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SUBJECT: Confirms 810109 telcon re high range radiation monitoring of auxiliary & shield bldg vents,Util implementing mod routing radioactive liquids back to containment,Monitoring & reroute sys scheduled for completion by 811001.

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P.O. Box 1200, Green Bay, Wisconsin 54305

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January 20, 1980

Mr. D. G. Eisenhut, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Lessons Learned Items

This letter confirms the telephone conversation held between members of my staff and the NRC on January 9, 1981. The subjects of that conversation were High Range Radiation Monitoring of the Kewaunee Auxiliary Building Vent and the monitoring of the shield building vent as it relates to the modification WPSC is implementing which will route radioactive liquids back to the containment.

The Kewaunee Auxiliary Building vent is monitored for radioactive release by a radiation monitor (NUREG 058, Item 86) located on the 657'-6" level of the auxiliary building.

The configuration of this monitor, specifically, its proximity to the Auxiliary Building, Special Ventilation (case) Filters, generated a concern by the staff concerning the accuracy of the monitor in determining radiation releases in the event the ASV filters become loaded with radioactive material. We do not feel that this is a safety concern for the reasons discussed below.

The possibility of loading the ASV filters with an amount of radioactive material which would result in a significant reduction in the accuracy of the auxiliary building vent monitor is very remote. For the purposes of conservatism in the auxiliary building shielding study performed by our architect/engineer, a major equipment malfunction was assumed in the auxiliary building, i.e., the failure of a residual heat removal pump seal. (This type of failure is discussed on pages 14.3 - 66 and 14.3 - 67 of the FSAR. It should be noted that this assumption is not part of the licensing basis for the Kewaunee Plant). This assumed failure results in a release of contaminated water to the RHR

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pump pits, and subsequently results in loading of the ASV filters. In addition to the remote possibility of an RHR pump seal failure, there is also the opportunity of corrective action by the operator to minimize the releases to the auxiliary building.

In the remote event that an equipment failure in the auxiliary building occurs after an accident, resulting in loading of the ASV filters, the effect on the radiation monitoring equipment will be conservative. That is, the resulting radiation reading will be higher than that reading would have been without ASV filter loading. Since WPSC intends to utilize off-site release monitoring to determine the effect of releases on local populace and does not intend to rely on the auxiliary building vent monitor indication as a unique criteria for determining accident urgency levels, this conservatism is acceptable and will not degrade the post-accident recovery effort.

WPSC is proceeding with implementation of long term lessons learned requirements which will ameliorate these concerns. A modification which will provide for remote sampling of the auxiliary building vent is in progress. This modification is scheduled for completion prior to October 1, 1981, contingent upon receipt of the necessary equipment. Secondly, the configuration of the radiation monitor in question will be changed to provide for shielding of potential doses from the ASV filters. These modifications are currently under design review. Tentatively, the new configuration would rotate the radiation monitor 180° around the Auxiliary Building duct and allow a cantilevered lead shield structure to be placed between the monitor and the ASV filters. This modification is scheduled for completion prior to March 20, 1981.

The second subject of the telephone conversation concerned the modification WPSC is implementing which will route radioactive liquids and gases to the containment after an accident. This modification is being implemented to minimize radiation levels in the auxiliary building. As a contingency, a facet of the design of this "reroute system" allows radioactive gases to be dumped in the shield building if the containment pressure is higher than the reroute system pressure. The gases would then be filtered through the shield building vent system prior to release to the environment. We reiterate that this facet of the design is only a contingency: it is unlikely that containment pressure will be higher than the reroute system pressure in those cases where the reroute system is in use. The source of radioactive gases is the reactor coolant system. For a large break LOCA, the radioactive gases will come out of the solution in the containment sump and will not be present in the auxiliary building. For a small break LOCA, characterized by RCS pressure steadying at a value greater than the accumulator injection point, the radioactive gases will remain in solution, and potentially could be transported to the auxiliary building via the chemical and volume control system. However, the energy release to the containment for a small break LOCA would not result in a significant increase in containment pressure, since the steam generators will remove most of the RCS energy. Therefore, it is unlikely that containment pressure will be high enough to prevent the routing of radioactive gases to the containment.

The containment ventilation system and the shield building ventilation system exhaust through a common duct at the Kewaunee Plant. Currently the containment is monitored by a radiation monitor located upstream of the junction of the containment ventilation exhaust and the shield building ventilation exhaust. The shield building ventilation exhaust is not directly monitored because it is not a viable release path. The shield building concept is to collect leakage from the containment and filter that leakage prior to release to the environment. Since it would take an additional failure of the containment boundary, the shield building vent is not assumed to be a credible release path at this time.

However, when the modification discussed above is completed, the shield building ventilation system will be a credible release path (albeit unlikely), therefore, we intend to provide radiation monitoring capability for the SBV system prior to declaring the reroute system operational. Radiation monitoring capability for the SBV system is scheduled to be complete by October 1, 1981, and the reroute system is currently scheduled to be complete after October 1, 1981, however, the final implementation date has not been determined yet.

Very truly yours,

Carl Ginsler for

E. R. Mathews, Vice President
Power Supply & Engineering

snf

cc - Mr. Robert Nelson, NRC Resident Inspector
RR #1, Box 999, Kewaunee, WI 54216