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SUBJECT: Requests enforcement discretion re station battery 2A individual cell low voltage.

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PRIORITY 1 DOCUMENT

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

October 28, 1994

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

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Gentlemen:

**VIRGINIA ELECTRIC AND POWER COMPANY**
**SURRY POWER STATION UNIT 2**
**STATION BATTERY 2A INDIVIDUAL CELL LOW VOLTAGE**
**REQUEST FOR ENFORCEMENT DISCRETION**

During scheduled surveillance testing of the Unit 2 Station Battery 2A, a degrading trend in cell voltage has been identified on individual cell 52. A degrading trend in individual cell voltage is not by itself an indication of the state of the charge of the battery, however individual cell voltage below the minimum acceptance criteria is an indication of a possible internal cell problem which may require cell replacement in the future. As identified in UFSAR Section 8.6, the Station Battery surveillance provides an indication of battery cells becoming unserviceable before they fail. If the tests reveal a weak cell or a weakening trend in any cell, replacements are made as necessary. Technical Specification 4.6.C.1 surveillance requirements make reference to each Station Battery being made up of 60 cells. To effect troubleshooting and repairs, the degrading cell and potentially one adjoining cell must be disconnected from the Station Battery. In this condition, the Station Battery maintains adequate capacity even though it is made up of less than 60 cells. In order to complete the required maintenance activities, 24 additional hours is requested to be added to the existing period of time a station battery is allowed to be out of service. Enforcement discretion is requested for Technical Specification 3.16.B.3 to allow an additional 24 hours.

The maintenance activities required to be performed constitute an infrequently performed evolution and as identified in our administrative procedures, require direct management oversight. Consequently, we are incorporating North Anna operational experience and knowledge gained during their performance of similar activities. In addition, experienced personnel from North Anna are being brought on site to provide assistance and support. In accordance with Technical Specification 3.16.B.3, we were in a 24 hour action statement when we held a telephone conference call for an inoperable station battery and will require an additional period of 24 hours to complete the maintenance activities. We are planning to replace the removed cell(s) during the upcoming Unit 2 refueling outage currently scheduled for February 1995.

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Technical Specification 4.6.C.1 makes reference to our Station Batteries as having 60 cells. We believe the reference to 60 cells is for identification of the battery being referenced and is not a requirement that the battery must have 60 cells. Following your concurrence with this position, a Technical Specification Interpretation will be issued as an interim measure. A Technical Specification change submittal is being prepared that clarifies these issues.

In our October 28, 1994 conference call between Virginia Power and the NRC, we apprised you of the degrading trend in cell 52 and the Technical Specification operability and surveillance requirements.

**SAFETY IMPACT AND POTENTIAL CONSEQUENCES**

The operation of Unit 2 with a station battery with at least 58 cells does not create any immediate threat to safety. Battery capacity remains acceptable with adequate margin to supply the loads on the DC bus if required. Existing engineering analyses and supporting calculations performed in accordance with IEEE Standard 485-1983 allow two cells within a Station Battery to be taken out of service with no significant reduction in load margin. A review of performance and service test data found Battery 2A performance acceptable following maintenance. The minimum acceptance criterion for one individual station battery cell is greater than 2.07 volts. The current voltage reading for cell 52 is 2.068 volts with a degrading trend rate. No other cells in the station battery show any signs of degradation. The two station battery chargers remain operable and are designed to carry the load of the associated DC bus if required.

**SIGNIFICANT HAZARDS CONSIDERATION**

The proposed request for discretionary enforcement is necessary in order to complete the required maintenance activities on the Unit 2 Station Battery 2A. An additional 24 hours is requested to be added to the existing period of time a station battery is allowed to be out of service. This discretionary enforcement action does not result in a significant hazards consideration as defined in 10 CFR 50.92. Specifically, the proposed enforcement discretion does not:

- Involve a significant increase in the probability or consequences of an accident previously evaluated. Allowing 24 additional hours for the infrequently performed maintenance activities is acceptable, since the redundant station battery and both battery chargers will remain operable and are capable of supplying the required DC bus loads. Furthermore, the probability of a loss of offsite power occurring during the additional 24 hour period is considered insignificant. Operation of the 2A station battery with at least 58 cells does not affect the ability of the battery to perform its intended safety function. Therefore, the consequences of accidents related to or dependent upon the station battery will remain unaffected.

- Create the possibility of a new or different kind of accident from any previously evaluated. There are no new failure modes or mechanisms associated with plant operation for an extended period with at least 58 cells connected to the 2A station battery. Adequate battery capacity exists with at least 58 connected cells, and the cell connector is constructed of materials similar to the existing battery connectors. The cell connector is installed in the same manner as the existing battery connectors. The cell connector provides the same level of performance and does not involve any modification outside the operational limits or physical design of the involved systems. Furthermore, the additional 24 hour period associated with the restoration of operability of the 2A station battery would not create a new accident type. Therefore, there are no new accident precursors generated due to the extended maintenance period or operation with a station battery with at least 58 cells.

- Involve a significant reduction in the margin of safety. Plant operation with at least 58 cells connected to the 2A station battery does not affect the Technical Specification margin of safety. Following the maintenance activity, the 2A station battery capacity remains acceptable with adequate margin to supply the loads on the DC bus. Existing engineering analyses and supporting calculations performed in accordance with IEEE Standard 485-1983 allow two cells within a Station Battery to be taken out of service with no significant reduction in load margin. A review of performance and service test data establishes that battery 2A performance will be acceptable following maintenance. Furthermore, the probability of a loss of offsite power during the additional 24 hour maintenance period is considered insignificant with respect to the margin of safety. The 2A station battery maintains the ability to perform its primary safety function with at least 58 connected cells with no significant reduction in safety.

**ENVIRONMENTAL CONSEQUENCES**

This waiver will not change the types of any effluents that may be released offsite, nor create a significant increase in individual or cumulative occupational radiation exposure. The proposed changes do not affect the ability of the 2A Station Battery to perform its intended safety function when a safety system setting is reached. Therefore, the consequences of accidents related to or dependent upon Station Battery 2A operation will remain unaffected.

The request for discretionary enforcement was reviewed by the Station Nuclear Safety and Operating Committee. It has been determined that no unreviewed safety question or significant hazards consideration exists.

Very truly yours,

James P. O'Hanlon

James P. O'Hanlon
Senior Vice President - Nuclear

cc: U. S. Nuclear Regulatory Commission
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