

DMB

DUKE POWER COMPANY
P.O. BOX 33189
CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

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February 28, 1986

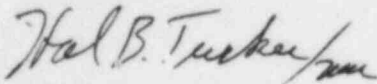
Dr. J. Nelson Grace, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Re: RII:GBZ/WBG
Catawba Nuclear Station
50-413/85-50
50-414/85-60

Dear Dr. Grace:

Attached is our response to Violation 413/85-50-02, 414/86-60-02, as identified in the subject Inspection Report.

Very truly yours,



Hal B. Tucker

LTP:slb

Attachment

cc: NRC Resident Inspector
Catawba Nuclear Station

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DUKE POWER COMPANY
CATAWBA NUCLEAR STATION

Violation 50-413/85-50-02, 50-414/85-60-02, Severity Level V

10 CFR 20.201(b) requires the licensee to make surveys that are reasonable under the circumstance to evaluate radiation hazards that may be present.

Technical Specification 6.8.1.g requires procedures to be established, implemented, and maintained for Quality Assurance (QA) Program implementation for effluent and environmental monitoring.

Contrary to the above requirements, the licensee's evaluation and QA procedures relating to effluent monitoring measurements were inadequate in that implementation of the licensee's QA procedures failed to identify gamma spectroscopy analysis inaccuracies and prevent inaccurate calibrations associated with reactor coolant charcoal cartridge, gas vial and gas marinelli geometries utilized for reactor coolant and effluent monitoring measurements.

Response

(1) Admission or denial of the alleged violation:

Duke Power agrees that the violation occurred as described in Inspection Report 50-413/85-50, 50-414/85-60.

(2) Reasons for the violation:

During the week of December 9-13, 1985, the NRC inspector noted several items pertaining to the QA program for gamma spectroscopy systems. The items covered:

- Procedural inadequacies to accurately trend performance data
- Interstation and intrastation Cross Check program inadequacies
- Program to consistently verify detector efficiencies and maintain detector data for measurement between all detectors was inadequate to effectively ensure accurate activity calculations.

(3) Corrective steps which have been taken and the results achieved:

- (a) Software improvements for Gamma Spectroscopy System: selected MCA related software was reviewed in order to verify its technical validity. Numerous programmatic data validations and controls were added to this software. The user-friendliness of this software was enhanced, increasing the technicians' understanding of system operation.
- (b) Revision of HP/O/B/1001/16 Operation and Calibration: the ORTEC ADCAM Gamma Analysis System was approved February 6, 1986.

The following improvements have been achieved:

- Procedural administrative controls to enhance and expand the QA Program were added.
- Clarification and expansion of methods to achieve improved consistency and technician operability.
- Incorporated improvements recommended by Duke Power Corporate Health Physics group following their Annual Program Review, November, 1985.

- (c) A study was performed to attempt to answer questions pertaining to the results of the Confirmatory Measurements. The data from the study did confirm the greater than desired variability between detectors for the 50 ml coolant sample as well as an overall wide variability for a 3500 ml beaker sample of liquid effluent.

In addition, the study showed that the average concentrations of Co-58, I-131, and I-133 (for all four detectors) for a 50 ml sample of diluted reactor coolant was virtually identical to the average concentrations for a companion 3500 ml Marinelli sample.

- (d) Increased technician duties and responsibilities pertaining to QA operations have been added to the Count Room organization.

(4) Corrective steps which will be taken to avoid further violations:

- (a) Evaluate the elimination of the 50 ml bottle sample and use the existing 100 ml bottle for analyses to achieve control of geometry and to increase collection efficiency.
- (b) Complete recalibration of Gas Geometries by May 1, 1986.
- (c) Obtain fresh NBS traceable sources semiannually, and re-evaluate geometries and calibrations to eliminate uncertainties and increase verification abilities.
- (d) Replace, during second quarter 1986, an "n" type Germanium detector with a "p" type to maintain consistency in that all detectors will have 18-20% efficiency and be "p" types.
- (e) Evaluate acquisition of an improved Gamma Spectroscopy Data Analysis System which meets or exceeds design criteria of Station and Corporate Health Physics.
- (f) Complete HP/O/B/1001/19 Interstation and Intrastation Cross Check Program during second quarter 1986.

(5) Full compliance will be achieved during third quarter 1986.