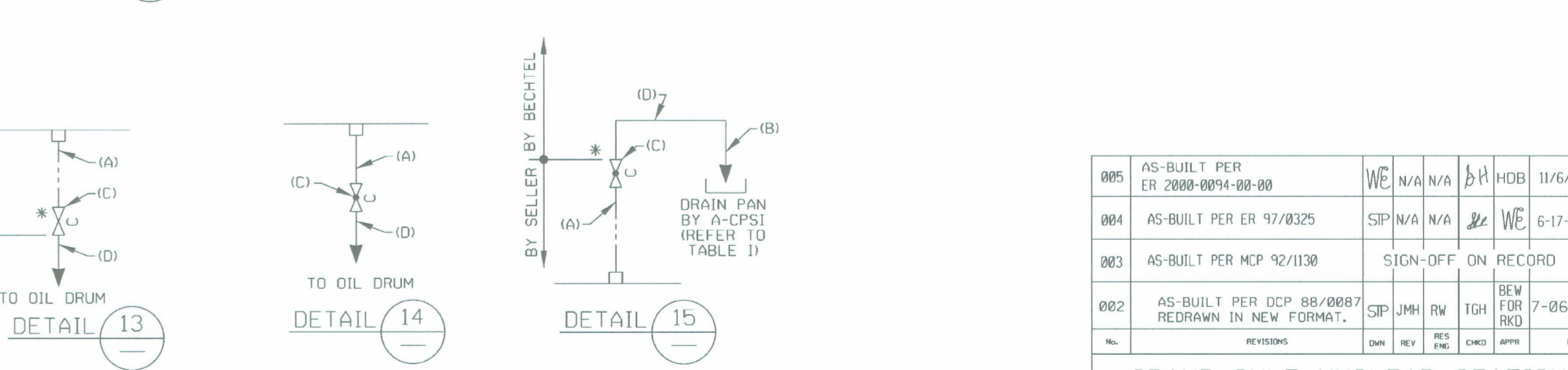
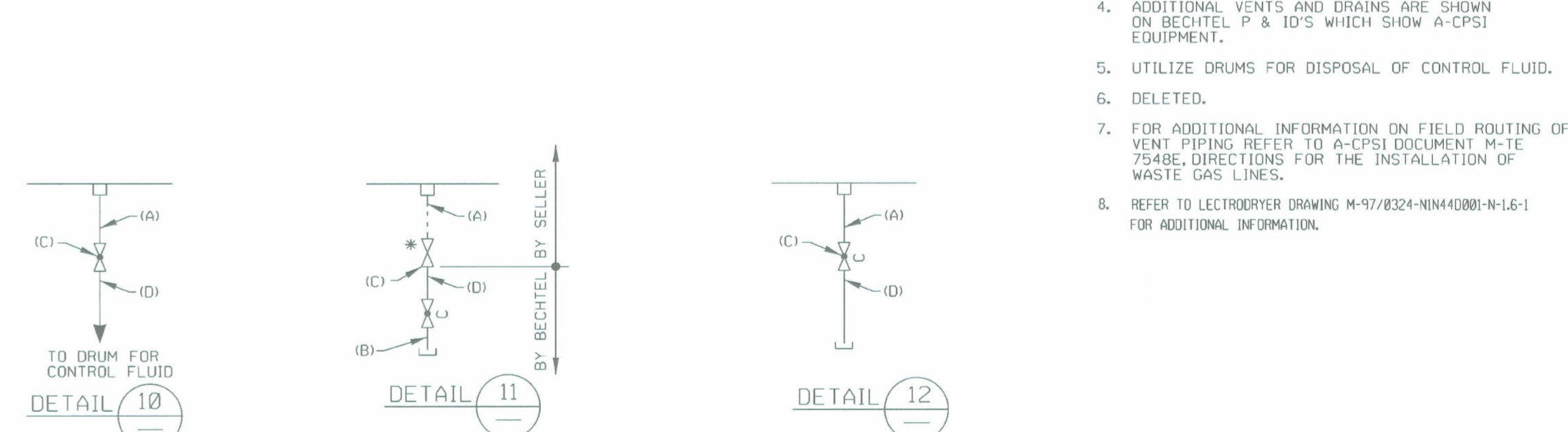
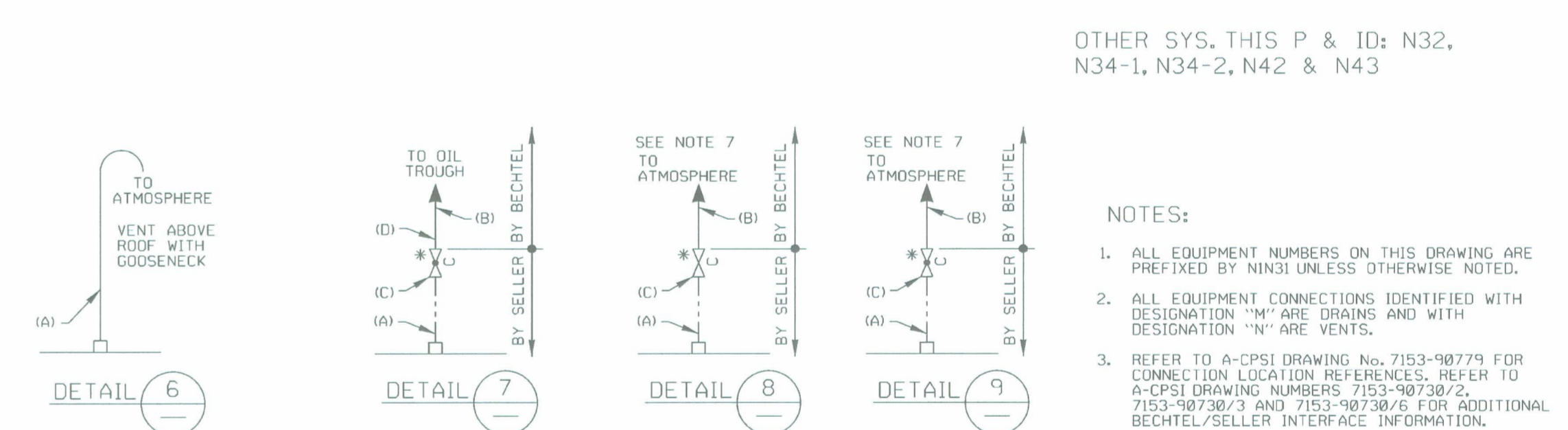
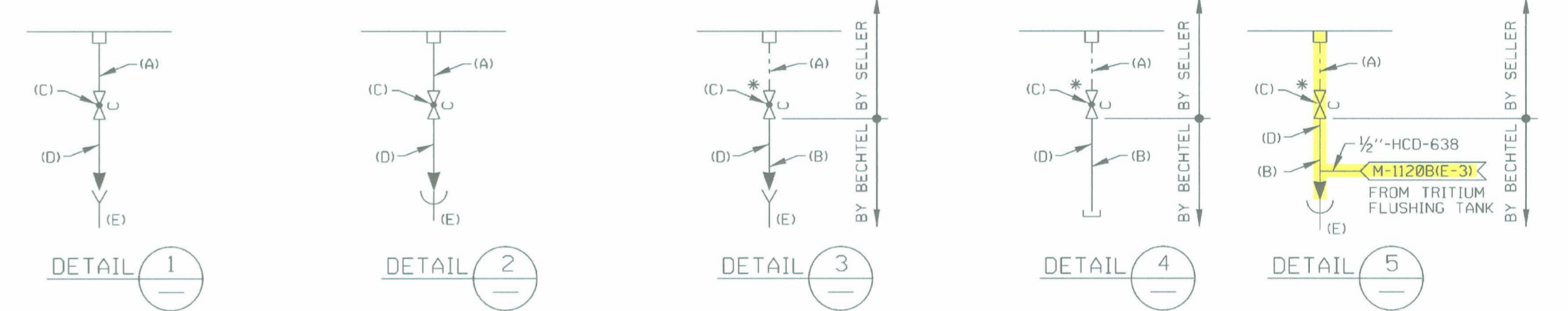
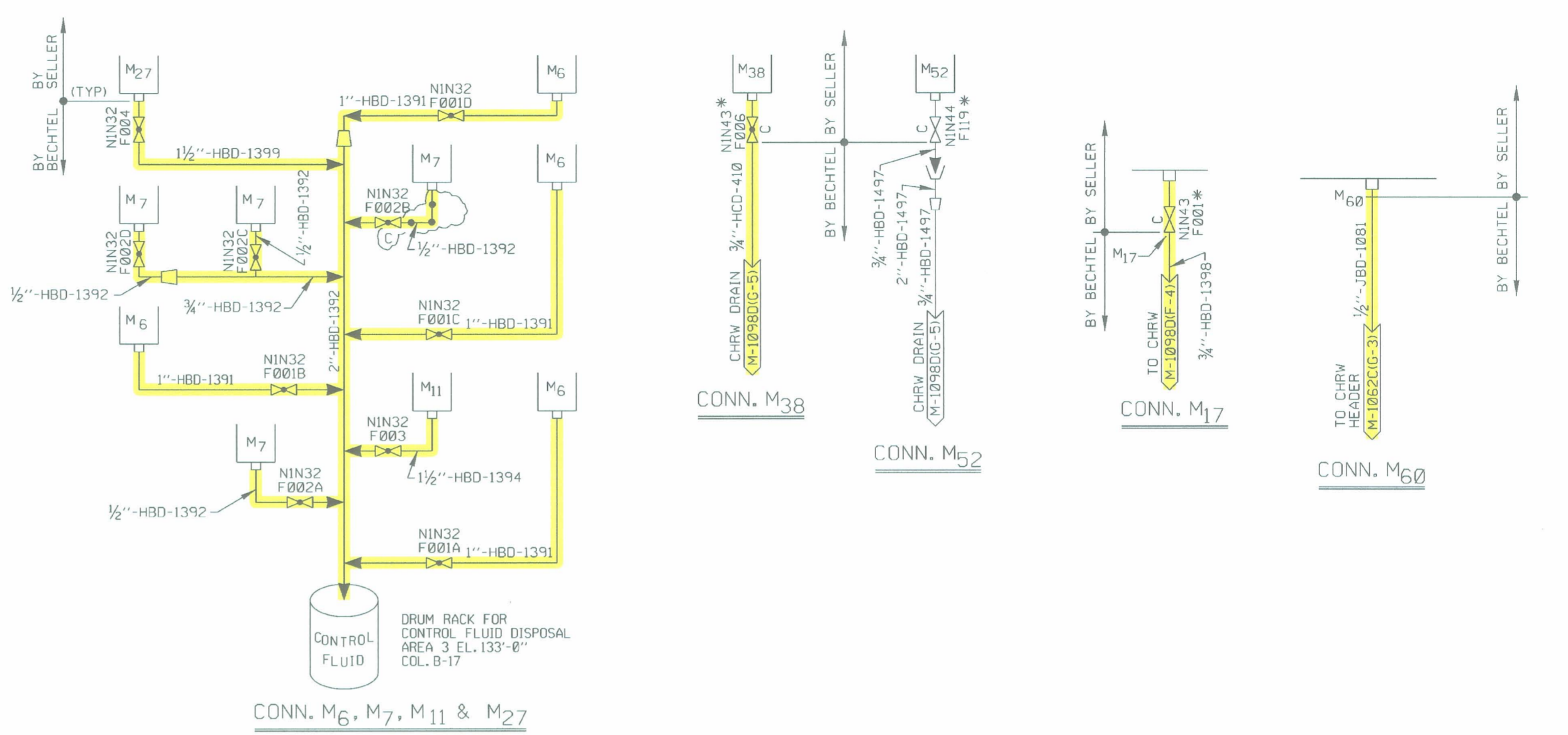


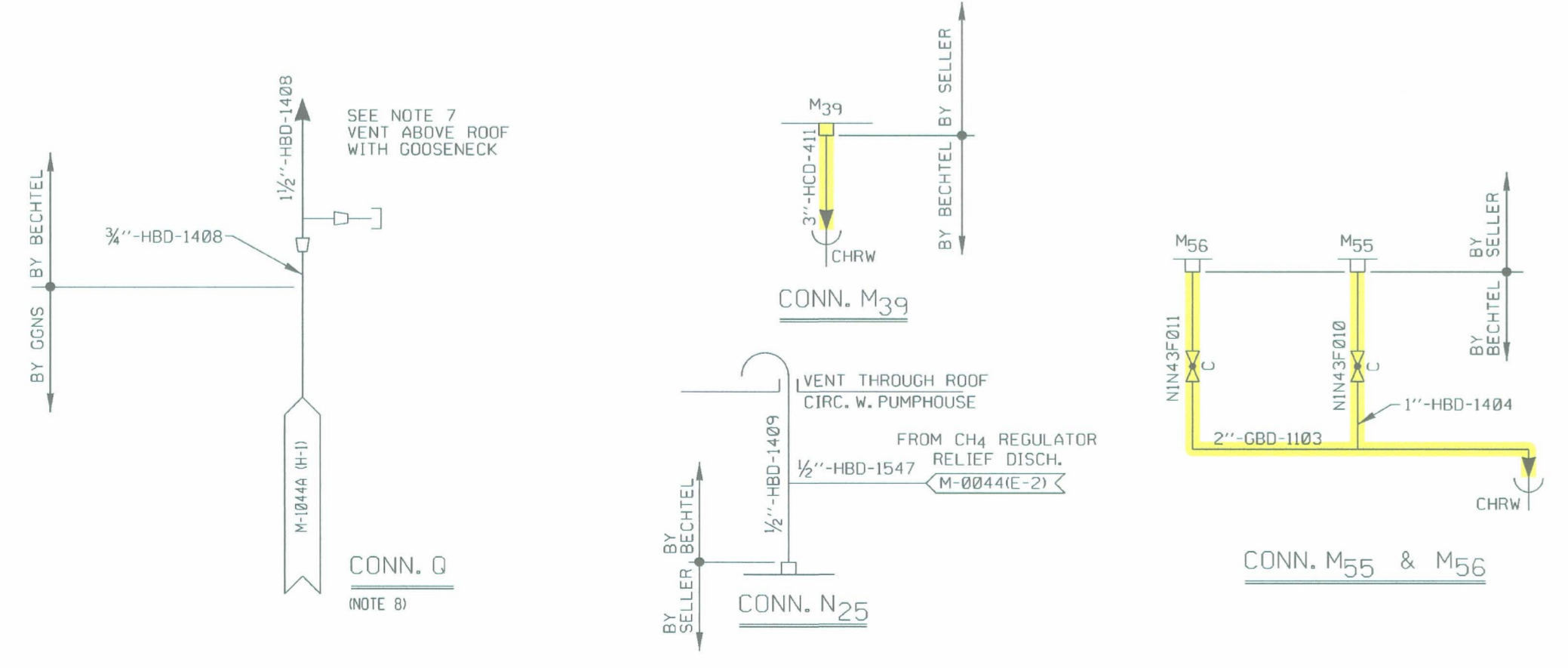
TABLE 1

CONN. No.	CONNECTION POINT	QUANTITY OF CONN.	DE-TAIL TYPE	LINE SIZE, CLASS & NUMBER (A)	LINE SIZE, CLASS & NUMBER (B)	VALVE NUMBER (C)	RADIATION ZONE (D)	APPLI-CABLE DRAIN SYS (E)	A-CPSI P & ID NUMBER OR OTHER REFERENCE DWG. (SEE NOTE 3)	REMARKS
N32	M5 CONTROL FLUID TANK	1	N/A	N/A	N/A	N/A	N/A	N/A	7153-92079	3" 300 #WN.R.F. FLANGE & 3" 300 #BLIND FLANGE
N32	M6 CONTROL FLUID SUPPLY RACK	4	10	1"-HBD-1391		NIN32F001A NIN32F001B NIN32F001C NIN32F001D	III-A		7153-92079	SEE NOTE 5-CONN. HEADERED WITH CONN. M7, M11 & M27. SEE DETAIL THIS DWG.
N42	M7 CONTROL FLUID LEAKAGE TANK	4	10	1/2"-HBD-1392		NIN32F002A NIN32F002B NIN32F002C NIN32F002D	III-A		7153-92079	SEE NOTE 5-CONN. HEADERED WITH CONN. M6, M11 & M27. SEE DETAIL THIS DWG.
N32	M8 SEAL OIL VALVE RACK I	1	14	1/2"-HBD-1393		NIN42F001			24-2470-54766	
N34-1	M11 HYD. CONTROL EQUIPMENT RACK	1	10	1/2"-HBD-1394		NIN32F003			7153-92079	SEE NOTE 5-CONN. HEADERED WITH CONN. M6, M7, M11 & M27. SEE DETAIL THIS DWG.
N34-1	M12 DUPLEX OIL STRAINER (THRUST BRG.)	2	4	1"	1"-HBD-1395	NIN34F400A NIN34F400B			7153-90079	CONN. HEADERED WITH CONN. M13. SEE DETAIL ON M-1116B
N34-1	M13 MAIN OIL COOLER (OIL SIDE)	2	4	1/2"	1/2"-HBD-1396	NIN34F393A NIN34F393B				CONN. HEADERED WITH CONN. M12. SEE DETAIL ON M-1116B
N34-2	M15 SHIELDING PIPE AT MAIN OIL TANK	1	11	1"	1"-HBD-1397	NIN34F394 NIN34F395				
N43	M17 PRIMARY WATER TANK AND PUMP SUCTION PIPE	1	3	3/4"	3/4"-HBD-1398	NIN43F001	III-B	CHRW	24-2605-55144	CONNECTED TO CHRW RISER SEE DETAIL THIS DWG.
N32	M27 HYD. CONTROL EQUIPMENT RACK FOR MS BYPASS CONTROL	1	10	1/2"-HBD-1399		NIN32F004	III-A		7153-92079	SEE NOTE 5-CONN. HEADERED WITH CONN. M6, M7 & M11. SEE DETAIL THIS DWG.
N43	M33 PIPE AFTER FILTER AND ION EXCHANGER UNIT	1	5	3/4"	3/4"-HCD-406	NIN43F002	III-B	CHRW	24-2605-55144	CONN. HEADERED WITH CONN. M36 & M37. SEE DETAIL ON M-1116B
N43	M35 PRIMARY WATER TANK	1			3/4"-HCD-407	NIN43F003			24-2605-55144	CONN. HEADERED WITH CONN. M36 & M37. SEE DETAIL ON M-1116B
N43	M36 RETURN PIPE OF PUMP CHAMBER 4	1			3/4"-HCD-408	NIN43F004				CONN. HEADERED WITH CONN. M35 & M37. SEE DETAIL ON M-1116B
N43	M37 COLLECTION DRAIN OF PRESSURE GAUGE RACK	1	2	3/4"-HCD-409		NIN43F005				CONN. HEADERED WITH CONN. M35 & M36. SEE DETAIL ON M-1116B
N43	M38 SYPHON DRAIN (LEAKAGE WATER DRAIN)	1	5	3/4"	3/4"-HCD-410	NIN43F006				CONNECTED TO CHRW RISER SEE DETAIL THIS DWG.
N43	M39 SYPHON OVERFLOW (LEAKAGE WATER DRAIN)	1	2	3"-HCD-411						SEE DETAIL THIS DWG.
F	M46 SEAL OIL OUTLET H2-SIDE (LOOP)	1	12	3/4"-HBD-1400		NIN42F002	III-A		24-2422-54765	
N42	M47 SEAL OIL UNIT BASE PLATE	1	14	1/2"-HBD-1401		NIN42F003			24-2422-54765	CONN. HEADERED WITH CONN. M4 & M13. SEE DETAIL ON M-1116B
N42	M49 STORAGE TANK (SEAL OIL)	1	11	3/4"	3/4"-HBD-1402	NIN42F004 NIN42F007			24-2422-54765 7153-90079	CONN. HEADERED WITH CONN. M47, M49, M13. SEE DETAIL THIS DWG.
N42	M50 U-LOOP BEHIND STORAGE TANK (SEAL OIL)	1	11	3/4"	3/4"-HBD-1403	NIN42F005 NIN42F008			24-2422-54765 7153-90079	CONN. HEADERED WITH CONN. M47, M49, M13. SEE DETAIL THIS DWG.
N42	M52 H2-U-LOOP EXCITER END	1	3	3/4"	3/4"-HBD-1417	NIN44F119	III-B	CHRW	24-2604-55143	SEE DETAIL THIS DWG.
N43	M54 COLLECTION DRAIN PRIMARY WATER VALVE RACK	1	2	3/4"-HBD-1102		NIN43F009			24-2605-55144	
N43	M55 COLLECTION DRAIN PRIMARY WATER FILTER	1	1	1"-HBD-1404		NIN43F010				CONN. HEADERED WITH CONN. M56. SEE DETAIL BELOW
N42	M56 COLLECTION DRAIN FILTER AND ION EXCHANGER	1		2"-HBD-1103		NIN43F011				CONN. HEADERED WITH CONN. M55. SEE DETAIL BELOW
N42	M9 SEAL OIL COOLER (OIL SIDE)	4	13	1/2"	1/2"-HBD-1514	NIN42F009A NIN42F009B NIN42F009C NIN42F009D	III-A		24-2422-54765	CONN. HEADERED WITH CONN. M47 & M13. SEE DETAIL ON M-1116B
N43	M58 RINSING OF ION EXCHANGER	1	5	1"	1"-EDC-19	NIN43F013	III-B	CHRW	24-2605-55144 24-2575-80723	
N43	M59 RINSING OF PALADIUM CATALYST	1	1	1"	1"-EDC-20	NIN43F014	III-B		24-2605-55144 24-2575-80723	
N42	M60 SEAL OIL COOLER RELIEF VALVE	1		1/4"	1/2"-JBD-1081	N/A	III-A		24-2411-80693	SEE DETAIL THIS DWG.
N43	N13 SEAL OIL COOLER (OIL SIDE)	4	7	1/2"	1/2"-HBD-1407	NIN42F006A NIN42F006B NIN42F006C NIN42F006D	III-A		24-2422-54765	NOTE 8
N43	Q SAFETY VALVE OF H2-PURGE GAS PIPE	1		3/4"	3/4"-HBD-1408	NIN43F015				NOTE 8
N44	N25 H2-CH4-TRACER GAS AFTER TRITIUM MEASURING ARRGT.	1	6	1/2"-HBD-1409			III-B		24-2467-59219 24-2604-55143	SEE DETAIL BELOW. PROVIDE GOOSENECK. SEE NOTE 7
N44	N26 CH4-PRESSURE REDUCER	1		1/2"-HBD-1410					24-2469-59202 24-2604-55143	PROVIDE GOOSENECK MIN. 15 FT. ABOVE GRADE
N44	N27 H2-PRESS. REDUCER & SAFETY VALVE TRITIUM MEAS. ARRGT.	1		1/2"-HBD-1411			III-B		24-2467-59219 24-2604-55143	VENT ABOVE ROOF. PROVIDE GOOSENECK. SEE NOTE 7
N43	N30 CONNECT PIPE-SHAFT PUMP AND COOLER UNIT	1	7	3/4"	3/4"-HCD-424	NIN43F016	III-B		24-2605-55144	ROUTE TO A-CPSI DRAIN PAN (CONN. M56)
N43	N31 CONNECT PIPE-COOLER UNIT AND ION EXCHANGER	1			3/4"-HCD-425	NIN43F017				ROUTE TO A-CPSI DRAIN PAN (CONN. M56)
N43	N32 CONNECT PIPE-BEFORE ROTOR FILTER UNIT	1			3/4"-HCD-426	NIN43F018				ROUTE TO A-CPSI DRAIN PAN (CONN. M56)
N43	N38 GENERATOR CORE MONITOR	1								(REFER TO DWG. No. J-01410 FOR DETAILS)
N43	N40 PIPE TO HEATER	1	15	3/4"	3/4"-HCD-440	NIN43FA79	III-B		24-2450-57162	ROUTE TO A-CPSI DRAIN PAN (CONN. M56)
N43	N41 PIPE FROM HEATER	1			3/4"-HCD-441	NIN43FAB1				ROUTE TO A-CPSI DRAIN PAN (CONN. M56)
N43	N42 AFTER MAIN BYPASS FILTER	1			3/4"-HCD-442	NIN43FAB3				ROUTE TO A-CPSI DRAIN PAN (CONN. M56)
N43	N49 WATER SUPPLY LINE	1			3/4"-HCD-443	NIN43FC39				ROUTE TO A-CPSI DRAIN PAN (CONN. M56)
N43	M18 DRAIN FROM PRIMARY WATER HEATER	1	5	3/4"-HBD-1545		NIN43FAB0		CRW	24-2605-55144 24-2450-57161	



OTHER SYS. THIS P & ID: N32, N34-1, N34-2, N42 & N43

- NOTES:
- ALL EQUIPMENT NUMBERS ON THIS DRAWING ARE PREFIXED BY NIN31 UNLESS OTHERWISE NOTED.
 - ALL EQUIPMENT CONNECTIONS IDENTIFIED WITH DESIGNATION "M" ARE DRAINS AND WITH DESIGNATION "N" ARE VENTS.
 - REFER TO A-CPSI DRAWING No. 7153-90779 FOR CONNECTION LOCATION REFERENCES. REFER TO A-CPSI DRAWING NUMBERS 7153-90730/2, 7153-90730/3 AND 7153-90730/6 FOR ADDITIONAL BECTHEL/SELLER INTERFACE INFORMATION.
 - ADDITIONAL VENTS AND DRAINS ARE SHOWN ON BECTHEL P & ID'S WHICH SHOW A-CPSI EQUIPMENT.
 - UTILIZE DRUMS FOR DISPOSAL OF CONTROL FLUID.
 - DELETED.
 - FOR ADDITIONAL INFORMATION ON FIELD ROUTING OF VENT PIPING REFER TO A-CPSI DOCUMENT M-TE 75486. DIRECTIONS FOR THE INSTALLATION OF WASTE GAS LINES.
 - REFER TO LECTRODYER DRAWING M-97/0324-NIN40001-N-16-1 FOR ADDITIONAL INFORMATION.



VENTS AND DRAINS DETAILS

REFER TO TABLE 1 FOR INFORMATION DESIGNATED BY LETTERS.

NO.	REVISIONS	DATE	BY	CHK	APP	DATE	
005	AS-BUILT PER ER 2000-0014-00-00		WE	N/A	N/A	11/6/02	
004	AS-BUILT PER ER 97/0325		SIP	N/A	N/A	6-17-98	
003	AS-BUILT PER MCP 92/1130		SIGN-OFF			ON RECORD	
002	AS-BUILT PER DCP 88/0087 REDRAWN IN NEW FORMAT.		SIP	JMH	RW	TGH	BEW FOR 7-06-92

GRAND GULF NUCLEAR STATION
UNIT 1
NUCLEAR PLANT ENGINEERING
P & I DIAGRAMS
MISC. VENTS & DRAINS FOR A-CPSI
TURBINE GENERATOR EQUIPMENT

SCALE: NONE DRAWING No. M-1116A REV. 005

COMPONENTS SUBJECT TO AMR
NON-SAFETY RELATED SYSTEMS & COMPONENTS AFFECTING SAFETY RELATED SYSTEMS AMR20

NO.	DATE	DESCRIPTION	BY	ENG	CHK	APP
REVISIONS						
LRA-M-1116A						
CAUTION: m1116a.DGN						