DUKE POWER COMPANY

OCONEE NUCLEAR STATION

ATTACHMENT 1

TECHNICAL SPECIFICATIONS

Remove Page	Insert Page
4.5-8	4.5-8
4.14-1	4.14-1
4.14-2	4.14-2

e. During each refueling outage, following 720 hours of system operation, or after painting, fire, or chemical release in any ventilation zone communicating with the system, a carbon sample shall be removed from the Penetration Room Ventilation system filters for laboratory analysis. Within 31 days of removal, this sample shall be verified to show ≥90% radioactive methyl iodide removal when tested in accordance with ASTM D3803-1989 (30°C, 95% R.H.). Otherwise, the filter system shall be declared inoperable.

Bases

Pressure drop across the combined high efficiency particulate air (HEPA) filters and charcoal adsorbers of less than six inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. A test frequency of once per year operating cycle establishes performance capability.

(HEPA) filters are installed before the charcoal adsorbers to prevent clogging of the iodine adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine. Bypass leakage for the charcoal adsorbers and particulate removal efficiency for HEPA filters are determined by halogenated hydrocarbon and DOP respectively. The laboratory carbon sample test results indicate a radioactive methyl iodide removal efficiency for expected accident conditions. Operation of the fans significantly different from the design flow will change the removal efficiency of the HEPA filters and charcoal adsorbers. If the performances are as specified, the calculated doses would be less than the guidelines stated in 10 CFR 100 for the accidents analyzed.

The frequency of tests and sample analysis are necessary to show that the HEPA filters and charcoal adsorbers can perform as evaluated. Replacement adsorbent should be qualified according to the guidelines of Regulatory Guide 1.52. The charcoal adsorber efficiency test procedures should allow for the removal of one adsorber tray, emptying of one bed from the tray, mixing the adsorbent thoroughly and obtaining at least two samples. Each sample should be replaced. Any HEPA filters found defective should be replaced with filters qualified pursuant to Regulatory Position C.3.d of Regulatory Guide 1.52.

Operation of the system every month will demonstrate operability of the filters and adsorber system. Operation for 15 minutes demonstrates operability and minimizes the moisture build up during testing.

If painting, fire or chemical release occurs during system operation such that the HEPA filter or charcoal adsorber could become contaminated from the fumes, chemicals or foreign materials, the same tests and sample analysis should be performed as required for operational use.

Demonstration of the automatic initiation capability is necessary to assure system performance capability.

4.14 REACTOR BUILDING PURGE FILTERS AND SPENT FUEL POOL VENTILATION SYSTEM

Applicability

Applies to testing of the Reactor Building purge filters for Units 2 and 3 and the spent fuel pool ventilation systems.

Objective

To verify that the Unit 2 and Unit 3 Reactor Building purge filters will per-form their design function and that when used with the spent fuel pool ventilation system, will reduce the off-site dose due to a fuel handling accident.

Specification

4.14.1 Operational and Performance Testing

a. Monthly, each train of the spent fuel pool ventilation system shall be operated through the respective Reactor Building purge filters for at least 15 minutes at design flow $\pm$ 10%.

b. During each refueling outage, the spent fuel pool ventilation fans shall be shown to operate at design flow $\pm$ 10% when tested in accordance with ANSI N510-1975.

c. Leak tests using DOP or halogenated hydrocarbon, as appropriate shall be performed on the Reactor Building purge filters:

1. During each refueling outage;

2. After each complete or partial replacement of HEPA filter bank or charcoal adsorber bank;

3. After any structural maintenance on the system housing;

4. After painting, fire, or chemical release in any ventilation zone communicating with the system.

d. The results of the DOP and halogenated hydrocarbon tests on HEPA filters and charcoal adsorber banks shall show $\geq$ 99% DOP removal and $\geq$ 99% halogenated hydrocarbon removal, respectively, when tested in accordance with ANSI N510-1975.

e. During each refueling outage, following 720 hours of system operation, or after painting, fire, or chemical release in any ventilation zone communicating with the system, a carbon sample shall be removed from the Reactor Building purge filters for laboratory analysis. Within 31 days of removal, this sample shall be verified to show $\geq$ 90% radioactive methyl iodide removal when tested in accordance with ASTM D3803-1989 (30°C, 95% R.H.). Otherwise, the filter system shall be declared inoperable.

Bases

The Unit 2 Reactor Building purge filter is used in the ventilation system for the common spent fuel pool for Units 1 and 2. The Unit 3 Reactor Building purge filter is used in the Unit 3 spent fuel pool ventilation system. Each filter is constructed with a prefilter, an absolute filter and a charcoal filter in series. The high efficiency particulate air (HEPA) filters are installed before the charcoal adsorbers to prevent clogging of the iodine adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine.

Bypass leakage for the charcoal adsorbers and particulate removal efficiency for HEPA filters are determined by halogenated hydrocarbon and DOP respectively. The laboratory carbon sample test results indicate a radioactive methyl iodide removal efficiency for expected accident conditions. Operation of the fans significantly different from the design flow will change the removal efficiency of the HEPA filters and charcoal adsorbers. If the performances are as specified, the doses for a fuel handling accident would be minimized.

The frequency of tests and sample analysis are necessary to show that the HEPA filters and charcoal adsorbers can perform as evaluated. Replacement adsorbent should be qualified according to the guidelines of Regulatory Guide 1.52. The charcoal adsorber efficiency test procedures should allow for the removal of one adsorber tray, emptying of one bed from the tray, mixing the adsorbent thoroughly and obtaining at least two samples. Each sample should be replaced. Any HEPA filters found defective should be replaced with filters qualified pursuant to Regulatory Position C.3.d of Regulatory Guide 1.52.

Operation of the spent fuel pool ventilation system every month will demonstrate operability of the fans, filters and adsorber system.

If painting, fire or chemical release occurs during system operation such that the HEPA filter or charcoal adsorber could become contaminated from the fumes, chemicals or foreign materials, the same tests and sample analysis should be performed as required for operational use.

DUKE POWER COMPANY

OCONEE NUCLEAR STATION

ATTACHMENT 2

TECHNICAL SPECIFICATIONS
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e. During each refueling outage, following 720 hours of system operation, or after painting, fire, or chemical release in any ventilation zone communicating with the system, a carbon sample shall be removed from the Penetration Room Ventilation system~~Reactor Building purge~~ filters for laboratory analysis. Within 31 days of removal, this sample shall be verified to show ≥90% radioactive methyl iodide removal when tested in accordance with ASTM D3803-1989~~ANSI N510-1975~~ (30~~130~~°C, 95% R.H.). Otherwise, the filter system shall be declared inoperable.

Bases

Pressure drop across the combined high efficiency particulate air (HEPA) filters and charcoal adsorbers of less than six inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. A test frequency of once per year operating cycle establishes performance capability.

(HEPA) filters are installed before the charcoal adsorbers to prevent clogging of the iodine adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine. Bypass leakage for the charcoal adsorbers and particulate removal efficiency for HEPA filters are determined by halogenated hydrocarbon and DOP respectively. The laboratory carbon sample test results indicate a radioactive methyl iodide removal efficiency for expected accident conditions. Operation of the fans significantly different from the design flow will change the removal efficiency of the HEPA filters and charcoal adsorbers. If the performances are as specified, the calculated doses would be less than the guidelines stated in 10 CFR 100 for the accidents analyzed.

The frequency of tests and sample analysis are necessary to show that the HEPA filters and charcoal adsorbers can perform as evaluated. Replacement adsorbent should be qualified according to the guidelines of Regulatory Guide 1.52. The charcoal adsorber efficiency test procedures should allow for the removal of one adsorber tray, emptying of one bed from the tray, mixing the adsorbent thoroughly and obtaining at least two samples. Each sample should be replaced. Any HEPA filters found defective should be replaced with filters qualified pursuant to Regulatory Position C.3.d of Regulatory Guide 1.52.

Operation of the system every month will demonstrate operability of the filters and adsorber system. Operation for 15 minutes demonstrates operability and minimizes the moisture build up during testing.

If painting, fire or chemical release occurs during system operation such that the HEPA filter or charcoal adsorber could become contaminated from the fumes, chemicals or foreign materials, the same tests and sample analysis should be performed as required for operational use.

Demonstration of the automatic initiation capability is necessary to assure system performance capability.

4.14 REACTOR BUILDING PURGE FILTERS AND SPENT FUEL POOL VENTILATION SYSTEM

Applicability

Applies to testing of the Reactor Building purge filters for Units 2 and 3 and the spent fuel pool ventilation systems.

Objective

To verify that the Unit 2 and Unit 3 Reactor Building purge filters will per-form their design function and that when used with the spent fuel pool ventilation system, will reduce the off-site dose due to a fuel handling accident.

Specification

4.14.1 Operational and Performance Testing

a. Monthly, each train of the spent fuel pool ventilation system shall be operated through the respective Reactor Building purge filters for at least 15 minutes at design flow $\pm$ 10%.

b. During each refueling outage, the spent fuel pool ventilation fans shall be shown to operate at design flow $\pm$ 10% when tested in accordance with ANSI N510-1975.

c. Leak tests using DOP or halogenated hydrocarbon, as appropriate shall be performed on the Reactor Building purge filters:

1. During each refueling outage;

2. After each complete or partial replacement of HEPA filter bank or charcoal adsorber bank;

3. After any structural maintenance on the system housing;

4. After painting, fire, or chemical release in any ventilation zone communicating with the system.

d. The results of the DOP and halogenated hydrocarbon tests on HEPA filters and charcoal adsorber banks shall show $\geq$ 99% DOP removal and $\geq$ 99% halogenated hydrocarbon removal, respectively, when tested in accordance with ANSI N510-1975.

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~~iodide removal when tested in accordance with ANSI N510-1975 (130°C, 95% R.H.). Otherwise, the filter system shall be delcared inoperable.~~

e. During each refueling outage, following 720 hours of system operation, or after painting, fire, or chemical release in any ventilation zone communicating with the system, a carbon sample shall be removed from the Reactor Building purge filters for laboratory analysis. Within 31 days of removal, this sample shall be verified to show > 90% radioactive methyl iodide removal when tested in accordance with ASTM D3803-1989 (30°C, 95% R.H.). Otherwise, the filter system shall be declared inoperable.

Bases

The Unit 2 Reactor Building purge filter is used in the ventilation system for the common spent fuel pool for Units 1 and 2. The Unit 3 Reactor Building purge filter is used in the Unit 3 spent fuel pool ventilation system. Each filter is constructed with a prefilter, an absolute filter and a charcoal filter in series. The high efficiency particulate air (HEPA) filters are installed before the charcoal adsorbers to prevent clogging of the iodine adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine.

Bypass leakage for the charcoal adsorbers and particulate removal efficiency for HEPA filters are determined by halogenated hydrocarbon and DOP respectively. The laboratory carbon sample test results indicate a radioactive methyl iodide removal efficiency for expected accident conditions. Operation of the fans significantly different from the design flow will change the removal efficiency of the HEPA filters and charcoal adsorbers. If the performances are as specified, the doses for a fuel handling accident would be minimized.

The frequency of tests and sample analysis are necessary to show that the HEPA filters and charcoal adsorbers can perform as evaluated. Replacement adsorbent should be qualified according to the guidelines of Regulatory Guide 1.52. The charcoal adsorber efficiency test procedures should allow for the removal of one adsorber tray, emptying of one bed from the tray, mixing the adsorbent thoroughly and obtaining at least two samples. Each sample should be replaced. Any HEPA filters found defective should be replaced with filters qualified pursuant to Regulatory Position C.3.d of Regulatory Guide 1.52.

Operation of the spent fuel pool ventilation system every month will demonstrate operability of the fans, filters and adsorber system.

If painting, fire or chemical release occurs during system operation such that the HEPA filter or charcoal adsorber could become contaminated from the fumes, chemicals or foreign materials, the same tests and sample analysis should be performed as required for operational use.

ATTACHMENT 3

TECHNICAL JUSTIFICATION

Proposed Technical Specification Change

Changes are proposed to Technical Specifications 4.5.4.1.e and 4.14.1.e. These changes are being proposed to allow for more representative, conservative carbon filter sample testing in accordance with more modern standards.

Background Information

During a review of industry operating experience information, it was discovered that the Davis-Besse Nuclear Plant staff had reported a condition of non-compliance with the literal requirements of their Technical Specifications which address carbon filter sample testing. As a result, a review of the ONS carbon filter testing program and associated Technical Specifications was conducted. This review concluded that current carbon filter testing methodology does not meet the literal requirements of ONS Technical Specifications 4.5.4.1.e and 4.14.1.e. Technical Specifications 4.5.4.1.e and 4.14.1.e require that, under specified conditions, the carbon samples from the Penetration Room Ventilation System, Reactor Building Purge System, and Spent Fuel Pool Ventilation System filters be tested in accordance with ANSI N510-1975 (N510-1975) at a temperature of 130°C and 95% relative humidity (R.H.). The technical specifications further specify that if stated testing requirements cannot be met, then the affected filter system shall be declared inoperable. Since late 1992, ONS has tested the carbon samples per the industry approved methodology specified in ASTM D3803-1989 (30°C, 95% R.H.) following a 50.59 evaluation and under the interpretation that this methodology conservatively met the intent of Technical Specifications 4.5.4.1.e and 4.14.1.e. As a result, the current technical specifications require updating to reflect the use of this more conservative, representative testing methodology.

Proposed Changes and Justifications

Technical Specification 4.5.4.1.e, Penetration Room Ventilation System Carbon Filter Surveillance

Proposed Change

The surveillance is proposed to be changed to state that the sample shall be tested in accordance with ASTM D3803-1989 (30°C, 95% R.H.) in lieu of ANSI N510-1975 (130°C, 95% R.H.). In addition, an editorial change to replace 'Reactor Building purge' with 'Penetration Room Ventilation System' is necessary to ensure that the specification references the correct system.

Justification

The testing performed per ASTM D3803-1989 (D3803-1989) exceeds the requirements of the testing specified by Technical Specification 4.5.4.1.e. The primary difference in testing methodology specified by N510-1975 and D3803-1989 is in the test temperature. N510-1975 specifies a test temperature of 130°C and D3803-1989 specifies a test temperature of 30°C. In addition, the D3803-1989 methodology requires a 16 hour pre-equilibration period which further introduces moisture content into the carbon filter sample prior to the actual test. The moisture retained by charcoal is dependent on temperature. Generally, the higher the temperature, the less moisture is retained. The moisture retained by the carbon decreases the efficiency of the carbon to adsorb contaminants. Therefore, the lower temperature test medium of the D3803-1989 methodology will yield more conservative results than the N510-1975 methodology.

A more detailed description of the justification for conversion to the D3803-1989 testing methodology is provided in NRC Information Notice 87-32 "Deficiencies in the Testing of Nuclear-Grade Activated Charcoal" and the associated contractor technical evaluation report, EGG-CS-7653, "Final

Technical Evaluation Report for the NRC/INEL Activated Carbon Testing Program".

Technical Specification 4.14.1.e, Reactor Building Purge and Spent Fuel Pool Ventilation System Carbon Filter Surveillance

Proposed Change

This surveillance is also proposed to be changed to state that the carbon sample shall be tested in accordance with ASTM D3803-1989 (30°C, 95% R.H.) in lieu of ANSI N510-1975 (130°C, 95% R.H.).

Justification

The justification provided for the proposed change to Technical Specification 4.5.4.1.e applies equally to this change.

ATTACHMENT 4

NO SIGNIFICANT HAZARDS CONSIDERATION EVALUATION

Pursuant to 10CFR50.91, Duke Power Company (Duke) has made the determination that this amendment request involves a No Significant Hazards Consideration by applying the standards established by NRC regulations in 10CFR50.92. This ensures that operation of the facility in accordance with the proposed amendment will not:

A. Involve a significant increase in the probability or consequences of an accident previously evaluated?

NO

The proposed amendment does not involve a significant increase in the probability of an accident previously evaluated since no accident initiators, conditions, or assumptions are significantly affected by the proposed amendment. The carbon sample test methodology used in accordance with ASTM D3803-1989 is considered to be more conservative than the testing methodology mandated by the current TSs. In addition, the proposed amendment does not result in operation of equipment important to safety outside their acceptable operating ranges.

The proposed amendment does not involve a significant increase in the consequences of an accident previously evaluated because the proposed change does not change the source term, containment isolation, or allowable releases.

B. Create the possibility of a new or different kind of accident from the accident previously evaluated?

NO

The proposed amendment does not create the possibility of a new or different kind of accident previously evaluated because no new accident initiators or assumptions are introduced by creditation of the carbon filter testing methodology performed per ASTM D3803-1989 in lieu of testing methodology mandated by current TSs. The proposed amendment does not result in installed equipment being operated in a manner outside its operating range. No new or different equipment failure modes or mechanisms are introduced by the proposed amendment.

C. Involve a significant reduction in a margin of safety?

NO

The proposed amendment does not have a significant effect on the initial conditions contributing to accident severity or consequences. Consequently, there are no significant reductions in a margin of safety.

Duke has concluded based on the above that there are no significant hazards considerations involved in this amendment request.

ATTACHMENT 5

ENVIRONMENTAL IMPACT ANALYSIS

Pursuant to 10CFR51.22 (b), an evaluation of the proposed amendments has been performed to determine whether or not it meets the criteria for categorical exclusion set forth in 10CFR51.22 (c) 9 of the regulations. The proposed amendment does not involve:

1) A significant hazards consideration.

This conclusion is supported by the No Significant Hazards Consideration Evaluation which is contained in Attachment 4.

2) A significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

This amendment will not significantly change the types or amounts of any effluents that may be released offsite.

3) A significant increase in the individual or cumulative occupational radiation exposure.

This amendment will not significantly increase the individual or cumulative occupation radiation exposure.

In summary, this amendment request meets the criteria set forth in 10CFR51.22 (c) 9 of the regulations for categorical exclusion from an environmental inpact statement.