

August 18, 2000

MEMORANDUM FOR: File

FROM: S. Patrick Sekerak, Project Manager, Section 1 */RA/*
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation (NRR)

SUBJECT: GRAND GULF NUCLEAR STATION, UNIT 1 (GGNS);
ELECTRONIC TRANSMISSION OF ITEMS FOR DISCUSSION
IN A TELEPHONE CONFERENCE RE: GGNS LICENSE
AMENDMENT REQUEST FOR LABORATORY TESTING OF
ACTIVATED CHARCOAL (TAC NO. MA8097)

The attached items for discussion were prepared by the NRR Plant Systems Branch, and electronically transmitted to Mr. Jerry Roberts and to Mr. Michael Krupa of Entergy Operations, Inc. on August 18, 2000, in preparation for a telephone conference with the NRR Technical Staff. The primary purpose of the teleconference is to discuss issues associated with NRC Generic Letter 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal."

This memorandum and the attachment do not convey a formal request for information or represent an NRC staff position. Formal questions, if any, may be developed after the teleconference depending on the results of the discussions.

Docket No. 50-416

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GRAND GULF NUCLEAR STATION, UNIT 1
Preliminary Questions for Teleconference Discussion re:
License Amendment Request for Laboratory Testing of Activated Charcoal
(TAC NO. MA8097)

The following four questions refer to the Standby Gas Treatment System (SGTS) and the Control Room Fresh Air (CRFA) System, unless otherwise noted:

- 1.) GL 99-02, under requested actions required each licensee to provide the charcoal bed depth, total residence time per bed depth, and penetration at which the current TS require the test to be performed for each ESF ventilation system.

Please refer to or provide docketed information stating the:

- (1) charcoal bed depth
- (2) total residence time per 2 in. of bed depth

- 2.) GL 99-02 states, "If the system has a face velocity greater than 110% of 0.203 m/s [40 ft/min], then the revised TS should specify the face velocity."

Under Section D in Attachment 1 of the November 23, 1999 letter (CNRO-99/00026), it states: "The affected systems for each facility have face velocities of approximately 40 ft/min, recognizing air flow distribution tolerances of $\pm 20\%$ are acceptable per RG 1.52. Therefore, this specific request is not applicable."

Concerning the actual and test face velocities:

- (1) Please indicate the actual system face velocities and how they are calculated.

The actual system face velocities can be calculated by dividing the maximum accident condition system flow rates specified in the technical specification (TS) (nominal + typically 10% upper value) by the total exposed surface area of the charcoal filter media.

Per GL 99-02, if this value is $>110\%$ of 40 ft/min, then the TS should be revised to specify that value as the test face velocity. (The guidance on calculation of the residence times in ASME AG-1-1997, Division II, Sections FD and FE, Articles I-1000, or in ANSI N510-1975 can be used to calculate the actual system face velocities).

- (2) Per GL 99-02, ASTM D3803-1989 is acceptable because it provides accurate and reproducible test results. Please justify why you are taking exception to the tolerance on test face velocity of 12.2 ± 0.3 m/min ($\pm 2.5\%$) that is specified in ASTM D3803-1989.
- (3) With respect to the current TS testing requirements for the SGTS, based on a credited efficiency of 99% and a test penetration of $<0.175\%$, we calculate a safety factor of 5.7. In contrast, for the CRFA system, based on a credited efficiency of 95% and the same

Attachment

test penetration of <0.175%, we calculate a safety factor of 28.6. In view of the sharp apparent differences in safety factors for the two systems, please confirm that the credited efficiency and the current test penetration for the CRFA system are correctly identified.

- (4) The Fuel Building Ventilation System is included in the Ventilation Filter Testing Program for River Bend. The analogous system is not included in the Ventilation Filter Testing Program for Grand Gulf. Although there are some notable differences between Grand Gulf and River Bend, such as the fact that River Bend does not have a containment spray system, since both plants are BWR 6 designs with Mark III containments, please indicate why the Fuel Building Ventilation System at Grand Gulf is not an ESF system and is not included in the proposed TS amendment.

(Note also that at Perry, another BWR 6 with a Mark III containment, the Annulus Exhaust Gas Treatment System is included as an ESF system. We assume that this system is analogous to the SGTS at GGNS and RBS).

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