



Jersey Central Power & Light Company
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960
(201) 455-8200

December 14, 1979

Mr. William Kane
Bulletins & Orders Task Force
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Kane:

Subject: Bulletins & Orders Task Force
Long Term Systems Information

Reference: (a) Letter from Jersey Central
Power & Light to William Kane,
Bulletins & Orders Task Force,
dated November 20, 1979,
Bulletins & Orders Task Force
Long Term Systems Information

Enclosure: (1) Primary Containment Isolation
System Data

By letter dated November 20, 1979 (reference a), Jersey Central Power & Light Company forwarded to the Nuclear Regulatory Commission an information package containing long term systems information requested by the Bulletins and Orders Task Force with the exception of primary containment isolation system data. Compilation of the primary containment isolation system data has now been completed and is forwarded to you as Enclosure 1 to this letter.

Very truly yours,

Ivan R. Finfreck
Ivan R. Finfreck, Jr.
Vice President

la

90005141

~~XXXXXXXXXX~~

7912190 564

Wu
X

ENCLOSURE 1

PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

90005142

Isolation Valves

POOR ORIGINAL

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an engineered safety feature	Figure	Process Fluid	Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions				Comments
																Normal	Shutdown	Post Accident	Power Failure	
X-24	24	MAIN STEAM	N	C	S	V-1-10	1, 2	O	GB	AO	A	RM	<10	A	D	O	O	O	C	
X-24	24	MAIN STEAM	N	C	S	V-1-8	1, 2	I	GB	AO	A	RM	<10	A	D	O	O	O	C	
X-28	24	MAIN STEAM	N	D	S	V-1-9	1, 2	O	GB	AO	A	RM	<10	A	D	O	O	O	C	
X-28	24	MAIN STEAM	N	D	S	V-1-7	1, 2	I	GB	AO	A	RM	<10	A	D	O	O	O	C	
X-3A	10	EMPTY COND. STEAM	N	A	S	V-1-30	1, 3	O	GT	MO	A	RM	<60	AC	D	O	O	O	AI	
X-3A	10	EMPTY COND. STEAM	N	A	S	V-1-32	1, 3	O	GT	MO	A	RM	<60	AC	D	O	O	O	AI	
X-3B	10	"	N	A	S	V-2-72	NONE	O	CK	-	RF	-	-	-	N	O	-	-	-	
X-4A	18	FEEDWATER	N	C	W	V-2-74	NONE	I	CK	-	RF	-	-	-	N	O	-	-	-	
X-4A	18	"	N	C	W	V-2-76	NONE	O	CK	-	RF	-	-	-	N	O	-	-	-	
X-4B	18	"	N	C	W	V-2-78	NONE	I	CK	-	RF	-	-	-	N	O	-	-	-	
X-4B	18	"	N	C	W	V-2-79	NONE	I	CK	-	RF	-	-	-	N	O	-	-	-	
X-4C	18	"	N	C	W	V-2-79	NONE	I	CK	-	RF	-	-	-	N	O	-	-	-	
X-5A	10	EMPTY COND. COND. RETURN	N	B	W	V-1-31	1, 3	O	GT	MO	A	RM	<60	AC	D	O	O	O	AI	
X-5A	10	"	N	B	W	V-1-32	1, 3	I	GT	MO	A	RM	<60	AC	D	O	O	O	AI	
X-5A	10	"	N	B	W	V-1-39	NONE	O	GB	H	-	-	-	-	N	O	-	-	-	
X-5A	1	"	N	B	W	V-1-40	NONE	O	GB	H	-	-	-	-	N	O	-	-	-	
X-5B	1	"	N	B	W	V-1-41	1, 3	O	GT	MO	A	RM	<60	AC	D	O	O	O	AI	
X-5B	1	"	N	B	W	V-1-42	1, 3	I	GT	MO	A	RM	<60	AC	D	O	O	O	AI	
X-5B	10	"	N	B	W	V-1-43	1, 3	I	GT	MO	A	RM	<60	AC	D	O	O	O	AI	
X-5B	10	"	N	B	W	V-1-44	1, 3	I	GT	MO	A	RM	<60	AC	D	O	O	O	AI	
X-5B	10	"	N	B	W	V-1-45	1, 3	I	GT	MO	A	RM	<60	AC	D	O	O	O	AI	
X-5B	10	"	N	B	W	V-1-46	1, 3	I	GT	MO	A	RM	<60	AC	D	O	O	O	AI	
X-6	1 1/2	POISON	Y	E	W	NP05-B	NONE	O	XV	EX	RM	-	-	AC	I	C	C	C	AI	
X-6	1 1/2	"	Y	E	W	NP05-B	NONE	O	XV	EX	RM	-	-	AC	I	C	C	C	AI	
X-6	1 1/2	POISON	Y	E	W	NP05-B	NONE	O	XV	EX	RM	-	-	AC	I	C	C	C	AI	
X-6	1 1/2	"	Y	E	W	NP05-B	NONE	O	XV	EX	RM	-	-	AC	I	C	C	C	AI	
X-6	1 1/2	"	Y	E	W	NP05-B	NONE	O	XV	EX	RM	-	-	AC	I	C	C	C	AI	
X-7	10	SAFETY COND. COND. RETURN	N	F	W	V-1-19	1, 5	I	GT	MO	A	RM	<60	AC	D	O	O	O	AI	
X-7	10	"	N	F	W	V-1-19	1, 5	I	GT	MO	A	RM	<60	AC	D	O	O	O	AI	
X-7	10	"	N	F	W	V-1-21	NONE	O	GT	MO	RM	-	-	DC	D	O	O	O	AI	
X-7	10	"	N	F	W	V-1-22	NONE	O	GT	MO	RM	-	-	DC	D	O	O	O	AI	
X-7	10	"	N	F	W	V-1-23	NONE	O	GT	MO	RM	-	-	DC	D	O	O	O	AI	
X-7	10	"	N	F	W	V-1-23	NONE	O	GT	MO	RM	-	-	DC	D	O	O	O	AI	

POOR ORIGINAL

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an engineered safety feature	Figure	Process Fluid	Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions				Comments
																Normal	Shutdown	Post Accident	Power Failure	
X-7	1	SHUTDOWN/COOLING SUPPLY	N	F	W	V-17-65	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	
X-7	1	"	N	F	W	V-17-21	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	
X-8	1/4	SHUTDOWN/COOLING RETURN	N	G	W	V-17-54	L5	I	GT	MO	A	RM	<60	AC	D	C	C	C	AI	
X-8	3/8	"	N	G	W	V-17-55	NONE	O	GT	MO	RM	—	—	DC	D	C	C	C	AI	
X-8	3/8	"	N	G	W	V-17-56	NONE	O	GT	MO	RM	—	—	DC	D	C	C	C	AI	
X-8	3/8	"	N	G	W	V-17-57	NONE	O	GT	MO	RM	—	—	DC	D	C	C	C	AI	
X-8	1	"	N	G	W	V-17-63	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	
X-8	1	"	N	G	W	V-17-66	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	
X-8	1	"	N	G	W	V-17-52	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	
X-8	1	"	N	G	W	V-17-51	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	
X-9	1	"	N	G	W	V-16-1	L4, L6	I	GT	MO	A	RM	<60	AC	D	C	C	C	AI	
X-9	6	CLEANUP SUPPLY	N	H	W	V-16-14	L4, L6	O	GT	MO	A	RM	<60	DC	D	C	C	C	AI	
X-9	6	"	N	H	W	V-16-4	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	
X-9	1	"	N	H	W	V-16-2	L4, L6	O	GT	MO	A	RM	<60	DC	D	C	C	C	AI	
X-9	6	"	N	H	W	V-16-6	L4, L6	O	GT	MO	A	RM	<60	AC	D	C	C	C	AI	
X-10	1	CLEANUP RETURN	N	I	W	V-16-65	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	
X-10	1	"	N	I	W	V-16-62	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	
X-10	6	"	N	I	W	—	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	
X-12A	1	REACTOR LEVEL	N	L	W	—	NONE	O	CK	AO	RF	—	—	—	N	C	C	C	—	
X-12B	3	CORE SPRAY SUPPLY	N	J	W	V-20-2A	NONE	I	CK	AO	RF	—	—	A	I	C	C	C	C	
X-12B	3	"	N	J	W	V-20-2C	NONE	I	CK	AO	RF	—	—	A	I	C	C	C	C	
X-12B	3	"	N	J	W	V-20-15	NONE	O	GT	MO	A	RM	<20	AC	D	C	C	C	AI	
X-12B	3	"	N	J	W	V-20-40	NONE	O	GT	MO	A	RM	<20	AC	D	C	C	C	AI	
X-12B	3/4	"	N	J	W	V-20-42	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	

POOR ORIGINAL

Isolation Valves

[illegible]

Isolation Valves

POOR ORIGINAL

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an engineered safety feature	Figure	Process Fluid	Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions				Comments
X-39	1	WIDE RANGE WATER LEVEL-TOPO	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-38	1	PROTECT SYS. LEVEL IND.	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-39	1	"	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-39	1	LEVEL CONTROL-STATIC LEG	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-39	1	" - REF. LEG	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-40	1	REC'D. LOOP DIFF. P.	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-42	1	SECTION + DISCHARGE	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-49	28	REACTOR LEG	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-49	28	VENT PIPES TO TORUS	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-50	1	TOXUS LEVEL	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-50	1	"	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-50	1	"	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-50	1	REC'D. PUMP QAL	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-50	1	CAVITY	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-50	1	DRYWEIL PRESSURE	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-52	24	MANHOLE	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-53	36	TORUS ACCESS HATCH	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-53	36	"	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES
X-53	36	"	N	L	W	—	NONE	Q	GB	H	—	—	—	—	N	Q	Q	Q	Q	2 LINES

Isolation Valves

POOR ORIGINAL

[illegible]

PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

PAGE 6 CONTINUED ON PAGE 7

Isolation Valves

POOR ORIGINAL

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an engineered safety feature	Figure	Process Fluid	Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions				Comments
																Normal	Shutdown	Post Accident	Power Failure	
X-74	20	REPAIR FROM RELIEF	N	R	W	11-6-84	NONE	O	CK	H	RF	—	—	—	N	C	C	C	—	IN TUBES
X-75	1	REPAIR FROM TRANS.	N	L	W	—	NONE	O	GR	H	—	—	—	—	N	O	O	O	—	10 LINES
X-58	1	MOUSE LINE DOWNHILL LEAK PIPE CAUTION DRAIN TO TORUS	N	—	W	NO VALVE	—	—	—	—	—	—	—	—	—	—	—	—	—	TOTAL OF 10 SKIN TUBES
X-45	1	STEAM FROM NOZZLE MOUSE LINE	N	GD	S	—	NONE	O	GR	H	—	—	—	—	N	O	O	O	—	4 LINES
X-45	1	COKE DP TIP (MOUSE CAUTION TORUS)	N	L	W	—	NONE	O	GR	H	—	—	—	—	N	O	O	O	—	4 LINES, USED ONLY DURING INCIDENT MAPPING
X-45	1	TIP (MOUSE CAUTION TORUS)	N	W	N ₂	—	6.67	O	BL	SO	A	RM	60	AC	D	C	C	C	—	4 LINES
X-45	1	TIP	N	W	N ₂	—	NONE	O	SHAR EX	RM	RM	—	—	DC	I	O	O	O	O	4 LINES
X-45	1	TIP (MOUSE CAUTION TORUS)	N	W	N ₂	—	6.67	O	SHAR EX	RM	RM	—	—	DC	I	O	O	O	O	4 LINES LOADED IN DRY PIPES, 7 LINES FROM T. LEAK LINES
X-22	1	CANT. SPRAY PUMPS	Y	Y	W	11-21-79	NONE	O	CK	—	RF	—	—	—	N	C	C	C	—	TEST LINE
X-22	1	CANT. SPRAY	Y	Y	W	11-21-80	NONE	O	CK	—	RF	—	—	—	N	C	C	C	—	TEST LINE
X-22	14	CANT. SPRAY	Y	Y	W	11-21-83	NONE	O	GT	MO	RM	—	—	AC	D	C	C	C	—	TEST LINE
X-22	14	"	Y	Y	W	11-21-87	NONE	O	GT	MO	RM	—	—	AC	D	C	C	C	—	TEST LINE
X-22	4	"	Y	W	W	11-21-85	NONE	O	GT	MO	A	RM	15	AC	D	C	C	C	—	14 LINES
X-22	4	"	Y	W	W	11-21-88	NONE	O	GT	MO	A	RM	15	AC	D	C	C	C	—	FROM TORUS
X-51	18	VALVE BREAKER	N	Y	A.W	11-21-88	NONE	O	CK	DP	A	M	—	—	I	C	C	C	—	FROM TORUS
		* COMMON ALARM FOR ANY OF THE 14 VALVES						NOT COVERED.												

POOR ORIGINAL

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety feature	Figure	Process Fluid	Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions				Comments
																Normal	Shutdown	Post Accident	Power Failure	
X-51	1	TORUS	N	Y	N ₂	V-6-138	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	
X-51	1	ONE SPRAY TO TORUS	Y	Y	W	V-2H45	1	O	GI	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	2	" " "	Y	Y	W	V-2H48	NONE	O	GI	MO	RM	—	—	—	N	C	C	C	—	
X-51	2	TORUS LEVEL	N	Y	AS	V-20-62	NONE	O	GB	H	—	—	—	—	N	C	C	C	—	
X-51	6	CORE DRY TEST LINE	Y	Y	W	V-20-31	NONE	O	CK	—	RF	—	—	—	N	C	C	C	—	
X-51	6	" " "	Y	Y	W	V-20-30	NONE	O	CK	—	RF	—	—	—	N	C	C	C	—	
X-51	6	" " "	Y	Y	W	V-20-26	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27	1.6, 7	O	GB	MO	RM	—	—	AC	D	C	C	C	AI	
X-51	6	" " "	Y	Y	W	V-20-27														

POOR ORIGINAL

Isolation Valves

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety feature	Figure	Process Fluid	Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actua- tion Mode	Secondary Actua- tion Mode	Full Closure Time, sec.	Power Source	Position Indica- tion in Control RM	Positions				Comments
																Normal	Shutdown	Post Accident	Power Failure	
X-65	20	VACUUM BREAKER	N	X	A	V-26-16	1,6,7	O	B	A0	A	RM	5.0	A	D	C	C	C	C	* REQUIRED IN LOW P PRESSURE TO PREVENT EXCEEDING TORUS DESIGN PRESSURE
X-65	20	"	N	X	A	V-26-15	1,6,7	O	B	A0	A	RM	5.0	A	D	C	C	C	C	TERM TO PREVENT
X-65	20	"	N	X	A	V-26-17	—	O	CK	—	RF	—	—	—	N	C	C	C	C	EXCEEDING TORUS DESIGN PRESSURE
X-65	20	"	N	X	A	V-26-17	—	O	CK	—	RF	—	—	—	N	C	C	C	C	DESIGN PRESSURE
X-65	3/4	TORUS PRESSURE INST.	N	X	A	—	NOVE	O	GB	H	—	—	—	—	N	O	O	O	O	
X-65	8	NITROGEN PURGE	Y	X	N ₂	V-23-15	1,6,7	O	B	A0	A	RM	3.5	A	D	C	C	C	C	
X-65	8	"	Y	X	N ₂	V-23-16	1,6,7	O	B	A0	A	RM	12.0	A	D	C	C	C	C	
X-65	8	"	Y	X	N ₂	V-23-19	1,6,7	O	GB	A0	A	RM	0.8	A	D	C	C	C	C	
X-65	2	"	Y	X	N ₂	V-23-20	1,6,7	O	GB	A0	A	RM	0.8	A	D	C	C	C	C	
X-65	2	"	Y	X	N ₂	V-28-47	1,6,7	O	GB	A0	A	RM	0.6	A	D	C	C	C	C	
X-65	12	TORUS TO ENERGY GAS TREATMENT SYSTEM	Y	X	GAS	V-28-17	1,6,7	O	B	A0	A	RM	24.7	A	D	C	C	C	C	
X-65	12	"	Y	X	GAS	V-28-18	1,6,7	C	B	A0	A	RM	20.5	A	D	C	C	C	C	
X-65	12	"	Y	X	W	V-21-1	1	O	GT	M0	RM	—	—	AC	D	D	O	O	AI	
X-65	12	"	Y	X	W	V-21-3	1	O	GT	M0	RM	—	—	AC	D	D	O	O	AI	
X-65	12	"	Y	X	W	V-21-7	1	O	GT	M0	RM	—	—	AC	D	D	O	O	AI	
X-65	12	"	Y	X	W	V-21-9	1	O	GT	M0	RM	—	—	AC	D	D	O	O	AI	
X-65	12	"	Y	X	W	V-20-32	1	O	GT	M0	RM	—	—	AC	D	D	O	O	AI	
X-65	12	"	Y	X	W	V-20-3	1	O	GT	M0	RM	—	—	AC	D	D	O	O	AI	
X-65	12	"	Y	X	W	V-20-4	1	O	GT	M0	RM	—	—	AC	D	D	O	O	AI	
X-65	12	"	Y	X	W	V-20-33	1	O	GT	M0	RM	—	—	AC	D	D	O	O	AI	
X-65	12	"	Y	X	W	V-20-29	1	O	GT	M0	RM	—	—	AC	D	D	O	O	AI	
X-65	12	"	Y	X	W	V-20-29	1	O	GT	H	—	—	—	—	N	O	O	O	—	

PLANT Oyster Creek UNIT 1
 PRIMARY CONTAINMENT ISOLATION SYSTEM DATA
 PAGE 10 CONTINUED ON PAGE 11

ABBREVIATIONS

Engineered Safety Function

N = NO
 Y = YES

Position Indication in Control Room

D = Direct
 I = Indirect
 N = None
 Others stated in Table

Fluid

A = Air
 S = Steam
 W = Water
 Others stated in Table

Isolation Valve Location

I = Inside Containment
 O = Outside Containment
 Others stated in Table

Isolation Valve Actuation Mode

A = Automatic
 OP = Overpressure
 RF = Reverse Flow
 RM = Remote Manual
 Others stated in Table

Isolation Valve Positions

AI = As Is
 C = Closed
 O = Open
 Others stated in Table

Isolation Valve Type

B = Butterfly
 BCK = Ball check
 BL = Ball
 CK = Check
 DCV = Diaphragm
 Control Valve
 GB = Globe
 GT = Gate
 RV = Relief
 SCV = Stop Check
 SV = Solenoid
 VB = Vacuum Breaker
 XV = Explosive
 Others stated in Table

Isolation Valve Power Source

A = Air
 AC = AC
 DC = DC
 H = Hand
 P = Process fluid
 Others stated in Table

Isolation Valve Actuator

AO = Air
 MO = Motor
 SO = Solenoid
 Others stated in Table

Isolation Signal Codes (utility supply)

Code or Group	Parameter(s) Sensed for Isolation	Set Point (units)
1	Manual Initiation	----
2	Rx LoLo Level	7'2"
	MSL Hi Radiation	10 x normal
	MSL Hi Temperature	Amb. + 100°F
	MSL Lo Pressure	825 psi
	MSL Hi Flow	120%
3	Iso. Condenser Hi Steam Flow	3 x normal
	Iso. Condenser Hi Return Flow	3 x normal
4	Low Filter Flow	80 gpm
	Hi Temp., outlet - NRHX	140°F
	Hi Pressure	140 psi
	Hi Cooling Water Temp.	130°F
	Liquid Poison Flow	15 gpm
5	Rx LoLo Level	7'2"
	Hi Inlet Temp. (Shutdown Cooling)	350°F
6	Rx LoLo Level	7'2"
7	Hi Drywell Pressure	2 psig

NOTE: Most instrument lines have excess flow
 check valves downstream of globe valves

90005152

OYSTER CREEK UNIT 1
 PRIMARY CONTAINMENT ISOLATION SYSTEM DATA
 PAGE 11, CONTINUED ON PAGE 12

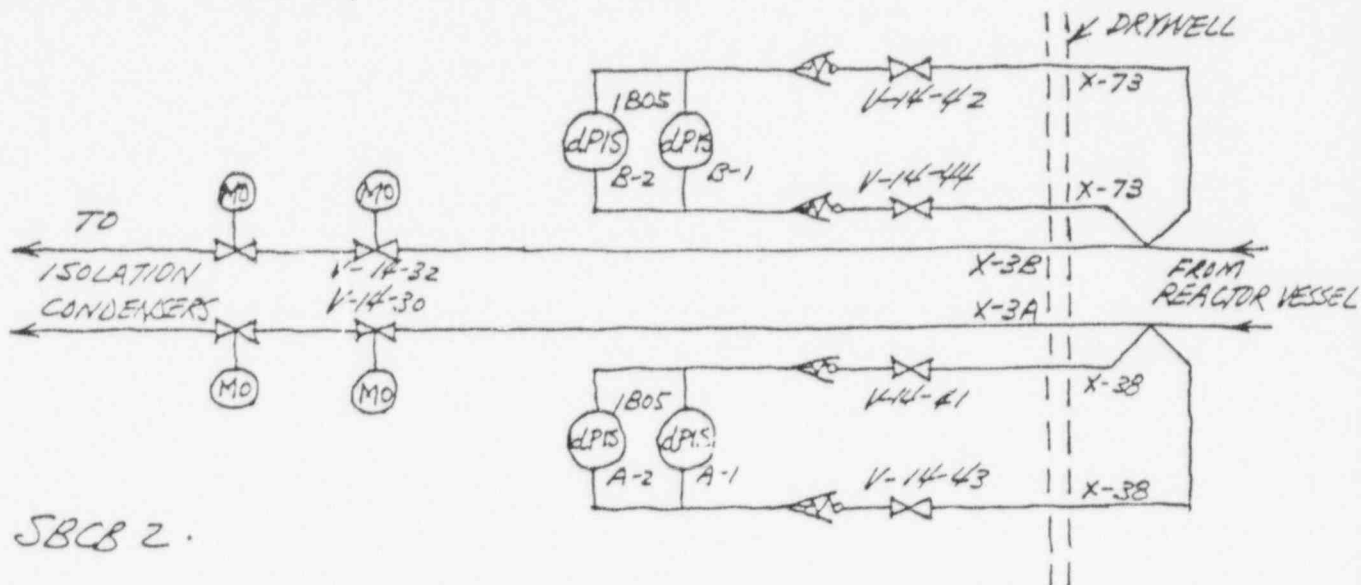


FIGURE A. ISOLATION CONDENSER SUPPLY

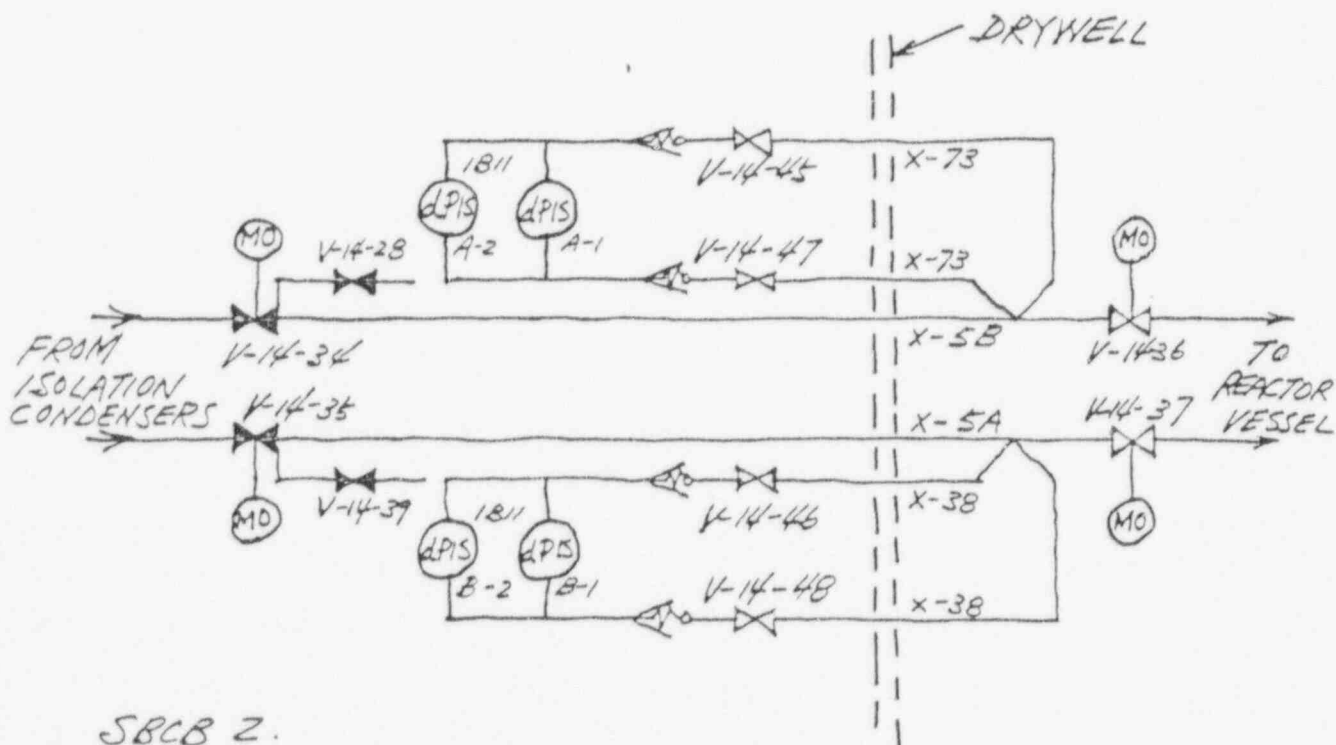


FIGURE B ISOLATION CONDENSER RETURN

90005153

OYSTER CREEK UNIT 1
 PRIMARY CONTAINMENT ISOLATION SYSTEM DATA
 PAGE 12, CONTINUED ON PAGE 13

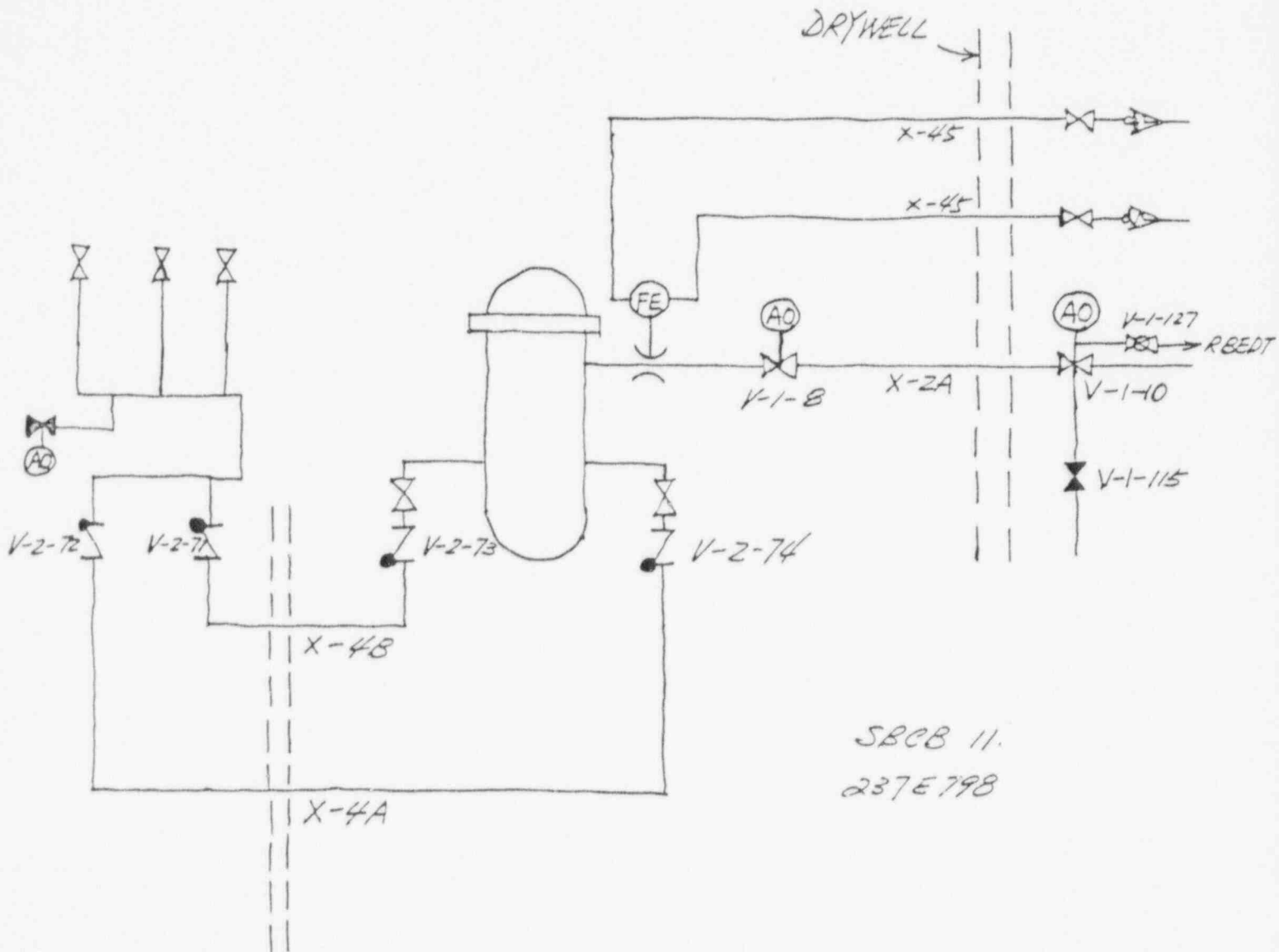
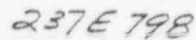


FIGURE C. MAIN STEAM AND
 FEEDWATER

90005154

PAGE 13, CONTINUED ON PAGE 14



MAIN STEAM

90005155

OYSTER CREEK UNIT 1
 PRIMARY CONTAINMENT ISOLATION SYSTEM DATA
 PAGE 14, CONTINUED ON PAGE 15

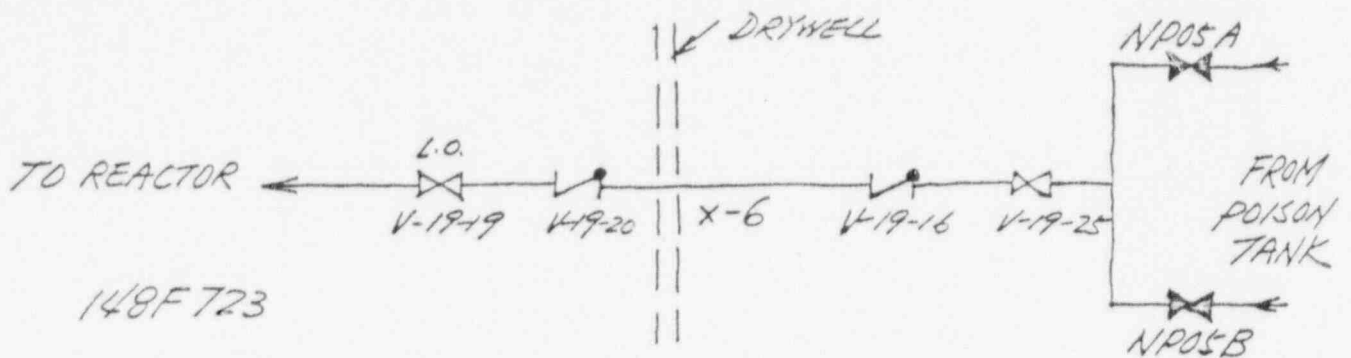
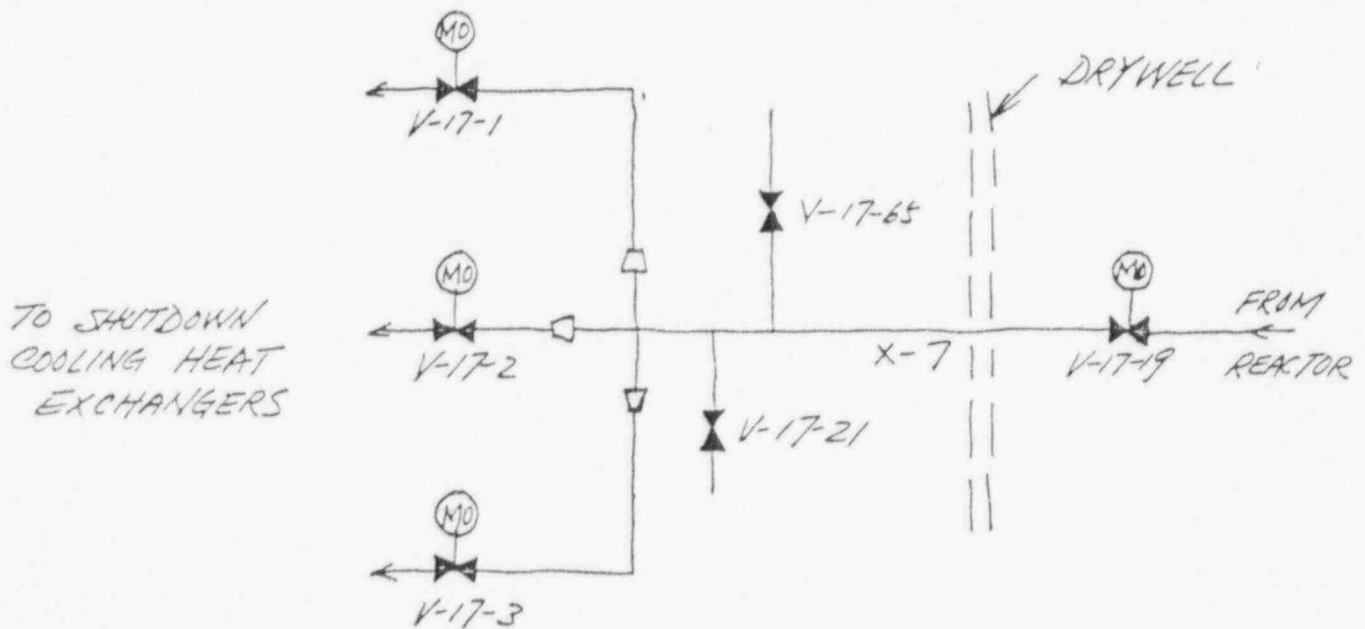


FIGURE E. POISON SYSTEM



148F711

FIGURE F SHUTDOWN COOLING
 SUPPLY

90005156

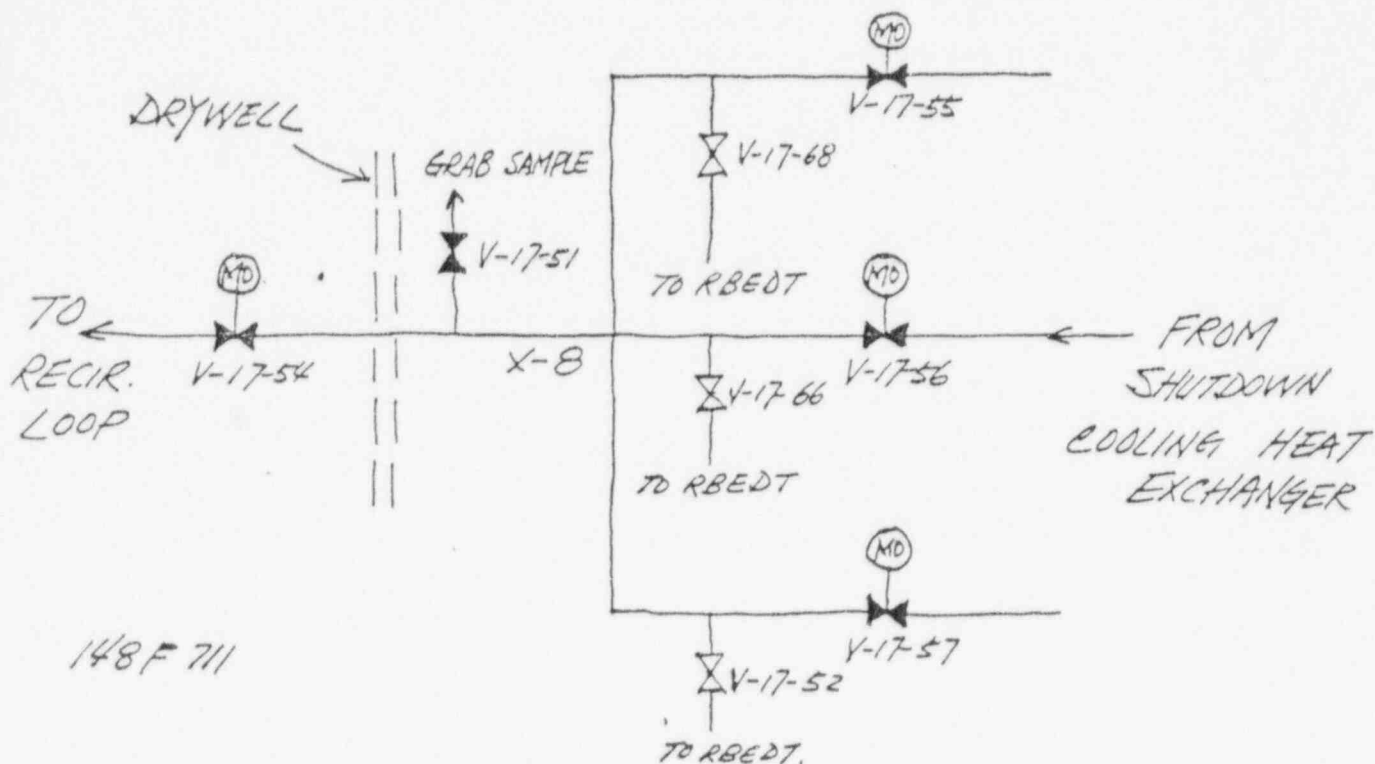


FIGURE G. SHUTDOWN COOLING RETURN

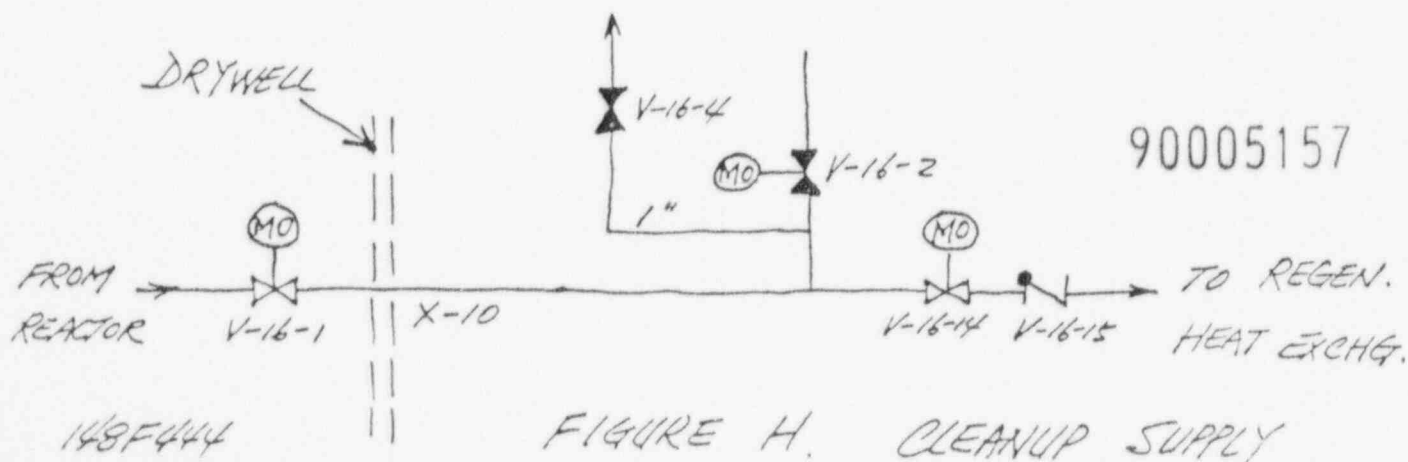


FIGURE H. CLEANUP SUPPLY

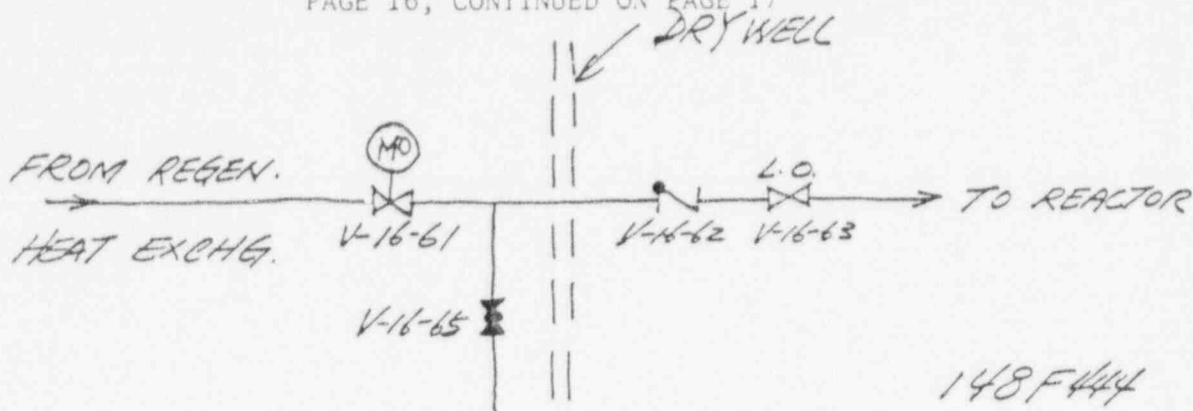


FIGURE I. CLEANUP RETURN

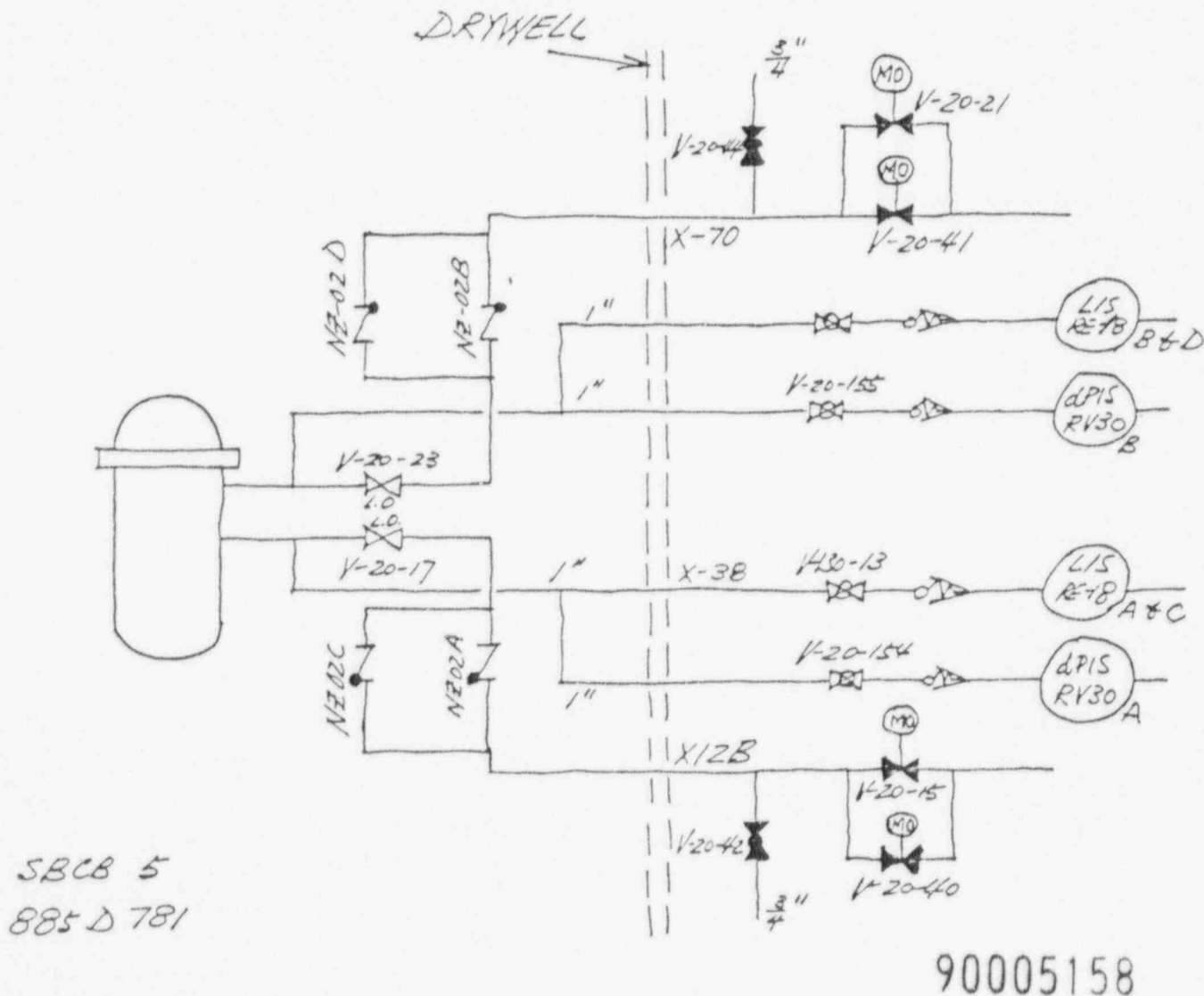


FIGURE J. CORE SPRAY SYSTEM

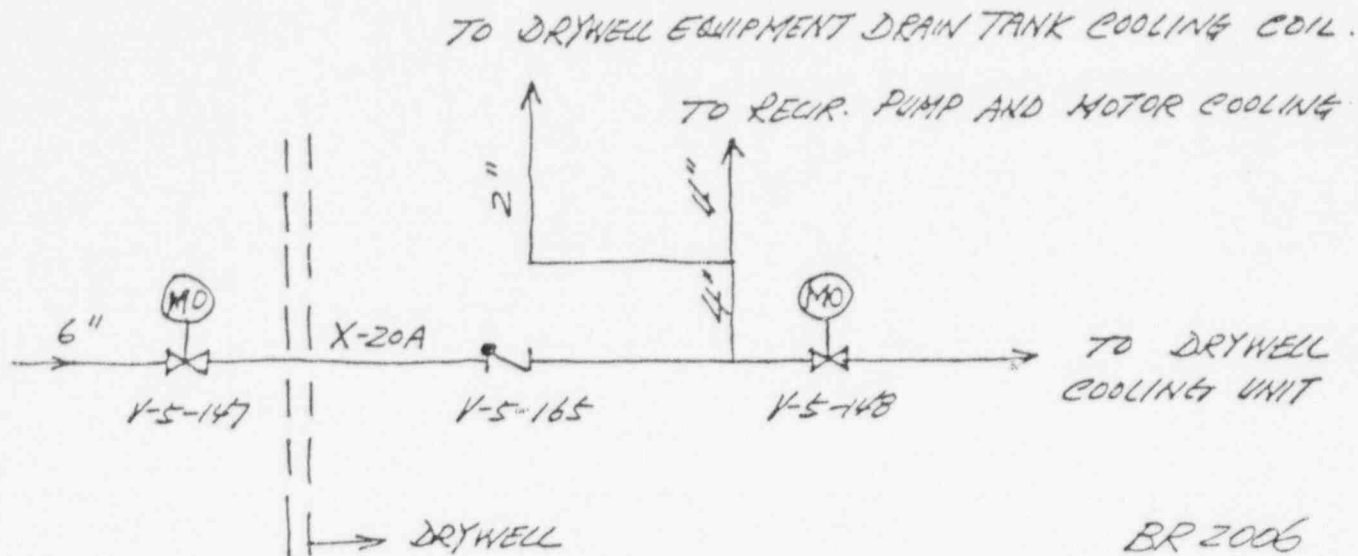


FIGURE K. DRYWELL CLOSED COOLING SUPPLY

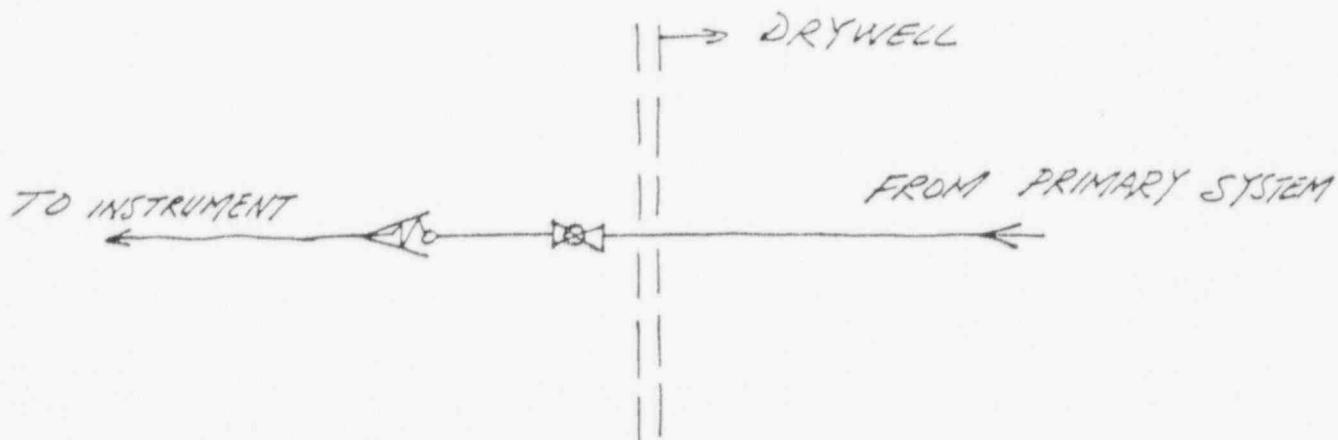


FIGURE L. TYPICAL INSTRUMENT LINE

90005159

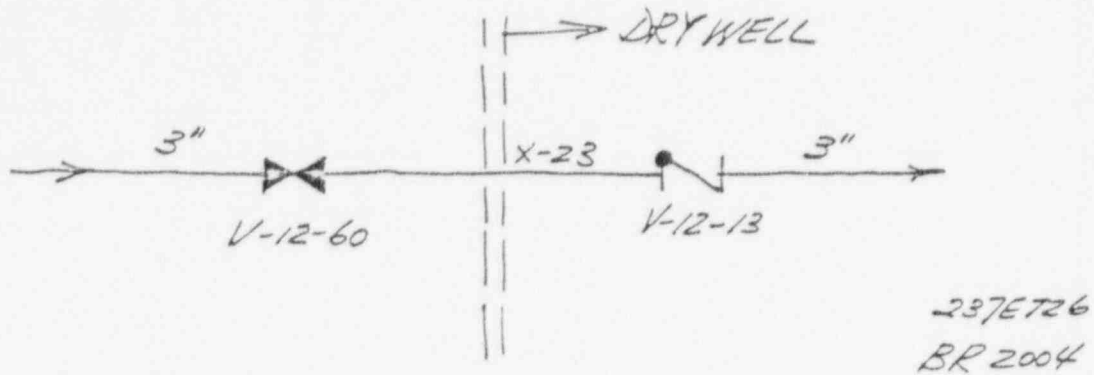


FIGURE M. DEMINERALIZED WATER

237ET26

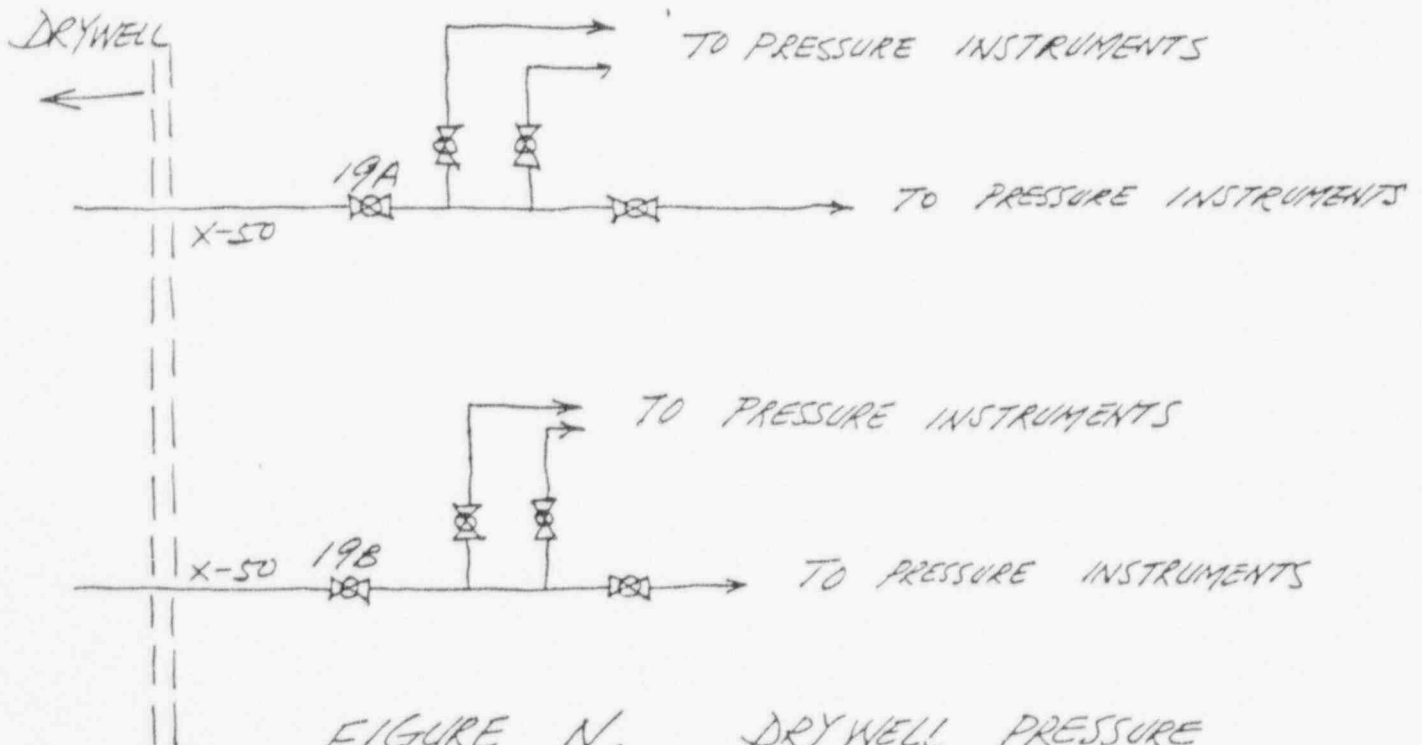


FIGURE N. DRYWELL PRESSURE

90005160

OYSTER CREEK UNIT 1
PRIMARY CONTAINMENT ISOLATION SYSTEM DATA
PAGE 19, CONTINUED ON PAGE 20

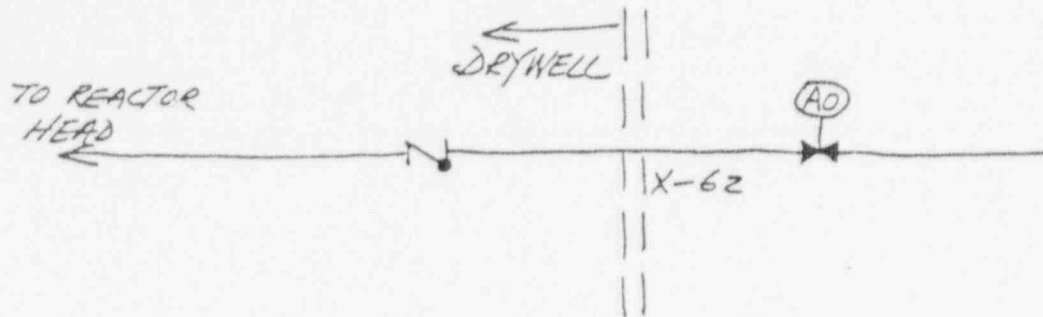


FIGURE O. REACTOR HEAD COOLING.

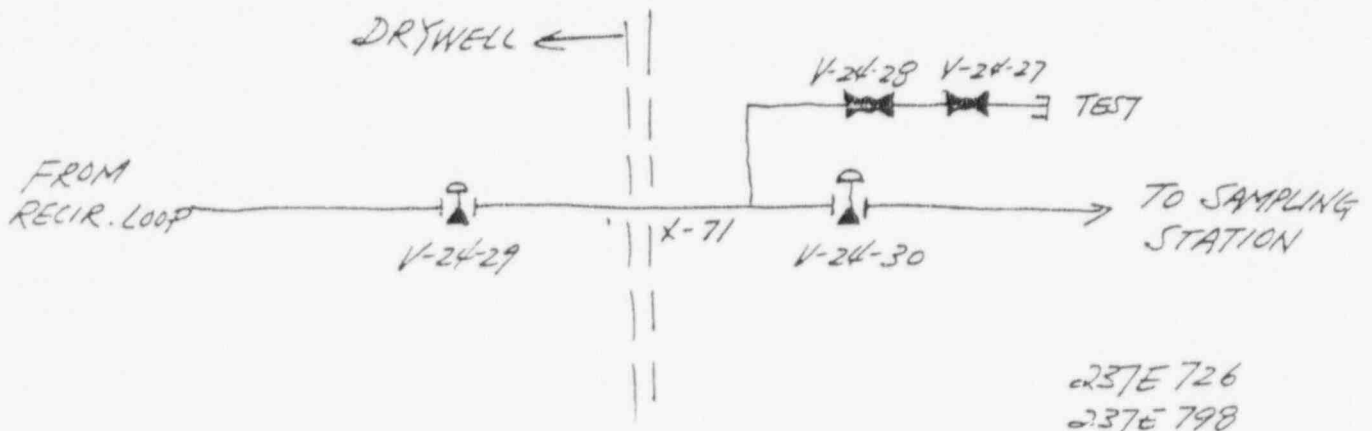


FIGURE P. RECIR. LOOP SAMPLE LINE

90005161

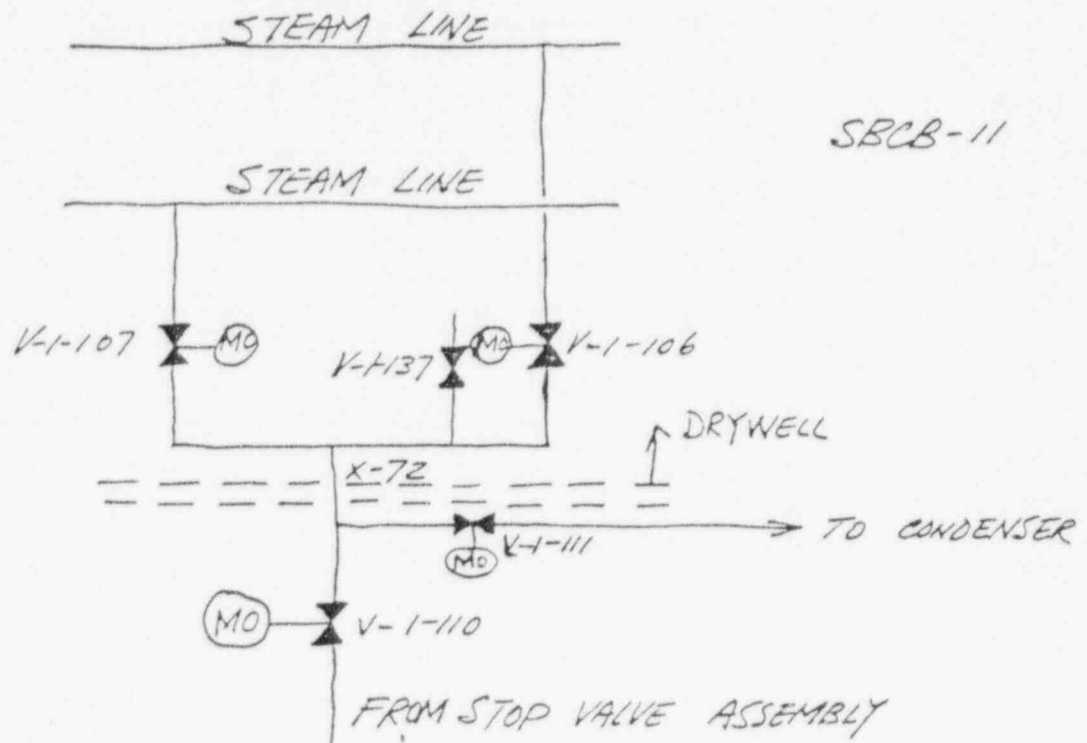


FIGURE Q. STEAM LINE DRAIN

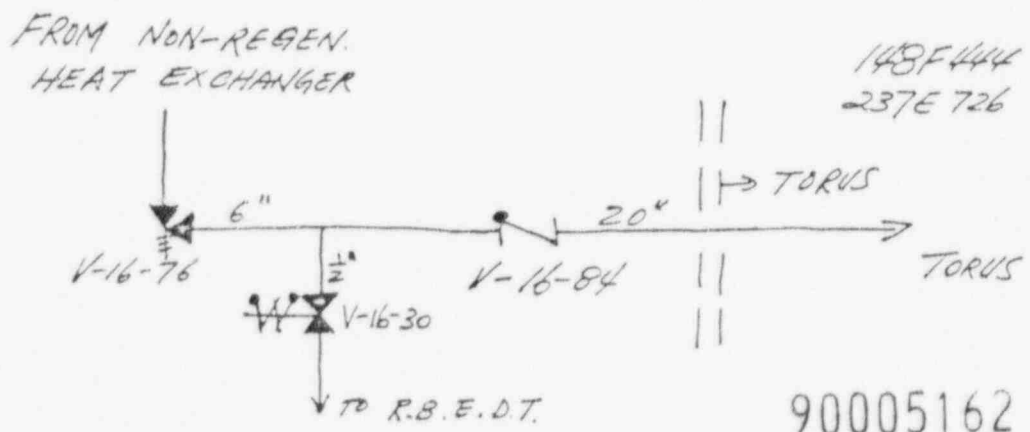


FIGURE R. CLEANUP DEMIN. RELIEF LINE

OYSTER CREEK UNIT 1
PRIMARY CONTAINMENT ISOLATION SYSTEM DATA
PAGE 21, CONTINUED ON PAGE 22

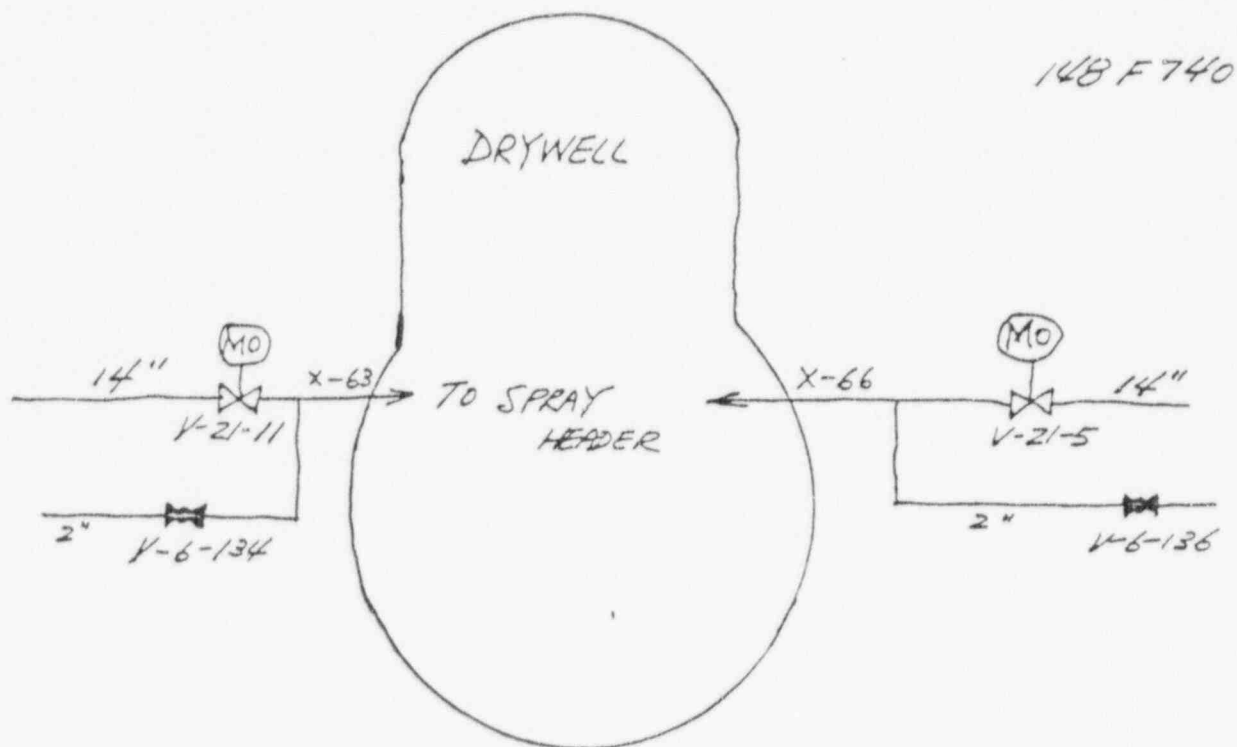


FIGURE 5. CONTAINMENT SPRAY

90005163

148F437

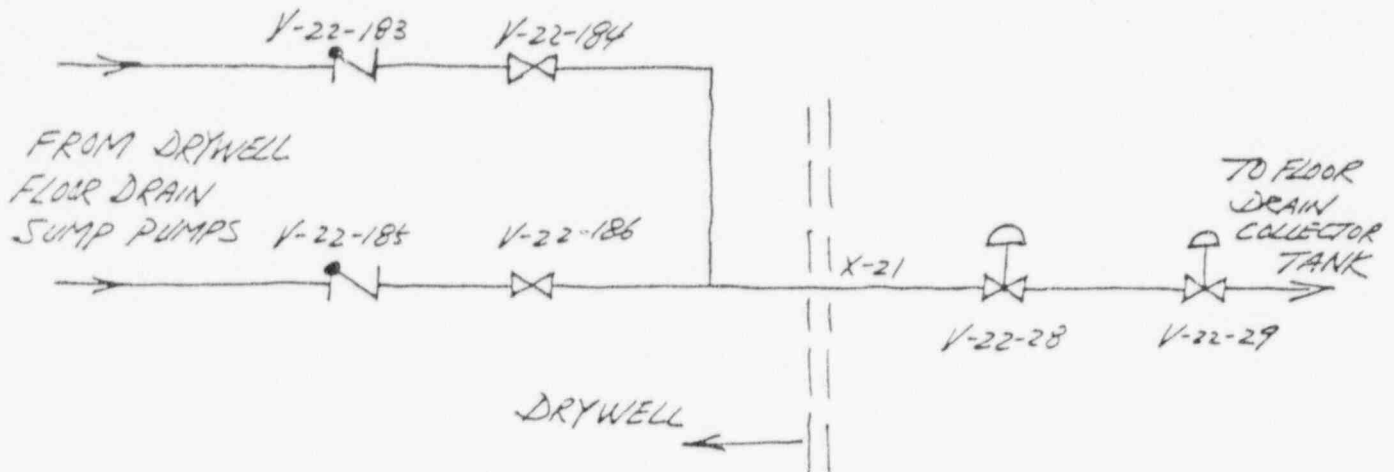
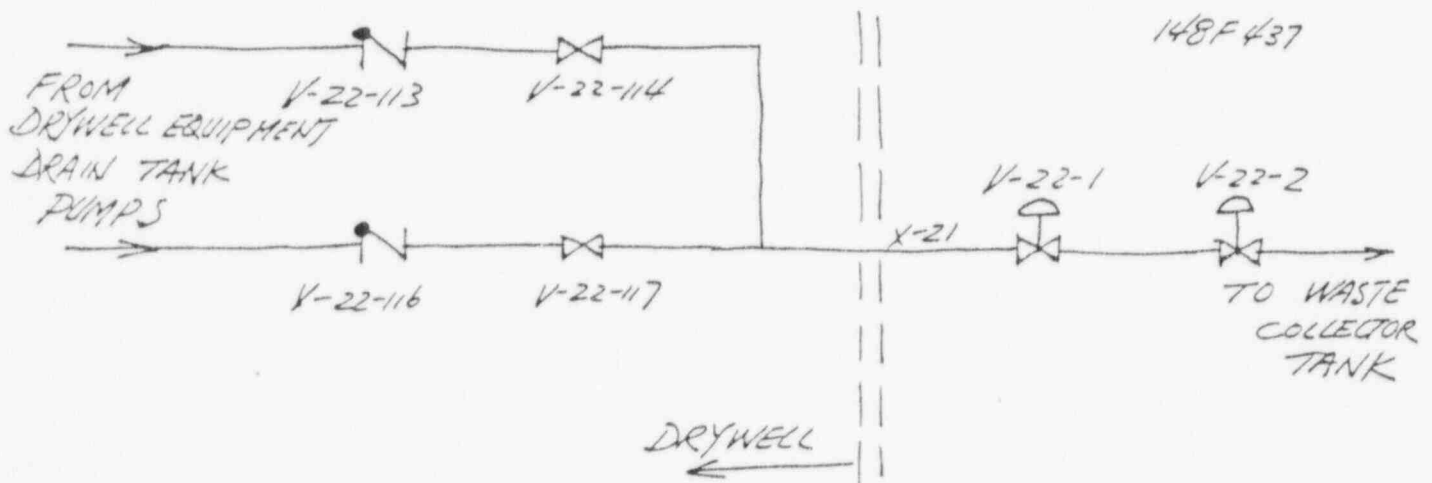


FIGURE T. DRYWELL SUMP DISCHARGE.



148F437

FIGURE U. DRYWELL EQUIPMENT DRAIN TANK DISCHARGE.

90005164

OYSTER CREEK UNIT 1
 PRIMARY CONTAINMENT ISOLATION SYSTEM DATA
 PAGE 23, CONTINUED ON PAGE 24

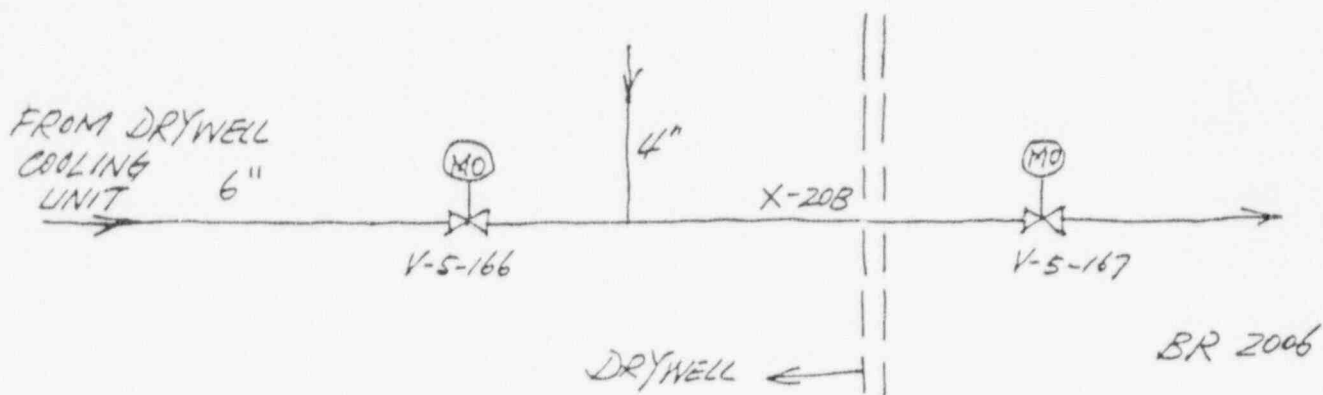


FIGURE V. DRYWELL CLOSED COOLING RETURN.

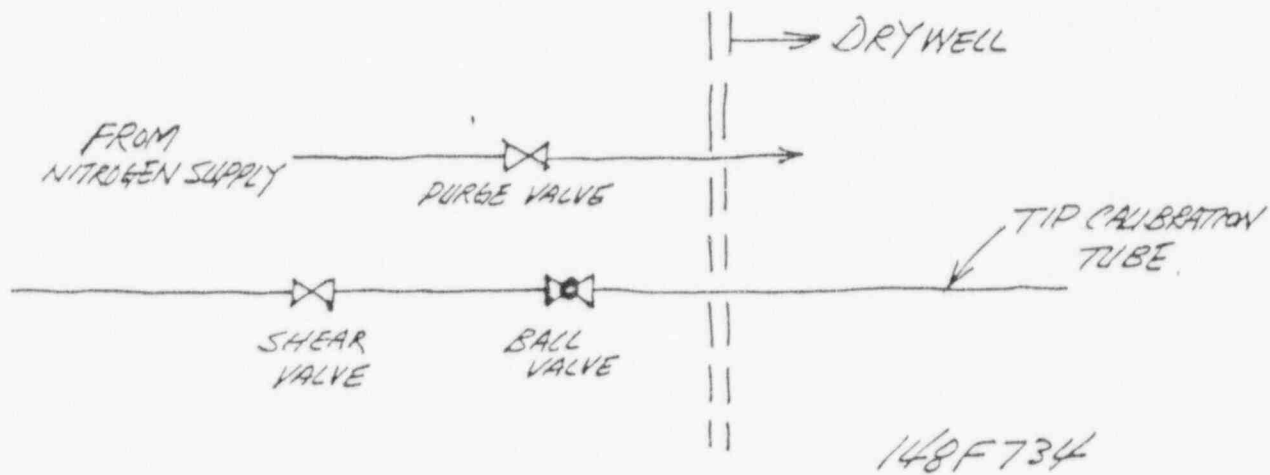


FIGURE W. INCORE CALIBRATION TUBE

90005165

DRYWELL AND TORUS PURGE AND VENT SYSTEM OYSTER CREEK

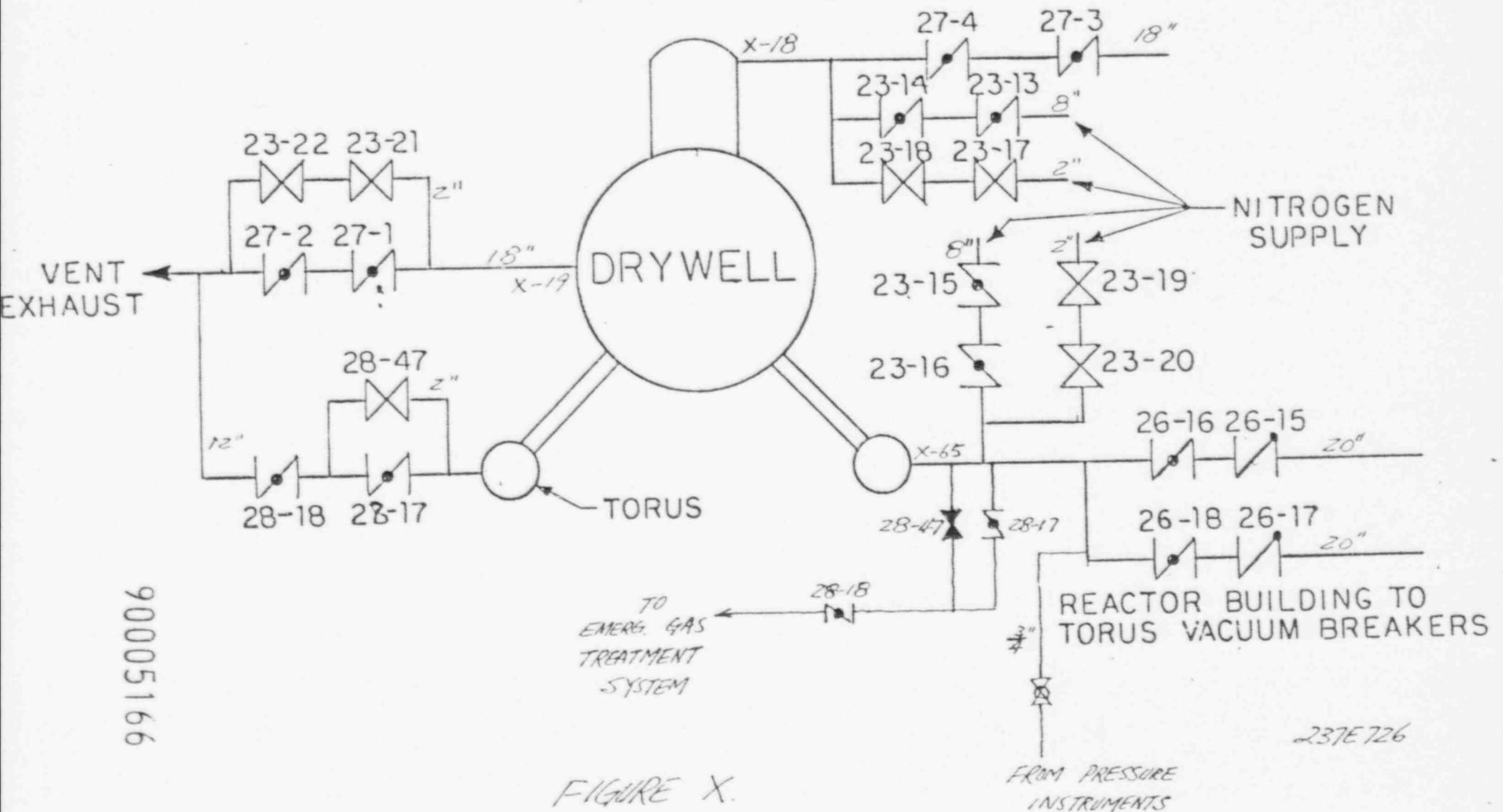
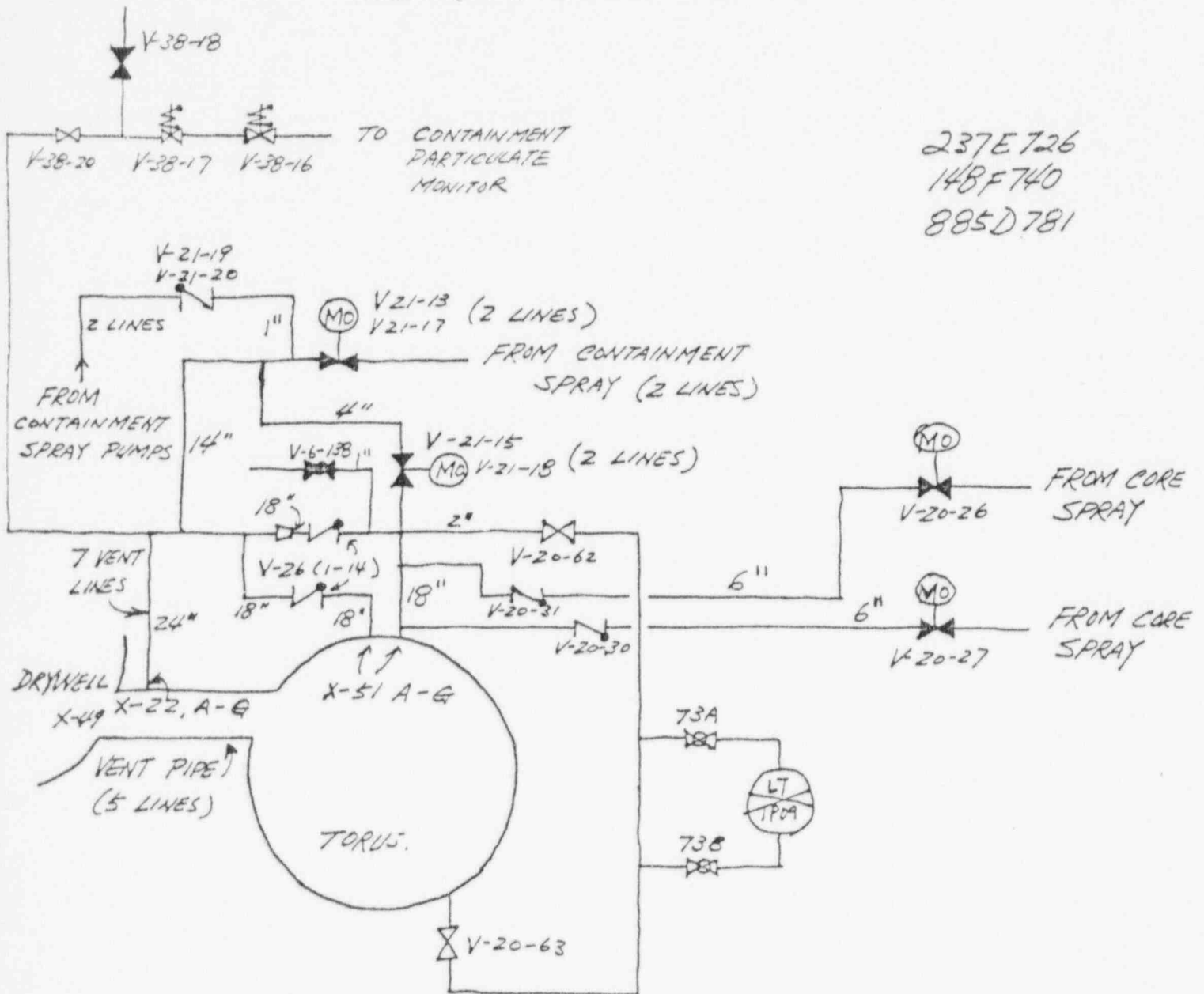


FIGURE X.

90005166

237E726

OYSTER CREEK UNIT 1
 PRIMARY CONTAINMENT ISOLATION SYSTEM DATA
 PAGE 25, CONTINUED ON PAGE 26



237E726
 148F740
 885D781

FIGURE Y. VACUUM BREAKERS + ASSOCIATED PIPING,
 VENT PIPES BETWEEN DRYWELL AND
 TORUS.

90005167

OYSTER CREEK UNIT 1
 PRIMARY CONTAINMENT ISOLATION SYSTEM DATA
 PAGE 26, CONTINUED ON PAGE 27

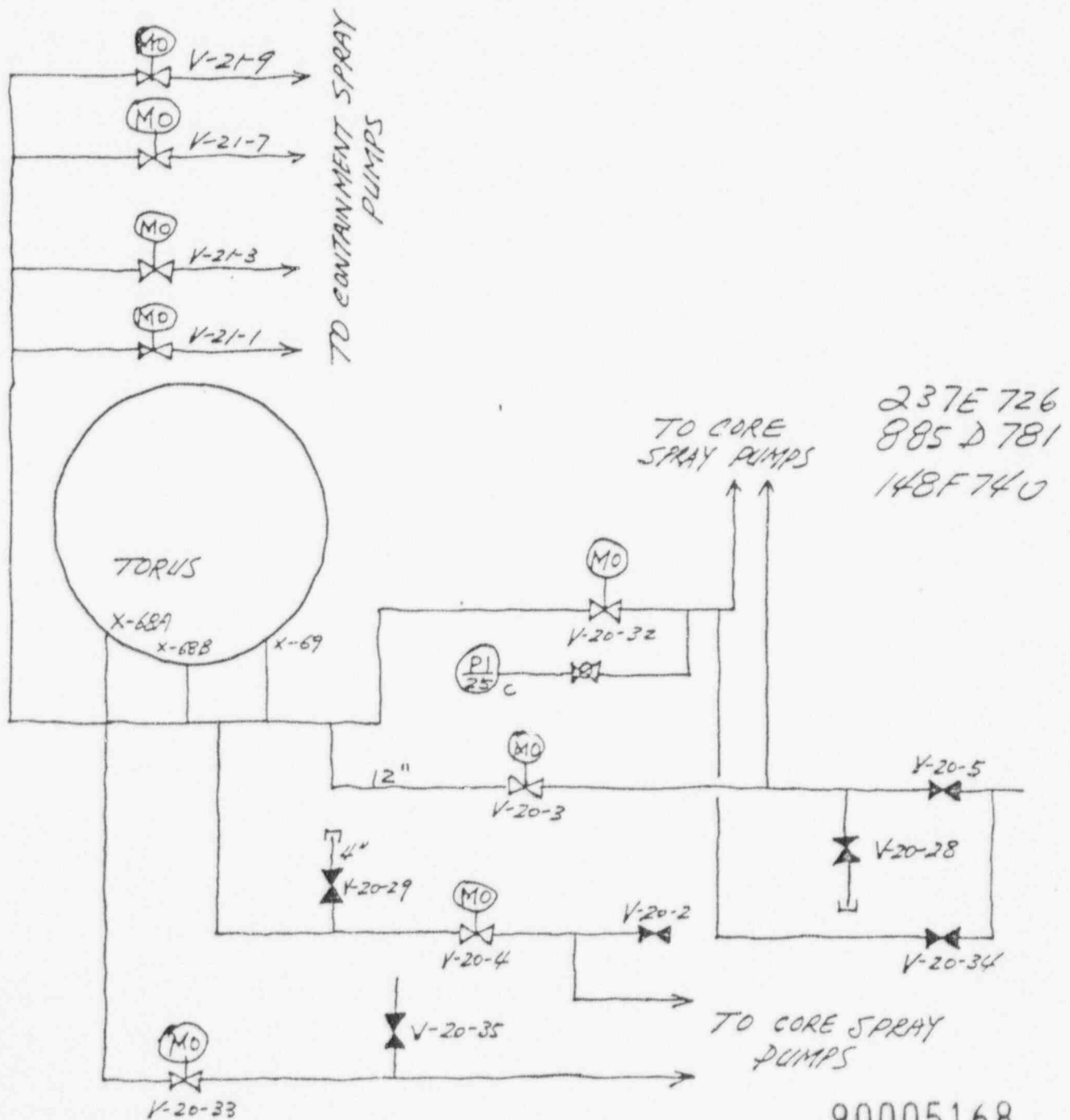


FIGURE E. CORE SPRAY AND CONTAINMENT SPRAY
 SUPPLY FROM TORUS

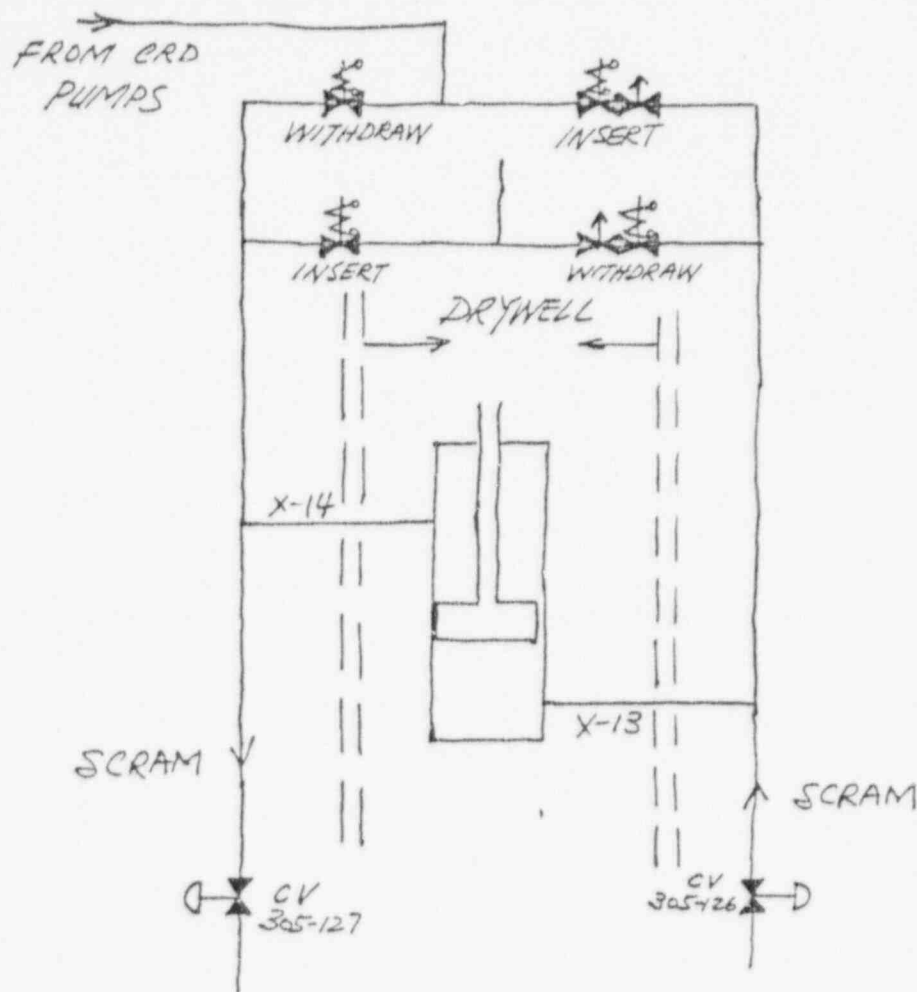


FIGURE AA CONTROL ROD DRIVES.

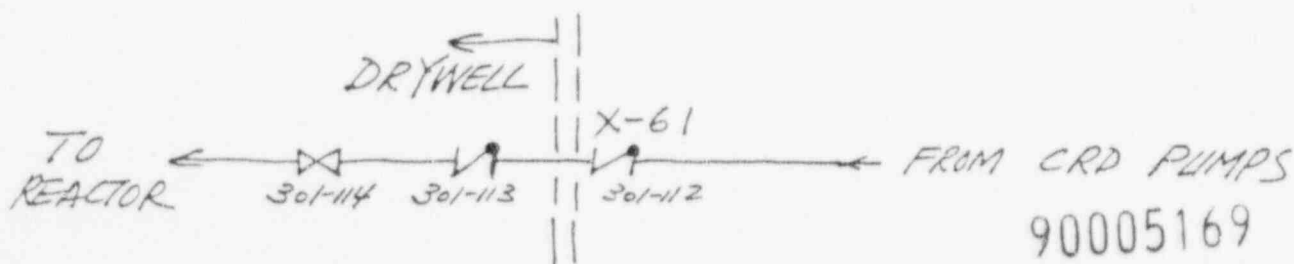
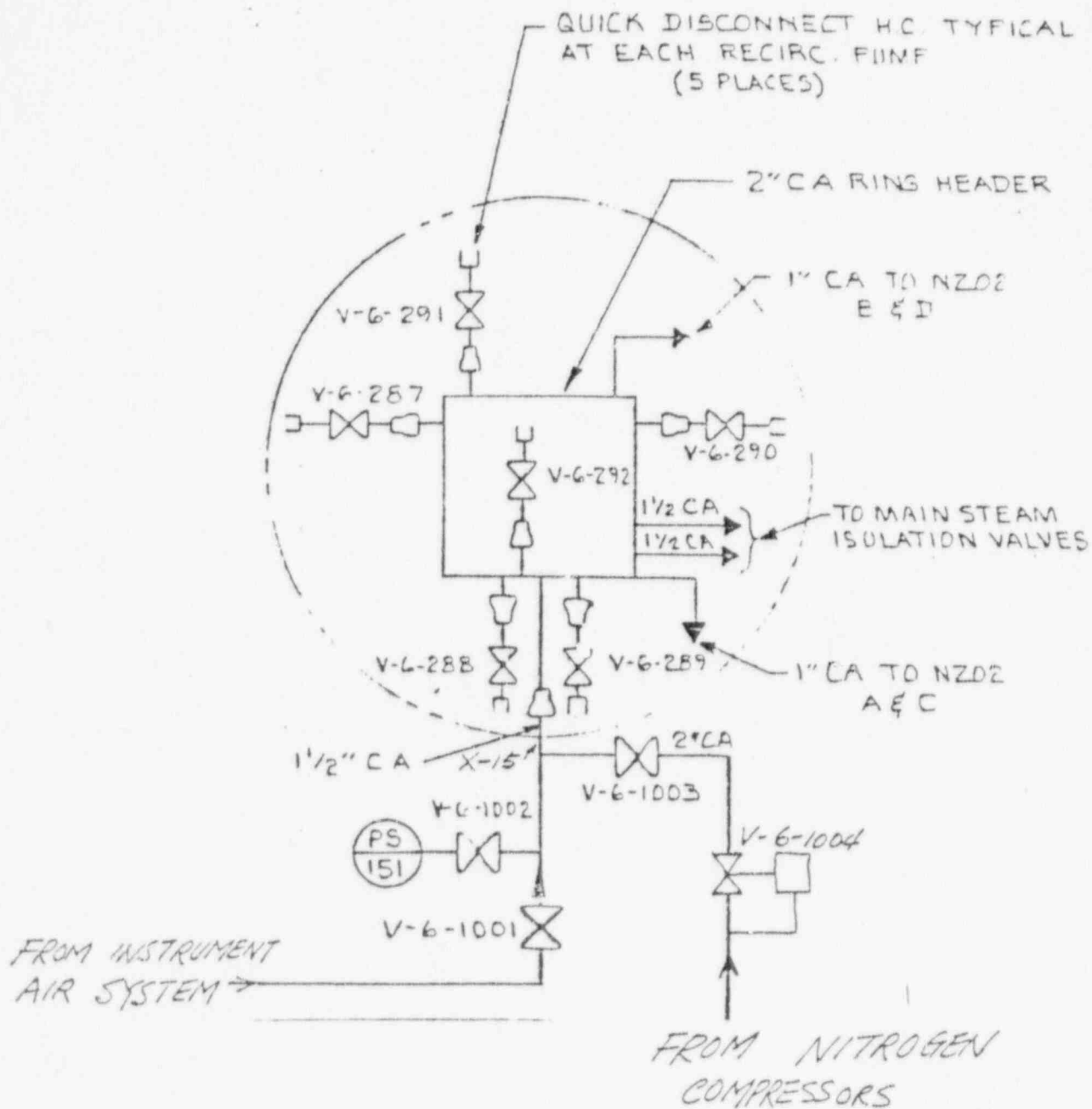


FIGURE BB

706E249

OYSTER CREEK UNIT 1
 PRIMARY CONTAINMENT ISOLATION SYSTEM DATA
 PAGE 28, CONTINUED ON PAGE 29



BR 2013 SH. #2.

FIGURE CC. INSTRUMENT AIR

90005170

OYSTER CREEK UNIT 1
 PRIMARY CONTAINMENT ISOLATION SYSTEM DATA
 PAGE 29, FINAL

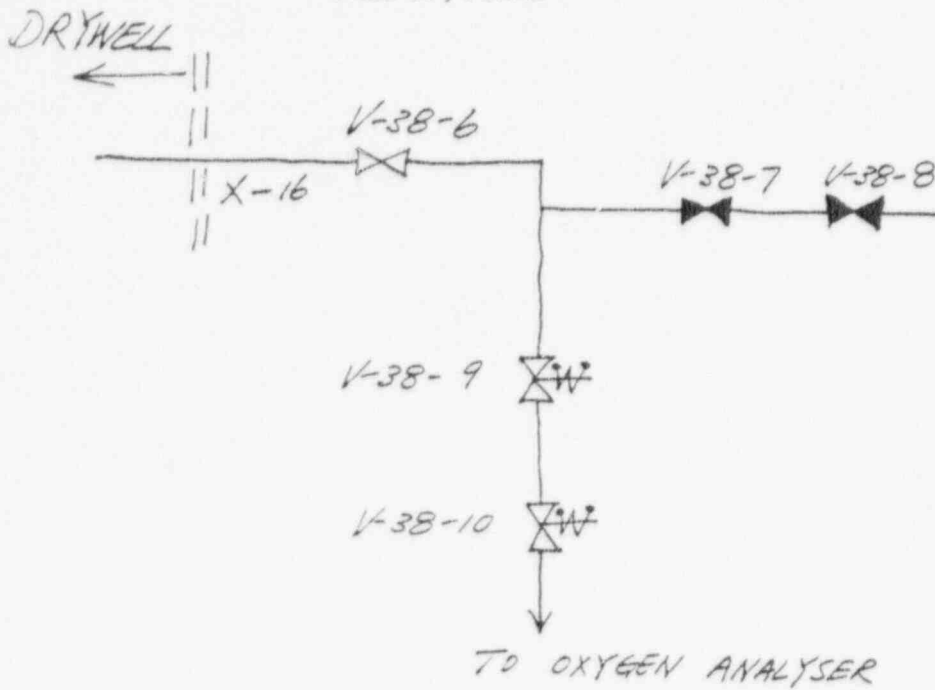


FIGURE DD. DRYWELL OXYGEN SAMPLE

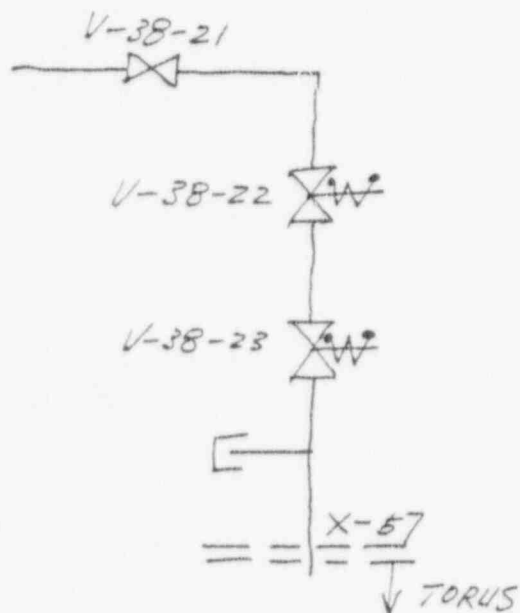


FIGURE EE. TORUS OXYGEN SAMPLE.

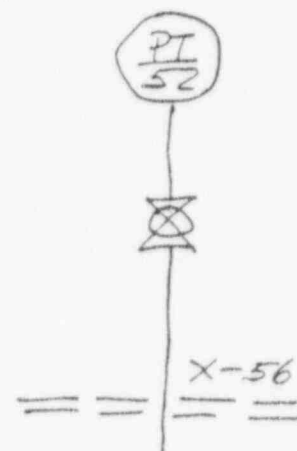


FIGURE FF.
 TORUS PRESSURE

90005171