

**Florida  
Power**  
CORPORATION

April 15, 1980

File: 3-0-3-a-3

Mr. Harold R. Denton  
Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: Crystal River 3  
Docket No. 50-302  
Operating License No. DPR-72  
NUREG-0578, Short-term Lessons Learned Recommendations  
Item 2.1.6.a - Systems Integrity for High Radioactivity

Dear Mr. Denton:

This letter supplements Florida Power Corporation's letters of October 17, 1979, November 17, 1979, January 11, 1980, February 6, 1980, February 8, 1980, February 11, 1980, February 12, 1980, and February 15, 1980, concerning the implementation of NUREG-0578, Short-term Lessons Learned Recommendations, and the Commission's January 2, 1980 Show Cause Order.

The following information is being provided in response to Attachment 5, Item 3, of the above referenced letter dated February 15, 1980.

Item 3                    A review of NCORs has been completed and no other incidents similar to the North Anna Unit 1 incident were found.

Items 3.b.a. &            A review of the overflow/overpressure protection for  
3.b.b.                    tanks and systems containing or potentially containing radioactive fluids (liquids and gas) has been performed. The results of the review are contained in Attachments 1 and 2 to this letter.

Attachment 1 lists the tanks which are in the above category as well as their means for overpressure protection.

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Attachment 2 lists the relief valves associated with the systems containing or potentially containing radioactive fluid as well as the relief flow path and other pertinent information.

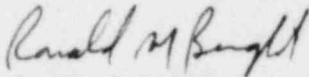
Item 3.b.c. A design review of the Miscellaneous Waste Storage Tank has been conducted to determine the feasibility of reducing the possibility of an overflow to the Auxiliary Building. Attachment 3 depicts three alternative methods for overflow control of the Miscellaneous Waste Storage Tank which are presently being studied by Florida Power Corporation.

Item 3.b.d. The Auxiliary Building sump design employs a typical method of airborne activity control, i.e., air flow from a lesser to a higher potential activity area. We are reviewing a more positive means of airborne activity control such as installing a door and backdraft damper in the doorway from the MWST cubicle as shown in Attachment 4.

Should you have any questions concerning the above items, please contact this office.

Very truly yours,

FLORIDA POWER CORPORATION



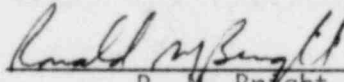
R. M. Bright  
Acting Manager  
Nuclear Support Services

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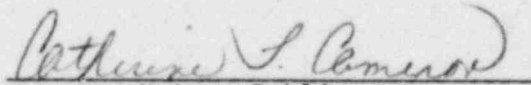
Attachments

STATE OF FLORIDA  
COUNTY OF PINELLAS

R. M. Bright states that he is the Acting Manager, Nuclear Support Services, of Florida Power Corporation; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission the information attached hereto; and that all such statements made and matters set forth therein are true and correct to the best of his knowledge, information and belief.

  
\_\_\_\_\_  
R. M. Bright

Subscribed and sworn to before me, a Notary Public in and for the State and County above named, this 15th day of April, 1980.

  
\_\_\_\_\_  
Notary Public

Notary Public, State of Florida at Large,  
My Commission Expires: August 8, 1983

Cameron(Notary)

Tank - Overpressure Protection, Flow Path and Method

No.	Tank-Descriptive Title	Relief Method	Set Pressure	Immediate Disposition	Intermediate Holdup	Final Disposition	Ref.
1	Reactor Coolant Drain Tank	RV Rupture Disc	100 psi 110 psi	R.B. Sump R.B. Floor	N/A R.B. Sump	Processing Recycle	683
2	Core Flood Tank	RV	700 psi	R.B. Atmo- sphere	-	Release to Environs	
3	Decay Heat Closed Cooling Surge Tanks	RV	15 psi	A.B. Vent Header	-	Release to Environs	632
4	Nuclear Service Closed Cooling Surge Tanks	RV	100 psi	A.B. Vent Header	-	Release to Environs	694/605
5	Makeup Tank	RV	100 psi	Waste Gas Surge Tank	Waste Gas Compressor	Waste Gas Tank	661/692/ 693
6	Miscellaneous Waste Storage Tank	Overflow	-	Floor Drain System	Aux. Bldg. Sump	Processing	681
7	Waste Neutralizer Tank	Overflow	-	Floor Drain System	Aux. Bldg. Sump	Processing	680/613
8	Condensate Waste Storage Tanks	Overflow	-	Local Container	-	-	698
9	Boric Acid Tanks	Overflow	-	Local Container	-	-	698
10	Reactor Coolant Bleed Tanks	Overflow	-	Floor Drain System	Aux. Bldg. Sump	Processing	682

No.	Tank-Descriptive Title	Relief Method	Set Pressure	Immediate Disposition	Intermediate Holdup	Final Disposition	Ref.
11	Waste Gas Surge Tank	RV	25 psi	A.B. Vent Header	-	Release to Environs	
12	Spent Resin Storage Tank	Overflow	-	Floor Drain System	Aux. Bldg. Sump	Processing	685
13	Recycle Evaporator Package Tank	Overflow	-	Floor Drain System	Aux. Bldg. Sump	Processing	698
14	Miscellaneous Evaporator Package Tank	Overflow	-	Floor Drain System	Aux. Bldg. Sump	Processing	698
15	Waste Gas Decay Tanks	RV	125 psi	A.B. Vent Header	-	Release to Environs	694
16	Evaporator Condensate Storage Tanks	Overflow	-	Floor Drain System	Aux. Bldg. Sump	Processing	682
17	Laundry and Hot Shower Tanks	Overflow	-	L&HS Sump	-	L&HS Tank/Processing	680
18	Borated Water Storage Tank	Overflow	-	Aux. Bldg. Sump	-	Processing	302-641

ATTACHMENT 2

Radioactive Fluid and Gas  
Systems Overpressure  
Protection Method and  
Flow Path



<u>Valve Number</u>	<u>Size</u>	<u>Set Pressure</u>	<u>Immediate Disposition</u>	<u>Intermediate Hold-up</u>	<u>Final Disposition</u>	<u>Flow Diag. Ref.</u>	<u>Remarks</u>
SWV 62	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 175F	3/4 x 1	200 psig	Floor	Nuc. Ser. Area Sump	Release to Environs	302-601	
SWV 176F	3/4 x 1	200 psig	Floor	Nuc. Serv. Area Sump	Release to Environs	302-601	
SWV 177F/ 178F	3/4 x 1	200 psig	Floor	Nuc. Ser. Area Sump	Release to Environs	302-601	
SWV 267	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 268	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 287	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 288	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 289	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 362	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 364	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 365	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 367	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 368	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	

<u>Valve Number</u>	<u>Size</u>	<u>Set Pressure</u>	<u>Immediate Disposition</u>	<u>Intermediate Hold-up</u>	<u>Final Disposition</u>	<u>Flow Diag. Ref.</u>	<u>Remarks</u>
SWV 369	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 370	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 371	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 372	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 373	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 374	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 375	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 376	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 377	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 378	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 379	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 380	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 381	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 382	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	

SYSTEM: Nuclear Service Closed Cycle Cooling



<u>Valve Number</u>	<u>Size</u>	<u>Set Pressure</u>	<u>Immediate Disposition</u>	<u>Intermediate Hold-up</u>	<u>Final Disposition</u>	<u>Flow Diag. Ref.</u>	<u>Remarks</u>
SWV 383	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 384	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 385	1/2 x 1/2	200 psig	Floor	R.B. Sump	Processing	302-601	
SWV 386	1/2 x 1/2	325 psig	Floor	R.B. Sump	Processing	302-601	
SWV 387	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 388	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 389	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 390	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 391	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 392	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 393	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 394	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 395	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 396	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	

SYSTEM: Nuclear Service Closed Cycle Cooling

<u>Valve Number</u>	<u>Size</u>	<u>Set Pressure</u>	<u>Immediate Disposition</u>	<u>Intermediate Hold-up</u>	<u>Final Disposition</u>	<u>Flow Diag. Ref.</u>	<u>Remarks</u>
SWV 397	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 398	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 399	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 400	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 403	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 404	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 405	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 406	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	
SWV 407	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-601	

<u>Valve Number</u>	<u>Size</u>	<u>Jet Pressure</u>	<u>Immediate Disposition</u>	<u>Intermediate Hold-up</u>	<u>Final Disposition</u>	<u>Flow Diag. Ref.</u>	<u>Remarks</u>
SFV 57F	3/4 x 1	125 psig	Floor Drain System	Aux. Bldg. Sump	Processing	302-621	
SFV 58F	3/4 x 1	125 psig	Floor Drain System	Aux. Bldg. Sump	Processing	302-621	
SFV 59F	3/4 x 1	125 psig	LWDS	-	Processing	302-621	
SFV 73F	3/4 x 1	125 psig	LWDS	-	Processing	302-621	
SFV 80F	3/4 x 1	125 psig	LWDS	-	Processing	302-621	
SFV 123	1/2 x 1/2	125 psig	Floor Drain System	Aux. Bldg. Sump	Processing	302-621	
SFV 124	1/2 x 1/2	125 psig	Floor Drain System	Aux. Bldg. Sump	Processing	302-621	

SYSTEM: Spent Fuel Cooling

<u>Valve Number</u>	<u>Size</u>	<u>Jet Pressure</u>	<u>Immediate Disposition</u>	<u>Intermediate Hold-up</u>	<u>Final Disposition</u>	<u>Flow Diag. Ref.</u>	<u>Remarks</u>
DCV 9F	3/4 x 1	100 psig	Floor	Nuc. Serv. Area Sump	Release to Environs	302-631	
DCV 11F	3/4 x 1	100 psig	Floor	Nuc. Serv. Area Sump	Release to Environs	302-631	
DCV 57	1/2 x 1/2	100 psig	Floor	Nuc. Serv. Area Sump	Release to Environs	302-631	
DCV 58	1/2 x 1/2	100 psig	Floor	Nuc. Serv. Area Sump	Release to Environs	302-631	
DCV 103	1/2 x 1/2	100 psig	Floor	Nuc. Serv. Area Sump	Release to Environs	302-631	
DCV 104	1/2 x 1/2	100 psig	Floor	Nuc. Serv. Area Sump	Release to Environs	302-631	
DCV 105	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-631	
DCV 106	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-631	
DCV 107	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-631	
DCV 108	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-631	
DCV 109	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-631	
DCV 110	1/2 x 1/2	200 psig	Floor	Aux. Bldg. Sump	Processing	302-631	
DCV 111	1/2 x 1/2	100 psig	Floor	Nuc. Serv. Area Sump	Release to Environs	302-631	
DCV 112	1/2 x 1/2	100 psig	Floor	Nuc. Serv. Area Sump	Release to Environs	302-631	

<u>Valve Number</u>	<u>Size</u>	<u>Set Pressure</u>	<u>Immediate Disposition</u>	<u>Intermediate Hold-up</u>	<u>Final Disposition</u>	<u>Flow Diag. Ref.</u>	<u>Remarks</u>
DCV 113	1/2 x 1/2	100 psig	Floor	Decay Heat Pit Sump	Processing	302-631	
DCV 114	1/2 x 1/2	100 psig	Floor	Decay Heat Pit Sump	Processing	302-631	

SYSTEM: Decay Heat Closed Cycle Cooling

<u>Valve Number</u>	<u>Size</u>	<u>Set Pressure</u>	<u>Immediate Disposition</u>	<u>Intermediate Hold-up</u>	<u>Final Disposition</u>	<u>Flow Diag. Ref.</u>	<u>Remarks</u>
DHV 17F	3/4 x 1	450 psig	Floor	Decay Heat Pit Sump	Processing	302-641	
DHV 28F	3/4 x 1	450 psig	Floor	Decay Heat Pit Sump	Processing	302-641	
DHV 37F	3/4 x 1	300 psig	Floor Drain System	R.B. Sump	Processing	302-641	
DHV 38F	3/4 x 1	300 psig	Floor Drain System	R.B. Sump	Processing	302-641	
DHV 44F	3/4 x 1	300 psig	Floor Drain System	R.B. Sump	Processing	302-641	

SYSTEM: Decay Heat Removal



<u>Valve Number</u>	<u>Size</u>	<u>Set Pressure</u>	<u>Immediate Disposition</u>	<u>Intermediate Hold-up</u>	<u>Final Disposition</u>	<u>Flow Diag. Ref.</u>	<u>Remarks</u>
RCV 8F	2½ x 6	2500 psig	R.C.D.T.	-	Processing	302-651	
RCV 9F	2½ x 6	2500 psig	R.C.D.T.	-	Processing	302-651	
RCV 10F	2½ x 4	2300 psig	R.C.D.T.	-	Processing	302-651	

SYSTEM: Reactor Coolant

<u>Valve Number</u>	<u>Size</u>	<u>Set Pressure</u>	<u>Immediate Disposition</u>	<u>Intermediate Hold-up</u>	<u>Final Disposition</u>	<u>Flow Diag. Ref.</u>	<u>Remarks</u>
MUV 61F	3/4 x 1	150 psig	LWDS	-	Processing	302-661	
MUV 67F	3/4 x 1	150 psig	LWDS	-	Processing	302-661	
MUV 71F	3/4 x 1	150 psig	LWDS	-	Processing	302-661	
MUV 75F	3 x 4	150 psig	MUT	-	Reuse	302-661	
MUV 76F	2½ x 4	150 psig	MWST	-	Processing	302-661	
MUV 85F	3/4 x 1	150 psig	Floor Drain System	Aux. Bldg. Sump	Processing	302-661	
MUV 86F	3/4 x 1	150 psig	Floor Drain System	Aux. Bldg. Sump	Processing	302-661	
MUV 98F	3/4 x 1	125 psig	Floor Drain System	Aux. Bldg. Sump	Processing	302-661	
MUV 99F	3/4 x 1	125 psig	Floor Drain System	Aux. Bldg. Sump	Processing	302-661	
MUV 122F	3/4 x 1	150 psig	Floor Drain System	Aux. Bldg. Sump	Processing	302-661	
MUV 132F	3/4 x 1	150 psig	Floor Drain System	Aux. Bldg. Sump	Processing	302-661	Spare per MVL 3/10/80
MUV 137	3 x 4	120 psig	LWDS	-	Processing	302-661	
MUV 150	1½ x 1½	150 psig	Floor Drain System	Aux. Bldg. Sump	Processing	302-661	
MUV 178	1½ x 2½	150 psig	Floor Drain	Aux. Bldg.	Processing	302-661	

SYSTEM: Make-up and Purification

<u>Valve Number</u>	<u>Size</u>	<u>Set Pressure</u>	<u>Immediate Disposition</u>	<u>Intermediate Hold-up</u>	<u>Final Disposition</u>	<u>Flow Diag. Ref.</u>	<u>Remarks</u>
MUV 248	1½ x 1½	150 psig	MWST	-	Processing	302-661	
MUV 249	1½ x 1½	150 psig	MWST	-	Processing	302-661	

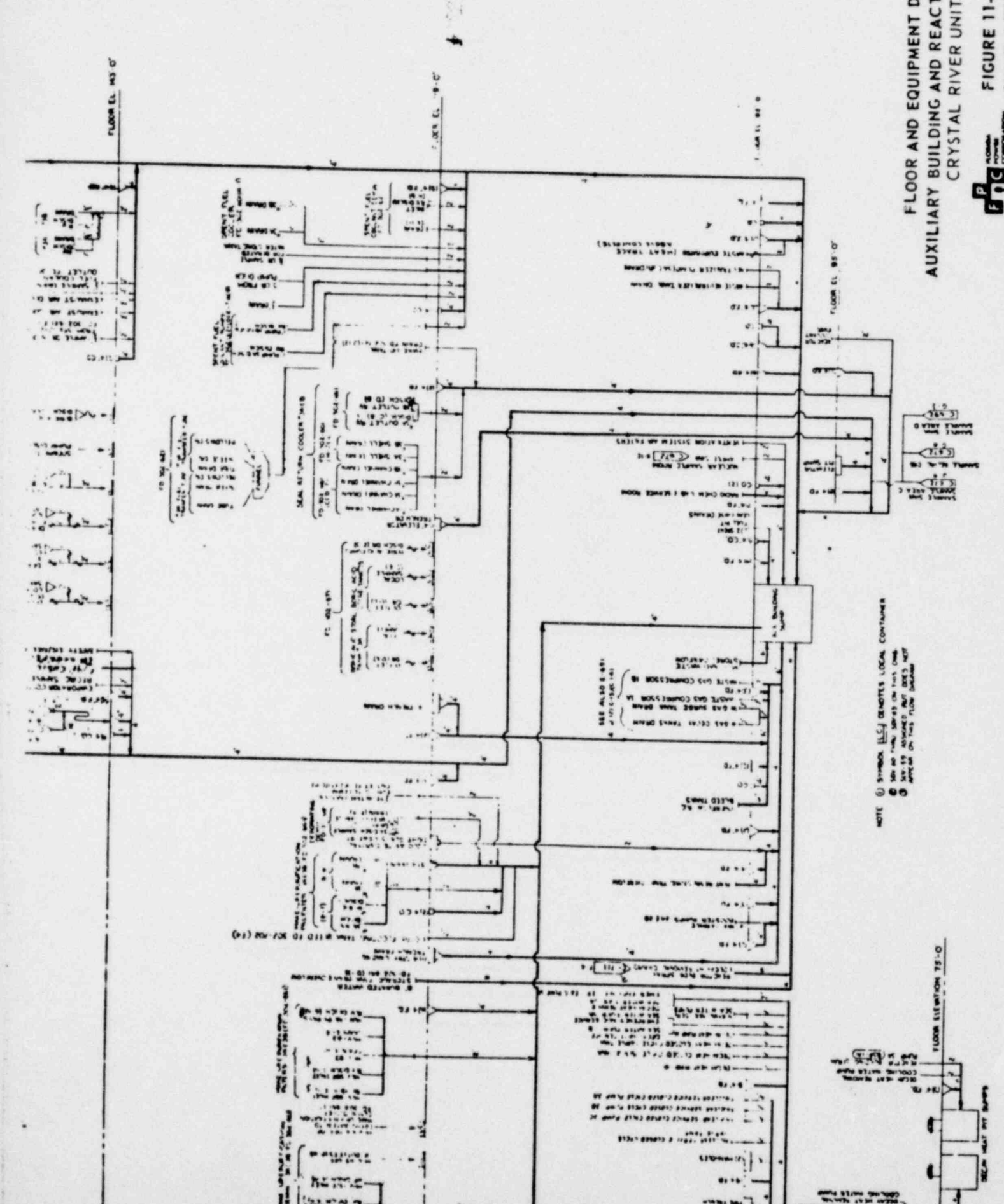
SYSTEM: Make-up and Purification

<u>Valve Number</u>	<u>Size</u>	<u>Set Pressure</u>	<u>Immediate Disposition</u>	<u>Intermediate Hold-up</u>	<u>Final Disposition</u>	<u>Flow Diag. Ref.</u>	<u>Remarks</u>
WDV 445F	1/2 x 1	Set in Field	WGST	WGT Compressor	Release to Environs	302-691	Furnished by NASH
WDV 446F	1/2 x 1	Set in Field	WGST	WGT Compressor	Release to Environs	302-691	Furnished by NASH
WDV 447F	1 x 2	15 psig	A.B. Vent Header	-	Release to Environs	302-691	
WDV 513F	1/2 x 1/2	> 100 psig	WG Compressor	-	Release to Environs	302-692	
WDV 540F	1/2 x 1/2	> 100 psig	WG Compressor	-	Release to Environs	302-692	
WDV 541F	1/2 x 1/2	100 psig	WG Compressor	-	Release to Environs	302-692	
WDV 542F	1/2 x 1/2	100 psig	WG Compressor	-	Release to Environs	302-692	

SYSTEM: Gas Waste Disposal/Sampling

EV  
DRAIN  
OVERFLOW  
F. 21  
F. 22  
IN LINE

FLOOR EL. 143' 0"  
FLOOR EL. 149' 0"  
FLOOR EL. 155' 0"



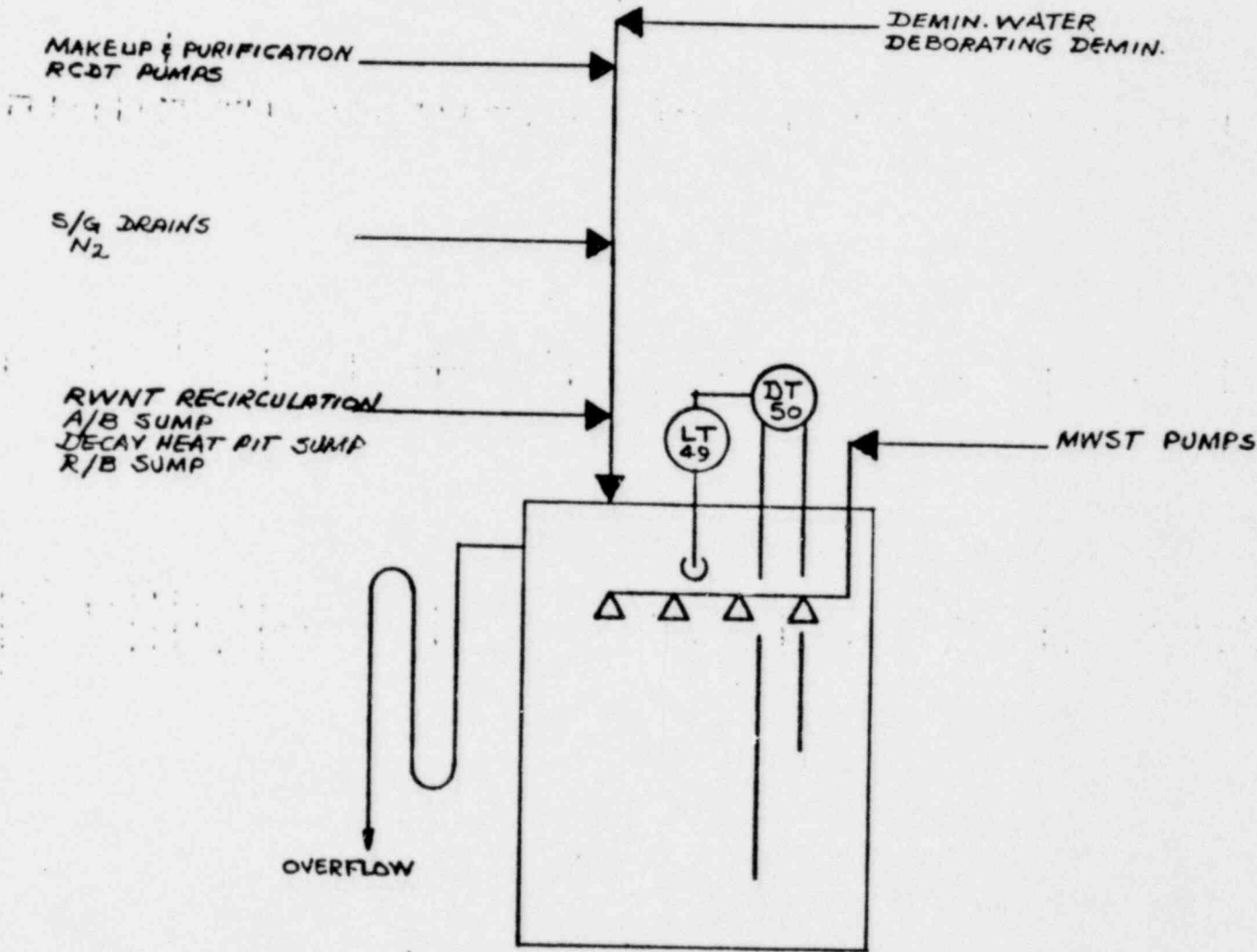
FLOOR AND EQUIPMENT DRAINS  
AUXILIARY BUILDING AND REACTOR BUILDING  
CRYSTAL RIVER UNIT 3

ATTACHMENT 3

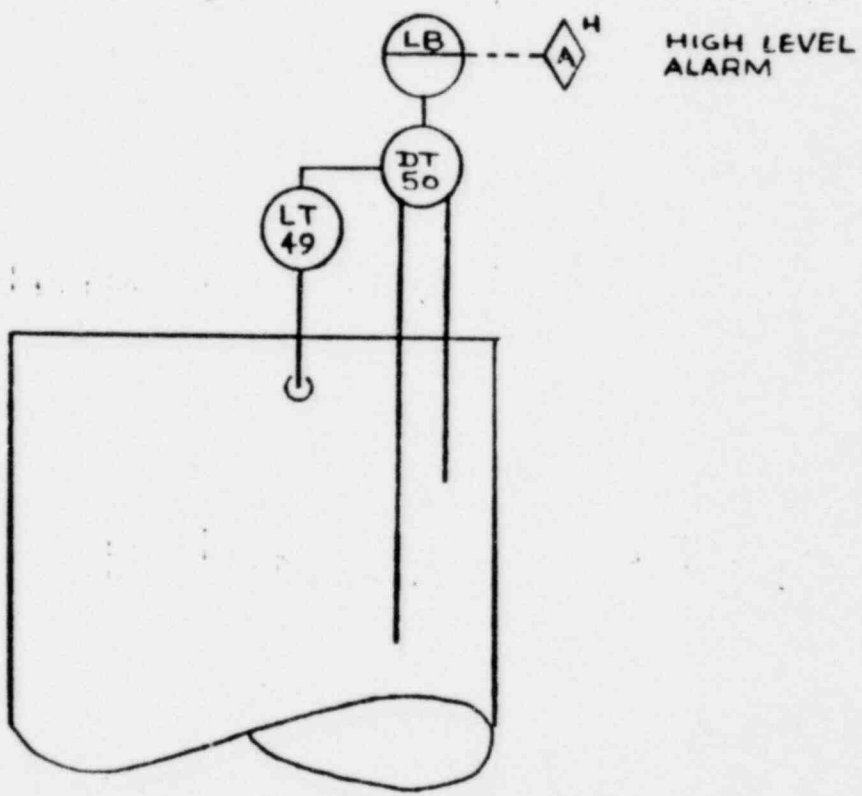
MWST  
Design Alternative  
to Reduce or Prevent  
Tank Overflow



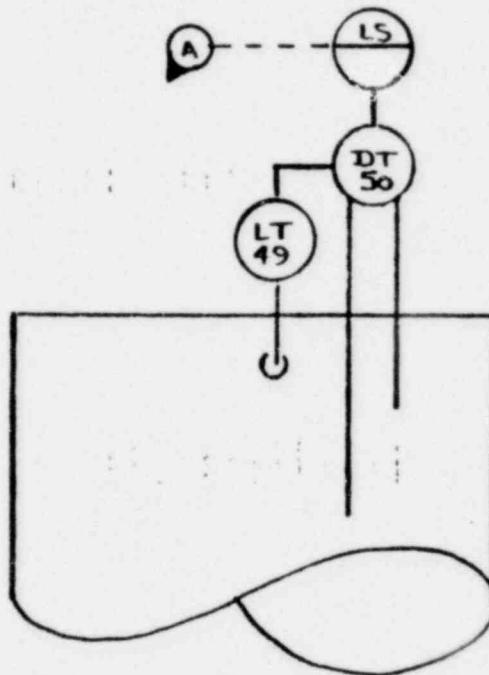
CR3	MADE 4-7-80	GILBERT ASSOCIATES, INC.		
	CHK'D.	ENGINEERS AND CONSULTANTS		
MWST - PRESENT	BO CP.	READING, PENNA.		
	CP. DPN.	04-4762	S-MJA-1	
	ENG. MJA	WORK ORDER	SIZE DRAWING	REV.
REF: 302-681	REV. CH. APP. DATE			



CR3	MADE 4-7-80	GILBERT ASSOCIATES, INC.		
	CHK'D.	ENGINEERS AND CONSULTANTS		
MWST - ALARM	EQ. CF.	READING, PENNA.		
ALTERNATIVE 1	CP. DPH.	04-4762	S-MJA-2	
	ENG. M.J.A.	WORK ORDER	SIZE	DRAWING
	REV. CH. APP. DATE			REV.



CR3	MADE 4-7-80	GILBERT ASSOCIATES, INC.		
	CHK'D.	ENGINEERS AND CONSULTANTS		
MWST - LEVEL CONTROL	BQ. CP.	READING, PENNA.		
ALTERNATIVE 2	CP. DFM.	04-4762	S-MJA-3	
	ENG. M.J.A.	WORK ORDER	SIZE	DRAWING
	REV. CH. APP. DATE			REV.



A

CLOSE

WDV 4  
WDV 9  
WDV 61  
WDV 121  
WSV 128  
WSV 146  
SDV 8  
SDV 12

CLOSE

SDV 12  
MSV 128  
MSV 146

OR

STOP

R/B SUMP PUMP  
DH PIT SUMP PUMP  
A/B SUMP PUMP  
RCDT PUMP  
RWNT PUMP

STOP

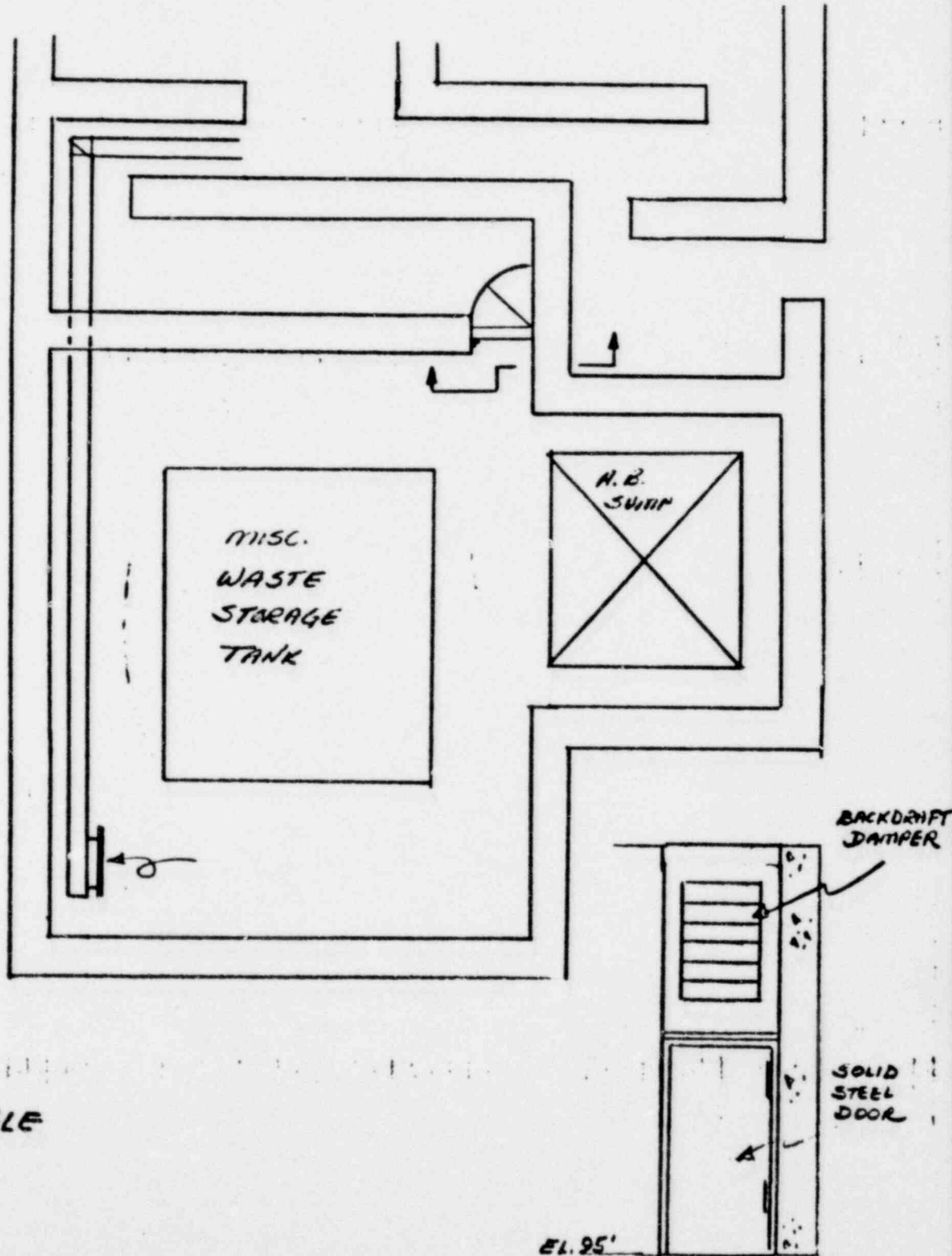
DH PIT SUMP PUMP  
A/B SUMP PUMP



ATTACHMENT 4

Auxiliary Building Sump  
Airborne Activity  
Control

CR3	MADE 4-3-80	GILBERT ASSOCIATES, INC.		
	CHK'D.	ENGINEERS AND CONSULTANTS		
A/B SUMP - AIRBORNE ACTIVITY CONTROL	BO CP.	READING, PENNA.		
	CP. DPH.	04-4762	S-MJA-5	
	ENG. MJA	WORK ORDER	SIZE	DRAWING
	REV. CH. APP. DATE			REV.



NOT TO SCALE

SECTION