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June 3, 1983

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Ms. E. G. Adensam, Chief
Licensing Branch No. 4

Re: McGuire Nuclear Station
Docket Nos. 50-369, 50-370

Dear Mr. Denton:

Attached is a description of the test program to verify the reliability of the undervoltage trip attachment (UVTA) on Westinghouse DS-416 breakers. This testing will be conducted on multiple UVTAs installed in a breaker. Detailed testing procedures are being finalized by Westinghouse in conjunction with Duke Power and other utilities. This testing program is scheduled to begin within the next several weeks; therefore, timely Staff review is requested.

By submittal of this information, Duke Power Company considers that condition number 2.C.(12)a. in License NPF-17 (Unit 2-FOL) is satisfied. Please advise if there are any questions regarding this matter.

Very truly yours,

H.B. Tucker /BH

Hal B. Tucker

GAC/php
Attachment

cc: Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Mr. W. T. Orders
NRC Resident Inspector
McGuire Nuclear Station

B021
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# DS-416 Undervoltage Trip Attachment
# Reliability Testing Program

## 1.0 OBJECTIVE

1.1 Define the undervoltage trip attachment (UVTA) service life.

1.2 Develop data to substantiate appropriate periodic test requirements during plant operation.

## 2.0 GOALS

2.1 Perform testing of sufficient devices to assess the potential performance degradation and associated service life failure mechanism characteristics for the undervoltage attachment.

2.2 Identify:

2.3.1 The quantifiable margin throughout service life in the UVTA/breaker trip forces.

2.3.2 Adequate measures of breaker trip performance and indicators of performance degradation.

2.3.3 Adequacy of present maintenance instructions for ensuring reliable operation of the UVTA for recommended service life.

2.3.4 Quantitative data for cyclic life effects upon the UVTA and recommended replacement intervals, if appropriate, as determined by test survival rates.

## 3.0 EVALUATION PROCESS

3.1 Specification of program objectives

3.2 Specification of test and analysis requirements

3.3 Testing and analysis of data

3.4 Compilation of testing and analysis against program objectives maintenance program recommendations

## 4.0 TESTING AND ANALYSES PRINCIPLES

4.1 Documentation shall be provided for evaluations and recommendations determined through either testing or analysis of areas under investigation.

4.2 The number of operations specified in the procedure shall be determined to adequately evaluate expected service life/replacement life.

4.3 Testing shall be performed upon a sample set of undervoltage trip attachments. A controlled undervoltage trip attachment from that set shall be kept and maintained for comparison purposes after completion of the testing.

4.4 The undervoltage trip attachments shall be installed in accordance with present installation procedures in the factory as-received condition.

4.5 The following baseline measurements/inspections of the test undervoltage trip attachments and test circuit breakers shall be taken and recorded:

4.5.1 Electrical resistance of the coil.

4.5.2 Breaker response time for undervoltage trip.

4.5.3 Clearance between undervoltage trip attachment to trip shaft.

4.5.4 Measurements of the force that the undervoltage attachments deliver.

4.5.5 Verification of proper operation of roller bearing on UVTA.

4.6 Periodic maintenance shall be performed on a frequency during the test that is approximately consistent with times that are expected for a normal fuel cycle.

4.7 Upon completion of the test, all units will be disassembled for detailed inspections and comparison to the control sample.