



GULF STATES UTILITIES COMPANY

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March 28, 1985
RBG- 20,571
File No. G9.5

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

River Bend Station - Unit 1
Docket No. 50-458

Enclosed for your review is Gulf States Utilities Company response to Request for Additional Information identified by the Nuclear Regulatory Commission's Instrumentation and Control Systems Branch (ICSB). The information contained, herein, provides 1) a description of the Access/Changing of setpoints on the Digital Radiation Monitoring System (DRMS) and 2) a discussion of calibration and testing for the DRMS. This letter provides partial response to Confirmatory Item (40) of Table 1.4 of the Safety Evaluation Report.

Sincerely,

Eddie R. Grant

for J. E. Booker
Manager-Engineering,
Nuclear Fuels & Licensing
River Bend Nuclear Group

JEB/WJR/JEP/je

Attachment

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ENCLOSURE 1

ACCESS/CHANGING SETPOINTS ON THE DIGITAL RADIATION MONITORING SYSTEM

Access and changing of setpoints in the Digital Radiation Monitoring System (DRMS) is performed as described below for Safety Related Radiation Monitors.

Certain steps must be followed to change an RM-80 setpoint using the RM-23. The following example is for changing the Alert Alarm Setpoint (Channel Item 009) of the Gas channel of a Particulate and Gas radiation monitor from a value of $1.0E+2$ to $2.5E+3$.

Operator Action	RM-23 Display
1. Insert the Supervisor's key into the panel in which the RM-23 is located and switch it to the supervisor position.	1. The SUPV MODE light comes on for all of the RM-23's on that panel section indicating that the RM-23 is now in supervisor mode and setpoint changing is allowed.
2. Press the channel key labeled GAS.	2. The GAS channel key backlights and the current activity of the Gas channel is displayed.
3. Press the zero key twice and the nine key once.	3. The display now reads "009".
4. Press the ITEM key.	4. The current value of Alert alarm setpoint (Channel Item 9) now appears in the display in the format $1.00E+02$.
5. Press the two key, the five key, the zero key, the plus key, the zero key and the three key.	5. The numbers appear on the display as they are pressed. After all all the keys have been pressed, $2.50E+03$ appears in the display.
6. Press the ENTER key.	6. The value $2.50E+03$ flashes once and remains in the display. The Alert Alarm Setpoint has now been changed in the RM-80 from $1.0E+2$ to $2.5E+3$.
7. Turn the key to the normal position and remove key from the panel in which the RM-23 is located.	7. The SUPV MODE light extinguishes for all of the RM-23's on that panel section.

The changing of other setpoints is accomplished in a manner similar to the example described above.

Safeguards:

- RM-23 - Information can be accessed without precaution. However, to change any setpoints requires a supervisory key.
- RM-80 - The cabinet which contains the RM-23P port and the access control switches and Jumper is locked.

DISCUSSION OF CALIBRATION AND TESTING FOR THE DIGITAL RADIATION

MONITORING SYSTEM (DRMS)

The following is a general discussion of the calibration and testing for the DRMS as delineated in the River Bend Technical Specifications. Procedures are currently being written to perform these functions.

Discussion:

Control Functions - The DRMS has Radiation Monitors that will accuate the following control functions:

- 1) Main Control Room Ventilation Isolation
- 2) Standby Gas Treatment Activation
- 3) Fuel Buildings Isolation
- 4) Containment Isolation
- 5) Divert Radwaste Discharge from the CCW to the Waste Collector Tanks

These control functions are accuated by either a high radiation condition or a loss of power to the radiation monitor.

CHANNEL CALIBRATION -

This is performed by completing the Calibration Procedure for the particular detector type. The Calibration Procedure completely recalibrates the monitor and demonstrates the proper accuation of any control functions associated with that monitor. This test is typically required once every 18 months.

CHANNEL FUNCTIONAL TEST -

This is a procedure that tests proper response to a Loss of Power condition and a signal input which is greater than the High Alarm Setpoint. Complete accusation of a control function will not necessarily be demonstrated during this test. However, as a minimum, the proper response from the Radiation Monitor which would cause accusation of the control function will be verified. This test is typically performed on a monthly or quarterly frequency.

1) Loss of Power:

Deenergize the RM-80 by placing the breaker that supplies power to the monitor to the OFF position. Verify appropriate alarm indications in the Main Control Room and accusation of relays which would initiate any control function associated with that monitor.

2) Instrument Measures in Range Above the High Alarm Setpoint:

Electronically simulate a radiation input greater than the High Alarm Setpoint. Verify that the RM-80 accuses the appropriate alarms in the Main Control Room and that the activity reading is correct. Verify accusation of relays which would initiate any control function associated with that monitor.

CHANNEL CHECK -

A channel check can be performed on the RM-80 using a checksource which can be manually activated and shall be automatically activated by the RM-80 at least once per shift.

If the detector does not read the proper value for the checksource the firmware declares the monitor inoperative and gives an inoperative indication both locally at the RM-80 and in the Main Control Room.

The channel check may be performed by taking a reading from the channel and comparing it with previous readings or with a separate channel which is monitoring the same condition.

SOURCE CHECK -

This shall be performed by applying a source of known value on the face of the detector and verifying that appropriate value is indicated by the RM-80.