

- ☒ ITS
☐ NSR
☐ NITS

TMI-2 DIVISION TECHNICAL EVALUATION REPORT FOR

Defueling Water _____

Cleanup System _____

COG ENG Herald K Boldt DATE 11/1/84
RTR Edward T. Smith DATE 11/1/84
COG ENG MGR. C.L. R. for RTR DATE 11/1/84

5	6/20/85	Issued For Use	EDL	B	ETS	CR
4	4/18/85	Issued For Use	EDL	RDR	ETS	CR
3	1/10/85	Issued For Use	EDL	B	ETS	CR
2	12/10/84	Issued For Use	EDL	B	ETS	CR
1	12/7/84	Issued For Use	EDL	B	ETS	CR
0	11/1/84	Issued For Use	EDL	B	ETS	CR
NO	DATE	REVISIONS	BY	CHECKED	GROUP SUPERVISOR	MGR DESIGN ENGINEERING
				CHIEF ENGINEER	N/A	

Title

Technical Evaluation Report for Defueling Water Cleanup System

PAGE

OF

2

19

Rev.

SUMMARY OF CHANGE

- | | |
|---|--|
| 0 | Initial issue November 1, 1984 |
| 1 | Revised to incorporate system design changes and comments on Revision 0 |
| 2 | Revised to incorporate comments on Revision 1 |
| 3 | Revised to incorporate comments on Revision 2 |
| 4 | Revised to reflect addition of relief valves at the outlets of the defueling filter canisters, deletion of fuel pool cleanup system boronometer and correction of minor typographical errors |
| 5 | Revised to correct and clarify description of low level alarm setpoints for fuel transfer canal |

canister and SDS is equipped with two filters in series, both of which have borosilicate glass to control reactivity (see Ref 2). Differential pressure is measured across the filters to indicate ruptured filter media. The SDS filter bypass is administratively controlled to prevent inadvertent operation.

Upon detection of a filter media rupture the filter trains will be isolated and the ruptured filter will be identified by observing the differential pressure versus flow for each individual canister with flow being recirculated to the fuel pool. A lower differential pressure for a given flow will indicate which filter is ruptured. The affected canister or canisters and the SDS pre-filter vessel or filter canister post filter cartridge would then be replaced as required and the system restarted.

3.2.2.4

Line Break

If a rupture occurred in the FTC/spent fuel pool cleanup system, the DWC system spent fuel pool pumps could deliver fuel transfer canal and/or spent fuel pool water to the Fuel Handling Building or the Reactor Building. This action would lower the level in the canal and the pool. A drop of one inch in canal/pool level is approximately equivalent to 1250 gal. A level loss would be detected by redundant level indicating systems, one each for the FTC and spent fuel pool, which are provided with low level alarms in the main control room. The low level alarm will actuate at El.327'-1". Upon receipt of either low level alarm, the system will be manually shut down.

5

Process water hoses are employed in three services in this system; filter canister inlet/outlet, skimmers to well pumps, and downstream of penetration R-539.

If a filter canister inlet/outlet hose ruptures, that canister will be isolated and the hose replaced. Since these hoses are submerged in the SFP, this results in no net water loss.

If a hose connecting the skimmer to the well pumps breaks, then the ability to surface skim will be hampered or lost, but pump capacity will not be diminished as the hose is routed underwater to the pumps and a pump suction supply will continue to be available.