SURVEILLANCE REQUIREMENTS (Continued)

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 21,270 cfm ± 10%.

2. Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of ~~Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978.~~ ANSI N509-1980, AT A RELATIVE HUMIDITY OF 70% AND 25°C WITH A METHYL IODIDE PENETRATION OF <1%.

3. Verifying a system flow rate of 21,270 cfm ± 10% during system operation when tested in accordance with ANSI N510-1975.

d. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of ~~Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978.~~

e. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA and roughing filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 21,270 cfm ± 10%.

2. Verifying that on a simulated SI or high radiation test signal, the system automatically switches into a recirculation mode of operation with flow through the HEPA filters and charcoal adsorber banks.

3. Verifying that on a simulated SI or high radiation test signal the system starts the normal and emergency air handling systems which pressurize the control room to a positive pressure of greater than or equal to 1/8 inch W.G. relative to the outside atmosphere and maintains the 1/8 inch W.G. positive pressure with a maximum of 1000 cfm of outside air during system operation.

f. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.95% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 21,270 cfm ± 10%.

g. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 21,270 cfm ± 10%.

SURVEILLANCE REQUIREMENTS (Continued)

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 21,270 cfm ± 10%.

2. Verifying, within 31 days after removal, that a laboratory analysis of a representative charcoal sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of ANSI N509-1980, at a relative humidity of 70% and 25°C with a methyl iodide penetration of < 1%.

3. Verifying a system flow rate of 21,270 cfm ± 10% during system operation when tested in accordance with ANSI N510-1975.

d. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of ANSI N509-1980, at a relative humidity of 70% and 25°C with a methyl iodide penetration of < 1%.

e. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA and roughing filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 21,270 cfm ± 10%.

2. Verifying that on a simulated SI or high radiation test signal, the system automatically switches into a recirculation mode of operation with flow through the HEPA filters and charcoal adsorber banks.

3. Verifying that on a simulated SI or high radiation test signal the system starts the normal and emergency air handling systems which pressurize the control room to a positive pressure of greater than or equal to 1/8 inch W.G. relative to the outside atmosphere and maintains the 1/8 inch W. G. positive pressure with a maximum of 1000 cfm of outside air during system operation.

f. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.95% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 21,270 cfm ± 10%.

g. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 21,270 cfm ± 10%.

SURVEILLANCE REQUIREMENTS (Continued)

2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of ~~Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978.~~ ANSI N509-1980, AT A TEST MEDIA TEMPERATURE of 30°C.

3. Verifying a system flow rate of 30,000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1975.

c. Prior to the movement of fuel or crane operation with loads over the pool by verifying that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of ~~Regulatory Position C.6.a. of Regulatory Guide 1.52, Revision 2, March 1978.~~ Subsequent to each initial analysis (which must be completed prior to fuel movement or crane operation with loads over the pool), during the period of time in which there is to be fuel or crane movement with loads over the pool, verify charcoal adsorber operation every 720 hours by obtaining and analyzing a sample as described above. These subsequent analyses are to be completed within thirty-one (31) days of sample removal.

d. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA and roughing filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 30,000 cfm ± 10%.

2. Verifying that on a loss of offsite power test signal, the system automatically starts.

3. Verifying that the system maintains the spent fuel pool area at a negative pressure greater than or equal to 1/8 inches Water Gauge relative to the outside atmosphere during system operation.

e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.95% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 30,000 cfm ± 10%.

f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 30,000 cfm ± 10%.

2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of ANSI N509-1980, at a test media temperature of 30°C.

3. Verifying a system flow rate of 30,000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1975.

c. Prior to the movement of fuel or crane operation with loads over the pool by verifying that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of ANSI N509-1980, at a test media temperature of 30°C. Subsequent to each initial analysis (which must be completed prior to fuel movement or crane operation with loads over the pool), during the period of time in which there is to be fuel or crane movement with loads over the pool, verify charcoal adsorber operation every 720 hours by obtaining and analyzing a sample as described above. These subsequent analyses are to be completed within thirty-one (31) days of sample removal.

d. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA and roughing filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 30,000 cfm ± 10%.

2. Verifying that on a loss of offsite power test signal, the system automatically starts.

3. Verifying that the system maintains the spent fuel pool area at a negative pressure greater than or equal to 1/8 inches Water Gauge relative to the outside atmosphere during system operation.

e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.95% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 30,000 cfm ± 10%.

f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 30,000 cfm ± 10%.

JUSTIFICATION FOR EMERGENCY ACTIONS FOR REVISING THE CHARCOAL FILTER SPECIFICATION IN THE VIRGIL C. SUMMER NUCLEAR STATION TECHNICAL SPECIFICATIONS

While performing analysis to support an NRC submittal for plant uprate, it was recognized that the Technical Specification (TS) requirement for testing the Engineered Safeguards Features (ESF) charcoal plenum is different from that used by the station. The TS refers to RG 1.52, Revision 2 for conducting the test. The station has been using ANSI N509-1980 in conjunction with RG 1.52 to meet the TS requirements. The station and vendor determined that this method of testing better demonstrated the ability of these ESF systems to perform their design functions than the test method specified in the TS. This is a licensee identified item.

NRC Information Notice (IN) 87-32, "Deficiencies in the Testing of Nuclear-Grade Activated Charcoal," dated July 10, 1987, identified that serious problems existed with the testing capabilities of many of the testing companies and the testing standards. All areas were vendor specific. Guidance to licensees was to seek direct contact with the individual testing companies to improve test accuracy. INEL report EGG-CS-7653, referenced in IN 87-32, recognizes Nuclear Containment Systems, Inc. (NCS), the vendor V. C. Summer has been using for carbon testing since construction, as one of the few vendors whose laboratory performance meets NRC criterion. They were also determined to fully satisfy SCE&G's Vendor Quality Assurance Program. IN 87-32 further states that it "identified serious shortcomings with the Standard" (RG 1.52, Revision 2), which has to the best of our knowledge not yet been revised. Based on the information provided in IN 87-32, the licensee took action to verify the test methodology and accuracy. The IN did not cause us to review the TS for changes.

NUREG 1431, Revision 1, dated April, 1995 "Standard Technical Specifications," was compared to SCE&G Technical Specification for commonality in the area of charcoal testing. Surveillance Requirement (SR) BASES for SR 3.7.10.2 states, "the CREFS filter tests are in accordance with Regulatory Guide 1.52 (Ref.3)." Reference 3 is Regulatory Guide 1.52, Revision 2. It is our conclusion that the Standard Technical Specification compares favorably to the SCE&G TS, warranting no specific changes in this area, and further provided no indication of a need for a TS change.

Discussions with other utilities on February 9, 1996, identified similar situations regarding test standard methodologies which were resolved via the use of normal TS change process or Notice of Enforcement Discretion which precluded the need for an avoidable plant transient (plant shutdown). These discussions indicate a precedent for the TS changes to prevent unnecessary mode changes when no safety issue exists and adds further justification for the need for an emergency TS change.

SCE&G has maintained that the testing conducted by SCE&G was conservative, thereby assuring that the Fuel Handling and Control Building Ventilation systems can perform their design basis functions when required.

In 1989, ASTM D 3803 was revised to provide additional guidance for charcoal testing. We recently learned that the NRC prefers the licensee to conduct charcoal testing using this standard. The station will follow up this emergency change with another TS change that reflects testing per this standard.

SAFETY EVALUATION FOR REVISING THE CHARCOAL FILTER SPECIFICATION IN THE VIRGIL C. SUMMER NUCLEAR STATION TECHNICAL SPECIFICATIONS

DESCRIPTION OF AMENDMENT REQUEST

This license amendment request proposes to revise Surveillance Requirements 4.7.6.c.2 and 4.7.6.d to reflect a proposed change to the testing criteria for the testing of carbon samples from the Control Room Emergency Ventilation System (CREVS) charcoal adsorbers. This change would adopt ASTM D 3803-1979 as the laboratory testing standard for control room filtration and control building pressurization charcoal adsorbers. Laboratory testing of the carbon samples taken from the charcoal adsorbers will be performed at 25 degrees Celsius (°C) and 70% relative humidity (RH) for a methyl iodide penetration of $<1\%$.

Surveillance Requirements 4.9.11.b.2 and 4.9.11.c are also being revised to reflect a proposed change to the testing criteria for the testing of carbon samples from the Fuel Handling (FH) Building Exhaust System charcoal adsorbers. This change would adopt ASTM D 3803-1979 as the laboratory testing standard for FH Building Exhaust System charcoal adsorbers. Laboratory testing of the carbon samples taken from the charcoal adsorbers will be performed at 30°C and 95% RH for a methyl iodide penetration of $<1\%$.

SAFETY EVALUATION

This evaluation addresses the change in used carbon testing methodologies applied to Safety Related Carbon plenums XAA0021 A,B,C and XAA0029 A and B.

Conclusion

Each of the differences between the current Technical Specifications (TS) and the proposed TS test methodologies have been reviewed. The test parameters for the proposed TS change more accurately demonstrates the actual performance of the adsorbers following the design basis accident. Therefore, there will be no degradation in the ability of the components to perform their design function.

References:

1. Regulatory Guide 1.52, Revision 2, March 1978; Design, Testing, and Maintenance Criteria For Post Accident Engineered Safety Feature Atmosphere Cleanup System Air Filtration and Adsorption Units Of Light Water Cooled Nuclear Power Plants
2. ANSI/ASME N509-1976, Nuclear Power Plant Air Cleaning Units and Components
3. ANSI/ASME N509-1980
4. ASTM D 3803-1979, Standard Test Methods for Radioiodine Testing of Nuclear-Grade Gas-Phase Adsorbents
5. RDT M16-1T-1977, Gas-Phase Adsorbents for Trapping Radioactive Iodine and Iodine Compounds
6. NUREG/CR-0771, Effects of Weathering on Impregnated Charcoal Performance; May 10, 1979, Victor R. Deitz
7. Telecon Record: Sam Skidmore, SCE&G to John Pearson, NCS, February 9, 1996

Discussion:

The requirements of RG 1.52 and N509-1976 presently form the licensing basis test requirements. The essential elements of this test are:

- 70% Relative Humidity (RH)
- A pre-test carbon sample equilibration for temperature and humidity at 25°C
- A test medium temperature of 80°C
- A post-test sweep for two hours at 25°C
- Methyl iodide penetration of $< 1\%$

The essential elements of the proposed TS change are those required by RG 1.52 and N509-1980 which references ASTM D 3803-1979. ASTM D 3803-1979 is in general updated guidance based on RDT M16-1T.

The essential elements of the the proposed TS change for testing per ASTM D 3803-1979 (Method A for used Carbon) and from Regulatory Guide 1.52 are:

- 95% RH for the Fuel Handling Building carbon
- 70% RH for the Control Room carbon
- No pre-test carbon sample equilibration for humidity
- Equilibration of the sample to test temperature
- A test medium temperature of 25°C for control room emergency ventilation carbon. A test medium temperature of 30°C for the FH Building Exhaust System carbon. ASTM D 3803-1979 specifies 30°C.
- A post-test sweep for four hours at test temperature (25°C for the Control Room and 30C for the FHB) and humidity per N509-1980
- Methyl iodide penetration less than 1%

The differences between the current TS and the proposed TS change requirements for carbon testing are:

- A test temperature of 25°C (Control Room) and 30°C (FHB) versus 80°C
- No pre-test humidity equilibration versus a pre-test humidity equilibration
- Temperature equilibration of the test carbon to the test air temperature
- A four hour post-test sweep versus a two hour post-test sweep
- For the FHB, the test medium will be at 95% relative humidity versus 70%

These differences will be addressed individually and will be shown to be better test methodology and more conservative than the present licensing basis.

25 or 30 Degrees Celsius Test Temperature versus 80 Degrees Celsius

The quantity of water retained by charcoal (carbon) is dependent on temperature. Generally, the higher the temperature the less water retained. The water retained by the carbon decreases the efficiency of the carbon to adsorb other contaminants. At 25°C and 95% RH, carbon will retain about 40 weight percent water. At 80°C and 95% RH, carbon retains only about 2 to 3 weight percent water. Therefore, the lower temperature test medium of the new TS will yield more conservative results than present TS.

ASTM D 3803-1979 specifies a test temperature of 30°C instead of 25°C. There is little difference in the adsorption behavior of carbon between these two temperatures. The 25°C parameter is more conservative.

Twenty-five degrees Celsius has been used and will continue to be used for the control room for the duration of the TS reference to N509-1980/ASTM D 3803-1979. This is because the Control Room area is maintained at 75 ± 2°F (approximately 25°C). Thirty degrees Celsius testing medium will be used for testing FH Building carbon. This is less than the expected area temperature of 104°F (about 40°C).

No pre-test equilibration for humidity

Pre-test humidity equilibration is achieved by sweeping air of the appropriate humidity through the test carbon. This condition is for testing new carbon and until 1977 it also was applied for testing used carbon. In 1977, RDT M16-1T-1977 was released stating that for testing used carbon, "the material shall not be pre-equilibrated before testing." Reference 6 provides a basis by stating that "it is thought that the elimination of the pre-humidification is a better simulation of accident conditions since a carbon filter must be ready at all times..." It also states that "several investigators do not recommend any pre-treatment (of the carbon) in order to prevent a partial regeneration of the carbon which would increase the measured trapping efficiency." Therefore, by the release of the 1979 ASTM D 3803, it was established that the better test method was not to pre-equilibrate the humidity of the carbon.

Test Bed not thermally equilibrated to test temperature

The present TS (N509-1976/RDT M16-1T) requires the carbon to be equilibrated to 25°C, 70% humidity. The methyl iodide test medium would then be instantaneously introduced at 80°C. Carbon testing is not performed this way because this would cause condensation to form on the carbon (the dew point temperature of the test medium at these conditions is approximately 71°C). Per Reference 7, condensation on the carbon sample itself ("wetting the bed") results in the test being invalid. This is supported by paragraph 12.4.1 of ASTM D 3803-1979 which states with respect to relative humidity of the test medium that, 'tests at saturation or above give very erratic results.' Because of this, the testing standards after 1976 (RDT M16-1T-1977, ASTM D 3803-1979, and N509-1980), have been changed to include pre-test thermal equilibration at the test temperature.

Four Hour Post Sweep Versus Two Hour Post Sweep

The post-test sweep of the carbon is performed to evaluate the ability of the carbon to hold the adsorbate once it is captured. The current TS test specifies a two hour test at 25°C. The proposed TS change will use a four hour sweep at the test medium temperature (25°C for Control Room Carbon, 30°C for FH Building). The longer time is more conservative as only more radioiodines would be swept off.

95% Humidity Versus 70% Humidity for FH Building. Control Room Testing Remains at 70%

It was addressed earlier that higher moisture content of the carbon resulted in lower adsorption of radioiodines. Reference 6 shows that at a constant temperature the weight percent of water adsorbed by the carbon increases with increasing relative humidity. Therefore it is more conservative to test at higher RH.

Previous tests of FH Building carbon had been performed at 70% RH. RG 1.52 allows for this in Table 2 for, "Air filtration system designed to operate outside the primary containment and RH is controlled to 70%." Section 3.3-b of Table 6.5-1 of the FSAR refers to the FH Building Exhaust System charcoal adsorbers and states that, "No heaters are included in the design. The filters process room air and room RH should not exceed 70 percent. Therefore, a heater is not required." On the basis of these statements, past FH Building charcoal carbon testing has been performed at 70% RH.

A review performed as part of the plant uprate identified the potential for an increase in the Fuel Handling Building Exhaust System RH. Therefore the FH Building Exhaust System charcoal testing RH is being increased to 95% RH. This is consistent with the requirements of ASTM D 3803-1979.

The Control Room Emergency Ventilation System, by design, maintains RH less than 70%. This is accomplished by recirculating approximately 95% of the total system airflow. This air is drawn from the control room (75°F, 50% RH) and mixed with approximately 5% outside air. Under all design conditions, the air passing through the charcoal plenums is maintained below the 70% requirement. Testing of the carbon at 70% RH is acceptable since RH is controlled to less than 70%. This is consistent with the guidance of RG 1.52, Revision 2.

NO SIGNIFICANT HAZARDS DETERMINATION FOR REVISING THE CHARCOAL FILTER SPECIFICATION IN THE VIRGIL C. SUMMER NUCLEAR STATION TECHNICAL SPECIFICATIONS

Description of Amendment Request

This license amendment request proposes to revise Surveillance Requirements 4.7.6.c.2 and 4.7.6.d to reflect a proposed change to the testing criteria for the testing of carbon samples from the Control Room Emergency Ventilation System (CREVS) charcoal adsorbers. This change would adopt ASTM D 3803-1979 as the laboratory testing standard for control room filtration and control building pressurization charcoal adsorbers. Laboratory testing of the carbon samples taken from the charcoal adsorbers will be performed at 25 degrees Celsius (°C) and 70% relative humidity (RH) for a methyl iodide penetration of $< 1\%$.

Surveillance Requirements 4.9.11.b.2 and 4.9.11.c are also being revised to reflect a proposed change to the testing criteria for the testing of carbon samples from the Fuel Handling (FH) Building Exhaust System charcoal adsorbers. This change would adopt ASTM D 3803-1979 as the laboratory testing standard for FH Building Exhaust System charcoal adsorbers. Laboratory testing of the carbon samples taken from the charcoal adsorbers will be performed at 30°C and 95% RH for a methyl iodide penetration of $< 1\%$.

Basis for No Significant Hazards Consideration Determination

SCE&G has evaluated the proposed changes to the VCSNS TS described above against the Significant Hazards Criteria of 10 CFR 50.92 and determined that the changes do not involve any significant hazard for the following reasons:

1. The probability or consequences of an accident previously evaluated is not significantly increased.

   The charcoal testing protocol changes will not affect system operation or performance, nor do they affect the probability of any event initiators. These changes do not affect any Engineered Safety Features actuation setpoints or accident mitigation capabilities. Therefore, the proposed changes will not significantly increase the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR.

2. The possibility of an accident or a malfunction of a different type than any previously evaluated is not created.

   The changes to the charcoal sample testing protocol will not affect the method of operation of the system. The proposed changes only affect the testing criteria for the charcoal samples. No new or different accident scenarios, transient precursors, failure mechanisms, or limiting single failures will be introduced as a result of these changes. Therefore, the possibility of a new or different kind of accident other than those already evaluated will not be created by this change.

3. The margin of safety has not been significantly reduced.

   The new charcoal adsorber sample laboratory testing protocol more accurately demonstrates the required performance of the adsorbers following a design basis LOCA (CREVS) or FH Accident outside containment (FH Building Exhaust). The change in charcoal sample testing protocol will not affect system performance or operation. The decontamination efficiencies used in the offsite and control room dose analyses are not affected by this change and therefore, all offsite and control room doses will remain with the limits of 10 CFR 100 and 10 CFR 50 Appendix A, GDC 19. Therefore, these changes will not result in a significant reduction in any margin of safety.

Based on the above discussions, it has been determined that the requested technical specification changes do not involve a significant increase in the probability or consequences of an accident or other adverse condition over previous evaluations; or create the possibility of a new or different kind of accident or condition over previous evaluations or involve a significant reduction in a margin of safety. Therefore, the requested license amendment does not involve a significant hazards consideration.

ENVIRONMENTAL IMPACT DETERMINATION FOR REVISING THE CHARCOAL FILTER SPECIFICATION IN THE VIRGIL C. SUMMER NUCLEAR STATION TECHNICAL SPECIFICATIONS

This amendment request meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) as specified below:

1. **The amendment involves no significant hazards consideration.**

   As demonstrated in Attachment IV, the proposed change does not involve any significant hazards consideration.

2. **There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.**

   The proposed changes do not involve a change to the facility or operating procedures which would create new types of effluents. The change in charcoal sample testing protocol will not affect system performance or operation. The decontamination efficiencies used in the analysis for offsite and control room doses are not affected by this change. Therefore, all offsite and control room doses will remain within the limits of 10 CFR 100 and 10 CFR 50 Appendix A, GDC 19.

3. **There is no significant increase in individual or cumulative occupation radiation exposure.**

   The change in charcoal sample testing protocol will not reduce filter efficiency nor will it affect the decontamination efficiencies used in the offsite and control room dose evaluations. Thus, these changes will not result in a significant increase in individual or cumulative occupational radiation exposure.

   Based on the above, it is concluded that there will be no impact on the environment resulting from the proposed changes and that the proposed changes meet the criteria specified in 10 CFR 51.22 for a categorical exclusion from the requirements of 10 CFR 51.21 relative to requiring a specific environmental assessment by the Commission.