

45.0

Davis-Besse Nuclear Power Station

SP 1105.20



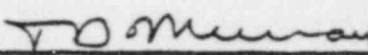
Unit No. 1

POWER OPERATED AND SAFETY RELIEF VALVE

MONITORING SYSTEM OPERATING PROCEDURE

NUCLEAR SAFETY RELATED

Record of Approval and Changes

Prepared by	<u>Daniel J. Trautman</u>	<u>07/09/80</u>
		Date
Submitted by	<u></u>	<u>7/12/80</u>
	Section Head	Date
Recommended by	<u></u>	<u>7/13/80</u>
	SRB Chairman	Date
QA Approved	<u>N/A</u>	
	Manager of Quality Assurance	Date
Approved by	<u></u>	<u>10/24/80</u>
	Station Superintendent	Date

Revision No.	SRB Recommendation	Date	QA Approved	Date	Sta. Supt. Approved	Date
--------------	--------------------	------	-------------	------	---------------------	------

8507300133 801024
PDR ADOCK 05000346
P PDR

1. PURPOSE

- 1.1 To detail the procedures necessary to perform the following operations associated with the Power Operated and Safety Relief Valve Monitoring System.

PORV/SAF Relief Valve Monitoring System Energization - Section 5
PORV/SAF Relief Valve Monitoring System Deenergization - Section 6

1.2 Discussion - General

- 1.2.1 The PORV/SAF Relief Valve Monitoring System is an accoustical flow monitoring designed to provide redundant valve position indication for the following valves:

RC2A
RC13A
RC13B

2. FUNCTIONAL DESCRIPTION

The PORV/SAF Relief Valve Monitoring System is divided into two (2) separate channels. Each channel is powered from a separate power source and located in a separate cabinet.

<u>Channel</u>	<u>Cabinet</u>	<u>Power Supply</u>	<u>Ckt.</u>
1	C5763B	Y1	12
2	C5755A	Y2	12

NOTE: The power circuit is wired in parallel with C5716 and C5717 indicating lights.

Each channel is divided into three (3) separate monitoring instruments, being powered from that specific channel's power supply. Each instrument is further subdivided into three (3) major components which are:

- A. Sensor/Preamplifiers
- B. Monitoring Module
- C. Alarm Module

2.1 Sensor/Preamplifier

Located on the piping downstream of the Power Operated Relief Valve, and each of the Pressurizer Code Safety Valves are two (2) accoustic sensors/valves. Each of the sensors detect accoustical vibrations and deliver these signals to each Channel Monitoring Module.

2.2 Monitoring Module

In each channel, there are three (3) monitoring modules which receiver signals from a sensor located downstream of the PORV and each Pressurizer Code Safety. The Monitoring Module will convert the signals into a percent valve flow indication, denoted by the highest level of LED indication on the front of the module.

2.3 Alarm Module

The Alarm Module accompanies each particular Valve Flow Monitor Module, such that; the Valve Flow Monitoring Module upon reaching a preset level will trigger the Alarm Module. When the Alarm Module is triggered, it will provide remote valve position indication of its respective valve at the POST ACCIDENT INDICATING PANEL C5798 (C5799) depending on the channel alarming.

NOTE: Computer Annunciator Alarm Z768 will alarm if any of the Alarm Modules actuate.

3. PRECAUTIONS

- 3.1 Safety Tagging Procedure, AD 1803.00, and TECo Safety Precautions are to be followed at all times.
- 3.2 Removal of a particular alarm module will give open indication for the associated valve.
- 3.3 Care should be exercised when performing maintenance in the vicinity of the accelerometers, as the hardline cable from these devices is very delicate.

4. REFERENCES

- 4.1 TEC 1414-5 Valve Flow Monitor System Manual
- 4.2 AD 1803.00, "Safety Tagging"
- 4.3 Elementary Drawings:
 - A. E-52B, Sheet 68, REACTOR COOLANT SYSTEM PORV/SAF REF VLV OPEN IND
 - B. E-786B; Flow Monitoring System for PORV/Safety Relief Valves

5. SYSTEM ENERGIZATION

- 5.1 Prerequisites

- 5.1.1 Circuit Breaker No. Y112 at essential distribution panel Y1 is closed.
- 5.1.2 Circuit Breaker No. Y212 at essential distribution panel Y2 is closed.
- 5.1.3 The Shift Supervisor has given permission to energize one or both channels.

5.2 Procedure

NOTE: Consult Attachment 1 for panel layout:

- 5.2.1 Verify power switch on the 913 Module for the appropriate channel is "OFF".

<u>Channel</u>	<u>Cabinet</u>	<u>Position</u>	<u>Verified</u>
1	C5763B	"OFF"	_____
2	C5755A	"OFF"	_____

- 5.2.2 At the PORV/SAF Monitoring Channel 1 (2), Cabinet C5763B (C5755A), energize the appropriate channel by placing the power switch on the 913 Module in the "ON" position.

Verify all four (4) power supply indicators for the appropriate channels are "ON".

<u>Verify</u>	<u>Channel</u>	<u>Status</u>	<u>Verified</u>
+15v	1 (C5763B)	"ON"	_____
-15v	1 (C5763B)	"ON"	_____
+5v	1 (C5763B)	"ON"	_____
+30v	1 (C5763B)	"ON"	_____
+15v	2 (C5755A)	"ON"	_____
-15v	2 (C5755A)	"ON"	_____
+5v	2 (C5755A)	"ON"	_____
+30v	2 (C5755A)	"ON"	_____

NOTE: If upon energization, any of the valves indicate open by % open indication and the associated alarm module alarming, check redundant indications to determine actual valve status. If NO abnormalities are noted, contact I&C to investigate and submit a W.R. in accordance with AD 1844.00, "Maintenance".

6. SYSTEM DEENERGIZATION

NOTE: There are NO control functions associated with this sytem, therefore deenergization of a channel, if necessary, will create NO adverse effects, other than loss of indication.

6.1 Prerequisites

- 6.1.1 The Shift Supervisor has given permission to deenergize one or both channels.

6.2 Procedure

- 6.2.1 At the PORV/SAF Monitoring Channel 1 (2), Cabinet C5763B (C5755A), deenergize the panel for the appropriate channel by placing the power switch on the 913 Module in the "OFF" position.

Verify all power supply indicators for the appropriate channel are "OFF".

NOTE: Turning the unit OFF at the cabinet will only deenergize internal panel wiring. If required to deenergize power to the panel, it will be necessary to deenergize Engineered Safety Features Panel C5716 (C5717) indicting lights.

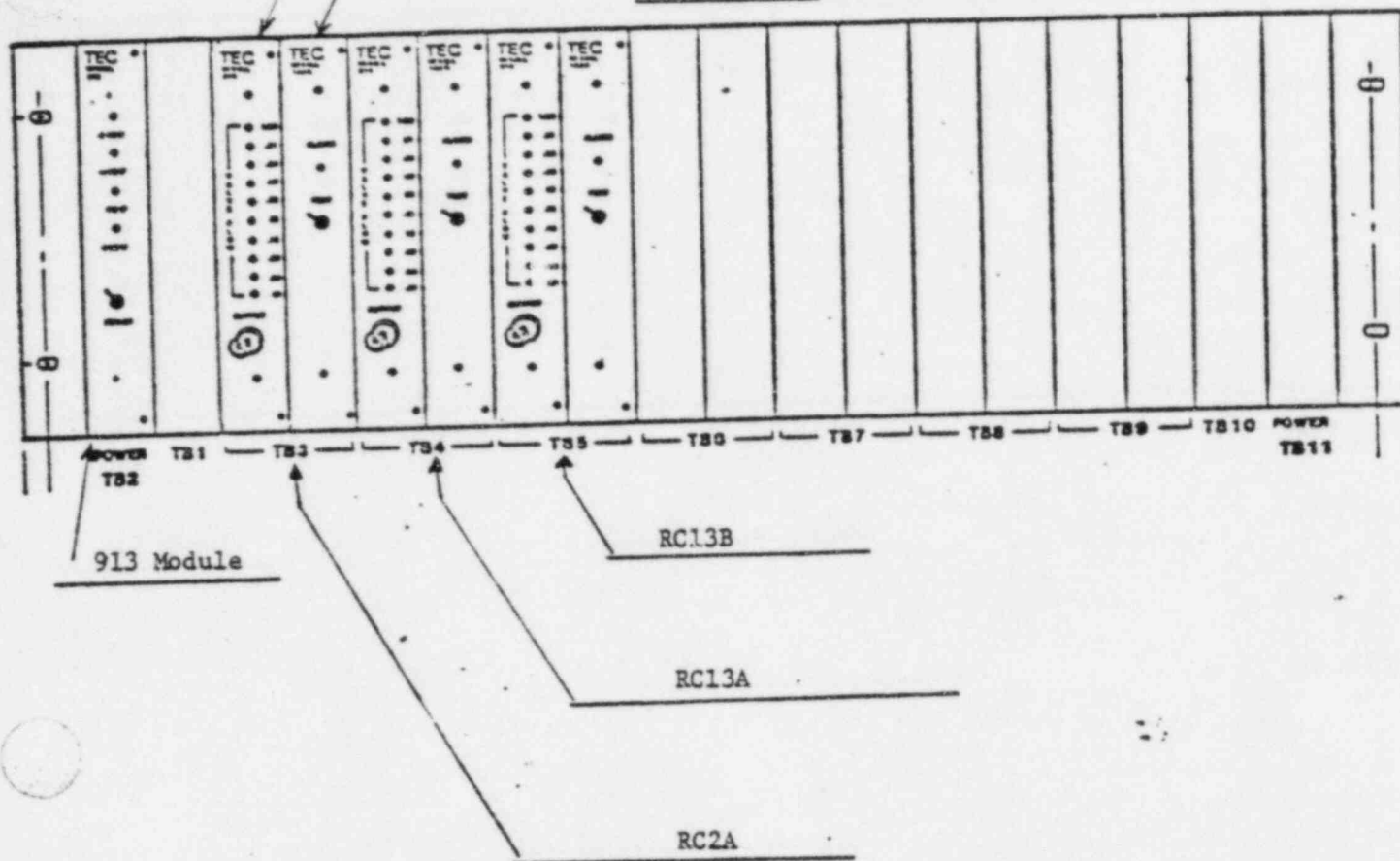
Flow Monitoring Module

Alarm Module

-5-

SP 1105.20.0

ATTACHMENT 1



TECo Channel No.	Accelerometer	Valve	Description
1	ZE 4263	RC-2A	Pressurizer Power Relief
1	ZE 4265	RC-13A	Pressurizer Relief
1	ZE 4267	RC-13B	Pressurizer Relief
2	ZE 4264	RC-2A	Pressurizer Power Relief
2	ZE 4266	RC-13A	Pressurizer Relief
2	ZE 4268	RC-13B	Pressurizer Relief

END