



Commonwealth Edison
Braidwood Nuclear Power Station
Route #1, Box 84
Braceville, Illinois 60407
Telephone 815/458-2801

December 4, 1989
BW/89-3119

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Dear Sir:

The enclosed Licensee Event Report from Braidwood Generating Station is being transmitted to you in accordance with the requirements of 10CFR50.73(a)(2)(i) which requires a 30-day written report.

This report is number 89-015-00; Docket No. 50-456.

Very truly yours,

R. E. Querio
Station Manager
Braidwood Nuclear Station

REQ/JDW/jfe
(7126z)

Enclosure: Licensee Event Report No. 89-015-00

cc: NRC Region III Administrator
NRC Resident Inspector
INPO Record Center
CECo Distribution List

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

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| Facility Name (1) Prairie Dog Unit 1 | | | | | | Docket Number (2) 0 5 0 0 0 4 5 6 | | | Page (3) 1 of 0 5 | | |
| Title (4) Missed Isotopic Analysis for Particulate Sample Cartridge as a Result of Programmatic Deficiencies and Personnel Error | | | | | | | | | | | |

| Event Date (5) | | | LER Number (6) | | | | Report Date (7) | | | Other Facilities Involved (8) | |
|----------------|-------|-----------|----------------|-------------------|-----------------|-------|-----------------|-----------|----------------|-------------------------------|--|
| Month | Day | Year | Year | Sequential Number | Revision Number | Month | Day | Year | Facility Names | Docket Number(s) | |
| 1 0 | 2 0 | 0 8 9 | 0 8 9 | 0 1 1 5 | 0 0 | 1 2 | 0 2 | 0 8 9 | None | 0 5 0 0 0 1 1 | |

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|-------------------------------|--|--|-----------------|------------------|-------------------|------------------|-----------------|-----------|-------------|-------------|----------------|-----------------|------------------|-----------------|----------------|------------------|----------------------|----------------------|----------------|----------|----------|---|
| OPERATING MODE (9) N | | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11) | | | | | | | | | | | | | | | | | | | | |
| POWER LEVEL (10) 0 0 0 | | 20.402(b) | 20.405(a)(1)(i) | 20.405(a)(1)(ii) | 20.405(a)(1)(iii) | 20.405(a)(1)(iv) | 20.405(a)(1)(v) | 20.405(c) | 50.36(c)(1) | 50.36(c)(2) | 50.73(a)(2)(i) | 50.73(a)(2)(ii) | 50.73(a)(2)(iii) | 50.73(a)(2)(iv) | 50.73(a)(2)(v) | 50.73(a)(2)(vii) | 50.73(a)(2)(viii)(A) | 50.73(a)(2)(viii)(B) | 50.73(a)(2)(x) | 73.71(b) | 73.71(c) | Other (Specify in Abstract below and in Text) |

| LICENSEE CONTACT FOR THIS LER (12) | | | | | | | | | | | |
|------------------------------------|--|--|--|--|--|--|--|--|--|--|--|
| Name E. Roche, Health Physics | | | | | | | | TELEPHONE NUMBER AREA CODE 8 1 5 4 5 8 - 2 8 0 1 | | | |
| Ext. 2235 | | | | | | | | | | | |

| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) | | | | | | | | | | | |
|--|--------|-----------|--------------|---------------------|--|-------|--------|-----------|--------------|---------------------|--|
| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPRDS | | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPRDS | |
| | | | | N | | | | | | | |

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|--|--|--|--|--|--|--|--|-------------------------------|--|--|--|
| SUPPLEMENTAL REPORT EXPECTED (14) | | | | | | | | Expected Submission Date (15) | | | |
| Yes (If yes, complete EXPECTED SUBMISSION DATE) X NO | | | | | | | | | | | |

ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single-space typewritten lines) (16)

At 0835 on October 20, 1989, the sample canisters for Unit 1 Auxiliary Building Vent Stack Radiation Monitor 1PR02BJ, were removed and were required to be analyzed within 48 hours. While entering data on the Counting Room Sample Log, the Chemistry Technician (CT) made an erroneous entry in the space for the Isotopic Analysis for the Particulate Sample Cartridge. Later that day, a Health Physics Supervisor (HPS) reviewed the results. At 0835 on October 22, 1989, the Sample Analysis Time Limit was exceeded. On November 2, a different HPS, who processes the ODCM calculations, requested a printout of the analysis. It was discovered that the analysis had not been performed. An analysis was then performed, no activity was indicated. The root cause of this event was that the existing sampling program did not verify the Technical Specification sampling requirements and their associated time limits. A contributory cause was a failure of the CT to perform the analysis as a result of the erroneous log entry. The Radiation Protection and Chemistry Department procedures and training programs will be revised as necessary to address this event. There have been previous occurrences of missed sampling requirements due to programmatic deficiencies. The previous corrective actions addressed root and contributing causes and are not applicable.

LICENSE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: Braidwood 1; Event Date: October 22, 1989; Event Time: 0836;
 Mode: N - Defueled; Rx Power: 0%;
 RCS [AB] Temperature/Pressure: Ambient/Atmosphere

B. DESCRIPTION OF EVENT:

There were no systems or components inoperable at the beginning of the event which contributed to the severity of the event.

During the day shift on October 20, 1989, the sample canisters for Unit 1 Auxiliary Building Vent Stack Radiation Monitor (PR) [IL], 1PR02BJ, were removed from the monitor by a Radiation Protection Technician (RPT), (Non-Licensed Health Physics personnel). There were three sample canisters. One for tritium, one for Iodine and one for Particulate. The Particulate cartridge required an Isotopic Analysis and a 6 hour gross Alpha count. Braidwood Technical Specification Table 4.11-2 specifies that the sample canisters be changed at least once per 7 days and analysis performed within 48 hours of sample canister removal. The sample canisters were labeled by the RPT. The label specified the types of analysis to be performed, when the sample canister had been removed, and where it had been removed from.

At 0835 the RPT took the sample canisters to the Chemistry Lab for sample analysis. The samples were entered into the "Counting Room Sample Log", BwAP 550-22T1. The log was a tracking device for items that were brought to the Chemistry Lab for sample analysis. The log provided for identification and completion signoff for the activities associated with an item.

Later that day, a Chemistry Technician (CT) (Non-Licensed Chemistry Personnel) was performing the analysis of the samples on the counting room sample log. During the entering of data on the Counting Room Sample Log the CT inadvertently entered the Spectrum File # for the Isotopic Analysis performed on the Iodine Sample cartridge in the space for the Isotopic Analysis for the Particulate Sample Cartridge. The CT lined out the entry and entered the data for a 6 Hour Gross Alpha Analysis above the line out. The CT entered the Iodine Sample data in the correct space. The CT then continued with other activities without performing the specified Isotopic Analysis on the Particulate Sample Cartridge.

Later that day, a Health Physics Supervisor (HPS) (Non-Licensed Supervisor) reviewed the results of the various samples that had been collected by RP and analyzed by Chemistry. The HPS signed for receiving the sample results of the analysis that had been completed. The HPS did not observe that the Particulate Isotopic Analysis had not been performed. The HPS forwarded the analysis sheets to a different HPS who is designated as the responsible person for tracking sample analysis results as inputs into the ODCM calculations.

At 0835, on October 22, 1989, the Sample Analysis Time Limit was exceeded.

On the evening of November 1, 1989, the second HPS was assembling data for ODCM calculations. He noted that he did not have a copy of the printout for the sample results for the particulate isotopic analysis of the 1PR02BJ sample canisters.

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TEXT Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]

B. DESCRIPTION OF EVENT, CONTINUED:

On November 2, 1989, the second HPS requested a printout of the particulate isotopic analysis from the Chemistry Supervisor. The Chemistry Supervisor discovered that the sample had not been analyzed. The particulate sample was analyzed to determine if any particulate could be quantified. The results indicated that no particulates could be quantified.

Based on the initial information associated with this event, a "Braidwood Station Error Evaluation Presentation" was held to review this event with the personnel directly involved and their supervisors. The corrective actions addressing both root and contributing causes are detailed below.

This event is being reported pursuant to 10CFR50.73(a)(2)(i) - any operation or condition prohibited by the plants Technical Specifications.

C. CAUSE OF EVENT:

The root cause of this event was a programmatic deficiency. The existing Sampling Analysis program did not provide positive verification of Technical Specification sampling requirements and their associated time requirements.

A contributory cause was a failure of the Chemistry Technician to perform the isotopic analysis on the Particulate Sample Cartridge.

D. SAFETY ANALYSIS:

This event had no effect on the safety of the plant or the public. Radiation monitor 1PR028J, and the Auxiliary Building Wide Range Gas Monitor were operable throughout the event.

Under worst case accident conditions these monitors would have been available to monitor Auxiliary Building ventilation Stack Effluent Activity.

E. CORRECTIVE ACTIONS:

The Particulate Sample Cartridge was immediately analysed. The results indicated that no particulates could be quantified.

Based on the initial information associated with this event, the personnel directly involved with this event participated in a "Braidwood Station Error Evaluation Presentation" to identify the root and contributing causes of this event. Based on the conclusions of this presentation the following corrective actions will be taken:

Procedure BWRP 1280-9T9, Vent Stack Particulate filter Iodine Cartridge Sample Data Sheet, will be revised to include a signature slot for the RPT collecting the samples. This will ensure that all information required for performing ODCM calculations is documented at the time the samples are collected. This will be tracked to completion by action item no. 456-200-89-18301.

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E. CORRECTIVE ACTIONS, CONTINUED:

A checklist will be developed to control processing of Technical Specification samples from initial sampling through collection of the results. The specific instructions in this checklist will include signature requirements for each step to ensure accountability of results. This will be tracked to completion by action item no. 456-200-89-18302.

A tailgate session reviewing the details of this event will be held with each of the departments. This will be tracked to completion by action item no. 456-200-89-18303.

A specifically labeled bin will be prepared for Technical Specification samples and will be located in the Chemistry Counting Room. This will ensure these samples do not get misplaced or assigned a lower priority. This will be tracked to completion by action item no. 456-200-89-180304.

Training, on the new program requirements, will be provided to both the Radiation Protection Department and the Chemistry Department. This will be tracked to completion by action item no. 456-200-89-18305.

The training programs for the Radiation Protection Technician and Chemistry Technician requalification and continuous training will be evaluated. Revisions will be made as necessary. This will be tracked to completion by action item no. 456-200-89-18306.

A formal Duty HP training program will be developed. This will be tracked to completion by action item no. 456-200-89-18307.

F. PREVIOUS OCCURRENCES:

There have been previous occurrences of missed chemistry sampling requirements due to programmatic deficiencies.

The previous similar occurrences are as follows:

| DVR / LER | TITLE |
|--------------------------------|---|
| DVR 20-1-87-273/ LER 87-043 | Missed Reactor Coolant Specific Activity Sample Due to Miscommunications |

The root cause of this event was a miscommunication between a licensed operator and a non-licensed chemist.

| DVR / LER | TITLE |
|--------------------------------|---|
| DVR 20-1-87-316/ LER 87-049 | Exceeded Analysis Frequency on Waste Gas Oxygen Analysis |

This event was a result of a programmatic deficiency. The method for tracking and completing samples was verbal and the method for assigning and tracking completion of samples was not formalized.

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F. PREVIOUS OCCURRENCES, CONTINUED:

DVR 20-1-88-145/ Lost Composite Samples Due to
 LER 88-013 Programmatic Deficiency

There were no specific provisions for disposition of the composite samples which caused the samples to be misplaced and/or discarded after they had been analyzed.

DVR 20-1-88-171/ Missed Technical Specification Composite
 LER 88-017 Samples Due to Failure to Implement Required Changes

This event was the result of failure of Chemistry Personnel to interpret the Technical Specification matrix changes regarding chemistry composite sampling requirements.

The corrective actions were implemented addressing both root and contributing causes. Previous corrective actions are not applicable to this event.

G. COMPONENT FAILURE DATA:

This event was not the result of component failure, nor did any components fail as a result of this event.