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SUBJECT: Nitifies of certain changes found necessary to make in scope
 & schedule of Tasks 1 & 2 of safety injection pump motor
 environmental qualification program.

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INDIANA & MICHIGAN ELECTRIC COMPANY

P.O. BOX 16631
COLUMBUS, OHIO 43216

June 1, 1987
AEP:NRC:0775AM

Donald C. Cook Nuclear Plant Unit No. 2
Docket No. 50-316
License No. DPR-74
ENVIRONMENTAL QUALIFICATION TEST PROGRAM CHANGES
CONCERNING THE SAFETY INJECTION PUMP MOTOR

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Attn: A. B. Davis

Dear Mr. Davis:

The purpose of this letter is to notify you of certain changes we have found necessary to make in the scope and schedule of Tasks 1 and 2 of our safety injection pump motor environmental qualification program. This program was described in our letter AEP:NRC:0775AL, dated March 3, 1987. (A copy of this letter is attached for your convenience.)

As described in our March 3, 1987 letter, Task 1 of the testing program consists of performing an evaluation, based on a search of existing literature, to predict the effects of radiation on the insulating varnish used by the noncertified motor-repair shop. Radiation effects on the interaction between this varnish and the original stator winding insulation will also be evaluated. This task was originally scheduled to begin in March 1987. However, due to delays in obtaining a detailed material listing of the make-up of the safety injection pump motor from the manufacturer (Westinghouse), this task has been rescheduled to begin in June 1987.


With regard to Task 2 of the testing program, we had originally planned to perform radiation testing of a sample pump motor stator winding to be fabricated by Westinghouse. Westinghouse has subsequently informed us that many of the materials originally used in the manufacture of the pump motor stator are no longer commercially available. As a result, our current plan is to perform radiation testing of the entire safety injection pump motor in question unless the Task 1 evaluation conclusively shows that the motor in its present condition will be unaffected by an accident environment.

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This document has been prepared following Corporate procedures which incorporate a reasonable set of controls to insure its accuracy and completeness prior to signature by the undersigned.

Very truly yours,


M. P. Alexich
Vice President

MPA/mi

Attachments

cc: John E. Dolan
W. G. Smith, Jr.
R. C. Callen
G. Bruchmann
G. Charnoff
NRC Resident Inspector - Bridgman
T. E. Murley, NRC - Washington, DC

Attachment 1 to AEP:NRC:0775AL

Supplemental Environmental Qualification Test Program
For the D. C. Cook Unit 2 Safety Injection Pump Motor



Columbus Division
505 King Avenue
Columbus, Ohio 43201-2693
Telephone (614) 424-6424
Telex 24-5454

February 25, 1987

Mr. Ronald Kraszewski, Safety Engineer
Nuclear Safety and Licensing
American Electric Power Service Corporation
1 Riverside Plaza
P. O. Box 16631
Columbus, Ohio 43216-6631

Dear Mr. Kraszewski:

As you requested during our meeting at Battelle on February 20, 1987, Battelle is preparing a proposal for the evaluation of materials used in a Westinghouse 400 horsepower motor for Class IE service. The proposed project will involve two parallel efforts:

- Search of technical literature to locate information and data on the varnish and paint used to treat the stator of the Westinghouse motor.
- Materials irradiation to determine the possible interaction of the original motor coating materials with the newly added varnish and paint.

Enclosed with this letter you will find an outline of the anticipated effort for the above two tasks, and an estimated schedule for the completion of the efforts.

If you have any questions concerning the proposal being prepared, please contact me at (614)424-7386, or Larry Lowry of the Nuclear Technology Section at (614)879-5338.

Very truly yours,

Tom Gruber

Tom Gruber
NDT Projects Office

TEST PLAN OUTLINE FOR FOUR HUNDRED HP MOTOR MATERIALS QUALIFICATION

TASK 1 INFORMATION SEARCH

A- Printed information base search

- 1- Contact motor manufacturer for materials and process specifications.
- 2- Search printed engineering indexes to
 - a- Determine key words used to index information about Class IE equipment, large horse power motors, and coating materials used in large motors and nuclear environments.
 - b- Identify journals etc. publishing information on large horse power motors used in nuclear environments.
 - c- Identify authors publishing on nuclear coatings, equipment used in nuclear environments, and large horse power motors.
- 3- Search annual indexes of printed journals publishing information on large motors used in nuclear environments and coatings used in nuclear environments.
- 4- Obtain copies of significant articles, reports, etc.
- 5- Contact authors (companies) for additional information and original data that might be used to qualify coatings and coating combinations for Class IE service.

B- Computerized data base information search

- 1- Define search strategy on the basis of key words and vocabulary of the technology as determined from the search of printed data bases.
- 2- Perform interactive data base search and obtain on-line listing of "hit" titles. This search will be limited to 1976 to the present.

- 3- Review articles titles and order abstracts of significant articles for off-line printing. Order off-line printing of review-type articles. The ordered material to be delivered by express mail.
 - 4- Review abstracts and order complete copies of significant articles, reports, etc.
 - 5- Review bibliographies of review-type articles and order significant articles, reports, etc.
 - 6- Contact authors (companies) of very significant information to learn if more recent reports are available and whether not raw data can be made available for qualification of materials for Class IE service.
 - 7- Obtain more recent reports and available data.
- C- Analyze information and prepare a report and recommendations.

TASK 2. MATERIALS QUALIFICATION TEST

The following materials qualification tests will be performed with appropriate quality control procedures in effect to insure the accuracy and validity of the data generated.

- A- Contact motor manufacturer for materials and process specifications.
- B- Radiation monitoring qualification.
- C- Map gamma field of radiation source.
- D- Obtain or fabricate test sample.
- E- Prepare test sample:
 - a- application of coatings.
 - b- attachment of electrical contacts.
 - c- attachment of thermocouples.
- F- Prepare test sample for irradiation:
 - a- attachment of dosimeters.
 - b- enclose in contamination shield.
- G- Preliminary measurements.
- H- Insert sample in irradiation tube.
- I- Irradiate sample and:
 - a- temperature measurements.
 - b- electrical measurements.
 - c- remove selected dosimeters at appropriate times.
- J- Remove sample from irradiation tube.
- K- Process dosimeters.
- L- Process and analyze data.
- M- Prepare report and recommendations.

	WEEKS												
ACTIVITIES	1	2	3	4	5	6	7	8	9	10	11	12	13
MATERIALS QUALIFICATION													
Radiation Monitor Qualification	-----												
Gamma Field Mapping		-----											
Contact Westinghouse	-----	-----	-----	-----	(Same activity as information search item)								
Test Sample Preparation				-----	-----								
Pre-irradiation Testing						-----	-----						
Prepare Sample For Irradiation							-----	-----					
Installation In Irradiation Tube								---					
Irradiation and Measurements									--				
Removal From Irradiation Tube										--			
Process Radiation Monitors										--			
Analysis and Report											-----	-----	

ESTIMATED SCHEDULE FOR INFORMATION SEARCH AND MATERIALS QUALIFICATION

ACTIVITIES	WEEKS												
	1	2	3	4	5	6	7	8	9	10	11	12	13
INFORMATION SEARCH													
Contact Westinghouse	-----												
Search Printed Sources	-----												
Review Engineering Indexes	---												
Review Technical Journals	---												
Obtain Journal Articles		-----											
Search Computer Data Bases		-----											
Plan Search Strategy		--											
Computer Search		---											
Order Abstracts		---											
Review Abstracts			-----										
Order Reports Etc				-----									
Review Information					-----								
Obtain Data						---							
Analysis and Report							-----						

Attachment 2 to AEP:NRC:0775AL

Licensee Event Report 86-031-00

ATTACHMENT TO AEP:NRC:0775AM

OUR LETTER AEP:NRC:0775AL, DATED MARCH 3, 1987

