



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

PRODUCTION DEPARTMENT

August 23, 1979

Mr. John F. Stolz
Office of Nuclear Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Stolz:

SUBJECT: Grand Gulf Nuclear Station
Units 1 and 2
Docket Numbers 50-416/50-417
File 0270/0277/1066
Moisture Controls for
E7018 Arc-welding
Electrodes
AECM-79/86

This letter is to inform you that Mississippi Power and Light Company is currently adopting controls of weld filler material which allow the use of E7018 electrodes in unheated containers for periods of up to 14 hours when issued for use on plain carbon steel weldments. The approval to permit the 14-hour condition was based on a thorough review of the original test data contained in a report entitled, "Qualification of an Alternative Electrode Control Program for AWS D1.1 for the Arizona Nuclear Power Project, Palo Verde Units 1, 2 and 3," dated March 15, 1978. This report substantiated the use of E7018 electrodes in unheated containers for as long as 12 hours and the report was subsequently accepted by the NRC.

Review of test data indicates that the use of E7018 electrodes in unheated containers for up to 14 hours is technically acceptable because of the conservative test program conditions imposed in generating the original data in combination with the more than adequate test results. A summary of program test conditions and results is as follows:

1. The test program utilized 15 and 20-hour moisture exposure times.
2. Three exposure cycles at 15 and 20 hours were utilized.
3. High humidity conditions of 86 and 100 percent were used for the times and cycles indicated above.
4. Four brands of commercial E7018 electrodes were tested.
5. Extreme restraint was used during the welding of test coupons including circular patch coupons.
6. The results of mechanical property testing and nondestructive examination exceeded minimum requirements indicating considerable margin even under conservative test conditions.

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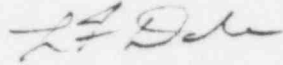
Mr. John F. Stolz
Office of Nuclear Reactor Regulation

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Please provide us with your concurrence at your earliest possible convenience.

Yours truly,



L. F. Dale
Nuclear Project Manager

JRF/pa

References: See Page 3

cc: Mr. N. L. Stampley
Mr. R. B. McGehee
Mr. T. B. Conner

Mr. John G. Davis, Director
Division of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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- Reference 1: Letter, Edwin E. VanBrunt, Jr. (Arizona Public Service Company) to Edson G. Case (NRC), April 4, 1978.
- Reference 2: Report, "Qualification of an Alternative Electrode Control Program for AWS D1.1," March 15, 1978, Arizona Public Service Company.
- Reference 3: Letter, John F. Stolz (NRC) to E. E. VanBrunt, Jr. (Arizona Public Service Company), April 24, 1978.
- Reference 4: Letter, J. P. McGaughy, Jr. (MP&L) to John F. Stolz (NRC), June 7, 1978.
- Reference 5: Letter, John F. Stolz (NRC) to N. L. Stampely (MP&L), January 29, 1979.