

Dec

April 11, 1997

Mr. H. G. Stanley
Site Vice President
Braidwood Nuclear Power Station
Commonwealth Edison Company
R.R. #1, Box 84
Braceville, IL 60407

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORTS NO. 50-456/
97003(DRS); 50-457/97003(DRS))

Dear Mr. Stanley:

This will acknowledge receipt of your letter dated March 31, 1997, in response to our letter dated March 4, 1997, transmitting a Notice of Violation associated with the failure to adhere to chemistry procedures and to adequately establish chemistry procedures at the Braidwood Generating Station, Units 1 and 2. We have reviewed your corrective actions and have no further questions at this time. These corrective actions will be examined during future inspections.

Sincerely,

/s/ Geoffrey E. Grant

Geoffrey E. Grant, Director
Division of Reactor Safety

Docket Nos. 50-456; 50-457
Licenses No. NPF-72; NPF-77

Enclosure: Ltr dtd 3/31/97 H. G. Stanley
Braidwood to USNRC w/encl

See Attached Distribution

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March 31, 1997

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U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Reply to Notice of Violation
NRC Inspection Report 50-456(457)/97003
Braidwood Nuclear Power Station Units 1 and 2
NRC Docket Numbers 50-456 and 50-457

Reference: G. F. Grant letter to H.G. Stanley dated March 4, 1997, transmitting
Notice of Violation from NRC Inspection Report 50-456(457)/97003

A Chemistry Inspection was conducted at Braidwood Station during the week of February 3, 1997. During the inspection, two Severity Level IV violations were identified. These violations are described in the Notice of Violation (NOV) which was transmitted with the Reference letter. ComEd's response to these violations is included in the attachment to this letter.

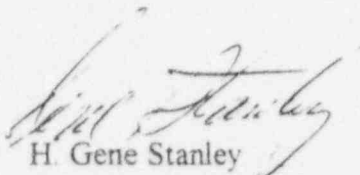
Braidwood Station has been effective at maintaining plant water chemistry parameters well within applicable guidelines, as recognized during the inspection. A solid Chemistry program depends, in part, on an effective quality control (QC) program. Although quality control is being maintained properly at the Station, the inspection revealed that enhancements could be made to QC procedures and actions have been taken to make these improvements. In addition to these procedure changes, the Chemistry Department has been taking steps to improve the quality and oversight of analytical chemistry functions. These steps include assignment of additional management personnel, clarifying roles and responsibilities, and plans to conduct reviews of procedure adequacy.

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The following commitments were made in the attached response:

- The requirements of BwCP 510-2, "Control of Laboratory Standards, Standard Reagents, and Chemicals," will be reviewed with all technicians.
- A review of Chemistry surveillance procedures will be done to ensure acceptance criteria are adequate.
- Chemistry management personnel will be trained on regulatory documents that govern chemistry activities.

If your staff has any questions or comments concerning this letter, please refer them to Terrence Simpkin, Braidwood Regulatory Assurance Supervisor, at (815) 458-2801, extension 2980.



H. Gene Stanley
Site Vice President
Braidwood Nuclear Generating Station

Attachment

cc: A.B. Beach, NRC Regional Administrator, Region III
G.F. Dick, Jr., Project Manager, NRR
C.J. Phillips, Senior Resident Inspector
F. Niziolek, Division of Engineering, Office of Nuclear Safety, IDNS

ATTACHMENT I

REPLY TO NOTICE OF VIOLATION VIOLATION (50-456(457)/97003-01a-d

1. Technical Specification 6.8.1.a requires that procedures be established, implemented, and maintained for activities covered in Appendix A of Regulatory Guide (RG) 1.33.

a. Appendix A of RG 1.33 recommends that procedures be implemented which specify chemistry instructions and the calibration of laboratory instruments.

BwCP 510-2, "Control of Laboratory Standards, Standard Reagents and Chemicals," Revision 13, dated April 15, 1994, which controls the standards used to perform chemistry instrument calibrations, requires that standards prepared at concentrations between 1001 parts per billion and 50 parts per million be labeled with expiration dates of six months from the date of preparation.

Contrary to the above, on August 13, 1996 and September 16, 1996, aluminum standards of 10 and 20 parts per million, respectively, were not labeled with expiration dates of six months from the date of preparation in accordance with BwCP 510-2. (50-456/97003-01a and 50-457/97003-01a)

REASON FOR THE VIOLATION

BwCP 510-2, "Control of Laboratory Standards, Standard Reagents, and Chemicals," provides instructions for determining the shelf life of laboratory standards. Technicians prepare standards and use a computer to generate labels. The shelf life of most standards is predetermined in the procedure and this information is stored in the computer program. As a result, when a technician prints labels for most standards using the program, the proper expiration date is specified based on the stored information. The 10 and 20 ppm aluminum standards did not have a shelf life stored in the computer because they are intermediate standards and technicians must reference the procedure to determine the shelf life for this standard type. The technician that made the aluminum standards prepared labels using the template for a higher concentration standard and due to habit, did not change the shelf life to the value required by procedure. Since most standards have the correct expiration date stored in the computer program, technicians were not used to referencing the procedure, classified as Information Use, for unusual standards. As a result, the wrong expiration dates were listed for the two standards.

CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED

The standards were discovered before their expiration date and removed from use. In addition, a review of all laboratory standards was done to ensure the expiration dates listed were correct.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION
VIOLATION (50-456(457)/97003-01a-d

CORRECTIVE ACTIONS TO PREVENT RECURRENCE

The computer database has been enhanced to include the shelf life of 10 and 20 ppm aluminum standards.

The requirements of BwCP 510-2, "Control of Laboratory Standards, Standard Reagents, and Chemicals," will be reviewed with all technicians.

DATE WHEN COMPLIANCE WAS ACHIEVED

Full compliance was achieved when the 10 and 20 ppm standards were removed from the laboratory.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION VIOLATION (50-456(457)/97003-01a-d

- b. Appendix A of RG 1.33 recommends that procedures be implemented which specify laboratory instructions and calibration of laboratory instruments.

BwAP 550-25, "Control of Chem Aids," Revision 2, dated February 14, 1994, requires the control and review of aids in the laboratory which are used to supplement chemistry procedures.

Contrary to the above, since February 7, 1997, the licensee failed to control and review the aid used in performing procedure BwCP 510-10, "Laboratory Instrumentation Performance Check Procedure," Revision 8, in accordance with BwAP 550-25. (50-456/97003-01b and 50-457/97003-01b)

REASON FOR THE VIOLATION

Quality control (QC) limit sheets which list the maximum and minimum values for performance check results were posted in the Chemistry laboratory in several locations. Technicians referenced these sheets to determine if performance check data was within QC limits before analyzing their unknown samples. Since technicians used this information to perform their job, the information should have been controlled in a more formal manner. The limit data sheets were not controlled as Chemistry Aids because the individual responsible for monitoring the QC limits did not interpret the limit sheets as Chemistry Aids and did not fully evaluate the effect of posting them. In addition, other department personnel did not question the use of these data sheets.

Although formal controls for the limit data sheets were not in place, the quality of laboratory analysis data was not affected. The QC limits are stored in a computer program which automatically rejects analysis results if performance check data results are outside of the established limits.

CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED

The uncontrolled limit sheets were removed from the laboratory.

CORRECTIVE ACTIONS TO PREVENT RECURRENCE

QC limit sheets are now being controlled as procedure attachment sheets (BwCP PD-7A1T4). Each sheet is reviewed and approved by the laboratory chemist prior to posting them in the laboratory.

ATTACHMENT I

REPLY TO NOTICE OF VIOLATION
VIOLATION (50-456(457)/97003-01a-d

DATE WHEN COMPLIANCE WAS ACHIEVED

Full compliance was achieved when the QC limit data sheets were removed from the laboratory.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION
VIOLATION (50-456(457)/97003-01a-d

- c. Appendix A of RG 1.33 recommends that procedures be implemented to ensure that laboratory equipment are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy.

BwCP PD-7A1, "Laboratory Analytical Instrumentation Quality Control Program," Revision 1, dated July 26, 1994, requires that an interlaboratory program exist and be conducted semi-annually.

Contrary to the above, since July 26, 1994, procedure BwCP PD-7A1 did not contain acceptance criteria or instructions as to corrective actions for unacceptable results of the interlaboratory program to ensure that laboratory equipment is properly controlled and calibrated in accordance with Appendix A of RG 1.33. (50-456/97003-01c and 50-457/97003-01c)

REASON FOR THE VIOLATION

BwCP PD-7A1, "Laboratory Analytical Instrumentation Quality Control Program," states that an interlaboratory program will exist at Braidwood. The reference section of this procedure specifies "NOD Recommended Practice concerning Nuclear Station's Chemistry Quality Control Program," which generally describes the program, and "INPO 88-012," which provides acceptance criteria for the comparisons. The procedure did not state whether these references were to be used to govern the program and as such did not provide adequate guidance for the conduct of the program. A factor contributing to this problem was that Chemistry management personnel were not fully aware of the regulatory requirements associated with this type of procedure, including the need to reference acceptance criteria.

CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED

The need for formal, timely reporting of interlaboratory results was emphasized with Corporate Chemistry personnel.

BwCP PD-7A1 has been revised to inform the user of where to find acceptance criteria and specific programmatic guidance for the interlaboratory program.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION
VIOLATION (50-456(457)/97003-01a-d

CORRECTIVE ACTIONS TO PREVENT RECURRENCE

A review of other Chemistry surveillance procedures will be done to ensure acceptance criteria are adequate.

Chemistry management personnel will be trained on regulatory documents that govern chemistry activities.

DATE WHEN COMPLIANCE WAS ACHIEVED

Full compliance was achieved when BwCP PD-7A1 was revised.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION VIOLATION (50-456(457)/97003-01a-d

- d Appendix A of RG 1.33 recommends that procedures be implemented that specify laboratory instructions and calibration of laboratory equipment. RG 1.33 states that extreme importance must be placed on laboratory procedures used to determine concentration and species of radioactivity in liquids and gases prior to release, including the validity of calibration techniques used in these analyses.

Contrary to the above, since February 21, 1996, Procedure BwCP 210-14, "Geometry Efficiency Standardization of Intrinsic Germanium Detectors on the ND 9900 Counting Room System," Revision 2, February 21, 1996, did not provide instructions to ensure the validity of the intrinsic germanium detector calibrations in accordance with Appendix A of RG 1.33. (50-456/97003-01d and 50-457/97003-01d)

REASON FOR THE VIOLATION

BwCP 210-14, "Geometry Efficiency Standardization of Intrinsic Germanium Detectors on the ND 9900 Counting Room System," and BwCP PD-7A3, "Radioanalytical Quality Control Program," provide instructions for standardization of HPGe detectors. These procedures included steps to ensure the standardization is performed properly, but did not contain formal acceptance criteria for validating the calibration. Chemistry management personnel were not aware of the regulatory requirement associated with including acceptance criteria in this type of procedure, which contributed to this procedure adequacy concern.

These calibrations had been carried out by the counting room chemist who used his training and experience to determine that the calibrations were adequate. The chemist was using sound technical criteria for accepting the calibrations, but these criteria were not proceduralized.

CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED

It was determined that the calibrations were adequate and the acceptance criteria used by the responsible chemist, although not proceduralized, was appropriate.

BwCP 210-14 and BwCP PD-7A3 were revised to include formal acceptance criteria.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION
VIOLATION (50-456(457)/97003-01a-d

CORRECTIVE ACTIONS TO PREVENT RECURRENCE

A review of other Chemistry surveillance procedures will be done to ensure acceptance criteria are adequate.

Chemistry management personnel will be trained on regulatory documents that govern chemistry activities.

DATE WHEN COMPLIANCE WAS ACHIEVED

Full compliance was achieved when BwCP 210-14 and BwCP PD-7A3 were revised.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION VIOLATION (50-456(457)/97003-02)

2. Technical Specification 6.8.4.d requires that a program be implemented which will ensure the capability exists to obtain and analyze reactor coolant samples, radioactive iodine and particulate samples in plant gaseous effluents and containment atmosphere samples under accident conditions, which includes procedures for sampling and analysis.

BwCP 323-13, "High Radiation Sampling System Surveillance Procedure," Revision 7, dated January 21, 1997, requires that performance checks be performed on the post accident sampling system to ensure the capability of the system.

Contrary to the above, since January 1, 1997, procedure BwCP 323-13 did not contain acceptance criteria for post accident sampling system surveillances to ensure the capability of the system to obtain post accident samples. (50-456/97003-02 and 50-457/97003-02)

REASON FOR THE VIOLATION

The BwCP 703-series procedures describe the operation of the post accident sampling system. These procedures are primarily designed to provide sampling guidance for post-accident conditions. In addition, these procedures were used to periodically obtain samples under normal conditions to demonstrate the capability of the system as required by the FSAR and NUREG 0737. Capability of the post accident sampling system was demonstrated by the ability to obtain and analyze a sample. The procedures did not contain any formal acceptance criteria because it was not recognized as a requirement by Chemistry personnel.

CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED

Surveillances are performed on the post accident sampling system to ensure the system would be capable of obtaining post accident samples. It was determined that the surveillances adequately demonstrated the functionality of the equipment.

Surveillance procedures for post accident sampling were created and contain acceptance criteria allowing comparison with actual conditions, when possible.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION
VIOLATION (50-456(457)/57003-02

CORRECTIVE ACTIONS TO PREVENT RECURRENCE

A review of other Chemistry surveillance procedures will be done to ensure acceptance criteria are adequate.

Chemistry management personnel will be trained on regulatory documents that govern chemistry activities.

DATE WHEN COMPLIANCE WAS ACHIEVED

Compliance was achieved when the post accident sampling system surveillance procedures were created.