

Qualification Testing Evaluation Research Review Group  
Meeting Report

Name of Author: Ronald Feit

Date and Place: May 16, 1979, Bethesda, Maryland

Purpose: (1) To discuss the final Sandia test plan for the Commission-directed connector test.

(2) To discuss the LOCA test facility performance.

Discussion

1. The Sandia connector test plan was discussed and accepted with the modifications and clarifications listed below. Formal acceptance will be implemented by letter initiated by the Chairman of the Review Group for the signature of Dr. Murley, Dr. Mattson and Mr. Stello. Additional changes will be considered if comments are received from TVA or Wyle prior to the formal acceptance.
  - a) The Sandia reference test profile should follow as closely as possible the actual Wyle test profile and not their TVA-sponsored reference profile. Specifically, this means that the pressure will be reduced from a reference value of 57.5 psig to 25 psig in 15 minutes as opposed to an instantaneous change. The Sandia test procedure will be revised if necessary to duplicate as closely as possible the actual Wyle temperature profile. (DOR representatives stated this is what commercial testing laboratories do). Elimination of the rapid change in pressure will make it easier to track the Wyle temperature profile.
  - b) The LOCA test should be preceded by a nitrogen purge in the test chamber if this was done in the Wyle test. Apparently, the test report (Wyle #43854-2, March 28, 1978) did not document the use of a nitrogen purge; however, there was some concern that a nitrogen purge was used by Wyle and inadvertently left out of the final report. This issue will be verified with TVA and Wyle prior to start of the test and included in the Sandia test procedure if necessary.
  - c) The load fuses used should be reviewed to ensure that sufficient margin exists to eliminate loss of load during the test. If practical the same values and type of fuses that Wyle used should also be used in the Sandia test.
  - d) Both Megger and VOM measurements should be made. However, the VOM data should be used as the acceptance criteria as was done by Wyle. The 20 megohm criterion should be added to the test plan. The megger data should be included in the final report as supplemental data.

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- e) The Wyle post-test soak period (before opening the chamber after the test) should be duplicated if in fact it was used. The Wyle test report did not indicate that a post-test soak was used; however, this issue will be verified with TVA and Wyle prior to the start of the test and included in the Sandia test procedure if necessary.
  - f) The test report should include a test plan outline reflecting any procedural changes that result from the items discussed in this meeting report. Also, the objective section in the test report should be simplified to state only that the test objective is to duplicate as close as possible a previously run test by Wyle Laboratory. The historical background material in the objective section of the latest Sandia test plan should be inserted into a background section in the final test report. In this section it should be pointed out that although IEEE-323-71 does not specifically require aging it was included in the Sandia test because it was included in the Wyle test. Furthermore, the aging test utilized does not constitute a NRC or Sandia endorsement of an aging test that will satisfy the IEEE-323-74 requirements. Any Sandia disclaimers on endorsement of the adequacy of the Wyle test to conform to the IEEE-323-71 standard can also be put in this section of the final report if considered necessary by Sandia. It was recommended that the final report include a discussion of the accuracy of the temperature measurements.
  - g) The baseline against which to compare the post-LOCA functional condition of the connectors should be the post-aging functional condition, as in the Wyle test.
2. The facility checkout was discussed but no agreement was reached with regard to use of the Sandia facility for the Commission-requested connector tests. It was concluded that the required test profile, including the degree of superheat, could be achieved in the Sandia facility. The significance of the differences in steam flow in the Wyle test and what can be achieved in the Sandia facility will not be determined until additional checkout tests are conducted. Sandia expects to continue these tests the week of May 21, 1979, to determine if the test specimen profile matches the chamber profile. These additional data will be sent to the review group members as soon as available.

If these remaining Sandia tests show that the Sandia LOCA facility can adequately reproduce the Wyle test conditions, then the formal acceptance letter for the final Sandia test plan will also include an acceptance of the Sandia LOCA test facility for the Commission-directed connector tests.

QTE MEETING, MAY 16, 1979

ATTENDANCE

Ronald Feit, RSR

Matthew Chiramal, DOR

E. J. Butcher, DOR

D. G. McDonald, DOR

C. A. Heit, DOR

A. J. Szukiewicz, DSS

J. A. Zwolinski, DSS

Gary L. Bennett, RSR

W. R. Rutherford, IE

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Addressees for Letter dated \_\_\_\_\_

T. E. Murley, RSR  
R. J. Mattson, DSS  
V. Stello, DOR  
R. Vollmer, DSE  
G. Lainas, PSYB  
M. Chiramal, PSYB  
J. A. Zwolinski, DSS  
L. Tripp, IE  
D. Sullivan, SD  
C. Heit, NRR  
P. Baranowsky, DSS  
A. Szukiewicz, DSS  
D. McDonald, NRR  
E. Butcher, DOR  
F. Rosa, DSS  
R. Satterfield, DSS  
M. Srinivasan, DSS  
W. Rutherford, IE  
V. Thomas, IE  
E. Blackwood, IE  
C. Long, DSS  
T. Dunning, DOR  
E. Sylvester, DOR  
R. Ferguson, DOR  
A. S. Hintze, SD  
A. Ungaro, DSS  
W. Haass, DPM  
M. Taylor, RES  
S. Hanauer, DSS  
L. Rubenstein, NRR  
A. R. Buhl, RES  
D. Kirkpatrick, IE  
C. Miller, DSS  
W. Morrison, SD  
B. Brooks, MIPC  
W. Paulson, NRR  
H. Ornstein, EDO  
H. Wilber, IE  
S. Ebnetter, IE-I  
NRC PDR (2) File #1-25 ✓  
D. Nowlin, AL  
C. Quinn, AL  
J. Johnson, AL  
L. Bonzon, Sandia  
D. Dugan, Sandia  
F. Thome, Sandia  
R. Saloman, Temple Univ.  
W. Von Rieseemann, Sandia  
B. Snyder, OPE

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