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ROBERT C. MECREDDY  
Vice President  
Nuclear Operations

November 30, 1999

United States Nuclear Regulatory Commission  
Document Control Desk  
Attention: Guy S. Vissing  
Project Directorate I-1  
Washington DC 20555

Subject: Response to Generic Letter 99-02, dated June 3, 1999;  
SUBJECT: LABORATORY TESTING OF NUCLEAR- GRADE  
ACTIVATED CHARCOAL  
R. E. Ginna Nuclear Power Plant  
Docket No. 50-244

Dear Mr. Vissing:

On June 3, 1999, the Nuclear Regulatory Commission issued the referenced generic letter to alert addressees that the NRC had determined that testing nuclear-grade activated charcoal to standards other than American Society for Testing and Materials (ASTM) D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," does not provide assurance for complying with the current licensing basis as it relates to the dose limits of General Design Criterion (GDC) 19 of Appendix A to Part 50 of Title 10 of the Code of Federal Regulations (10 CFR) and Subpart A of 10 CFR Part 100. The generic letter requests that all addressees determine whether their technical specifications (TS) reference ASTM D3803-1989 for charcoal filter laboratory testing and addressees whose TS do not reference ASTM D3803-1989 are requested to either amend their TS to reference ASTM D3803-1989 or propose an alternative test protocol and provide the information discussed in the requested actions.

The generic letter also alerts addressees of the NRC staff's intent to exercise enforcement discretion under certain conditions.

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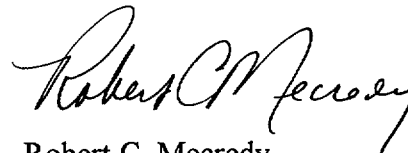
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Response to Requested Information

By this letter, Rochester Gas and Electric Corporation is providing the required 120-day response to Generic Letter 99-02.

Attachments: (1) Generic Letter 99-02 Requested Information

Very truly yours,



Robert C. Mecredy

xc: Mr. Guy S. Vissing (Mail Stop 8C2)  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Regulatory Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

U.S. NRC Ginna Senior Resident Inspector

**Attachment 1**  
**Generic Letter 99-02 Requested Information**

- (1) *Within 180 days of the date of this generic letter, submit a written response to the NRC describing your current TS requirements for the laboratory testing of charcoal samples for each ESF ventilation system including the specific test protocol, temperature, RH, charcoal bed thickness, total residence time per bed depth, and penetration at which the TS require the test to be performed. If your current TS specifically require laboratory testing of charcoal samples in accordance with the ASTM D3803-1989 protocol at 30 °C [86 °F], and you have been testing in accordance with this standard, then you only need to address this requested action (i.e. no TS amendment or additional testing is required).*

**RESPONSE:**

The Rochester Gas and Electric Corporation Technical Specifications (TS) currently require testing of Ginna Stations two Engineered Safety Feature (ESF) ventilation systems and the Spent Fuel Pool (SFP) Charcoal Adsorber System per section 5.5.10, Ventilation Filter Testing Program (VFTP). The test frequencies and methods are required to be in accordance with Regulatory Guide 1.52, Revision 2, except that in lieu of 18 month test intervals, a 24 month interval is implemented. The plant procedures which implement the VFTP provide reference to standards ANSI/ASME N-509-1976 (Nuclear Power Plant Air Cleaning Unit and Components) and ANSI/ASME N-510-1975 (Testing of Nuclear Air Cleaning Systems) for performance of the specified testing. The following is the requested information for the ESF and SFP ventilation systems:

	Containment	Control Room	Spent Fuel Pool
Temperature	≥286°F	≥125°F	≥150°F
Relative Humidity	≥95%	≥95%	≥95%
Charcoal Bed Thickness	2 in.	2 in.	2 in.
Total Residence Time	.32 sec.	.23 sec.	Variable (< .25 sec.)
Methyl Iodine Penetration*	≤10%	≤10%	≤10%

\* Only the Methyl Iodine Penetration is explicitly listed in TS.

- (2) *If you choose to adopt the ASTM D3803-1989 protocol, submit a TS amendment request to require testing to this protocol within 180 days of the date of this generic letter. The request should contain the test temperature, RH, and penetration at which the proposed TS will require the test to be performed and the basis for these values. If the system has a face velocity greater than 110 percent of 0.203 m/s [40 ft/min], then the revised TS should specify the face velocity. Also, indicate when the next laboratory test is scheduled to be performed. (Enclosure 2 is a sample TS that the NRC considers acceptable.)*

**RESPONSE:**

Rochester Gas and Electric Corporation is submitting, by separate letter, a proposed TS amendment request to require testing of the ESF and SFP ventilation systems in accordance with the ASTM D3803-1989 protocol. The TS amendment request does not specify a face velocity requirement for the ESF ventilation systems, as the face velocity of the applicable systems is  $\leq 110\%$  of 40 ft/min.

The SFP ventilation system is a non-ESF ventilation system and the flow rate through the system is not a limiting parameter, as such the requirement for a face velocity will be maintained outside of TS. Surveillance testing of the SFP ventilation system is performed to verify system air flow is above administrative limits which are based upon satisfying TS SR 3.7.10.1, which requires verification that a negative pressure is maintained during fuel movement in the Auxiliary Building. As long as this minimum pressure is maintained by drawing air from the surface of the SFP through the SFP charcoal adsorbers, the assumptions of the accident analyses are met.

The next scheduled laboratory test for the applicable systems is as follows:

Containment Post-Accident Charcoal System - 9/2000  
Control Room Emergency Air Treatment System - as necessary due to use\*  
Spent Fuel Pool Charcoal Adsorber System - prior to 9/2000\*

\* Both of these systems have been tested to ASTM D3803-1989 since the issuance of GL 99-02.

- (3) *If you are proposing an alternate test protocol, address the attributes discussed below and submit a TS amendment request to require testing to this alternate protocol within 180 days of the date of this generic letter. The request should contain the test temperature, RH, and penetration at which the proposed TS will require the test to be performed and the basis for these values. If the system has a face velocity greater than 110 percent of 0.203 m/s [40 ft/min], then the revised TS should specify the face velocity. Also, indicate when the next laboratory test is scheduled to be performed.*

*The following information should be submitted for staff review to determine the acceptability of the alternate protocol:*

- 1. summary of the test method*
- 2. precision of the method*
- 3. description of the test apparatus along with tolerances*
- 4. parameter specifications*
- 5. material requirements*
- 6. hazards*
- 7. preparation of the apparatus before initiation of the test*
- 8. calibration requirements of the test equipment*
- 9. test procedure*
- 10. manner of calculating penetration and error*
- 11. repeatability and reproducibility of the results for 1 percent and 10 percent penetration and the penetration at a 95 percent confidence interval for charcoal tested at 70 percent RH and at 95 percent RH*
- 12. bias associated with the method*

13. *results from at least two laboratories which demonstrate that the alternate test protocol achieves results that are consistent with, or more conservative than, results associated with ASTM D3803-1989.*

*The demonstration identified in Item 13 above should be based upon a series of tests comparing the alternate test protocol and ASTM D3803-1989, and it should apply to both new and used charcoal tested at 70 percent RH and at 95 percent RH. If an addressee chooses to test its charcoal samples at actual accident conditions which are different from the test conditions specified in ASTM D3803-1989, then that test should be treated as an alternate protocol. At least two laboratories should be used in determining the acceptability of the alternate protocol. One laboratory should be used to develop the alternate protocol and the other to demonstrate the repeatability and reproducibility of the alternate protocol. The two laboratories should be able to demonstrate that the alternate protocol is at least as conservative as ASTM D3803-1989, and should be able to perform the ASTM D3803-1989 test and achieve repeatable and reproducible results.*

**RESPONSE:**

Rochester Gas and Electric Corporation is not proposing an alternate test protocol.

- (4) *At the next required laboratory surveillance test of a charcoal sample that is 60 or more days after the date of this generic letter, test your charcoal samples in accordance with ASTM D3803-1989 or replace all of the charcoal with new charcoal that has been tested in accordance with ASTM D3803-1989. In all cases, the results should meet the acceptance criterion that is derived from applying a safety factor as low as 2 (see the note in Enclosure 2) to the charcoal filter efficiency assumed in your design-basis dose analysis and the charcoal samples should continue to be tested in accordance with ASTM D3803-1989, in lieu of the current TS-required laboratory testing, until the TS amendment is approved by the NRC.*

**RESPONSE:**

Rochester Gas and Electric Corporation initiated actions prior to August 2, 1999 such that laboratory testing of the applicable charcoal samples of the ESF and SFP ventilation systems would be in accordance with ASTM D3803-1989.

- (5) *Addressees who choose not to do the above actions are requested to notify the NRC in writing of their decision, as soon as a decision is reached but no later than 60 days from the date of this generic letter. The 60 day written response should also discuss (1) addressee plans to pursue a proposed alternative course of action (including the basis for establishing its acceptability), (2) the schedule for submitting that proposal for NRC staff review (that proposal should be submitted to the NRC no later than 180 days from the date of this generic letter), and (3) the basis for continued operability of affected systems and components until such time that the proposed alternative course of action is approved by the NRC.*

**RESPONSE:**

Rochester Gas and Electric Corporation has chosen to perform testing of the TS ESF and SFP ventilation systems in accordance with the preferred protocol and submit a request for a TS amendment, therefore a response to this question is not applicable.