

DUKE POWER COMPANY

POWER BUILDING

422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

July 16, 1981

TELEPHONE: AREA 704
373-4083

Mr. James P. O'Reilly, Director
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Re: McGuire Nuclear Station Unit 1
Docket No. 50-369



Dear Mr. O'Reilly:

Please find attached Reportable Occurrence Report RO-369/81-101. This report concerns Technical Specification 4.11.1.5; "The quantity of radioactive material contained in each batch of slurry (used powdex resin) to be transferred to the chemical treatment ponds shall be determined to be within the above limit by analyzing a representative sample of this slurry." This incident was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

William O. Parker, Jr.

PBN/pw
Attachment

cc: Director
Office of Management & Program Analysis
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. Bill Lavalley
Nuclear Safety Analysis Center
Post Office Box 10412
Palo Alto, CA 94303

Ms. M. J. Graham
Resident Inspector - NRC
McGuire Nuclear Station

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McGUIRE NUCLEAR STATION
REPORTABLE OCCURRENCE

Report Number: 81-101

Report Date: July 16, 1981

Occurrence Date: June 17, 1981

Facility: McGuire Unit 1, Cornelius, N. C.

Identification of Occurrence: Estimates of Sr-89 and Sr-90 batch concentrations (based on previous monthly composite analysis) were not performed on used powdex resin which was transferred to on-site Chemical Treatment Ponds.

Conditions Prior to Occurrence: Mode 5, Cold Shutdown, prior to initial criticality.

Description of Occurrence: Estimates of Sr-89 and Sr-90 based on previous monthly analysis of batch releases of used powdex resin to on-site Chemical Treatment Ponds were not made. This was reportable pursuant to Technical Specification Surveillance requirement 4.11.1.5.

Analysis of Occurrence: Ten batch releases (~5,000 gal/ea) of slurry (used powdex resin) had been transferred to the Chemical Treatment Ponds (CTP) prior to identification of this incident. Each of these releases was sampled and analyzed for radioactivity; the identification and concentrations of specific isotopes, such as I-131, I-133, and principal gamma emitters, were determined. It was felt that this analysis was required for the plant in its current state of operation.

Analyzation of a sample for Sr-89 and Sr-90 requires complex and lengthy procedures. The Station does not have the capability of analyzing a sample for Sr isotopes; therefore, samples must be shipped off-site to a private vendor for analysis. The turn around time to receive the sample results from the vendor is 3-6 weeks.

A member of the resident NRC staff was questioned concerning this sampling requirement and other obscurities within 4.11.1.5. It was determined that the station was in error with the current Technical Specification but that Technical Specification requirement 4.11.1.5 is incorrect and, if literally interpreted, would unreasonably restrict station operation. For example: The results of resin sent to the vendor in April, may not be returned until June. Thus, no releases could be made for the month of May. As a result, no releases could be made in June or in subsequent months.

Upon discovery of the discrepancy, samples of resin were shipped to the contracted, off-site vendor for analysis. Additionally, steps were taken to have the NRC re-evaluate the requirements of 4.11.1.5 and consider modifying it to incorporate a workable solution with which the station could better meet this surveillance requirement.

Apparent Cause: The requirement for the analysis of powdex resin for Sr-89 and Sr-90 is obscurely located in the definition of a component of an equation which is found in Surveillance Requirement 4.11.1.5. The Health Physics group had incorrectly assumed that this requirement was not applicable until after the reactor had gone critical and/or a primary to secondary leak had occurred.

Corrective Action: This deficiency was brought to the attention of an NRC inspector who confirmed that the incident was a reportable occurrence.

Samples of resin were sent to an off-site vendor for Sr-89 and Sr-90 analysis. Additionally, Duke Power will apply to the NRC for a change or an official interpretation of the affected surveillance requirement.

Safety Analysis: Sr-89 and Sr-90 are bone-seeking isotopes which could have an affect on one's body burden if injected orally. Their detection in samples is difficult to obtain because their presence is obscured by other beta-emitting isotopes. Laboratory analyses have confirmed that no activity greater than normal background has been present in any of the batch releases of powdex resin to the CTP's. The results of the most recent sample of powdex resin (June 11, 1981) which was analyzed by an off-site vendor substantiated this. Thus, neither the health and safety of the public or the environment were affected by this incident.