February 23, 1990

Docket No. 50-424

Mr. W. G. Hairston, III
Senior Vice President -
Nuclear Operations
Georgia Power Company
P.O. Box 1295
Birmingham, Alabama 35201

Dear Mr. Hairston:

SUBJECT: AMENDMENT TO EXEMPTION FOR USE OF SOLVENT IODINE CANISTERS-
VOGTLE ELECTRIC GENERATING PLANT, UNIT 1 (TAC 75168)

The Nuclear Regulatory Commission has granted the enclosed Exemption amendment allowing Class C storage for certain respiratory protection canisters used by workers at the Vogtle Electric Generating Plant, Unit 1. The Exemption amendment was granted in response to your letter dated September 28, 1989.

Also enclosed is a Safety Evaluation supporting granting of the Exemption amendment.

A copy of the Exemption amendment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/s/

Timothy A. Reed, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Exemption Amendment
2. Safety Evaluation

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7590-01

UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
GEORGIA POWER COMPANY	)	Docket No. 50-424
OGLETHORPE POWER CORPORATION	)	
MUNICIPAL ELECTRICAL AUTHORITY OF GEORGIA	)	
CITY OF DALTON, GEORGIA	)	
(Vogtle Electric Generating Plant, Unit 1)	)	

EXEMPTION AMENDMENT

I.

Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia (the licensee), are the holders of Facility Operating License No. NPF-68 issued March 16, 1987, which authorizes full power operation of the Vogtle Electric Generating Plant, Unit 1 (the facility). The license provides, among other things, that it is subject to all rules, regulations and Orders of the Nuclear Regulatory Commission (the Commission).

The facility consists of a pressurized water reactor at the licensee's site located in Burke County, Georgia.

II.

10 CFR Part 20, Appendix A, "Protection Factors for Respirators," establishes protection factors of air-purifying respirators for protection against particulates only. Furthermore, footnote d-2(c) states, "No allowance is to be made for the use of sorbents against radioactive gases or vapors." On October 27, 1988, the Commission granted an exemption to the facility from the

restriction of 10 CFR Part 20, Appendix A, footnote d-2(c), and authorized the use of the MSA GMR-I canister with restrictions as shown in Attachment 1 to that exemption.

By letter dated September 28, 1989, the licensee requested an amendment to the exemption to allow the MSA GMR-I canisters to be stored in a Class C storage environment as defined in ANSI N45.2.2 versus a Class A or better environment which is a restriction contained in Attachment 1 to the exemption granted October 27, 1988. The licensee provided a summary of test results from Mine Safety Appliances justifying Class C storage requirements for the MSA GMR-I canisters. The Commission's staff evaluated the information provided by the licensee to support the exemption amendment. The Commission's Safety Evaluation relating to Class C storage for MSA GMR-I canisters at Vogtle 1 is being issued concurrently with this exemption amendment. The Safety Evaluation concludes that Class C storage is acceptable for radioiodine MSA GMR-I canisters.

III.

Accordingly, the Commission has determined that, pursuant to 10 CFR 20.501, an exemption amendment as requested by the licensee's letter of September 28, 1989, is authorized by law and will not result in undue hazard to life or property. The Commission hereby grants an amendment to the exemption granted October 27, 1988, and authorizes Class C storage for the MSA GMR-I canisters, as shown in the amended Attachment 1 to the exemption of October 27, 1988 (attached). The exemption amendment is subject to modification by rule, regulation or Order of the Commission.

Pursuant to 10 CFR 51.32, the Commission has determined that the issuance of the exemption amendment will have no significant impact on the environment (55 FR 6565).

This exemption amendment is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Steven A. Varga, Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Usage Restrictions

Dated at Rockville, Maryland
this 23rd day of February 1990.

Attachment 1

Limitations, Usage Restrictions, and Controls Applicable
to the Use of MSA GMR-I Canister at the
Vogtle Electric Generating Plant, Unit 1

1. Protection factor equal to 50 as a maximum value.

2. The maximum permissible continuous use time is eight hours after which the canister will be discarded.

3. Canisters are not to be used in the presence of organic solvent vapors.

4. Canisters are to be stored in a Class C or better environment, as defined in ANSI N45.2.2.

5. The allowable service life for sorbent canisters is to be calculated from the time of unsealing the canister, including periods of non-exposure.

6. Canister is to be used with a full facepiece capable of providing a fit factor equal to or greater than 500.

7. Canisters are not to be used in total challenge concentrations of organic iodines and other halogenated compounds greater than 1ppm, including nonradioactive compounds.

8. Canisters are not to be used in environments where temperatures are greater than 110°F, or up to 120°F if the dewpoint is equal to or less than 107°F.

In addition to the limitations and usage restrictions noted above, the following additional controls will be utilized by the licensee:

1. Temperatures will be measured prior to and/or during the use of GMR-I canisters to assure that work temperatures are within limits.

2. Air samples will be taken prior to and during any activities that involve the use of the GMR-I canister for protection against radioactive iodine.

3. A GMR-I canister found to have exceeded 3 years from date of manufacture will not be used for protection against radioactive iodine.

4. In the initial implementation of the GMR-I program, the following verification measures will be in effect:

   a. Weekly whole body counts for individuals using the GMR-I canisters for radioiodine protection;

   b. A whole body count for individuals that exceed 10 MPC in a week and used the GMR-I canister for respiratory protection in that period;

   c. Anyone that measures 70 nCI or greater iodine uptake to the thyroid during a whole body count will be restricted from entering a radioiodine atmosphere pending Health Physics evaluation;

   d. The radiological survey and whole body count information will be compiled to evaluate the effectiveness of the program.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

CLASS C STORAGE ENVIRONMENT FOR SORBENT CANISTERS

AT VOGTLE ELECTRIC GENERATING PLANT, UNIT 1

DOCKET NO. 50-424

INTRODUCTION

By submittal dated September 28, 1989, Georgia Power Company, et al. (the licensee) requested an amendment to the exemption granted October 27, 1988, to allow MSA GMR-I canisters to be stored in a Class C storage environment versus a Class A storage environment as defined in ANSI N45.2.2.

EVALUATION

The licensee's submittal provided a letter from the Mine Safety Appliances Company (MSA) which contains a summary of test results which form the basis for MSA and the licensee's conclusion that Class C storage is acceptable. The test summary discussed accelerated storage tests, Class B storage tests, and a moisture permeation study of the bottom seal.

The accelerated storage tests consisted of 24 canisters after 4 months' storage being exposed to a 10 ppm methyliodide concentration for 480 minutes, three canisters after 6 months' storage being exposed to a 5 ppm methyliodide concentration for 480 minutes, and one canister after 1 year's storage being exposed to an 8 ppm methyliodide concentration for 480 minutes. In all cases, methyliodide penetration was below 0.5%. In addition, the three canisters tested after 6 months' storage had their testing continued to a 1% breakthrough of methyliodide. The average time to a 1% breakthrough was 44 hours.

The Class B storage tests consisted of samples drawn at 3- and 4-year storage intervals and tested. Test penetrations were at or below initial inspection results for the canister lot.

The moisture permeation study on the canister bottom seal was conducted at 100°F and 100% relative humidity. MSA found the moisture incursion to be insignificant.

The NRC staff has reviewed the information submitted by the licensee and concludes that Class C storage is acceptable.

Principal Contributor: Jon B. Hopkins, PDII-3/NRR

Dated: February 23, 1990

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