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SUBJECT: Provides addl info re ICS sys surveillance,per Proposed Amend 83 submitted on 871026.

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June 16, 1988

10 CFR 50.90

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Proposed Amendment No. 83 to the Kewaunee
Internal Containment Spray System Testing

Reference: Letter from D. C. Hintz (WPSC) to Document Control Desk (NRC) dated October 26, 1987

The referenced, proposed amendment 83 (PA-83), requested that Technical Specification 4.5.a.2 (TS 4.5.a.2) be changed to clarify its intent. TS 4.5.a.2 describes the surveillance requirements for the internal containment spray (ICS) system. TS 4.5.a.2.A states:

> "System tests shall be performed once every operating cycle or once every 18 months, whichever occurs first. The test shall be performed with the isolation valves in the supply lines at the containment blocked closed. Operation of the system is initiated by tripping the normal actuation instrumentation."

The proposed change would delete the last sentence of the specification. As a result of the proposed change, Kewaunee Nuclear Regulatory Commission (NRC) Project Manager requested additional information concerning ICS system surveillance. This submittal supplies the additional information.

Presently, the requirement specified by TS 4.5.a.2 is met by conducting surveillance procedure (SP) 23-095, Containment Spray System Test. During SP 23-095 the ICS isolation valves at the containment are closed and then the ICS pumps are operated near their shutoff head. Since this can lead to excessive wear and tear on the pumps, pump run time is limited to 20 seconds. The test is initiated by simultaneously pushing the two manual initiation pushbuttons located in the control room.

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The NRC has questioned the adequacy of this test because the manual pushbuttons are used to actuate the system. TS 4.5.a.2.A could be interpreted to require the injection of test pressure signals into the containment pressure transmitters in order to actuate the system. If this interpretation is taken, the system would have to be started a minimum of eight times to verify the operability of all containment pressure channel combinations. The seven additional starts required by this interpretation would exacerbate the wear and tear on the pumps. The proposed change would clarify the testing requirements and preclude this interpretation.

Sufficient surveillance currently exists to adequately verify the operability of the ICS system initiation logic. Figures 1 through 5 in the attachment provide simplified schematics of the ICS system actuation logic from the containment pressure transmitters to an ICS pump or valve. The figures identify the SPs that test each component. From these figures, it can be seen that the existing procedures adequately test each component with sufficient overlap to ensure system operability.

SP 18-043, Containment Pressure Instrument Channel test, is conducted on a monthly basis in accordance with item 18c of table TS 4.1-1. This procedure calibrates the bistables associated with the containment pressure transmitters and verifies the operability of the transmitter's power supply, isolation amplifier, test point, bistables, logic relay, and control room annunciators.

SP 18-044, Containment Pressure Instrument Calibration, is conducted on a refueling basis in accordance with item 18c of table TS 4.1-1. This procedure calibrates the containment pressure transmitters, their associated bistables and control room indication. The procedure also verifies operability of the transmitter's power supply, isolation amplifier, test point, logic relay and control room annunciators.

SP 23-095, Containment Spray System Test, is conducted on a refueling basis in accordance with TS 4.5.a.2.A. This procedure verifies operability of the ICS system's pumps, valves, and actuation logic, including the master/slave relay.

SP 55-155, Engineered Safeguards Logic Channel Test, is conducted monthly in accordance with item 26 of Table TS 4.1-1 and item 3b of table TS 3.5-3. This procedure verifies operability of the ICS master/slave relays, their associated contact points and the ICS ESF actuation logic.

In conclusion, the proposed change to TS 4.5.a.2 requested by PA-83 should be approved by the NRC. The proposed change would ensure that the TS is properly interpreted to prevent excessive wear and tear of the ICS pumps. Therefore, the proposed change is safe and conservative and should be approved.

Sincerely,

D. C. Hintz
Vice President - Nuclear Power

TJW/jms
Enc.
cc - Mr. Robert Nelson, US NRC
US NRC, Region III

Attachment

To The Letter

From:

D. C. Hintz (WPSC)

To:

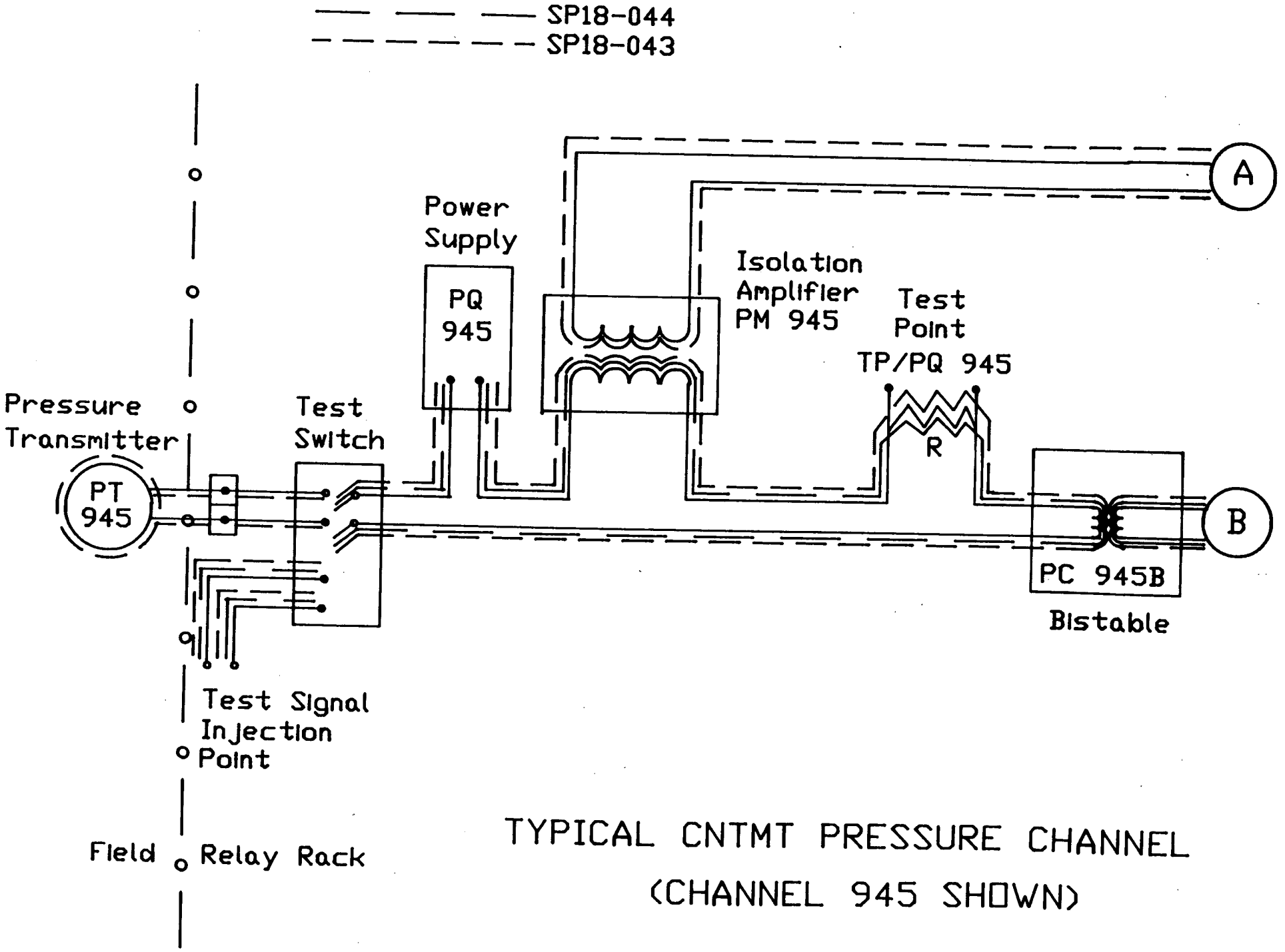
Document Control Desk (NRC)

Dated:

June 16, 1988

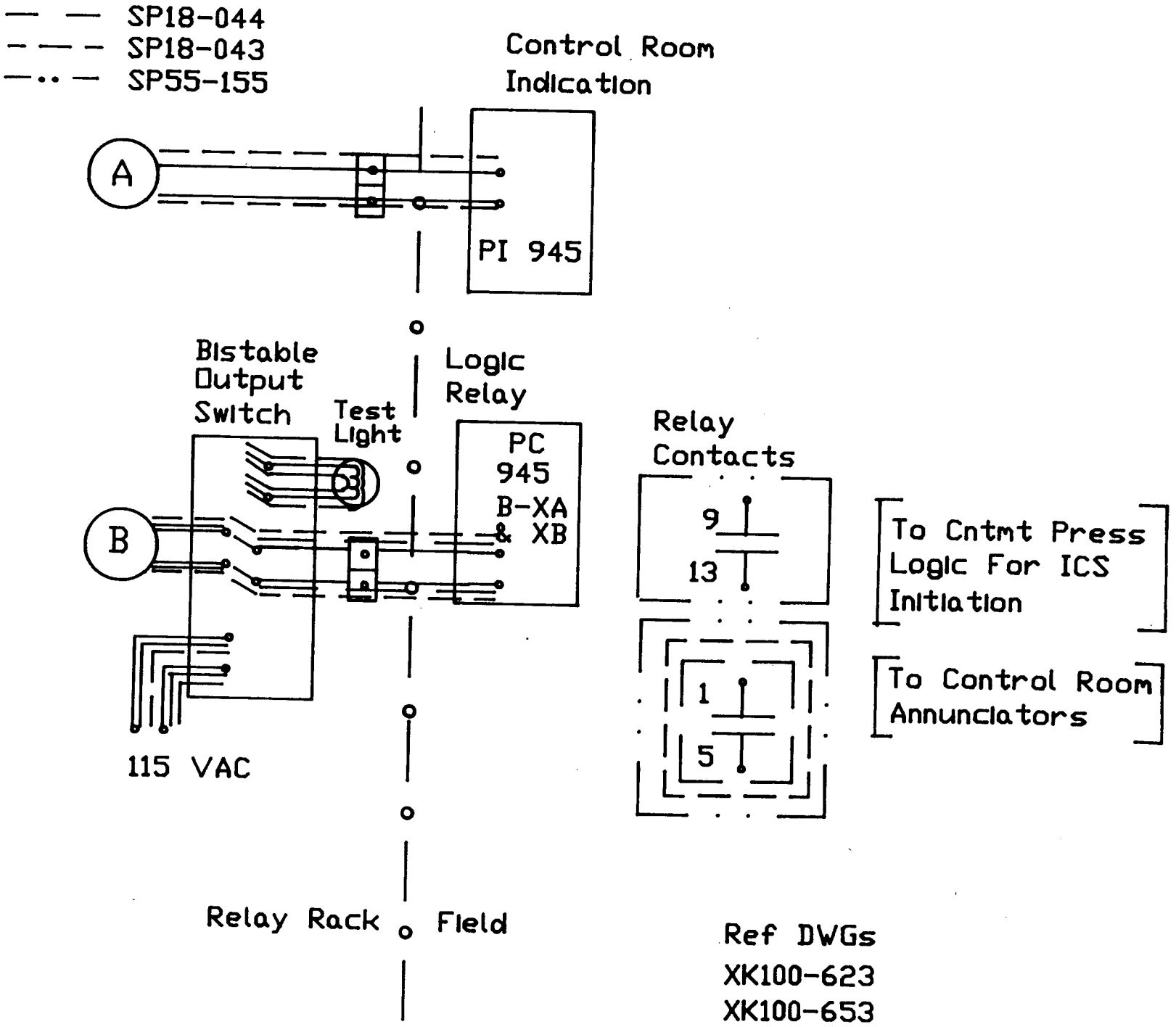
Re:

Internal Containment Spray System Testing



TYPICAL CNTMT PRESSURE CHANNEL
(CHANNEL 945 SHOWN)

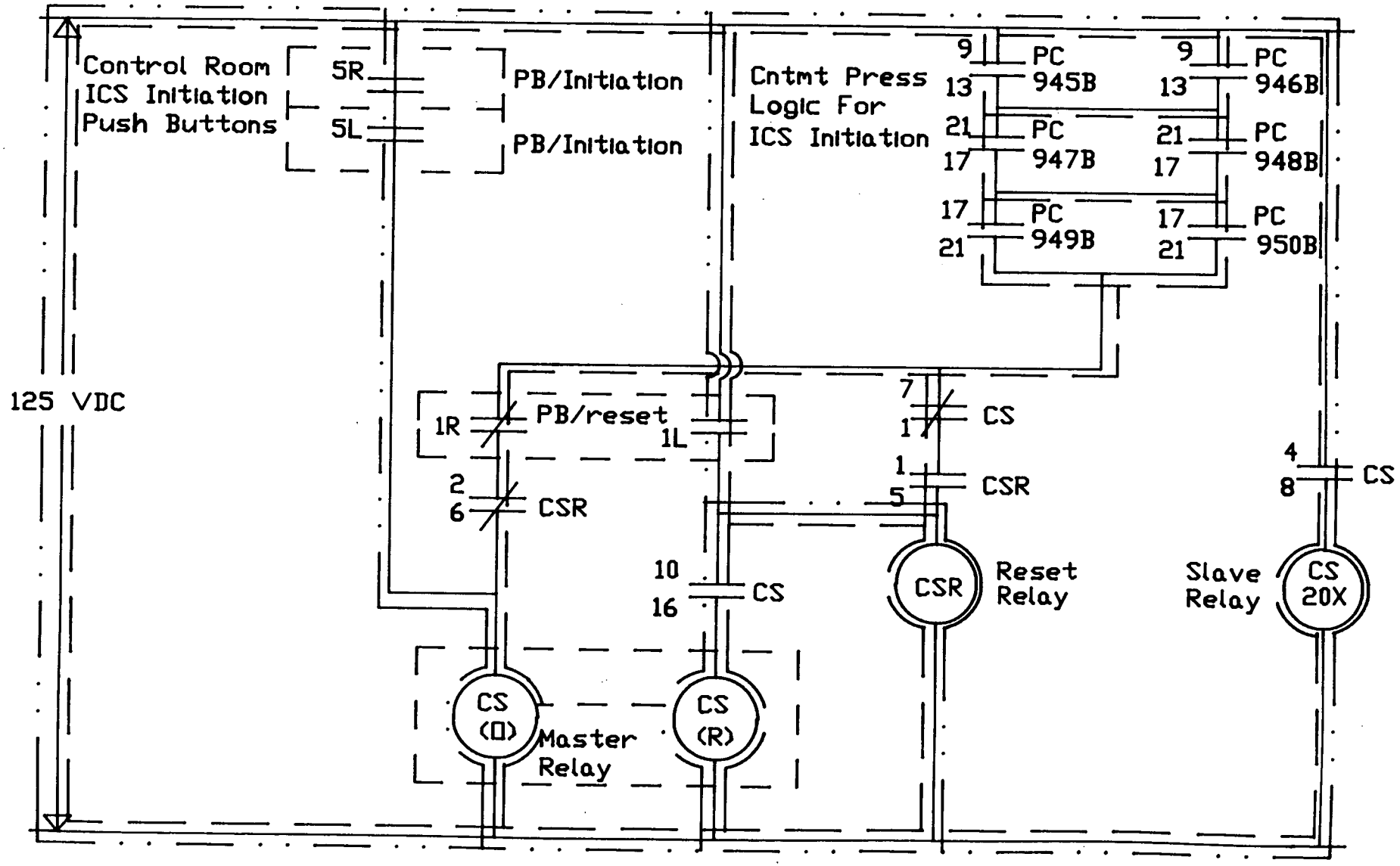
FIGURE 1



Ref DWGs
XK100-623
XK100-653
E2709

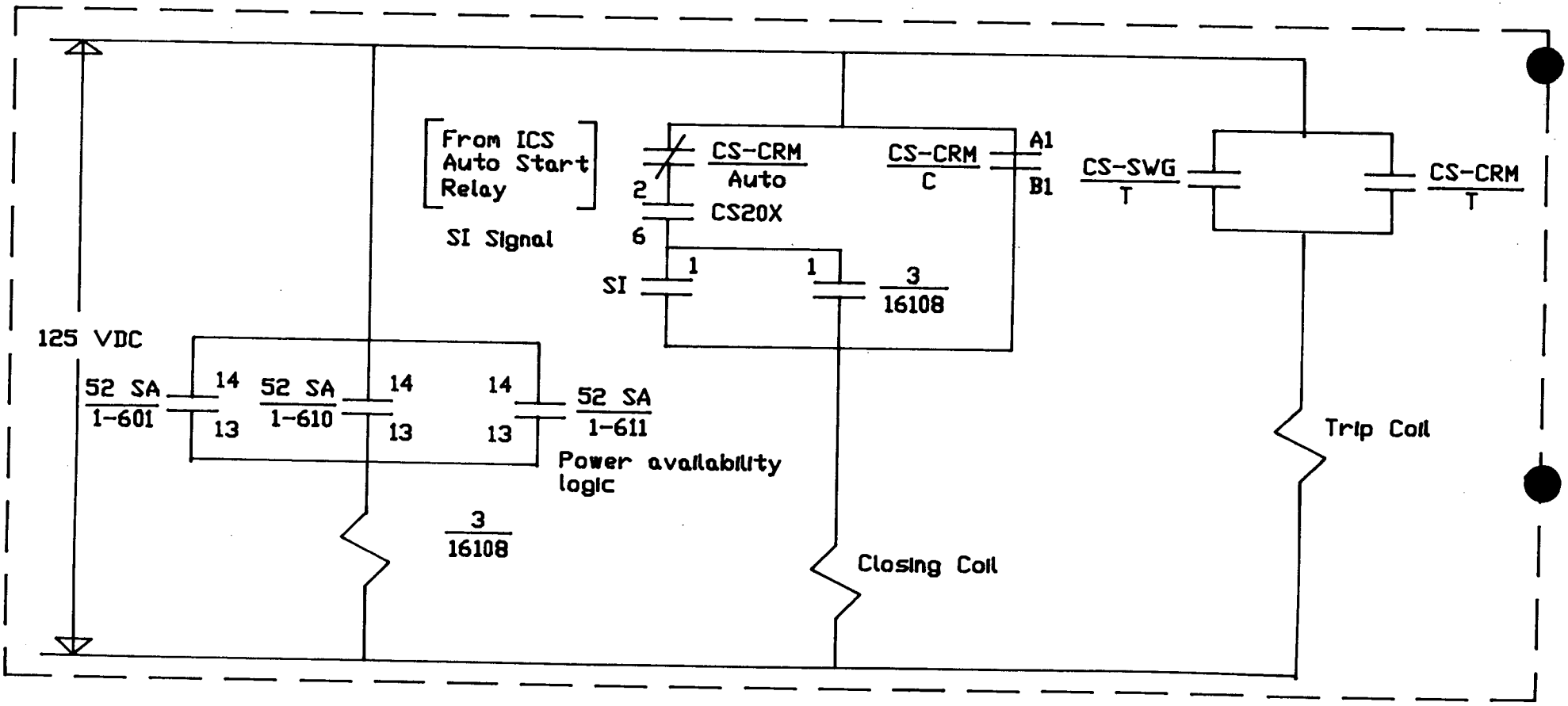
FIGURE 1 (CON'T)

SP55-155
SP23-095



ICS ESF ACTUATION LOGIC
FIGURE 2

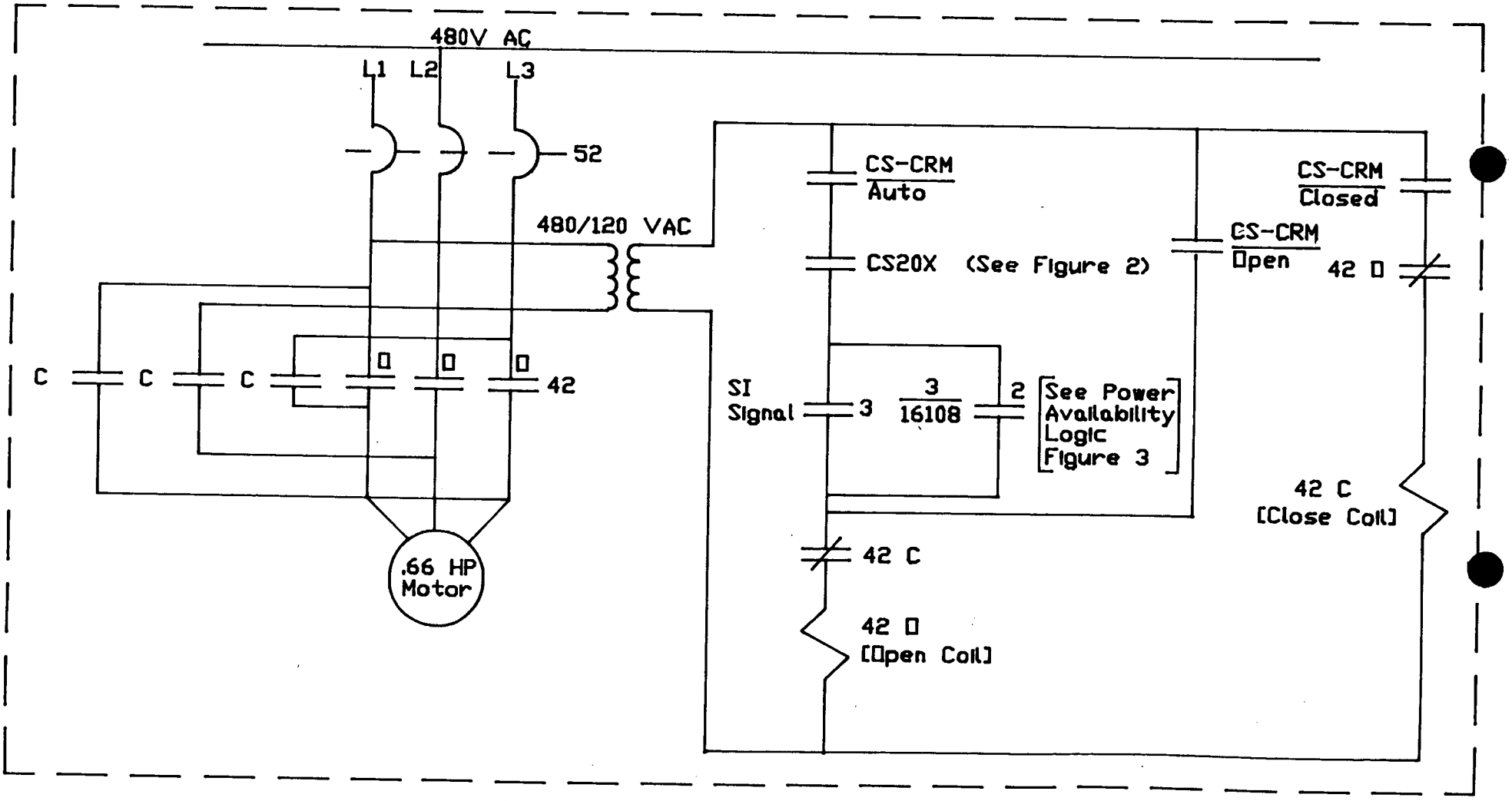
Ref DWG
E2712



ICS PUMP

FIGURE 3

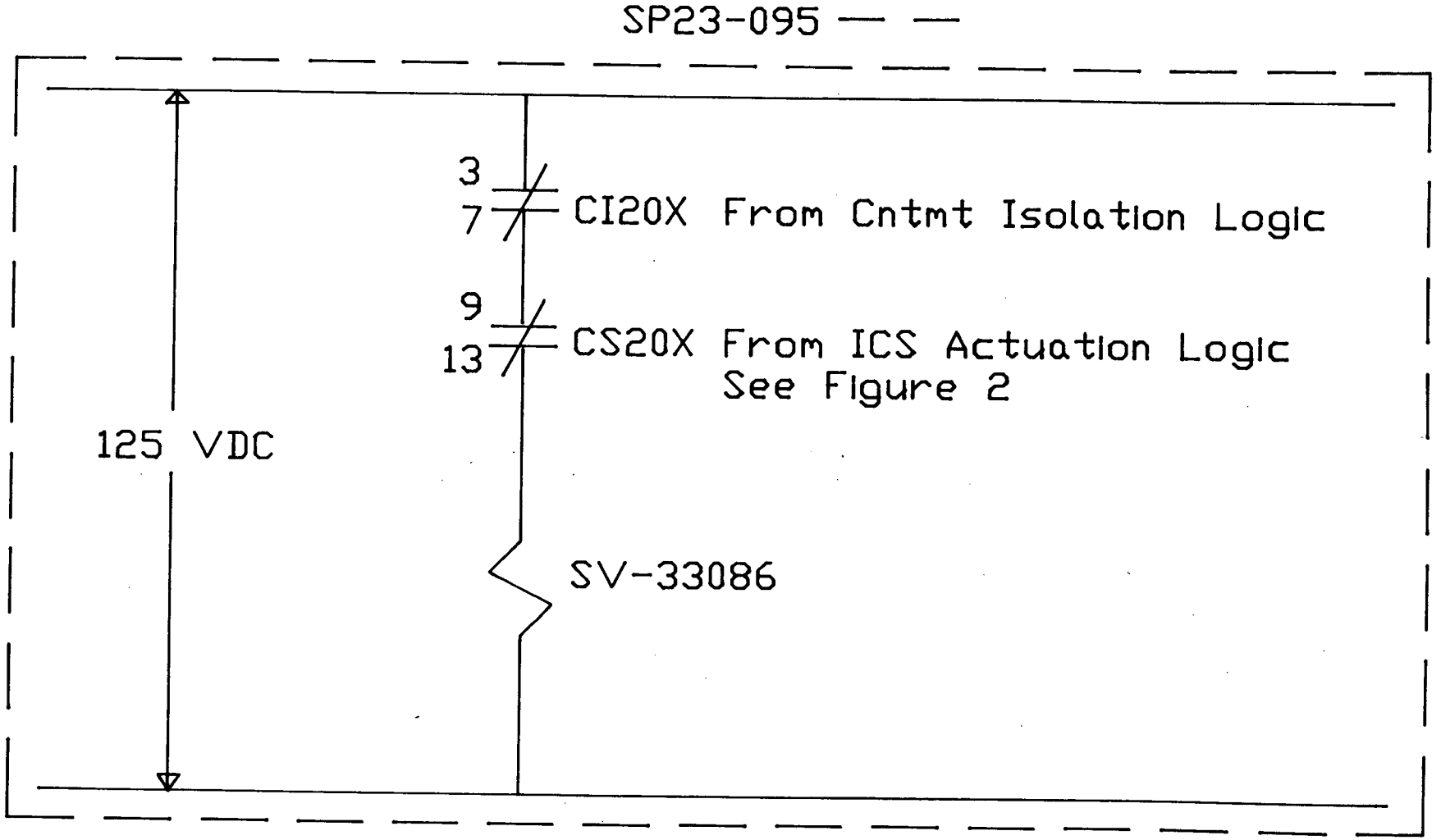
Ref DWGS:
E1082
E1089



ICS PUMP DISCHARGE VALVE TO CNTMT

FIGURE 4

Ref DWG:
E1419



ICS PUMP DISCHARGE VALVE TO THE RWST

FIGURE 5