

February 28, 1985

Mr. J. G. Keppler, Regional Administrator
Office of Inspection and Enforcement,
Region III
U. S. NUCLEAR REGULATORY COMMISSION
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Attention: Mr. C. J. Paperiello, Chief
Emergency Preparedness Branch

Gentlemen:

DOCKET NOS. 50-266 AND 50-301
RESPONSE TO NOTICE OF VIOLATION
IE INSPECTION REPORTS 50-266/84-22 AND 50-301/84-20
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Your letter dated January 11, 1985 forwarded IE Inspection Reports 50-266/84-22 and 50-301/84-20 concerning the results of the routine safety inspections conducted by Mr. R. A. Paul during the period of December 3-7 and 26, 1984. The associated Notice of Violation, which identified one apparent violation, was not attached to the forwarding letter. A copy was later obtained from the NRC Resident Inspector and a copy was received in the mail from your office on February 11, 1985. Pursuant to the provisions of 10 CFR 2.201, Wisconsin Electric, as licensee for the Point Beach Nuclear Plant, hereby submits the following written reply to this Notice of Violation. The delay in our response relative to the date of the inspection report is discussed in our letter dated February 11, 1985.

The Notice of Violation stated that, contrary to the requirements of Technical Specifications 15.4.1 and 15.1.f.3, liquid and gaseous effluent monitors, which are part of the radiation monitoring system, have not been properly calibrated. Since the initial multi-point calibration, only one-point calibrations have been performed on these instruments. This was assessed as a Severity Level IV violation.

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We disagree with your assessment that our method of calibrating the liquid and gaseous effluent monitors is not in accordance with the requirements of Technical Specifications 15.4.1 and 15.1.f.3. The basis for conducting a one-point calibration of the radiation monitoring system detectors as an appropriate means of verifying monitor response over the range of the instruments in accordance with our Technical Specifications is outlined below.

Point Beach Nuclear Technical Specification 15.1.f.3 defines channel calibration as "...the adjustment of channel output such that it responds, with acceptable range and accuracy, to known values of the parameter which the channel measures...". The primary detectors in the Point Beach radiation monitoring system for gaseous and liquid effluents are plastic and NaI(Tl) scintillation detectors. These types of scintillators have scintillation decay times, typically 0.003 microseconds for plastic scintillators and 0.23 microseconds for sodium iodide scintillators. As a result of fast decay times, detector dead time losses are calculated using a conservative assumption of extendable dead time to be less than 0.5% for the detectors and less than 3.0% for the electronic circuit at rates (events per second) which correspond to the fail high count rate for the detectors. Because of the low count rate losses, deviations from a linear response will be small over the range of interest and insignificant under normal effluent monitoring conditions. This inherent linearity of the scintillation detectors is the basis for the one-point radiological calibration procedure for the Point Beach liquid and gaseous effluent monitors as a means of ensuring that the system responds with acceptable range and accuracy to the activity which each system monitors. The one-point calibration procedure is also consistent with the one-point calibration procedures used by the manufacturer and supplier of the Point Beach radiological monitoring system.

Following the December inspection, a radiological linearity check was made on one of the gross liquid monitors in order to address the concerns expressed during the inspection about the one-point radiological calibration. Count rates from three different source strengths, which spanned two orders of magnitude, showed the system to be linear within the allowable error of counting statistics.

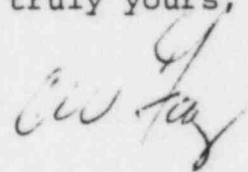
Two detectors in the Point Beach effluent monitoring system, 1(2)RE-222, are Geiger-Miller (GM) tubes. These detectors serve as backups to 1(2)RE-219 which monitor steam generator blowdown. It is recognized the GM tubes do not exhibit response characteristics which are similar to that of scintillation detectors. However, the alarm and trip setpoint are in the lower portion of the total

response range of the 1(2)RE-222 GM detectors. The response characteristics over the range of operation for 1(2)RE-222, up to the alarm and trip setpoint, allows usage of a one-point calibration.

In summary, please note that the design of the effluent monitoring system at Point Beach provides for a one-point calibration technique by (1) utilizing scintillation detectors as the primary detection units which have inherently negligible dead times over several orders of magnitude and (2) establishing fail-high points which are set lower than the level at which appreciable dead time would be expected to occur. For these reasons, we believe there is no technical basis for the adoption of a multiple-point calibration technique for our particular system.

Please contact us if you have any questions.

Very truly yours,

A handwritten signature in cursive script, appearing to read "C. W. Fay", is written over the typed name.

Vice President-Nuclear Power

C. W. Fay

Copy to NRC Resident Inspector