

WISCONSIN PUBLIC SERVICE CORPORATION

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

NRC-83-03



June 8, 1983

Mr. J. A. Hind
Division of Emergency Preparedness
and Operations Support
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr. Hind:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
IE Inspection Report 83-03 (DRMS)

Attachment 1 to this letter details our actions taken in response to the two items of noncompliance identified in IE Inspection Report 83-03 (DRMS). In addition, Attachment 2 provides an update on the status of the commitments made by Wisconsin Public Service Corporation to ensure the overall quality of the radiological measurement program.

Very truly yours,

C. W. Giesler
Vice President - Nuclear Power

Attach.

cc: R. L. Nelson (US NRC)
S. A. Varga (US NRC)

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Response to Items of Noncompliance

IE Inspection Report 83-03 (DRMS)

The following responds to the two items of noncompliance identified in Appendix A of Inspection Report 83-03 (DRMS):

Item 1

Table TS.4.11-1 of Appendix A Technical Specifications states in part: Secondary plant blowdown and secondary plant leakage are each subject to the sampling and analysis requirements contained in Part B of Table TS.4.11-1.

Part B of Table TS.4.11-1 requires weekly gross beta, gamma analyses at a sensitivity of 10^{-7} uCi/ml.

Contrary to the above, weekly samples of Steam Generator A and B blowdown have not been analyzed to a sensitivity of 10^{-7} uCi/ml. Since October 28, 1981, the sensitivity of analysis using a Nuclear Chicago Automatic Planchet Counter has averaged 3.5×10^{-7} uCi/ml. Also, beginning December 23, 1982, the sensitivity of analyses using a Baird Automatic Planchet Counter has been at 4.2×10^{-7} uCi/ml.

Response:

As noted in the inspection report the Nuclear Chicago Automatic Planchet Counter (APC) has shown decreasing sensitivity and has availability problems due to numerous electronic and mechanical malfunctions. Recognizing this, WPSC purchased a Baird APC to serve as backup counting system. However, the Baird APC has also been unable to demonstrate a sensitivity of 10^{-7} uCi/ml.

As an interim corrective action weekly steam generator blowdown samples will be analyzed with the Baird APC using a longer counting time.

Recent analysis sensitivities have varied between 1.1×10^{-7} uCi/ml and 1.5×10^{-7} uCi/ml.

Two potential long-term solutions are available. WPSC has made arrangements to obtain a low background counting system for trial use and will pursue purchase

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*What action was
taken?*

pending satisfactory instrument performance. If this new system is unacceptable, WPSC will pursue a change to the Technical Specifications. Implementation of either of these items will place WPSC in full compliance. To prevent recurrence, trending of counting system minimum sensitivities is being formalized with required limits for analysis specified.

Item 2

Appendix A Technical Specification 4.10 states in part: Environmental samples shall be collected and analyzed according to Table TS 4.10-1.

Table TS 4.10-1 states that a precipitation sample shall be collected monthly from location K-1f (at the meteorological tower).

Contrary to the above, since the beginning of 1976 this sample has been collected from location K-11 (one mile northwest of the plant).

Response:

In early 1976, WPSC changed the location of the precipitation sample from K-1f to K-11 in order to satisfy the requirement that tritium analysis be performed. WPSC recognized that a change to Technical Specifications was required, however, failed to include this change when TS Table 4.10-1 was updated by Amendment No. 44.

On April 29, 1983 WPS submitted Proposed Amendment 54 to the Kewaunee Technical Specifications to change the precipitation sample location to K-11. NRC approval of this revision will place WPSC in full compliance.

Status of WPSC Commitments to Ensure
The Quality of Radiological Measurements

WPSC has taken a number of actions to improve the quality of the Radiological Measurement Program.

Gaseous Sample Analysis - WPSC has acquired new NBS traceable standards: a face-loaded mixed fission product standard for use as a mock radioiodine source, a homogeneously mixed isotope disk standard, and NBS supplied Xe-133 standard reference material. Complete calibrations of the Tracor NS 660 and Nuclear Data 6700 gamma spectroscopy systems have been performed for particulate filter, charcoal adsorber, and Marinelli Beaker geometries using these new sources. The use of the center loaded charcoal standard and radiopharmaceutical grade gases for primary calibrations has been discontinued. The Assistant Radiation Protection Supervisor and Lead Chemistry Technologist have been assigned the responsibility for maintaining these calibration records and ensuring their retrievability.

Poor communications between N. A. Nicholson and S. Rozak and our staff during the inspection resulted in several misunderstandings. Plant procedures provide for placement of a particulate filter upstream of charcoal adsorbers and our particulate activity analysis uses a particulate filter geometry. Analysis of the NRC spiked charcoal source for fission products other than radioiodines¹³⁷ required that a new calibration curve be generated for this geometry. No indication was given to WPSC that the sample analysis was required in a given time frame and the alleged lack of timeliness on our part was a result of our attempt to try to make our equipment and methodology compatible with the NRC provided source samples. This in no way should be related to our ability to respond with

radiological analyses in emergency situations. Emergency Plan Implementing Procedures are in place with the proper plant geometries which facilitate prompt determination of radiological analyses.

30/62-08-03
To address inspector concerns of inaccurate particulate activity determinations resulting from particulate filter failure or bypass, particulate filters are now counted simultaneously with their corresponding downstream charcoal adsorbers. The determination of correction factors for long sample collection times is continuing. WPSC expects to have these values incorporated into procedures by August 1, 1983.

30/61-04-01
Liquid Sample Analysis - The Nuclear Data 6700 system has been calibrated for 1 liter radioactive liquid samples. Chemistry procedure, RC-C-10, has been revised, and chemistry technicians are trained in ND 6700 operation. Improved resolution with the ND 6700 system has eliminated problems of quantifying Cs-137 in the presence of Ag-110m. This capability has been confirmed through analysis of Cs-137 samples with varying Ag-110m activities.

WPSC has also taken action to update the procedure for computation of reactor coolant \bar{E} (average sum of the beta and gamma decay energies). This procedure now reflects values found in current literature.

Instrument Quality Control - WPSC is continuing to formalize the trending of instrument operating parameters. These control procedures for radioanalytical equipment will include acceptable operating characteristics and actions required when limits of statistical deviation are not met. WPSC expects to have these procedures in effect by July 15, 1983.