

POWER AUTHORITY OF THE STATE OF NEW YORK  
INDIAN POINT NO. 3 NUCLEAR POWER PLANT

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December 12, 1980  
IP-CMC-11132

U.S. NRC  
DIST. SECTION SERVICES  
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DIST. SECTION SERVICES UNIT

Director of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Attention: Stephen A. Varga  
Operating Reactor Branch No. 1  
Division of Operating Reactors

Subject: Indian Point No. 3 Nuclear Power Plant  
Docket 286  
Environmental Qualifications of Electrical Equipment

Dear Sir:

In response to a telephone conversation with Mr. John Archer of Franklin Institute, concerning Indian Point's submittal to the Systematic Evaluation Program, the following concerns are being addressed:

Section 3.3.2.23 of the Technical Evaluation response from Franklin Institute was not answered in our October 30, 1980 submittal. The hydrogen recombiner control panel area is to be shielded from this radiation source. This shielding will decrease the exposure in the area to  $4.0 \times 10^2$  rads, hence we consider this area non-hostile.

It is worth noting that NUREG-737 issued on October 31, 1980 will reduce the radiation expected in the area of the Hydrogen Recombiner Control Panel. Based on a complete analysis of the fields, we may not need to shield the piping below the panel which is the source of radiation. If this becomes the case, we will revise the Environmental Qualification Submittal to reflect the change.

The hydrogen recombiner igniter exit unit was supplied to Franklin Institute Research Laboratories for environmental tests following radiation exposure testing at Westinghouse WES. At the completion of the test at Franklin, the igniter was found to have erratic operation. Upon examination of the unit, a 100 ohm bleed resistor was found to have failed. During the test, the resistor was used for the continuous load for the igniter, a function that it was not designed to perform. In normal operation, the resistor is used only as a device to discharge the high voltage output of the unit to ground to prevent the igniter from functioning when the recombiner is not in service. Therefore the failure of the resistor will have no affect on the normal operation of the hydrogen recombining system following an accident condition.

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In the auxiliary feedwater pump room the high energy line is the steam supply to the auxiliary feedwater turbine-driven pump. The steam supply line contains shut-off valves 1310A and 1310B. The valves are controlled by temperature sensors. In the event of a steam-line rupture and the temperature in the room reaches the setpoint, the steam supply shuts off. For purposes of qualification, we will assume a conservative value of five minutes in this environment. We are further investigating the qualifications of these sensors.

Franklin Institute raised a concern with the qualification of the internal splices of the Fan Cooler Unit and Recirculation Units. We believe they were environmentally qualified with the test motor, however, we will investigate the splice further.

In response to the question concerning the fan cooler and recirculation pump motors, the motors are totally enclosed, and are air cooled with an internal water cooling system to remove moisture from and cool the air. The fan cooler motors are cooled by service water while component cooling supplies the recirculation motors.

Very truly yours,

  
S. Zulla  
Resident Manager

CMC/jd

cc: John Archer - Franklin Institute