



Portland General Electric Company

Bart D. Withers Vice President

April 20, 1983

Trojan Nuclear Plant
Docket 50-344
License NPF-1

Director of Nuclear Reactor Regulation
ATTN: Mr. Robert A. Clark, Chief
Operating Reactors Branch No. 3
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington DC 20555

Dear Mr. Clark:

Engineered Safety Features Actuation Signals

The NRC letter of February 3, 1983 indicated that Trojan's current design for Containment ventilation isolation, ESF reset push buttons, and annunciation of the overridden status of the ESF systems was not in accordance with NRC criteria. PGE's response to that NRC letter is attached and will hopefully resolve the NRC concerns on this issue.

Sincerely,

Bart D. Withers
Vice President
Nuclear

Attachment

c: Mr. Lynn Frank, Director
State of Oregon
Department of Energy

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RESOLUTION OF CRITERIA 1, 2, AND 3 FOR
SAFETY ACTUATION SYSTEM SIGNAL OVERRIDE

1. Criterion 1 - In keeping with the requirements of General Design Criteria (GDC) 55 and 56, the overriding of one type of safety actuation signal (eg, radiation) should not cause the blocking of any other type of safety actuation signal (eg, pressure) for those valves that have no function besides Containment isolation.

NRC Conclusion - The Containment ventilation isolation (CVI) system circuitry does not satisfy Criterion 1, since the overriding of one type of safety signal will block actuation by a second signal. We disagree with the contractor's feelings that additional procedural controls in conjunction with existing Technical Specifications will satisfy the objectives of Criterion 1.

PGE Response - In order to prevent an overriding/blocking situation from occurring in violation of Criterion 1, the Containment ventilation isolation system (CVIS) circuitry shown in Figure 1 will be modified to remove the effect of the reset push button on the CVI SAF OUT module. The lead for the reset push button from CVI SAF OUT module will be eliminated, which will remove all override capability from the CVIS circuitry. Thus, in order to reset CVIS so that the Containment purge valves and hydrogen vent valves can be reopened, all incoming trip signals to the CVIS circuitry must clear or must be blocked at their source. Upon completion of this modification, Criterion 1 will be satisfied for the CVIS. This modification is expected to be complete by January 1, 1984.

2. Criterion 2 - Sufficient physical features (eg, keylock switches) are to be provided to facilitate adequate administrative controls.

NRC Conclusion - The CVI and other Engineered Safety Features (ESF) "RESET" push buttons are not provided with physical features to facilitate administrative controls as required by Criterion 2.

PGE Response - In response to Supplement 1 to NUREG-0737, PGE is currently involved in performing a detailed Control Room Design Review (CRDR) to satisfy human factors concerns. The ESF reset push buttons of concern in the Containment purging and venting issue are being considered as part of the CRDR. Therefore, to avoid the possibility of performing multiple changes on these reset push buttons, the Containment purging and venting criteria will be integrated with the human factors concerns and will be considered under the CRDR.

3. Criterion 3 - A system level annunciation of the overridden status should be provided for every safety system impacted when any override is active. (See NRC Regulatory Guide 1.47.)

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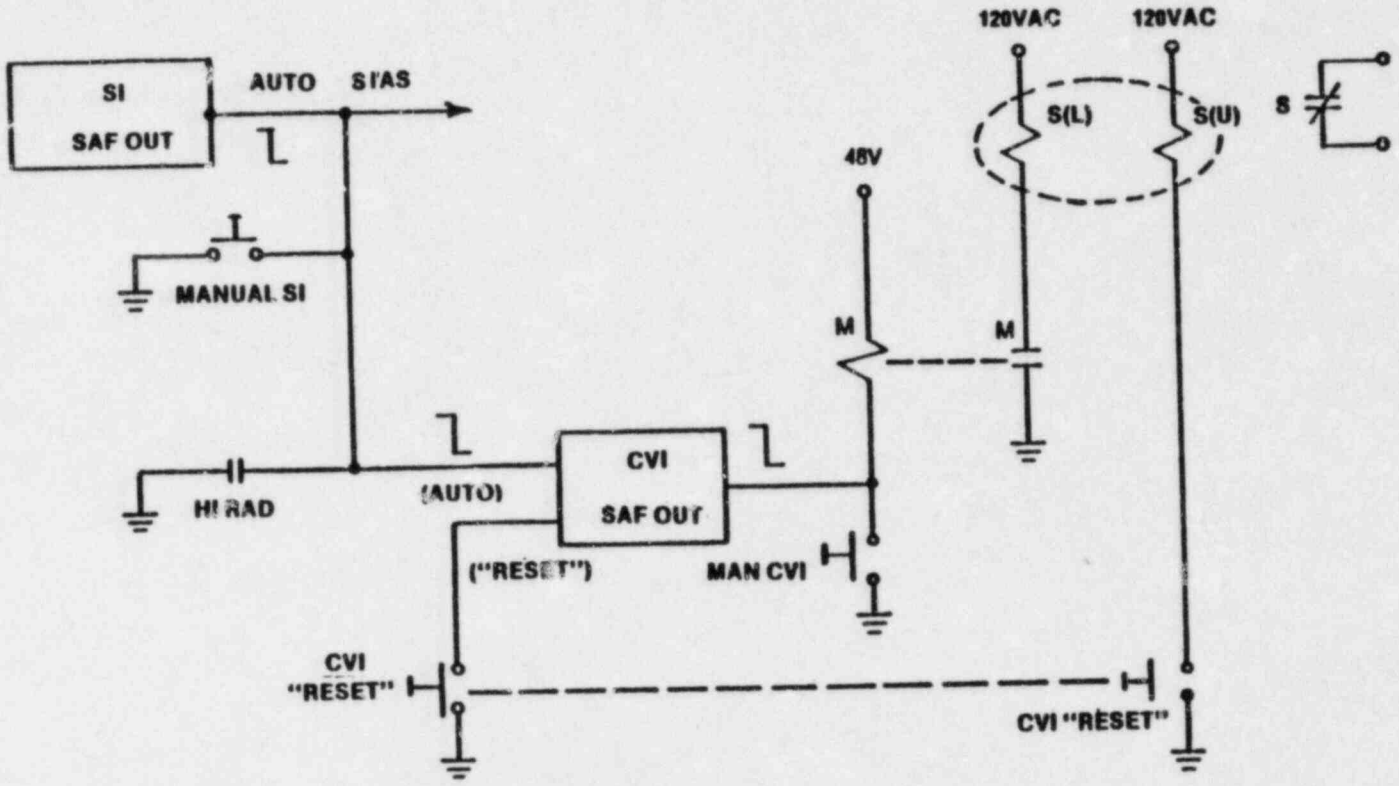
NRC Conclusion - No annunciation of the overridden status of the CVI or other ESF systems is provided as required by review Criterion 3.

PGE Response - In view of the modification committed to for Criterion 1 above, the CVIS circuitry will no longer provide an override capability and therefore needs no annunciation. Additionally, the current SI circuitry does provide status lamp indication for the operators when SI is "blocked" and therefore no further annunciation is needed for this system.

The remaining three ESF circuits for Containment spray, Containment isolation, and feedwater isolation are not required to be provided with annunciation for the reset/override condition of concern in accordance with the provisions of NRC Regulatory Guide 1.47. Sections B and C.3.b of the Regulatory Guide indicate that annunciation is only required if the "bypass will be utilized by plant personnel or the inoperable condition can reasonably be expected to occur more frequently than once per year". It is not current practice, nor is it expected, that the reset features associated with these systems will be used in an override capacity in excess of once per year if at all. Therefore, no annunciation is required for these systems.

Further, in response to Three Mile Island Action Items, the Technical Support Center (TSC) computer is being installed and will provide a bypassed and inoperable status indication (BISI) function which is intended to satisfy the guidelines of NRC Regulatory Guide 1.47. The BISI function will provide CRT console displays in the control room which depict the status of all ESF systems on a system and component level. Availability and operability of each ESF system will be displayed and annunciated.

In view of both the existing and proposed capabilities of ESF systems as described above, it is believed that the Trojan Nuclear Plant adequately meets the guidelines of Regulatory Guide 1.47.



M - MASTER RELAY
 S(L) - SLAVE RELAY (LATCH COIL)
 S(U) - SLAVE RELAY (UNLATCH COIL)

Figure 1 CVI Actuation/Reset