

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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RECIP. NAME: RECIPIENT AFFILIATION
VISSING, G.S.

SUBJECT: Forwards 180-day response to GL 98-02, "Loss of RC Inventory
& Associated Potential for Loss of Emergency Mitigation
Functions While in Shutdown Condition."

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ROBERT C. MECREDY
Vice President
Nuclear Operations



December 1, 1998

U. S. Nuclear Regulatory Commission
Document Control Desk
Attn: Guy S. Vissing
Project Directorate I-1
Washington, D. C. 20555

Subject: Response to Generic Letter 98-02, dated May 28, 1998;
SUBJECT: LOSS OF REACTOR COOLANT INVENTORY AND
ASSOCIATED POTENTIAL FOR LOSS OF EMERGENCY
MITIGATION FUNCTIONS WHILE IN A SHUTDOWN CONDITION
R. E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Vissing:

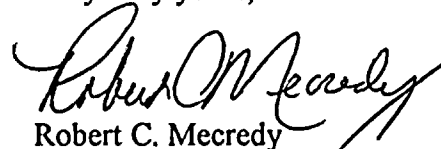
Enclosed is the Rochester Gas and Electric Corporation (RG&E) 180 day response to Generic Letter 98-02.

As requested by the generic letter, an assessment of Ginna's emergency core cooling system design characteristics, to determine susceptibility to events similar to the Wolf Creek event of 9/17/94, was performed. The assessment determined that the RHR and ECCS piping configuration is such that, if highly unlikely independent actions were taken during specific plant configurations, Ginna could be vulnerable to an event of this type. Because of this, RG&E has enclosed the results of the assessment in Attachment 1.

The features of the Appendix B Quality Assurance program were reviewed to assure that the safety related functions of the RHR System and ECCS will not be adversely affected by activities conducted at Hot Shutdown (such as occurred at Wolf Creek). It was determined that barriers to preclude such events do exist, and have been effective in preventing similar events at Ginna. In addition, RG&E will further evaluate procedures and training, and make enhancements if appropriate prior to the next refueling outage, scheduled to begin in March 1999. This information will be maintained in our internal tracking system for retrieval and NRC review upon request.

680105

Very truly yours,


Robert C. Mecredy

9812090006 981201
PDR ADDCK 05000244
P PDR

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A001

Attachment

Subscribed and sworn to before me
on this 1st day of December, 1998

Christina K. Sardou
Notary Public

CHRISTINA K. SARDOU
Notary Public, State of New York
Registration No. 01SA6015061
Genesee County
Commission Expires October 19, 2000

xc: Mr. Guy S. Vissing (Mail Stop 14B2)
Project Directorate I-1
Division of Reactor Projects – I/II
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

U.S. NRC Ginna Senior Resident Inspector

CHRISTINA K. SARNOU
Notary Public, State of New York
Registration No. 015A0013681
Genesee County
Commission Expires October 18, 2011

Attachment 1

Generic Letter 98-02 Assessment

Generic Letter 98-02 requires "an assessment of whether your emergency core cooling systems include certain design features, such as a common pump suction header, which can render the systems susceptible to common-cause failure as a result of events similar to the Wolf Creek RCS drain-down event of September 17, 1994". The GL allows that "Addressees may limit their attention to those surveillance, maintenance, modification and operational activities at hot shutdown during which it is feasible to divert RCS fluid to the RWST, resulting in simultaneous drain-down of the RCS and voiding in the suction header for the RHR and ECC system pumps. Addressees may further limit their response to the consideration of potential configurations and conditions that involve flow paths with pipe diameters equal to or greater than 2 inches". To accomplish this, plant piping systems were reviewed to identify potential flow paths that meet the criteria. The following is a summary of those flow paths which were judged to be potentially susceptible to this issue (refer to attached Figures 1 through 6).

1. RCS→(700→701) or (721→720→626)→857B/A&C→
SI Suction Line→896B→896A→RWST.
2. RCS→(700→701) or (721→720→626)→857B/A&C→
SI Suction Line→826A&B or 826C&D→BASTs→Overflow.
3. RCS→(700→701) or (721→720→626)→857B/A&C→
825A/B→SI Suction Line→SI Pumps→898→897→RWST.
4. RCS→(700→701) or (721→720→626)→1816B→
1816A→C SI Pump Suction→1815A→1815B→
A/B SI Pump Suction→825A/B→896B→896A→RWST.
5. RCS→(700→701) or (721→720→626)→1816B→
1816A→C SI Pump Suction→1815A→1815B→
A/B SI Pump Suction→826A&B or 826C&D→
BASTs→Overflow.
6. RCS→(700→701) or (721→720→626)→1816B→
1816A→C SI Pump Suction→1815A→1815B→
A/B SI Pump Suction→SI Pumps→898→897→RWST

For this susceptibility to result in a concern, the RHR system must be in service with the RCS at some temperature above saturation at the SI pump suction. Since the RHR System is not placed in service above 350F, the susceptibility is limited to Mode 4 down to approximately 260F (the saturation temperature for the calculated static head of the RWST at the SI Pump Suction). Furthermore, highly unlikely system configuration changes would have to occur to cross-connect the RHR and SI Systems. Specifically, the RHR and SI Systems must become cross-connected either through the High Head Recirculation Path (MOV-857's) or the RHR to C SI Pump suction line (V-1816A/B). MOV-857A & MOV-857C, and similarly manual valves V-1816A/B, are series valves which would require two independent actions to inadvertently open the flow path. MOV-857B is pressure interlocked to prevent opening with an RHR Pressure greater than 250 psig (below the typical RHR pressure that is maintained prior to reaching cold shutdown).

Evaluation of Features/Controls

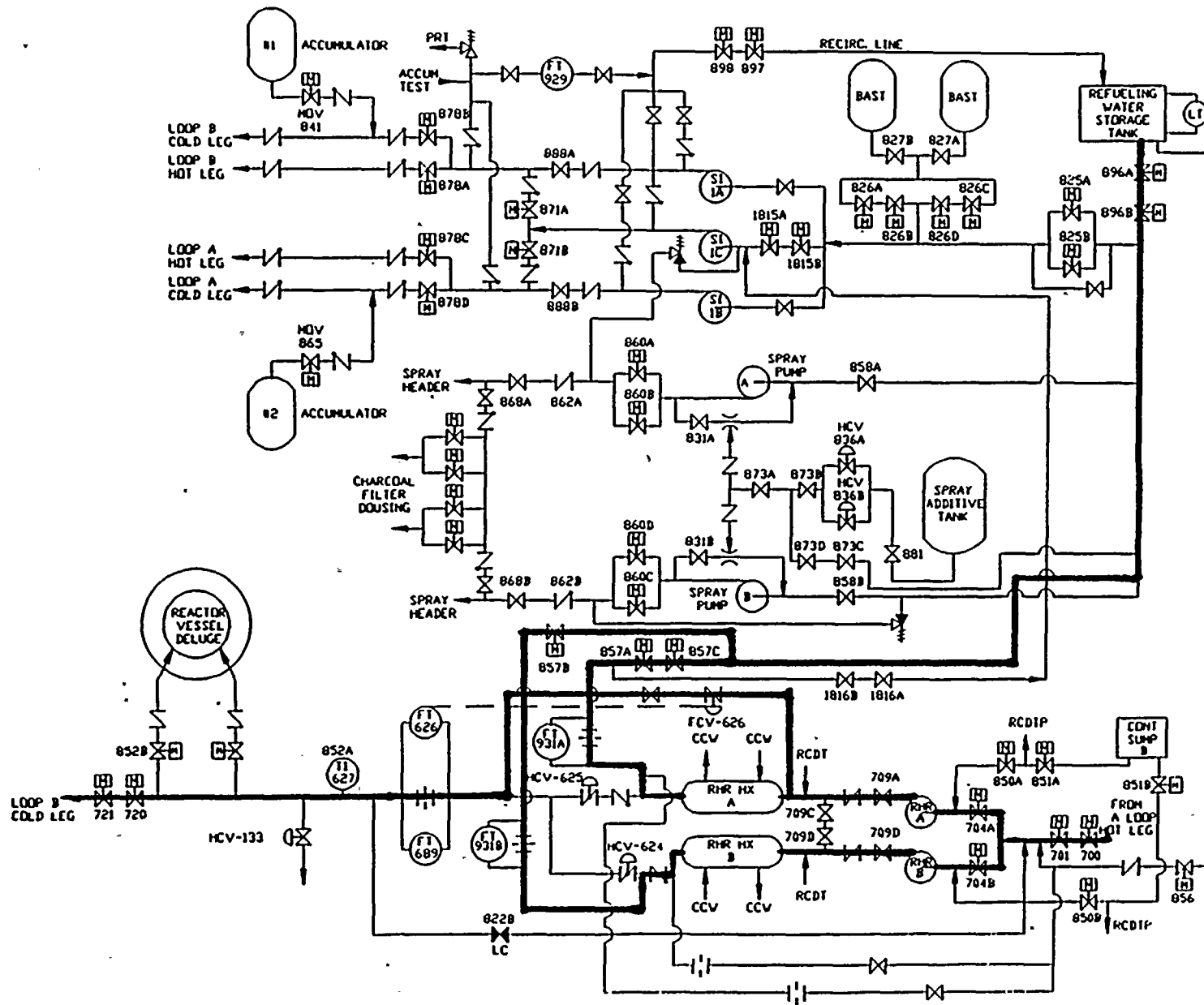
In addition to the configuration control features described above to make this concern very unlikely, RG&E has evaluated the following areas to ensure adequate controls of activities to preclude the Wolf Creek Style event.

1. Operating Procedures – The Operating Procedures avoid unusual lineups by providing a precise sequence of steps resulting in proper system configuration. For example, the breakers for MOV-857A,B and C are opened in procedure O-2.2, Plant Shutdown from Hot Shutdown to Cold Condition, prior to placing RHR in service.
2. Testing Procedures – Unintentional configurations are avoided by requiring specific initial conditions for the test to occur. In addition, testing activities are approved by both the Outage Planning Staff and Operations before start.
3. MOVATS Procedures – MOVATS activities are planned and scheduled by the Outage Planning Group. Both electrical and fluid isolation must be provided prior to the start of the test.
4. Maintenance activities – These activities are planned and scheduled by the Outage Planning Group. Appropriate Holds must be in place and Operations approval obtained prior to start.
5. Station Holding – Station holding, which can result in change to system configuration, is under the control of licensed personnel in communication with the Shift Supervisor

6. Training – Specific training targeted to shutdown evolutions, such as RHR operations, is conducted prior to scheduled refueling outages. Generic Letter 98-02 has been covered in operator requalification training.

In addition to the above, RG&E will further evaluate procedures and the need for additional training, making appropriate enhancements prior to the scheduled March 1999 refueling outage.

FIGURE 1

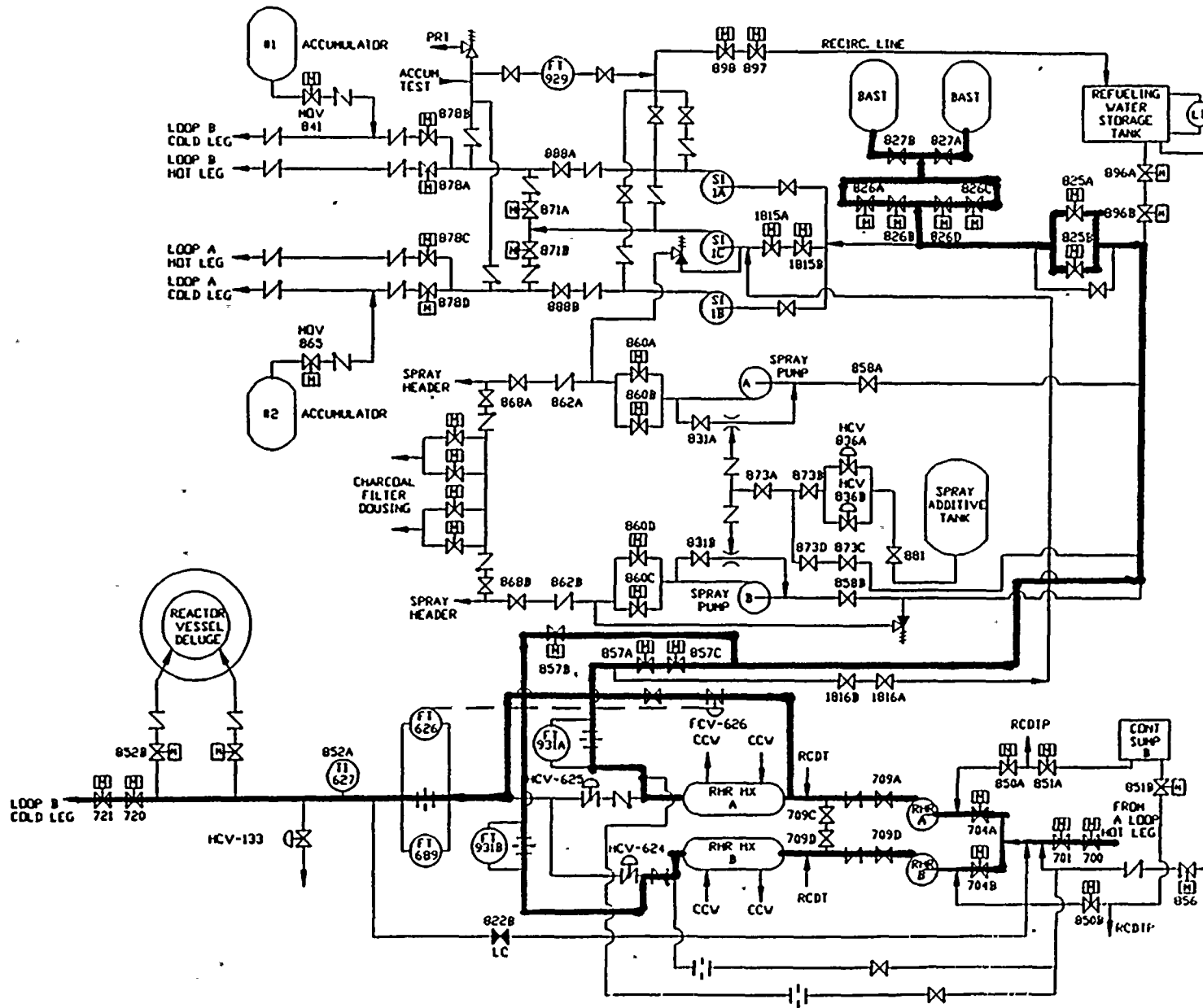


ECCS COMPOSITE

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FIGURE 2

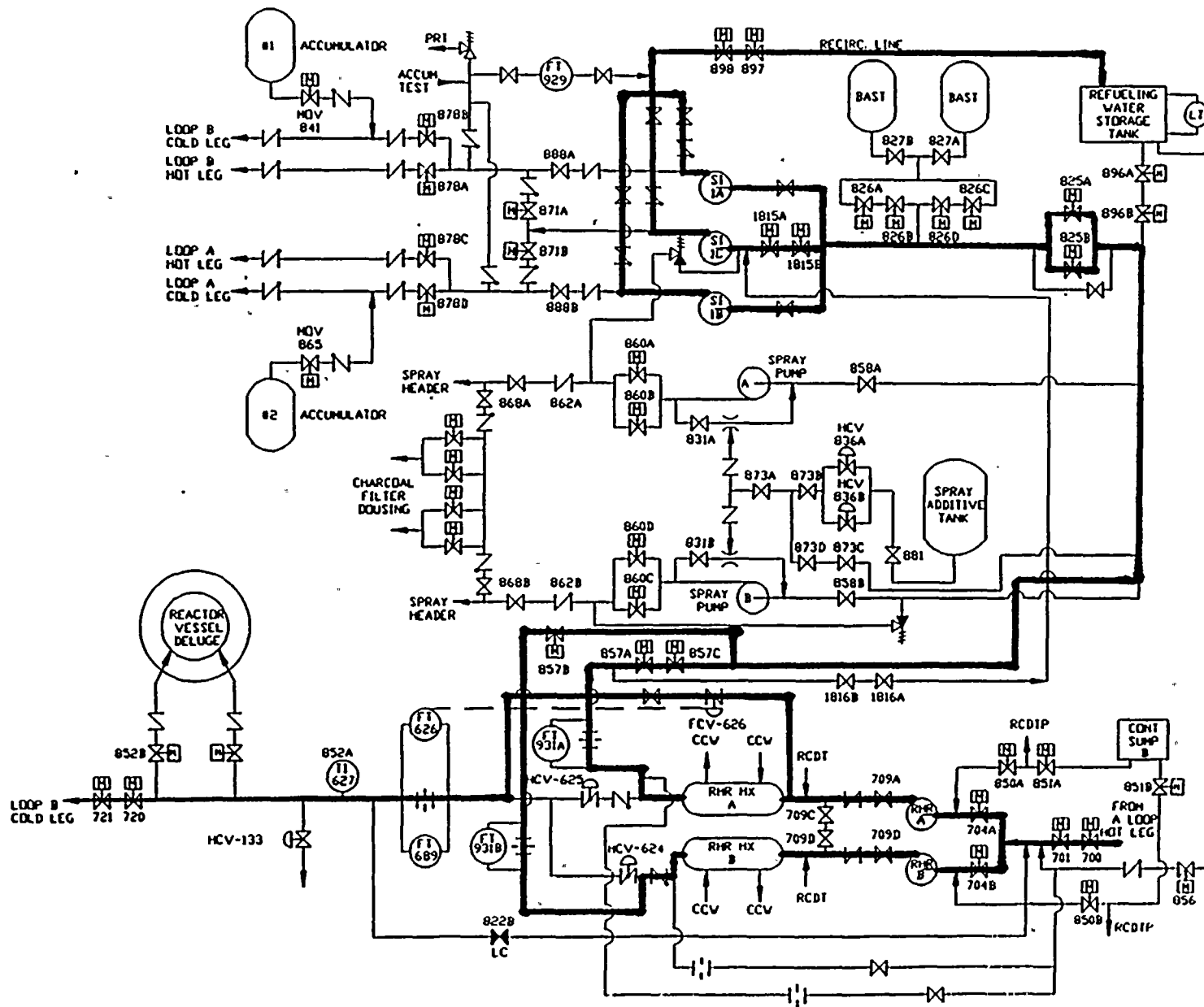


ECCS COMPOSITE

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FIGURE 3

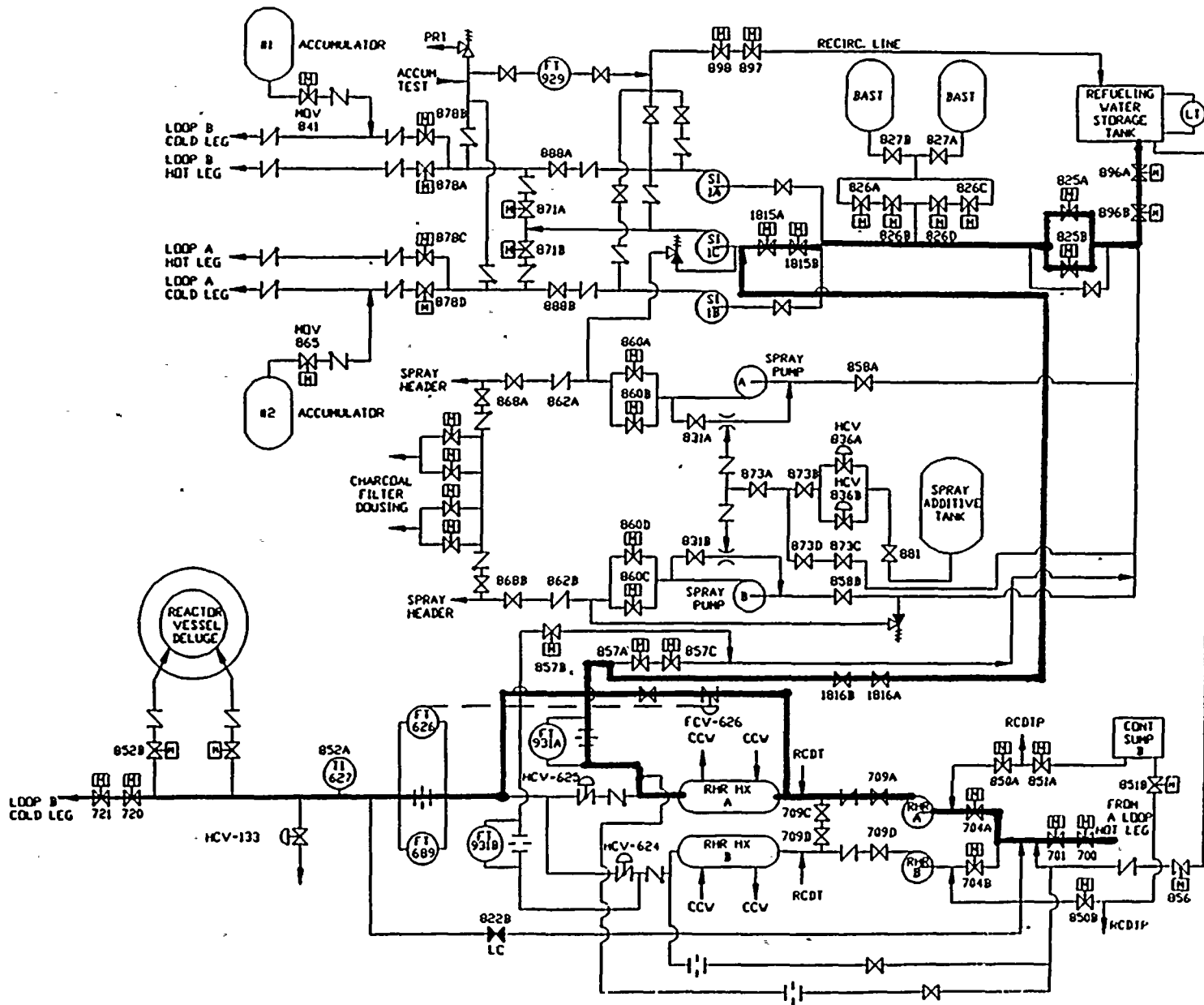


ECCS COMPOSITE

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FIGURE 4

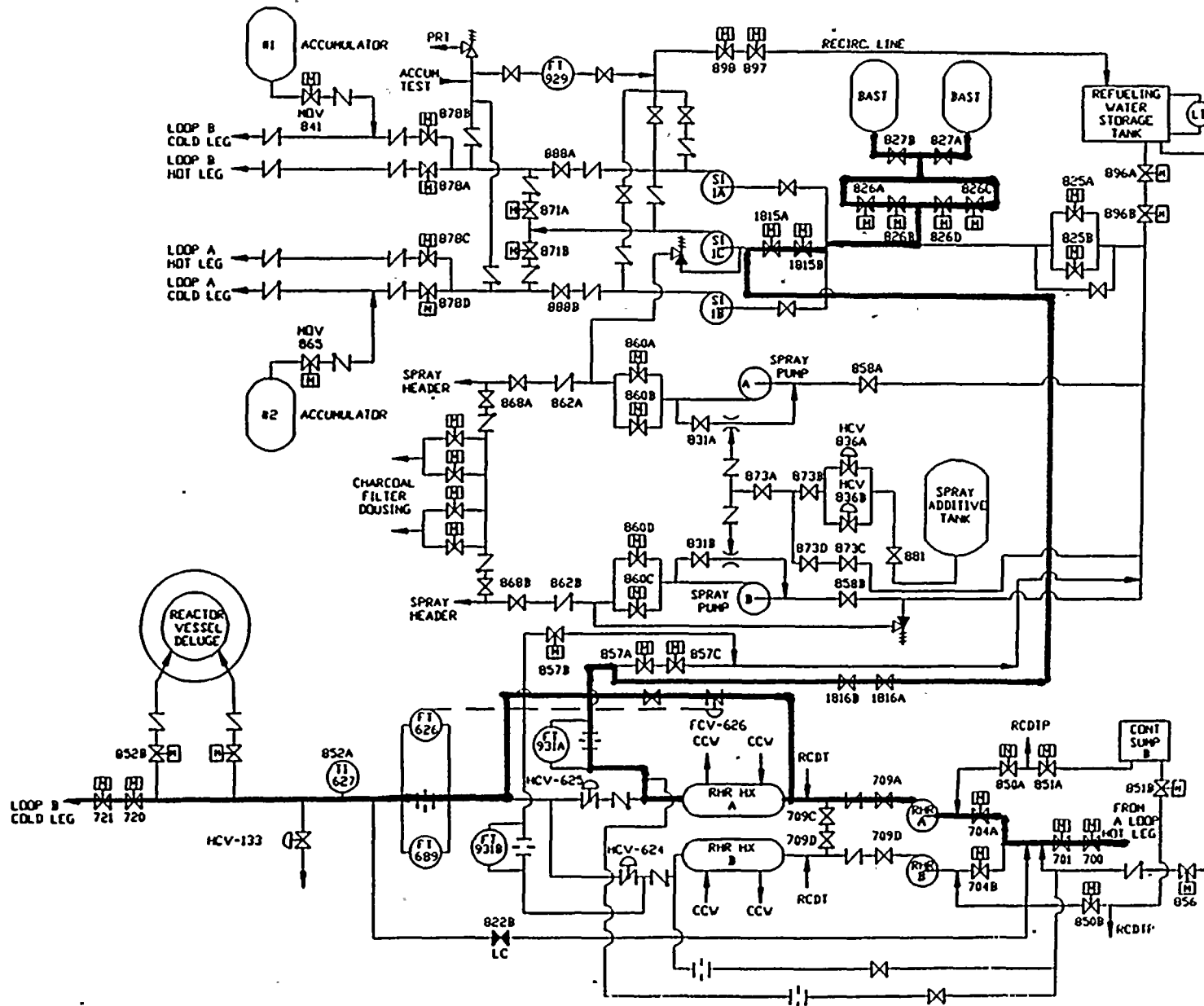


ECCS COMPOSITE

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FIGURE 5

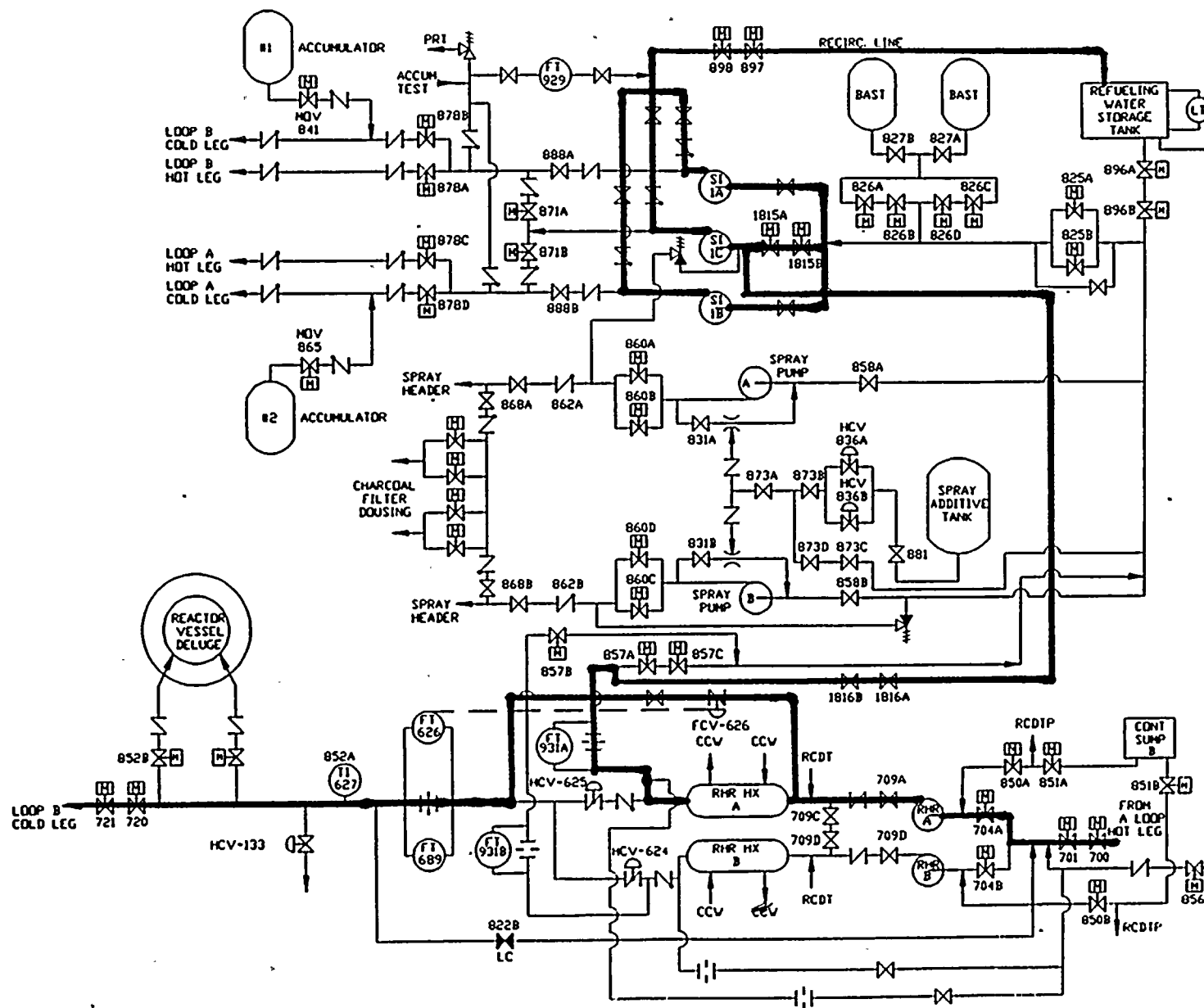


ECCS COMPOSITE

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FIGURE 6



ECCS COMPOSITE

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