



ENTERGY

Entergy Operations, Inc.
P.O. Box 31995
Jackson, MS 39286-1995
Tel 601 368 5760
Fax 601 368 5768

Jerrold G. Dewease
Vice President
Operations Support

March 20, 1997

Document Control Desk
United States Nuclear Regulatory Commission
Mail Stop P1-37
Washington, DC 20555-0001

Subject Entergy Operations, Inc.
Request for Interpretation of Filtration Unit Testing Requirements as Specified
by the Technical Specifications and Regulatory Guide 1.52

Arkansas Nuclear One
Units 1 & 2
Docket Nos. 50-313 & 50-368
License Nos. DPR-51 & NPF-6

Grand Gulf Nuclear Station
Docket No. 50-416
License No. NPF-29

River Bend Station
Docket No. 50-458
License No. NPF-47

Waterford 3 Steam Electric Station
Docket No. 50-382
License No. NPF-38

CNRO-97/00005

Entergy Operations, Inc. (EOI) by this letter requests a formal interpretation of Technical Specification requirements by the NRC.

The details of EOI's request can be found in Attachment 1. Please address any comments or questions regarding this matter to Bryan Ford at (601) 368-5792.

Sincerely,

JGD/SJB/BSF/baa

- | | | |
|-----|-------------------|----------------------|
| cc: | Mr. J. L. Blount | Mr. J. J. Hagan |
| | Mr. L. J. Callen | Mr. C. R. Hutchinson |
| | Mr. J. G. Dewease | Mr. G. Kalman |
| | Mr. J. N. Donohew | Mr. J. R. McGaha |
| | Mr. C. M. Dugger | Mr. C. P. Patel |
| | Mr. C. Grimes | Mr. D. L. Wigginton |

9704010499 970320
PDR ADDCK 05000313
P PDR



A0011

Request for Interpretation of Filtration Unit Testing Requirements as Specified by the Technical Specifications and Regulatory Guide 1.52

The Technical Specifications (TSs) for Grand Gulf Nuclear Station (GGNS) and Waterford 3 Power Plant (W-3) require that the Engineered Safety Feature filtration systems be tested at a frequency that is in accordance with Regulatory Guide 1.52, Revision 2 (RG 1.52). The surveillance frequency is specified at GGNS for the Standby Gas Treatment (SGT) System, LCO 3.6.4.3, and the Control Room Fresh Air (CRFA) System, LCO 3.7.4, by reference to the Ventilation Filter Testing Program (VFTP) which requires the testing frequency be in accordance with RG 1.52. The surveillance frequency is specified at W-3 for the Control Room Emergency Air Filtration System (LCO 3.7.6.1), the Controlled Ventilation Area System (LCO 3.7.7), the Fuel Handling Building Ventilation System (LCO 3.9.12), and the Shield Building Ventilation System (LCO 3.6.6.1) by direct inclusion of the frequency specified in RG 1.52 into the surveillance requirement. The RG 1.52 states that:

" Adsorber leak testing should be conducted (1) initially, (2) at least once per 18 months thereafter, (3) following removal of an adsorber sample for laboratory testing if the integrity of the adsorber section is affected, and (4) following painting, fire, or chemical release in any ventilation zone communicating with the system."

RG 1.52 also states that testing should conform to guidance given in ANSI N510-1975, "Testing of Nuclear Air Cleaning Systems" (ANSI N510). ANSI N510 states in Note 5.c of Table 1 (which refers to in-place testing) that testing should be performed following system exposure to solvents, paints, or other organic fumes or vapors which **could** degrade the performance of the adsorbent. EOI believes that the intent of RG 1.52 allows the use of technical justification to determine when conditions require performance of the stated Technical Specification surveillances.

The reason for the fourth frequency "following painting, fire, or chemical release in any ventilation zone communicating with the system" is the concern that volatile organic materials released by the painting, fire, or chemical release may decrease the filter efficiency. Subsequently, following organic saturation, the filter will allow elemental and organo-iodines to pass through untreated during an accident. Available industry data indicates that up to 10% by weight of the charcoal filter can be saturated by volatiles without decreasing the filter efficiency to unacceptable levels ("A Study of the Effect of Coatings Operation on Radioiodine Removing Adsorbents" and "Basis for and Practical Method of Controlling Paint Activities at Sequoyah Nuclear Plant", presented at the 21st and 24th DOE/NRC Nuclear Air Cleaning and Treatment Conferences, respectively).

Viewing industry practices, the frequency "following painting, fire, or chemical release in any ventilation zone communicating with the system" is implemented in one or more of the following methods:

1. Ensuring that Engineered Safety Feature filtration systems which exhaust an area are not operating during the painting, chemical release, or fire. Also, assuring that the normal ventilation systems have time to remove a sufficient amount of the volatile organics that the amount of volatile organics introduced into Engineered Safety Feature filtration systems could not damage the charcoal units when they start. Communication is only considered to occur when the filtration system is in operation.
2. If painting, a fire or unexpected chemical release occurs during or just prior to the associated Engineered Safety Feature filtration systems being in operation, there may be insufficient time for the normal ventilation systems to remove the volatile organics from the area. The effects of the event are evaluated to determine if the amount of volatile organic material introduced into Engineered Safety Feature filtration systems could have damaged the charcoal units.
3. If the painting or chemical release is pre-planned to occur during a time when the associated Engineered Safety Feature filtration systems are expected to be operating, the amount of volatile organics expected to be released is reviewed to ensure that the amount of volatile organics introduced into Engineered Safety Feature filtration systems could not damage the charcoal units.

The above examples are methods used within the industry to comply with the TS surveillance requirements for testing the Engineered Safety Feature filtration systems "following painting, fire, or chemical release in any ventilation zone communicating with the system."

An example of the application of the philosophy that engineering evaluation is an acceptable means of complying with the intent of this surveillance requirement can be found in the Technical Specifications of the E.I. Hatch plant. In the E. I. Hatch Ventilation Filter Testing Program (Specification 5.5.7) there is the following note:

- "i. Tests and evaluations have determined the impact on the Standby Gas Treatment (SGT) System filters of certain types of painting, buffing and grinding, and welding. The use of water based paints and the performance of metal grinding, buffing, or welding are not detrimental to the charcoal filters of the SGT System, either prior to or during operation. These activities will not require surveillance of the system upon their conclusion. This applies to all types of welding conducted at Plant Hatch, and tracking of the quantity of weld material used is not necessary."

Recently, at GGNS and W-3 a concern has been raised by NRC Resident Inspectors that the words of RG 1.52 or the TS surveillance, as applicable, does not allow the use of **any** technical justification or analysis to determine when testing is required. In other words, the NRC is questioning if the surveillances are required to be performed and the systems are inoperable until they are performed after any of the following:

1. Painting (from touching up a sign to painting the entire building) in an area exhausted by the filtration system with no consideration given to the amount of volatile organics contained in the paint.
2. Any chemical release (including any possible interpretation of what a chemical release is) involved in an area exhausted by the filtration system with no regard for the amount of any volatile organics that may have been were released.
3. A fire (potentially including welding, arcing, or shorting in a circuit) in an area exhausted by the filtration system.
4. Any painting, chemical release, or fire in the area exhausted by the filtration system whether or not another ventilation system had been previously used to exhaust the area and regardless of the amount of time prior to the operation of the filtration system.

Essentially, this interpretation of the surveillance requirement will result in an increase in the amount of testing of the systems, as well as, increase in the technical inoperability of the systems. This is considered to be an increase in risk caused by the increased potential for subjecting the plant to shut down transients due to the technical inoperability of the system with no corresponding increase in safety.

EOI believes that ANSI N510 must be considered when determining the testing of filtration units as required by RG 1.52 and the TS. As a result, EOI believes that the intent is to require testing when organic fumes or vapors **could** degrade the performance of the adsorbent. Therefore, technical engineering justification is appropriate in determining whether the exposure which occurred could have degraded the filtration units' components. This evaluation is based upon the quantity of volatiles that could have communicated with filtration unit components, any removal of the volatiles by normal ventilation systems, and the quantity of filter media. EOI believes that the industry methods described above are adequate to determine when the TS surveillance requirements for testing the Engineered Safety Feature filtration systems "following painting, fire, or chemical release in any ventilation zone communicating with the system" must be initiated.

Since the acceptability of our position has been questioned at two of the EOI sites and since EOI believes that this issue has a very broad applicability, EOI requests that the NRC formally endorse the industry standard methods described above for complying with the RG 1.52 and TS surveillance requirements for testing the Engineered Safety Feature filtration systems "following painting, fire, or chemical release in any ventilation zone".