

ATTACHMENT 1
SURRY POWER STATION
PROPOSED TECHNICAL SPECIFICATION FOR THE
MAIN CONTROL ROOM AND EMERGENCY SWITCHGEAR
ROOM AIR HANDLING UNITS

3.23 MAIN CONTROL ROOM AND EMERGENCY SWITCHGEAR ROOM VENTILATION AND AIR CONDITIONING SYSTEMS

Applicability

Applies to the main control room (MCR) and emergency switchgear room (ESGR) air conditioning system and emergency ventilation system.

Objective

To specify requirements to ensure the proper function of the main control and emergency switchgear room air conditioning system and emergency ventilation system.

Specification

- A. Both trains of the main control and emergency switchgear rooms' emergency ventilation system shall be operable whenever either unit is above cold shutdown.
 - B. With one train of the main control and emergency switchgear room emergency ventilation system inoperable for any reason, return the inoperable train to a operable status within 7 days or be in at least Hot Shutdown within the next 6 hours and in Cold Shutdown within the following 48 hours.
 - C. The main control and emergency switchgear room air conditioning system shall be operable as delineated in the following:
 - *1. Chiller Refrigeration Units
 - a. Chillers 1-VS-E-4A, 4B, and 4C must be operable whenever either unit is above Cold Shutdown.
- * This interim specification is necessary until the air conditioning system modifications are completed. Following completion of the permanent modifications, a revised air conditioning system specification will be submitted.

- b. If one chiller becomes inoperable, return the inoperable chiller to operable status within seven (7) days or bring both units to Hot Shutdown within the next six (6) hours and be in Cold Shutdown within the following 30 hours.

2. Air Handling Units (AHU)

- a. Unit 1 air handling units, 1-VS-AC-1, 1-VS-AC-2, 1-VS-AC-6, and 1-VS-AC-7, must be operable whenever Unit 1 is above Cold Shutdown.

1. If one Unit 1 AHU becomes inoperable, return the inoperable AHU to operable status within seven (7) days or bring Unit 1 to Hot Shutdown within the next six (6) hours and be in Cold Shutdown within the following 30 hours.

- b. Unit 2 air handling units, 2-VS-AC-8, 2-VS-AC-9, 2-VS-AC-6, and 2-VS-AC-7 must be operable whenever Unit 2 is above Cold Shutdown.

1. If one Unit 2 AHU becomes inoperable, return the inoperable AHU to operable status within seven (7) days or bring Unit 2 to Hot Shutdown within the next six (6) hours and be in Cold Shutdown within the following 30 hours.

Basis

When the supply of compressed bottled air is depleted, the main control room and emergency switchgear room emergency ventilation system is manually started to continue to maintain the control room pressure at the design positive pressure so that leakage is outleakage. One train of the main control room emergency ventilation consists of one fan powered from an independent emergency power source.

The main control and emergency switchgear room emergency ventilation system is designed to filter the intake air into the control room pressure envelope, which consists of the control room, relay rooms, and emergency switchgear rooms during a LOCA.

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 intake of radio-iodine to the control room. The in-place test results should indicate a system leaktightness of less than 1 percent bypass leakage for the charcoal adsorbers and a HEPA efficiency of at least 99.5 percent removal of DOP particulates. The laboratory carbon sample test results should indicate a radioactive methyl iodide removal efficiency of at least 95 percent for expected accident conditions. The control room dose calculations assume only 90 percent iodine removal efficiency for the air passing through the charcoal filters. Therefore, if the efficiencies of the HEPA filters and charcoal adsorbers are as specified, at the temperatures, flow rates and velocities within the design values of the system, the resulting doses will be less than the allowable levels stated in Criterion 19 of the General Design Criteria for Nuclear Power Plants, Appendix A to 10 CFR Part 50.

If the system is found to be inoperable, there is no immediate threat to the control room, and reactor operation may continue for a limited period of time while repairs are being made. If the system cannot be repaired within the specified time, procedures are initiated to establish conditions for which the filter system is not required.

The Main Control Room (MCR) and Emergency Switchgear Room (ESGR) Air Conditioning System cools the control room, the control room annex and the Units 1 and 2 emergency switchgear rooms. The air conditioning system includes three chillers (1-VS-E-4A, 4B, and 4C) and eight air handling units (1-VS-AC-1, 2, 6, 7 and 2-VS-AC-6, 7, 8, and 9).

Interim modifications were completed on the MCR and ESGR Air Conditioning System to address interim failure and increased cooling requirements for the ESGRs. Permanent modifications will include replacement of the MCR and ESGR AHUs and installation of additional chiller capacity to restore original design flexibility.

The MCR and ESGR AHUs have been replaced in the initial phases of the permanent modification. Currently, two of three MCR and ESGR Air Conditioning System chillers are required to operate to maintain design temperatures under maximum heat load conditions. As such, all three chillers must be operable with either Unit above Cold Shutdown. Additional chiller capacity will be installed as part of the permanent modifications to restore original design flexibility.

In addition to the equipment restrictions above, a fire watch will be required during this interim period in both units' ESGR and MER #3 to address Appendix R considerations.

ATTACHMENT 2
SURRY POWER STATION
SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

DISCUSSION OF CHANGE

The Main Control Room (MCR) and Emergency Switchgear Room (ESGR) AC System was determined to be undersized due to the unrecognized addition of incremental heat loads in these areas over an extended period of time. To allow for continued plant operation, interim modifications were completed on the MCR & ESGR AC System in 1989. These modifications provided the required cooling and met design basis assumptions. The modifications included: 1) the addition of a redundant motor on each of the four ESGR air handling units (AHUs), 2) an alternate power supply for the swing chiller, and 3) the incorporation of interim equipment operating restrictions into the Technical Specifications.

In order to return the system to two 100% redundant trains and provide operational flexibility, additional modifications (system upgrades) have to be made. The Unit 1 AHUs were replaced with larger capacity units during the 1990 refueling outage. The Unit 2 AHUs will be replaced with larger capacity units during the 1991 refueling outage. After the eight AHUs (4 per unit) are replaced by the end of the Unit 2 refueling outage, the MCR & ESGR air conditioning system will be restored to two 100% redundant trains. Subsequent modifications to install additional chiller capacity are scheduled as non-outage work following the Unit 2 refueling outage. The schedule for installation of this additional chiller capacity has not yet been finalized, although it is our intention to initiate this activity late in 1991 or early 1992. After completion of each phase of the modification, a Technical Specification change will be necessary to reflect the current condition of the MCR & ESGR air conditioning system.

This proposed Technical Specification change provides the necessary operation restrictions and action statements required for continued interim operation. This condition will exist until the additional safety-related chiller capacity is installed. The proposed Technical Specification removes the 6 hour action statement for the Unit 2 ESGR AHUs and the 7 day action statement for the redundant motors on the Unit 2 ESGR AHUs consistent with the previous Technical Specification made for Unit 1. We are requesting that the Technical Specification become effective when the Unit 2 AHUs are installed and operational at the end of the Unit 2 refueling outage.

10 CFR 50.92 SIGNIFICANT HAZARDS CONSIDERATION REVIEW

Virginia Electric and Power Company has reviewed the proposed Technical Specification change against the criteria of 10 CFR 50.92 and has concluded that the interim modification and the Technical Specification change as proposed does not pose a significant hazards consideration. Specifically, operation of the Surry Power Station in accordance with the proposed change will not:

1. Involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated. Replacement of the Unit 2 Air Handling Units with larger capacity Air Handling Units (AHU) restores the Unit 2 portion of the Main Control Room and Emergency Switchgear Room AC system to the original design capability. Therefore, those interim operating restrictions applicable to the Unit 2 AHUs are no longer necessary. There is no increase in the probability or consequences of any previously evaluated accident.
2. Create the possibility of a new or different kind of accident from any accident previously evaluated. The modification returns the Unit 2 AHUs to the original design capability. Therefore, the interim operating restrictions are no longer necessary and removal of those restrictions does not create a new or different accident from those previously evaluated.
3. Involve a significant reduction in a margin of safety. The larger capacity Unit 2 AHUs restore the Main Control Room and Emergency Switchgear Room AC system to the original design condition. Therefore, eliminating the interim operating restrictions on the Unit 2 AHUs does not reduce the margin of safety.