

DUKE POWER COMPANY NRC REGION II
POWER BUILDING ATLANTA, GEORGIA

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

81 DEC 28 P 1: 53

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

December 23, 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: Oconee Nuclear Station
IE Inspection Report
50-269/81-25
50-270/81-25
50-287/81-25

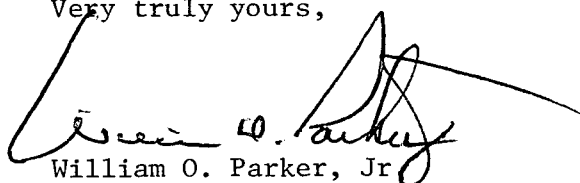
Dear Sir:

With regard to your letter of November 25, 1981 which transmitted the subject inspection report, Duke Power Company does not consider the information contained therein to be proprietary.

Please find attached responses to the cited items of noncompliance. Please note that although the violation is admitted, Duke Power Company does not agree that the violation is a Severity Level III violation for the reasons specifically addressed in the attached.

I declare under penalty of perjury that the statements set forth herein are true and correct to the best of my knowledge, executed on December 23, 1981.

Very truly yours,


William O. Parker, Jr.

JLJ/php
Attachment

8203080418 820126
PDR ADOCK 05000269
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DUKE POWER COMPANY
OCONEE NUCLEAR STATION

Response to IE Inspection Report 50-269/81-25, -270/81-25, -287/81-25

Violation

10 CFR 20.301 permits disposal by transfer to an authorized recipient as provided in 10 CFR 30. 10 CFR 30.41(b)(5) permits transfer of byproduct material to any person authorized to receive such byproduct material under terms of a specific license issued by an Agreement State. South Carolina (an Agreement State), Radioactive Material License No. 097, for the Chem-Nuclear disposal facility, limits, in paragraph 26(b), the free-standing liquid content of byproduct material that may be received to one-half percent.

Contrary to the above, the licensee disposed of licensed byproduct material by transfer to an unauthorized recipient. Byproduct material transferred under Bill of Lading Number CNSI-8-1879 to Chem-Nuclear contained a free-standing liquid content in excess of the limit authorized by the State license.

This is a Severity Level III Violation (Supplement IV).

Response

1) Admission or Denial of Alleged Violation:

This violation is admitted as stated with the following exceptions:

- a. 10 CFR Part 2, Appendix C provides general policy and procedure for NRC enforcement actions. Supplement IV of this appendix is subtitled "Health Physics, 10 CFR Part 20." No details are provided to support the determination of Severity Level III (Supplement IV.) Duke Power Company does not consider that the violation warrants a Severity Level III classification. There were no releases to the environment during transportation, and the cask was a Type B container, thus precluding the potential for release even under accident conditions.
- b. Supplement V of the above appendix is subtitled "Transportation." Based on the nature of the citation, that the transfer was made contrary to 10 CFR 30.41(b)(5), Duke Power Company believes that a Severity Level IV (Supplement V) classification is more appropriate in this case.
- c. Chem-Nuclear is authorized to receive licensed byproduct material. The wording of the first sentence, second paragraph of the violation implies that the recipient was not authorized to receive byproduct material. The actual violation concerned the State's limit of 1% free-standing liquid, not the licensed byproduct material.

2) Reasons for Violation:

Chem-Nuclear, the vendor who supplied the Urea-Formaldehyde service, is

conducting testing and analysis in an effort to establish the cause of the excessive free-standing water.

Preliminary test results indicate that a combination of factors may be involved in the violation. The probable major factors involved are:

- a. Transportation: Use of the High Integrity Container for UF Solidification may have magnified the effects of over-the-road shipment of solidified evaporator concentrates. Increased flexing of the container wall might compress the billet, forcing out water and increasing the container void space available for the accumulation of free liquid.
- b. Temperature: Solidification at the higher waste temperature sometimes encountered at the Oconee Station may have produced excessive evaporation from the UF billet after solidification and dewatering. As the billet gradually cooled to ambient temperature, the water vapor condensed and collected in the liner as free liquid.
- c. Post Cure Reactions: Free water may have been released by the breakdown of certain chemical groups in the acid environment. This would have resulted in additional water generation following initial cure and container dewatering. The effect, if present, would be compounded by the sustained elevated temperature of the billet in question.

While research to determine the exact cause of the excessive free-standing liquid was being conducted, Duke Power Company decided to change solidification processes to preclude any further problems.

3) Corrective Actions Taken and Results:

When Duke Power Company became aware of the shipment to Chem-Nuclear containing excessive free-standing water, the following actions were taken:

- a. The solidification of evaporator concentrates with Urea-Formaldehyde was discontinued.
- b. A vendor-supplied cement solidification system was ordered and installed at the Oconee Nuclear Station.
- c. Solidification was resumed on October 15, 1981, using the cement process.

All shipments processed and shipped for disposal since the cement unit was installed have met or exceeded all current solidification regulations. The absence of free-standing water is assured by the chemical process, since cement is a hydration reaction. During cure, hydrated cement settles to the bottom of the container and any uncombined water forms a surface film above the cement. All shipments receive visual inspections of the containers and penetration testing of the billet prior to transport to confirm product

hardness and absence of free liquid. The completion of hydration reactions is monitored by recording temperature profiles during the initial cure period for every solidification.

4) Corrective Actions to Be Taken to Avoid Further Violations:

All corrective actions required to prevent a recurrence have been taken.

5) Date When Full Compliance Will Be Achieved:

Duke Power Company has been in full compliance since October 15, 1981.