

SEABROOK STATION UNIT 1 PREOPERATIONAL  
LEAKAGE REDUCTION TRACKING AND HISTORY REPORT

FOR

CONTAINMENT BUILDING SPRAY  
COMBUSTIBLE GAS CONTROL - HYDROGEN DETECTION  
CHARGING AND REACTOR COOLANT PUMP SEAL INJECTION  
RESIDUAL HEAT REMOVAL  
SAFETY INJECTION  
PRIMARY SAMPLE AND POST ACCIDENT SAMPLE  
SYSTEMS

MARCH 11, 1987

## SUMMARY

Following the accident at Three Mile Island, NUREG 0737 required that a program be developed to reduce leakage from systems outside containment that may contain primary coolant or other highly radioactive liquids or gases. The program at Seabrook Station includes the following systems:

- o Residual Heat Removal (RH)
- o Containment Building Spray (CBS)
- o Charging and Reactor Coolant Pump Seal Injection (CS)
- o Safety Injection (SI)
- o Primary Coolant Sampling including the Post-Accident Sampling System (SS)
- o Combustible Gas Control - Hydrogen Detection (CGC)

Liquid systems are visually inspected at operating temperatures and pressures and leakage noted. Helium leak detection methods are used to determine the CGC system leakage. These inspections are performed at routine intervals by system engineers during pump and valve testing, primary sampling, or other times established by surveillance procedure. The leakage reduction program will be continued through the life of the plant. Inspection frequencies shall be at least once per 18 months.

All practical leak reduction measures are implemented when leakage is found. Repair priorities are assigned depending on the amount of leakage and plant operating conditions.

The enclosed preoperational data reflects the results of the routine surveillances as well as results from general housekeeping inspections by plant operators and others. This data is maintained on a computer-based tracking program which serves as a management summary and trending tool to maintain leakage as low as possible.

## LEAKAGE REDUCTION TRACKING AND HISTORY REPORT

### EXPLANATION OF REPORT COLUMNS

<u>Column</u>	<u>Description</u>
SYS	System Code
CD	Component Code
COMP ID	Component Identification
TR	Train
DESCRIPTION	Component Description
LEAK TY	Leak Type
LEAK AS F	Leakage As Found Measurement
LEAK AS L	Leakage As Left Measurement
WR NUMBER	Work Request Document Number
DT ID	Date Leakage Identified
DT COM	Date Work and Documentation Closed Out
ACTION TAKEN	Description of Work Performed
REMARKS	Status and Comments

### ABBREVIATIONS

CBS - Containment Building Spray System	P - Pump Equipment Code
CGC - Combustible Gas Control System	PPG - Piping
CS - Charging and Reactor Coolant Pump	RC - Reactor Coolant System
Seal Injection (Chemical and Volume Control) System	RH - Residual Heat Removal System
DPM - Drops per Minute	SI - Safety Injection System
DR - Drain	SS - Sample and Post Accident Sample System
FCV - Flow Control Valve	THD - Threaded
FV - Flow Valve	V - Valve Equipment Code
GPM - Gallons per Minute	VLV - Valve
MECH JT - Mechanical Joint	

### NOTES

1. Seat leakage of vent or drain valve detected by leakage or boric acid crystal build-up at capped connection downstream of valve. Cap not removed to measure seat leakage.
2. Leakage not measured.
3. Hydrogen detection valve has small leakage around a body gasket detected by helium mass spectrometer. The audible output of the detector changed, but the detector meter did not register a measurable change from background, (indicating a very small or negligible leak). The valve will not be repaired, but will be trended during future surveillances.



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SYS CD	COMP ID	TR DESCRIPTION	LEAK TY	LK AS F	LK AS L	WR NUMBER	DT ID	DT COM	ACTION TAKEN	REMARKS
CBS	P 9A	A CENTRIFUGAL PUMP SEAL	<1 DPM	0		86W007358	860903	860929	REWORKED SEAL PIPING CONN	COMPLETED
CBS	P 9A	A CENTRIFUGAL PUMP SEAL	60 DPM			86W008498	861003		REWORKED SEAL PIPING CONN	OPEN - FIELD WORK COMPLETE
CBS	P 9B	B CENTRIFUGAL PUMP SEAL	<1 DPM	0		86W007359	860903	861204	REWORKED SEAL PIPING CONN	COMPLETED
CBS	V 0027	B 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W007357	860903	870227	ADJUSTED PACKING	COMPLETED
CBS	V 0044	B 6" GATE VALVE MECH JT	<1 DPM	0		86W008690	861009	861208	REWORKED LEAK-OFF PLUG	COMPLETED
CBS	V 0053	B 6" GATE VALVE PACKING	<1 DPM	0		86W005788	860723	860908	ADJUSTED PACKING	COMPLETED
CBS	V 0062	B 3/4" X 1" RELIEF BELLOWS	NOTE 2	0		86W006156	860730	861015	REPLACED VALVE	COMPLETED
CBS	V 0094	B 3/4" X 1" RELIEF SEAT	NOTE 2	0		86W009866	861118	870227	LAPPED DISC AND SEAT	COMPLETE
CBS	V 0096	A 3/4" X 1" RELIEF SEAT	NOTE 2	0		86W010247	861202	861219	LAPPED DISC AND SEAT	COMPLETED
CBS	V 0102	A 3/4" GLOBE VALVE BODY	<1 DPM	0		86W005117	860711	860918	REPLACED BODY-BONNET GASKET	COMPLETED
CBC	V 0062	B 3/4" VAC RELIEF BODY	NOTE 3	NOTE 3	N/A		870308	N/A	NONE - SEE NOTE 3	NO WORK PERFORMED - TREND ONLY
CS	V 0067	- 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008133	860924	861119	ADJUSTED PACKING	COMPLETED
CS	V 0068	- 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008132	860924	861119	ADJUSTED PACKING	COMPLETED
CS	V 0121	- 3/4" GLOBE VALVE SEAT	1 GPM	0		86W010254	861202	870113	REPLACED INTERNALS	COMPLETED
CS	V 0124	- 3/4" GLOBE VALVE SEAT	<1 DPM	0		86W008456	861002	861208	CLEANED DR PPG/REPLACED CAP	COMPLETED
CS	V 0132	- 2" GLOBE VALVE PACKING	<1 DPM	0		86W008452	861002	861119	ADJUSTED PACKING	COMPLETED
CS	V 0136	- 2" GLOBE VALVE PACKING	<1 DPM	0		86W008451	861002	861119	ADJUSTED PACKING	COMPLETED
CS	V 0153	- 2" NEEDLE VALVE PACKING	<1 DPM	0		86W008461	861002	861208	ADJUSTED PACKING	COMPLETED
CS	V 0157	- 2" NEEDLE VALVE PACKING	<1 DPM			86W008460	861002			OPEN
CS	V 0158	- 2" GLOBE VALVE PACKING	<1 DPM			86W008459	861002			OPEN
CS	V 0162	- 2" GLOBE VALVE PACKING	30 DPM	0		86W010290	861203	870224	ADJUSTED PACKING	COMPLETED
CS	V 0162	- 2" GLOBE VALVE PACKING	5 DPM			87W001282	870211		ADJUSTED PACKING	OPEN - FIELD WORK COMPLETE
CS	V 0166	- 2" GLOBE VALVE PACKING	<1 DPM	0		86W006612	860814	860908	CLEANED VALVE ONLY	COMPLETED
CS	V 0167	- 2" GLOBE VALVE PACKING	<1 DPM	0		86W008449	861002	861229	ADJUSTED PACKING	COMPLETED
CS	V 0167	- 2" GLOBE VALVE PACKING	4 DPM			87W002034	870120			OPEN
CS	V 0194	- 3" GLOBE VALVE PACKING	<1 DPM	0		87W000339	870111	870224	REPLACED PACKING	COMPLETED
CS	V 0205	- 2" GLOBE VALVE PACKING	<1 DPM	0		86W008143	860924	870210	REPLACED PACKING	COMPLETED
CS	V 0205	- 2" GLOBE VALVE PACKING	<1 DPM	0		86W010198	861126	870227	ADJUSTED PACKING	COMPLETED
CS	V 0214	- 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W010197	861126	870224	ADJUSTED PACKING	COMPLETED
CS	V 0218	B 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008496	861003	861208	ADJUSTED PACKING	COMPLETED
CS	V 0218	B 3/4" GLOBE VALVE PACKING	<1 DPM			87W000827	870127			OPEN
CS	V 0525	A 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008497	861002	861208	ADJUSTED PACKING	COMPLETED
CS	V 0525	A 3/4" GLOBE VALVE PACKING	<1 DPM			87W000818	870127			OPEN
CS	V 0580	- 3/4" GLOBE VALVE SEAT	<1 DPM	0		86W008448	861002	861208	CLEANED DR PPG/REPLACED CAP	COMPLETED
CS	V 0602	A 1" GLOBE VALVE PACKING	<1 DPM	0		86W008497	861002	861208	ADJUSTED PACKING	COMPLETED
CS	V 0761	- 3/4" GLOBE VALVE SEAT	NOTE 1			87W001077	870205			OPEN
CS	V 0795	- 2" GLOBE VALVE PACKING	<1 DPM	0		86W008450	861002	861212	ADJUSTED PACKING	COMPLETED
CS	V 0795	- 2" GLOBE VALVE PACKING	<1 DPM	0		87W000615	870120	870224	REPLACED PACKING	COMPLETED
CS	V 0869	B 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008496	861003	861208	ADJUSTED PACKING	COMPLETED
CS	V 0869	B 3/4" GLOBE VALVE PACKING	<1 DPM			87W000826	870127			OPEN
CS	V 0871	B 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008496	861003	861208	ADJUSTED PACKING	COMPLETED
CS	V 0871	B 3/4" GLOBE VALVE PACKING	<1 DPM			87W000825	870127			OPEN
CS	V 0873	A 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008160	860924	861208	ADJUSTED PACKING	COMPLETED
CS	V 0873	A 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008497	861002	861208	ADJUSTED PACKING	COMPLETED
CS	V 0873	A 3/4" GLOBE VALVE PACKING	<1 DPM			87W000817	870127			OPEN
CS	V 0875	A 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008497	861002	861208	ADJUSTED PACKING	COMPLETED
CS	V 0875	A 3/4" GLOBE VALVE PACKING	<1 DPM			87W000820	870127			OPEN
CS	V 0999	- 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W010196	861126	870224	ADJUSTED PACKING	COMPLETED
RC	V 0342	- 1/2" GLOBE VALVE PACKING	3 DPM			87W002389	870307			OPEN
RH	V 0008	A 3/4" GLOBE VALVE SEAT	NOTE 1			86W009540	861106			OPEN
RH	V 0016	A 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008058	860918	861208	ADJUSTED PACKING	COMPLETED
RH	V 0017	B 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W007880	860916	870227	ADJUSTED PACKING	COMPLETED
RH	V 0023	B 1/2" GLOBE VALVE PACKING	<1 DPM	0		86W007878	860916	861017	ADJUSTED PACKING	COMPLETED
RH	V 0041	B 1/2" GLOBE VALVE PACKING	<1 DPM	0		86W007883	860916	861016	ADJUSTED PACKING	COMPLETED
RH	V 0042	B 1/2" GLOBE VALVE PACKING	<1 DPM			86W009698	861112		ADJUSTED PACKING	OPEN - FIELD WORK COMPLETE

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RH	V 0044	B 3/4" GLOBE VALVE SEAT	NOTE 1			86W011005	861230			OPEN
RH	V 0078	B 3/4" GATE VALVE PACKING	<1 DPM	0		86W007879	860916	861024	ADJUSTED PACKING	COMPLETED
RH	V 0085	A 3/4" GATE VALVE SEAT	<1 DPM	<1 DPM		86W008052	860918	861104	ADDED THD SEALANT TO DR CAP	COMPLETED
RH	V 0087	A 3/4" GATE VALVE PACKING	<1 DPM	0		86W008059	860918	861204	ADJUSTED PACKING	COMPLETED
RH	V 0104	A 3/4" GLOBE VALVE SEAT	NOTE 1			87W000654	870121			OPEN
RH	V 0120	B 3/4" GATE VALVE SEAT	NOTE 1			86W009003	860918		ADJUSTED PACKING	OPEN - FIELD WORK COMPLETE
RH	V 0121	A 3/4" GATE VALVE SEAT	NOTE 1	0		86W008053	860918			OPEN
RH	V 0140	B 1/2" GLOBE VALVE SEAT	NOTE 2	0		86W011004	861230	870224	CLOSED VALVE REPLACED CAP	COMPLETED - VLV FOUND CRACKED OPEN
RH	V 0141	B 1/2" GLOBE VALVE SEAT	NOTE 2	0		86W011003	861230	870224	CLOSED VALVE REPLACED CAP	COMPLETED - VLV FOUND CRACKED OPEN
RH	V 0148	A 1/2" GLOBE VALVE MECH JT	<1 DPM	0		86W008057	860918	861029	TIGHTENED SWAGE LOK FITTING	COMPLETED
RH	V 0150	A 1/2" GLOBE VALVE MECH JT	<1 DPM	0		86W008057	860918	861029	TIGHTENED SWAGE LOK FITTING	COMPLETED
RH	V 0160	A 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008061	860918	861112	ADJUSTED PACKING	COMPLETED
RH	V 0162	B 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W007882	860916	861016	ADJUSTED PACKING	COMPLETED
RH	V 0162	B 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W009699	861112	861204	ADJUSTED PACKING	COMPLETED
RH	V 0164	B 3/4" GLOBE VALVE SEAT	NOTE 1	0		87W000621	870120	870224	LAPPED PLUG AND SEAT	COMPLETED
RH	FCV 0618	A 8" BUTTERFLY VLV PACKING	<1 DPM			86W008060	860918		ADJUSTED PACKING	OPEN - FIELD WORK COMPLETE
SI	V 0062	- 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W004974	860714	860911	ADJUSTED PACKING	COMPLETED
SI	V 0073	B 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008723	861010	870115	ADJUSTED PACKING	COMPLETED
SI	V 0076	B 3/4" X 1" RELIEF SEAT	NOTE 2	0		86W006157	860730	860910	REPLACED VALVE	COMPLETED
SI	V 0093	- 2" GLOBE VALVE PACKING	<1 DPM	0		86W008139	860923	861110	ADJUSTED PACKING	COMPLETED
SI	V 0098	A 3/4" GLOBE VALVE PACKING	<1 DPM	0		86W008137	860923	861110	ADJUSTED PACKING	COMPLETED
SI	V 0099	A 3/4" GLOBE VALVE MECH JT	2 DPM	0		86W002977	860613	861208	REPLACED FLEX HOSE	COMPLETED
SI	V 0175	- 3/4" X 1" RELIEF SEAT	NOTE 2	0		86W008296	860927	861211	REPLACED VALVE	COMPLETED
SI	V 0200	B 3/4" GLOBE VALVE SEAT	NOTE 1			86W008136	860923			OPEN
SI	V 0248	- 3/4" X 1" RELIEF SEAT	NOTE 2	0		86W007604	860909	861125	REPLACED VALVE INTERNALS	COMPLETED
SS	V 0230	- 1/4" GLOBE VALVE PACKING	<1 DPM			87W002316	870309			OPEN
SS	FV 9606	- 1/2" GLOBE VALVE SEAT	NOTE 2			87W002109	870302			OPEN
SS	FV 9611	- 1/2" GLOBE VALVE PACKING	80 DPM			87W002399	860311			OPEN

TOTALS

Printed 83 of the 83 records.

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