BOSTON EDISON
Pilgrim Nuclear Power Station
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Environmental Qualification of Instrumentation Monitoring Effluent Radioactivity and Status of Standby Power for Regulatory Guide 1.97, Revision 3 (TAC 51119)

Boston Edison has completed the evaluation of the post-accident environment for instrumentation monitoring effluent radioactivity and status of standby power at the Pilgrim Nuclear Power Station (PNPS). As requested by your letter dated January 24, 1989, the following bases for the environmental qualification of these two Regulatory Guide 1.97 variables are provided:

1. Effluent Radioactivity - Noble Gases (Type C, Category 2)

   Regulatory Guide 1.97 recommends instrumentation be provided to monitor effluent radioactivity released from buildings or areas where primary containment penetrations and hatches are located. This instrumentation would be used post-accident to detect a breach of the primary containment. At PNPS, effluent radioactivity instrumentation monitors the main stack, the reactor building vent stack, and the turbine building roof exhaust.

   The radioactivity monitors for the main stack and reactor building vent stack are located in areas presently scheduled for shielding enhancements. With the shielding enhancements in place, these areas will remain mild during post-accident conditions. Therefore, no environmental qualification of the main stack and reactor building vent stack monitors is necessary. The shielding enhancements will be installed in accordance with the Long Term Program schedule for completion of the Regulatory Guide 1.97 Project.

   Portions of cables associated with the main stack and reactor building vent stack monitors pass through potentially harsh environments. These portions of cables will be environmentally qualified in accordance with the Long Term Program schedule for completion of the Regulatory Guide 1.97 Project.

   The existing turbine building effluent monitor is located in a potentially harsh environment for which it is not environmentally qualified. Turbine

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building effluent monitoring capability will be environmentally qualified to meet the Regulatory Guide 1.97 recommended design criteria for this Category 2 variable. This will be completed in accordance with the Long Term Program schedule for completion of the Regulatory Guide 1.97 Project.

2. Status of Standby Power and Other Energy Sources Important to Safety (Type D, Category 2)

Regulatory Guide 1.97 recommends instrumentation be provided to monitor the status of standby power and other energy sources important to safety. At PNPS, this includes instrumentation to monitor the status of the 4160 V distribution system, the emergency diesel generators, the 125 VDC system, the 250 VDC system, and the instrument air system.

The instrumentation and associated equipment used to monitor this variable are located in both mild and potentially harsh post-accident environments. This instrumentation and associated equipment will be qualified to their respective post-accident environments in accordance with the Long Term Program schedule for completion of the Regulatory Guide 1.97 Project.

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DMV/3911

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