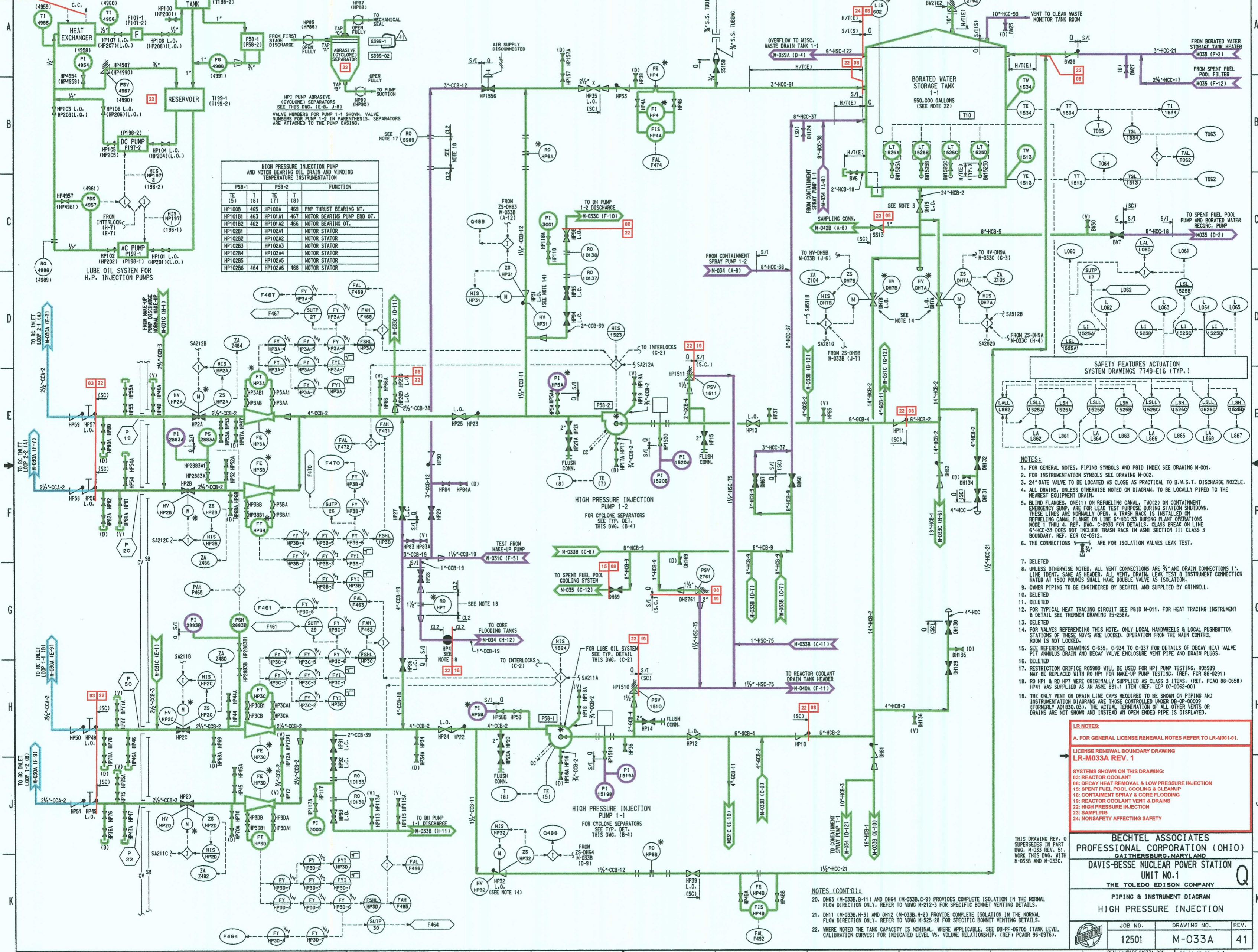


HIGHLIGHTING CONTINUED ON DRAWING LR-M033B



HIGH PRESSURE INJECTION PUMP AND MOTOR BEARING OIL DRAIN AND WINDING TEMPERATURE INSTRUMENTATION

PS-1	PS-2	FUNCTION		
HP1008	465	HP1008A	469	PMP THRUST BEARING MT.
HP1018	463	HP1018A	467	MOTOR BEARING PUMP END OT.
HP1028	462	HP1028A	466	MOTOR BEARING MOTOR END OT.
HP1038	461	HP1038A	465	MOTOR STATOR
HP1048	460	HP1048A	464	MOTOR STATOR
HP1058	459	HP1058A	463	MOTOR STATOR
HP1068	458	HP1068A	462	MOTOR STATOR
HP1078	457	HP1078A	461	MOTOR STATOR
HP1088	456	HP1088A	460	MOTOR STATOR
HP1098	455	HP1098A	459	MOTOR STATOR
HP1108	454	HP1108A	458	MOTOR STATOR

- NOTES:
- FOR GENERAL NOTES, PIPING SYMBOLS AND PID INDEX SEE DRAWING M-001.
 - FOR INSTRUMENTATION SYMBOLS SEE DRAWING M-002.
 - 24" GATE VALVE TO BE LOCATED AS CLOSE AS PRACTICAL TO B.W.S.T. DISCHARGE NOZZLE.
 - ALL DRAINS, UNLESS OTHERWISE NOTED ON DIAGRAM, TO BE LOCALLY PIPED TO THE NEAREST EQUIPMENT DRAIN.
 - BLIND FLANGES, ONE (1) ON REFUELING CANAL, TWO (2) ON CONTAINMENT EMERGENCY SUMP, ARE FOR LEAK TEST PURPOSE DURING STATION SHUTDOWN. THESE LINES ARE NORMALLY OPEN. A TRASH RACK IS INSTALLED ON REFUELING CANAL FLANGES ON LINE M-033C DURING PLANT OPERATIONS MODE 1 THRU 4. REF. DWG. C-0933 FOR DETAILS. CLASS BREAK ON LINE M-033C DOES NOT INCLUDE TRASH RACK IN ASME SECTION III CLASS 3 BOUNDARY. REF. ECR 02-0912.
 - THE CONNECTIONS 5" ARE FOR ISOLATION VALVES LEAK TEST.
 - DELETED.
 - UNLESS OTHERWISE NOTED, ALL VENT CONNECTIONS ARE 3/4" AND DRAIN CONNECTIONS 1". LINE IDENT. SAME AS HEADER. ALL VENT, DRAIN, LEAK TEST & INSTRUMENT CONNECTION RATED AT 1500 POUNDS SHALL HAVE DOUBLE VALVE AS ISOLATION.
 - OWNER PIPING TO BE ENGINEERED BY BECTEL AND SUPPLIED BY GRINNELL.
 - DELETED.
 - DELETED.
 - FOR TYPICAL HEAT TRACING CIRCUIT SEE PID M-011. FOR HEAT TRACING INSTRUMENT & DETAIL SEE THERMOM DRAWING T5-258A.
 - DELETED.
 - FOR VALVES REFERENCING THIS NOTE, ONLY LOCAL HANDWHEELS & LOCAL PUSHBUTTON ROOM IS NOT LOCKED.
 - SEE REFERENCE DRAWINGS C-635, C-634 TO C-637 FOR DETAILS OF DECAY HEAT VALVE PIT ANNULUS DRAIN AND DECAY VALVE ENCLOSURE VENT PIPE AND DRAIN PLUGS.
 - DELETED.
 - RESTRICTION ORIFICE RO5989 WILL BE USED FOR HPI PUMP TESTING. RO5989 MAY BE REPLACED WITH RO HPI FOR MAKE-UP PUMP TESTING. (REF. FCR 86-0291)
 - RO HPI & RO HPIE WERE ORIGINALLY SUPPLIED AS CLASS 3 ITEMS. (REF. PCAD 88-0658) HP41 WAS SUPPLIED AS AN ASME B31.1 ITEM (REF. EDP 07-0082-001)
 - THE ONLY VENT OR DRAIN LINE CAPS REQUIRED TO BE SHOWN ON PIPING AND INSTRUMENTATION DIAGRAMS ARE THOSE CONTROLLED UNDER DR-0P-00009 (FORMERLY ADI-030). THE ACTUAL TERMINATION OF ALL OTHER VENTS OR DRAINS ARE NOT SHOWN AND INSTEAD AN OPEN ENDED PIPE IS DISPLAYED.

LR NOTES:

A. FOR GENERAL LICENSE RENEWAL NOTES REFER TO LR-M001-01.

LICENSE RENEWAL BOUNDARY DRAWING LR-M033A REV. 1

SYSTEMS SHOWN ON THIS DRAWING:

- 03: REACTOR COOLANT
- 15: DECAY HEAT REMOVAL & LOW PRESSURE INJECTION
- 16: SPENT FUEL POOL COOLING & CLEANUP
- 17: CONTAINMENT SPRAY & CORE FLOODING
- 19: REACTOR COOLANT VENT & DRAINS
- 22: HIGH PRESSURE INJECTION
- 23: SAMPLING
- 24: NONSAFETY AFFECTING SAFETY

THIS DRAWING REV. 0 SUPERSEDES IN PART DWG. M-033B REV. 5. WORK THIS DWG. WITH M-033B AND M-033C.

BECTEL ASSOCIATES
PROFESSIONAL CORPORATION (OHIO)
241 THESSBURG, MARYLAND
DAVIS-BESSE NUCLEAR POWER STATION
UNIT NO. 1
THE TOLEDO EDISON COMPANY

PIPING & INSTRUMENT DIAGRAM
HIGH PRESSURE INJECTION

JOB NO.	DRAWING NO.	REV.
12501	M-033A	41

DATE: 08-10-09-08

- NOTES (CONT'D):
- DH63 (M-033B, B-11) AND DH64 (M-033B, C-9) PROVIDES COMPLETE ISOLATION IN THE NORMAL FLOW DIRECTION ONLY. REFER TO VDM M-212-3 FOR SPECIFIC BONNET VENTING DETAILS.
 - DH11 (M-033B, B-3) AND DH12 (M-033B, B-2) PROVIDE COMPLETE ISOLATION IN THE NORMAL FLOW DIRECTION ONLY. REFER TO VDM M-225-38 FOR SPECIFIC BONNET VENTING DETAILS.
 - WHERE NOTED THE TANK CAPACITY IS NOMINAL, WHERE APPLICABLE, SEE DR-PF-06705 (TANK LEVEL CALIBRATION CURVES) FOR INDICATED LEVEL VS. VOLUME RELATIONSHIP. (REF. PCADR 96-0976).

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