

Southern California Edison Company



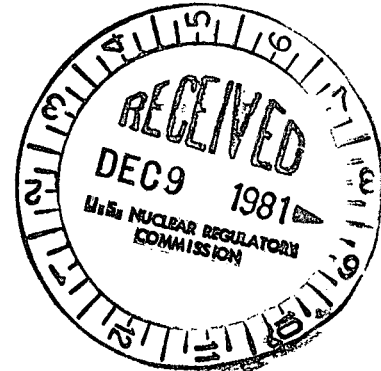
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K. P. BASKIN  
MANAGER OF NUCLEAR ENGINEERING,  
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December 8, 1981

TELEPHONE  
(213) 572-1401

Director, Office of Nuclear Reactor Regulation  
Attention: D. M. Crutchfield, Chief  
Operating Reactors Branch No. 5  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555



Gentlemen:

Subject: Docket No. 50-206  
Safety Injection System Modifications  
San Onofre Nuclear Generating Station  
Unit 1

Our letter dated October 16, 1981 forwarded the report entitled "Safety Injection System Modifications, San Onofre Nuclear Generating Station, Unit 1, October, 1981". The report provided information and commitments related to the recent modifications made to the Safety Injection System (SIS), including a commitment to submit a schedule to replace the SIS hydraulically operated valves to eliminate the need to trip the feedwater pumps and vent the valve body cavities, and to study the SIS design and performance to determine if major redesign is warranted. The schedule for each of the above items is discussed below:

1. Replacement of SIS Hydraulically Operated Valves

A specification has been prepared and forwarded to seven manufacturers (five provided quotes) for replacement of the subject valves. The manufacturers' proposals have recently been received and will be evaluated by mid-February, 1982. In order to establish an engineering, procurement, construction and startup schedule for replacement of the subject valves, we requested each manufacturer to submit schedular information separate from their proposals. Based on our review of the schedular information, we have developed the following best estimate schedule:

- a. Drawing Preparation and Review - completed four months after issuance of purchase order
- b. Fabrication, Qualification Testing and Delivery - completed nine to thirty-four months after a. above
- c. Construction and Startup Testing - completed during the next scheduled refueling outage after b. above

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As discussed above, the best estimate shedule has been developed without a detailed review of the manufacturers' proposals. Since our objective is to install qualified and tested valves, we have included an estimate of minimum and maximum qualification testing and delivery time which is dependent on whether current standards or earlier standards are utilized.

Until we have an opportunity to review and evaluate each manufacturers' proposal in detail, in particular, their qualification testing program, we cannot provide a more definitve schedule. Our plans for issuance of a purchase order to the selected manufacturer and overall schedule for replacement of the subject valves are discussed below.

## 2. Study of SIS Design and Performance

We have completed a conceptual assessment of design alternatives which will be further considered to determine if major redesign of the SIS is warranted. The design alternatives include:

- a. Low Pressure and High Pressure SIS Pumps with Boron Injection Tank
- b. SIS Pumps
- c. Feedwater Pumps

Figure 1 of this letter shows the existing SIS. Figures 2, 3 and 4 of this letter show the design alternatives discussed above.

We anticipate that an evaluation of the design alternatives can be completed by May, 1982. At that time, we will advise you concerning the results of the evaluation. If we determine that major redesign of the SIS is warranted, we will provide the associated conceptual engineering information for the design alternative adopted, including the projected completion schedule. If we determine that major redesign of the SIS is not warranted, we will advise you of the basis for our determination.

In summary, we will complete our review and evaluation of the manufacturers' proposals for replacement of the SIS hydraulically operated valves in mid-February, 1982 and we will complete our study of the SIS design and performance in May, 1982 to determine if major redesign is warranted. With issuance of a purchase order to the selected manufacturer in mid-February, 1982, the SIS hydraulically operated valves can be delivered by March, 1983, based on a minimum qualification testing and delivery time, or by April, 1985, based on a maximum qualification testing and delivery time. Following delivery of the new hydraulically operated valves, construction and startup testing activities will be completed during the next scheduled refueling outage. If we determine that major redesign of the SIS is warranted, we will evaluate whether the replacement of the hydraulically operated valves would be more appropriately undertaken as part of the design alternative adopted and will advise you of the results of our evaluation in May, 1982 as discussed in Item 2 above.

D. M. Crutchfield

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December 8, 1981

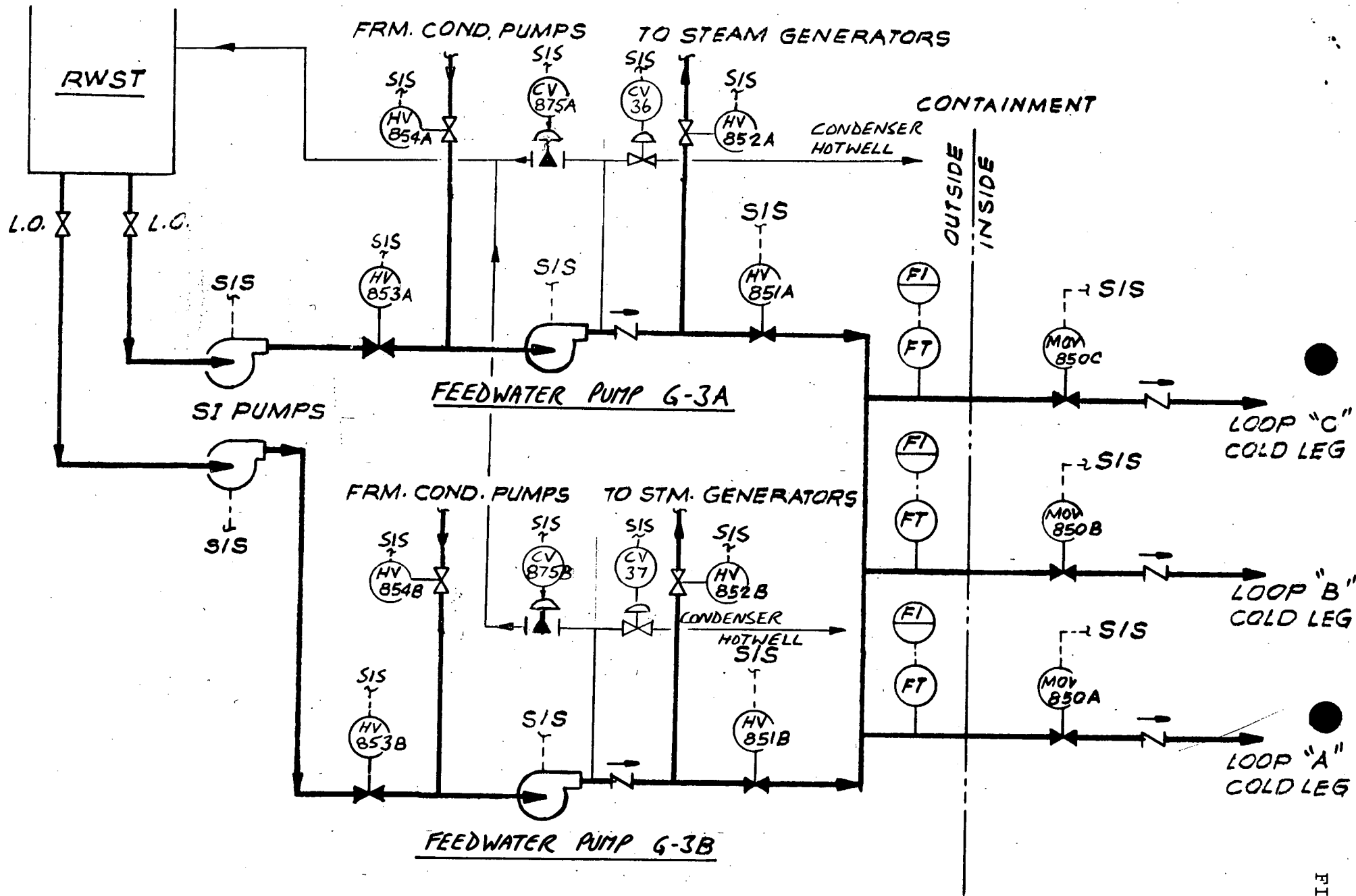
If you have any questions or desire further information concerning the schedules discussed above, please contact me.

Very truly yours,

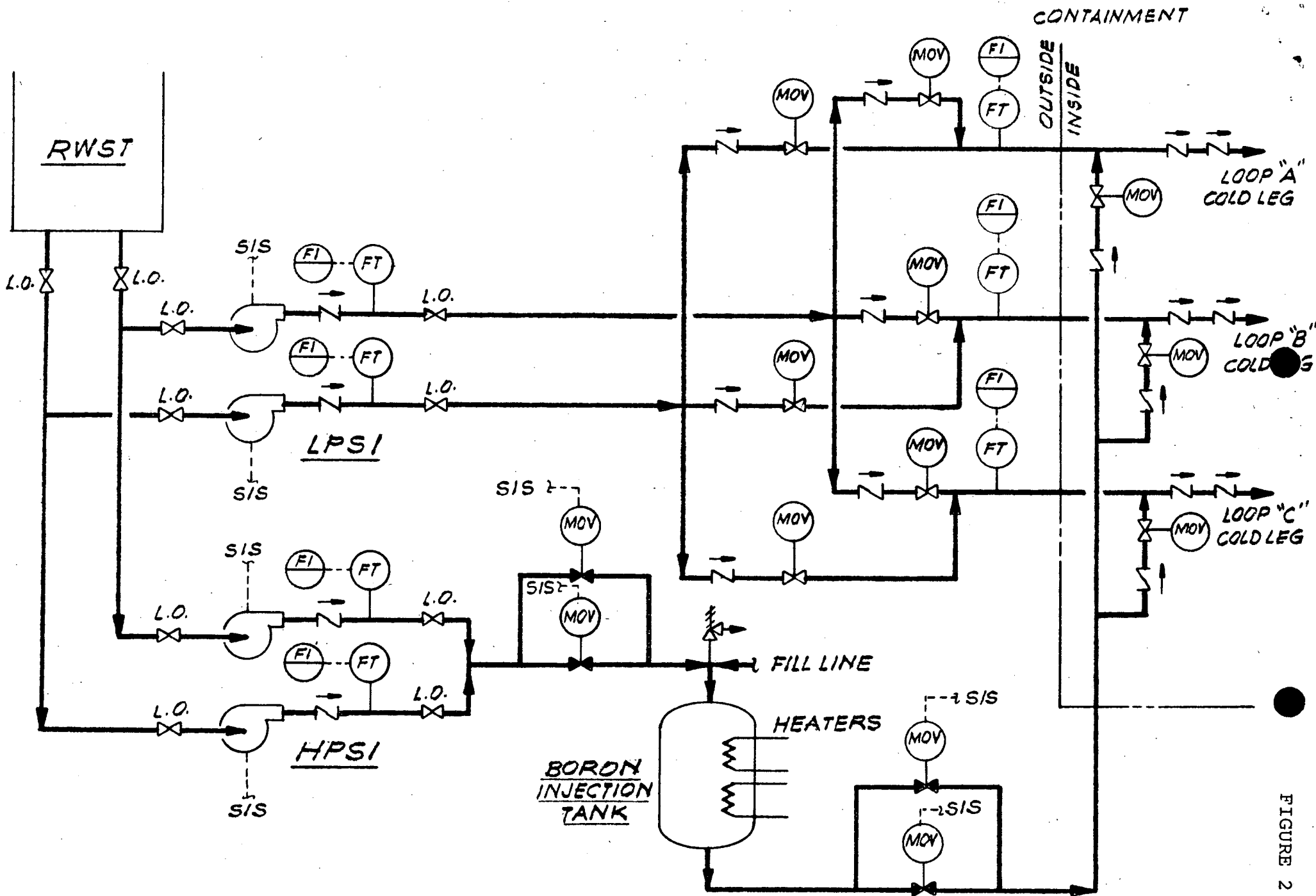
A handwritten signature in cursive script, appearing to read "W.P. Bush".

Enclosures (4)

cc: R. H. Engleken, Director, DIE, Region V



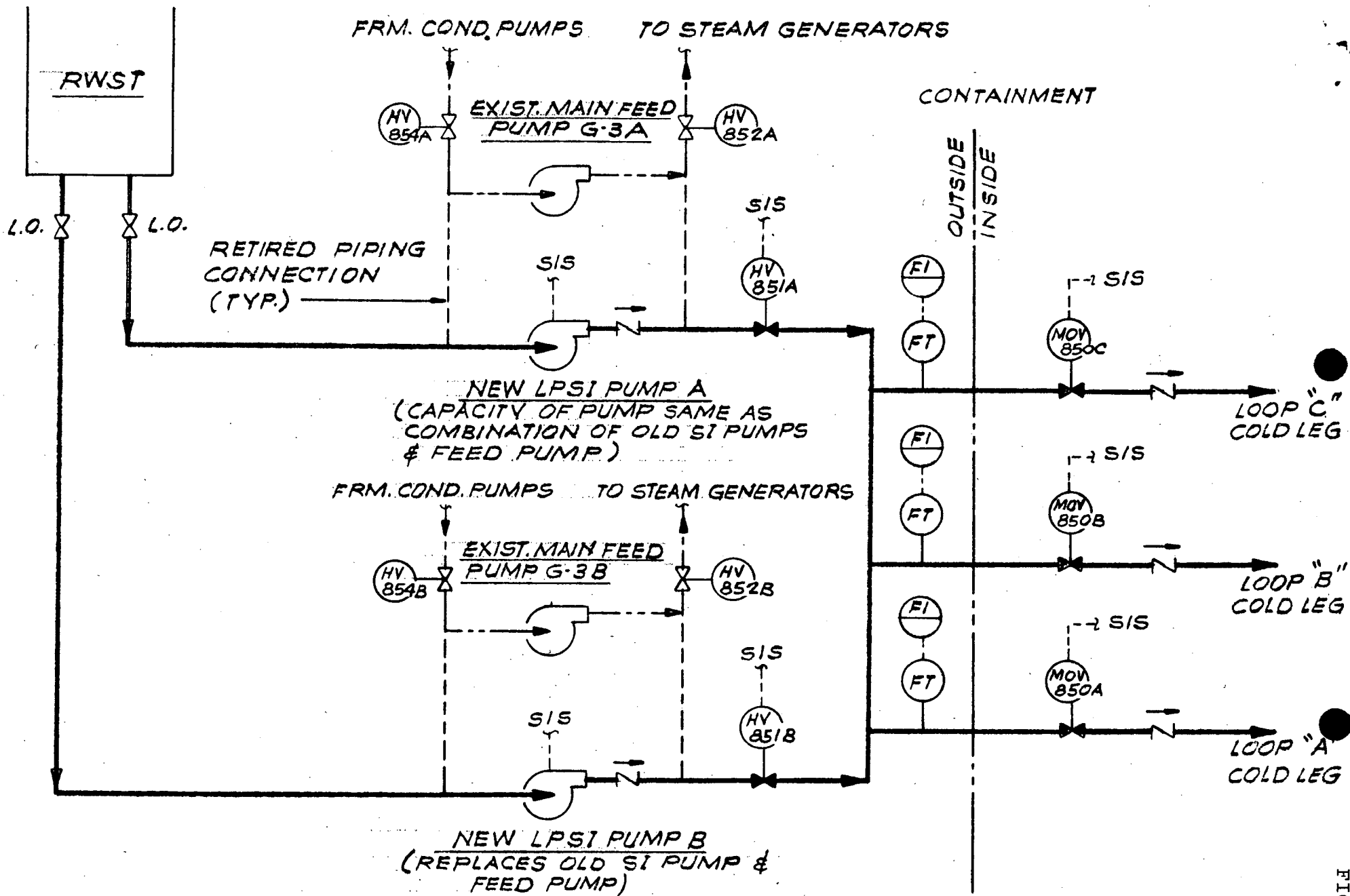
AS BUILT SYSTEM



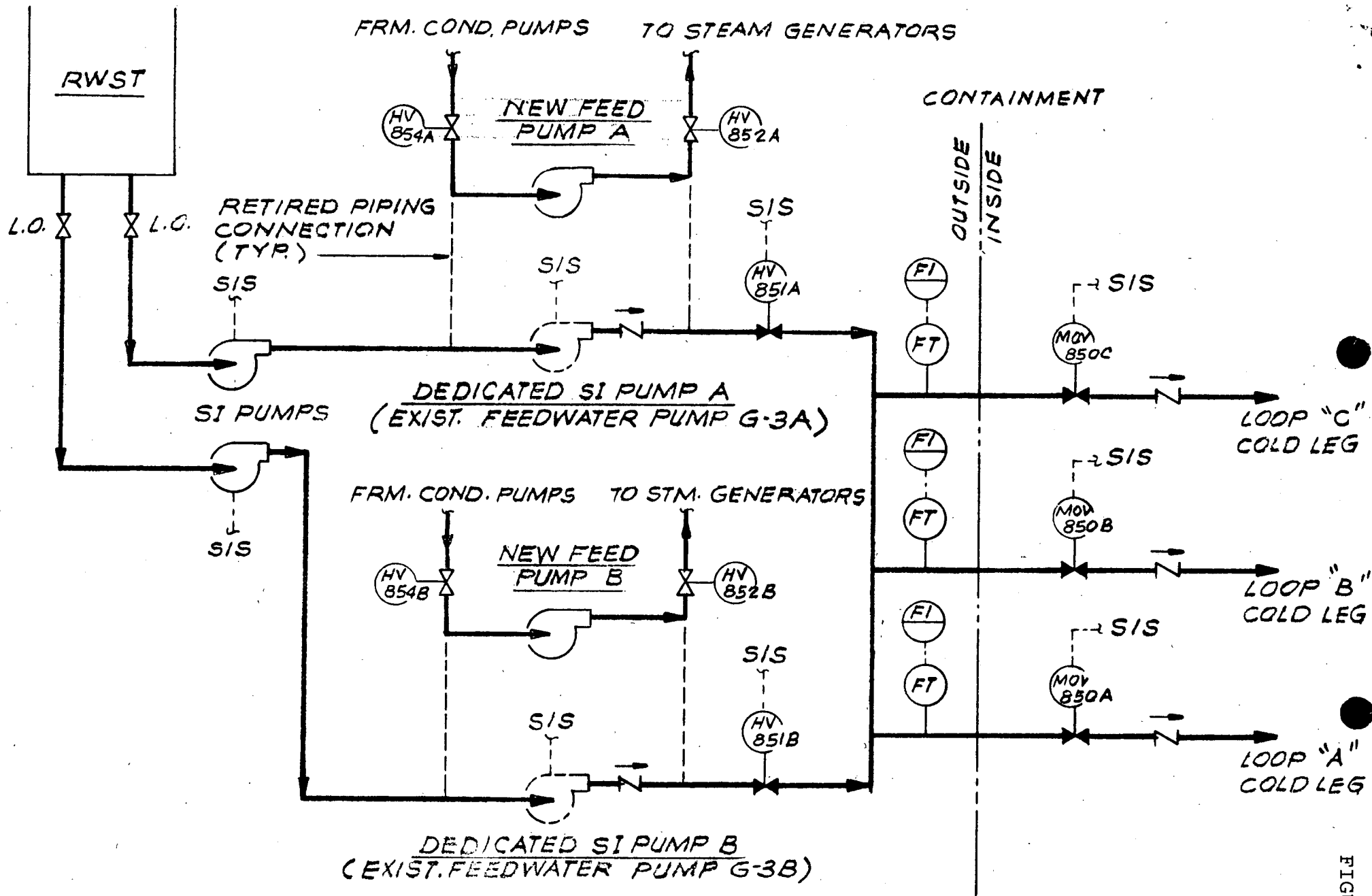
ALTERNATIVE 2

( LOW PRESSURE AND HIGH PRESSURE SI PUMPS WITH BORON INJECTION TANK )

FIGURE 2



**ALTERNATIVE 3**  
(NEW SI PUMPS)



**ALTERNATIVE 4**  
**(NEW DEDICATED FEED PUMPS)**