

ATTACHMENT 1

PROPOSED CHANGE TO TECHNICAL SPECIFICATIONS
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

LCR 87-01
Page 1 of 2

Description of Change

Revise Technical Specification Table 3.3.3-2 to change the description of the 4.16 kv Emergency Bus Undervoltage (Degraded Voltage) relays. The four inverse time delay voltage relays will be replaced with four solid state voltage relays pending approval of this request.

In addition, an editorial change is provided to change the footnote for the undervoltage trip setpoints and allowable values. The footnote currently states that the voltages shown are the maximum that will not result in a trip. Actually, since the relays are undervoltage relays, the voltages are the minimum that will not result in a trip.

Reason for Change

The inverse time delay voltage relay currently used tends to exceed the permissible time of 20 + 15, -5 seconds at 109.0 volts specified in Technical Specification Table 3.3.3-2, Trip Function 5.b.b. To prevent this from occurring, PSE&G has increased the surveillance frequency of these relays in order to compensate for recurring setpoint drift.

In addition to exceeding the permissible time value, the inverse time delay relays remain energized once they are tripped due to undervoltage. A solid state relay used in conjunction with an associated time delay relay (Agastat type E7012PD) will eliminate the reset requirement imposed by the inverse time delay relay. The undervoltage protection schemes will be revised such that in the event of complete loss of voltage (70% or less of normal voltage), the undervoltage relay will trip the incoming feeder breaker without a time delay. For the degraded voltage case, the time delay will be controlled by the Agastat time delay relays which will operate within the tolerance specified in Technical Specification Table 3.3.3-2.

The change of the word "maximum" to "minimum" in Table 3.3.3-2 is being submitted as an editorial correction. Since the footnote refers to the undervoltage relays, the trip setpoints and allowable values are in fact the minimum voltages that will not result in a trip. If the voltage decreases beyond the minimum, an undervoltage trip is initiated. This change is editorial since it does not involve any change in system operation or configuration, but merely revises the footnote to state what was originally intended.

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Significant Hazards Consideration

This proposed change to the Hope Creek Generating Station Technical Specifications does not:

- a) involve a significant increase in the probability or consequences of an accident previously evaluated. The inverse time delay voltage relays will be replaced with single phase solid state voltage relays. All components involved in the modification will be qualified to Class 1E standards. Since the revised configuration will operate within the parameters specified in Technical Specification Table 3.3.3-2 (i.e. 20 + 15, -5 seconds at 109.0 volts), the system's reliability will be increased.
- b) create the possibility of a new or different kind of accident from any accident previously evaluated. Since the proposed modification will perform the same function as the inverse time delay voltage relays currently in place, and is of higher reliability, the possibility of a new or different kind of accident is not created.
- c) involve a significant reduction in a margin of safety. The same Technical Specification requirements will be imposed on the solid state relays as are currently imposed on the inverse time delay voltage relays. Therefore, the margin of safety is not reduced.

Based on the above evaluation, PSE&G has determined that this proposed change does not involve a significant hazards consideration.

TABLE 3.3.3-2 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
4. <u>AUTOMATIC DEPRESSURIZATION SYSTEM</u>		
a. Reactor Water Level - Low Low Low, Level 1	> -129 inches*	> -136 inches
b. Drywell Pressure - High	< 1.68 psig	< 1.88 psig
c. ADS Timer	< 105 seconds	< 117 seconds
d. Core Spray Pump Discharge Pressure - High	145 psig	< 155 psig > 125 psig
e. RHR LPCI Mode Pump Discharge Pressure-High	125 psig	< 135 psig > 115 psig
f. Reactor Vessel Water Level-Low, Level 3	> 12.5 inches	> 11.0 inches
g. ADS Drywell Pressure Bypass Timer	< 5.0 minutes	< 5.5 minutes
h. ADS Manual Inhibit Switch	NA	NA
i. Manual Initiation	NA	NA
5. <u>LOSS OF POWER</u>		
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	a. 4.16 kv Basis - 2975 ± 30 volts	2975 ± 63 volts
	b. 120 v Basis - 85 ± 0.85 volts	85 ± 1.8 volts
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)**	a. 4.16 kv Basis - > 3857 volts	> 3857 volts
	b. 120 v Basis - > 110.2 volts	> 109.0 volts
	c. 20 sec @ 109.0 volts	20 + 15, - 5 sec @ 109.0 volts

* See Bases Figure B 3/4 3-1.

** This is an inverse time delay voltage relay. The voltages shown are the maximum that will not result in a trip. Some voltage conditions will result in decreased trip times.

a solid state

minimum