

F. L. Clayton Jr.
Special Agent in Charge
February 29, 1984

A-20 IEB 79-01B
50-348/364 - CIVAF37
3/19/92

0057

APCo Exhibit 20



Alabama Power

February 29, 1984

Docket Nos. 50-348
50-364

Director, Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. S. A. Varga

Joseph M. Farley Nuclear Plant - Units 1 and 2
Environmental Qualification



Gentlemen:

On February 4, 1983, Alabama Power Company (APCo) received the Safety Evaluation Reports (SERs) regarding the environmental qualification of safety-related electrical equipment at Farley Nuclear Plant (FNP), Units 1 and 2 defined by IEB 79-01B and NUREG-0588 respectively. The SERs each contained a Technical Evaluation Report (TER) which noted deficiencies concerning the documentation of qualification for several safety-related items at FNP. On January 11, 1984, a meeting was held with members of the NRC Staff to discuss APCo's responses that resolved each identified deficiency. In addition to the TER items, APCo discussed with the NRC Staff clarifications related to (1) specific NRC Staff questions identified at the meeting concerning generic environmental qualification issues and (2) the scope, environmental qualification criteria, and schedule provisions of 10CFR50.49(b)(3). This letter documents the discussions held at the January 11, 1984 meeting.

Attachment 1 of this letter summarizes each identified TER deficiency as discussed with the staff. The only outstanding action item is a review of the qualification report for the Target Rock solenoid valves used on the reactor head vent system. The qualification report is currently under development by Westinghouse with a scheduled completion in 1984. APCo has reviewed the draft qualification report and determined that these solenoids are qualified for use in the FNP containment. APCo will review the final report when issued to ensure the qualification is maintained. These solenoid valves, however, are not within the scope of IEB 79-01B and NUREG-0588 since, as stated in APCo letters dated June 23, 1982 and May 20, 1983, such equipment is addressed by the TMI Action Plan and is not essential to achieve a safe shutdown condition. The schedule for the full environmental qualification of the solenoid valves, therefore, does not impair the safe shutdown capability of FNP.

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In the January 11, 1984 meeting, the NRC Staff requested that this letter include additional clarifications regarding specific NRC Staff comments, identified during the meeting, on generic environmental qualification issues. APCo's responses to these specific comments are included as Attachment 2.

Documentation of the discussion related to the scope, environmental qualification criteria, and schedule provisions of 10CFR50.49(b)(3), applicable to the FNP, was provided in Attachment 3 to the APCo letter dated February 22, 1984 addressing R.G. 1.97 equipment within the scope of 10CFR50.49(b)(3).

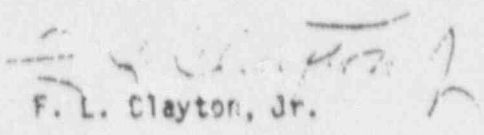
As stated in letters dated March 14, 1983 and May 20, 1983, it is the judgement of Alabama Power Company that all equipment required to achieve a safe shutdown condition at FNP is environmentally qualified and Justifications for Continued Operation (JCO) are not necessary.

As discussed in the January 11, 1984 meeting, it is requested that supplemental SERs be issued to indicate that the APCo Environmental Qualification Program meets the requirements of 10CFR50.49(b)(1) and (b)(2) and that all deficiencies noted in the SERs dated February 4, 1983 are resolved.

It is noted that information provided in Supplements 1, 2, 3 and 4 to Attachment 1 include data which is proprietary to Westinghouse. Enclosed as Attachment 3 to this letter is a signed affidavit from Westinghouse requesting that this information be withheld from public disclosure. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.790 of the Commission's regulations. Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10CFR Section 2.790 of the Commission's regulations. Correspondence with respect to the proprietary aspects of this application for withholding or the supporting Westinghouse affidavit should be addressed to R. A. Wieseemann, Manager, Regulatory and Legislative Affairs, Westinghouse Electric Corporation, P.O. Box 355, Pittsburgh, Pennsylvania 15230.

If there are any questions, please advise.

Very truly yours,


F. L. Clayton, Jr.

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U. S. Nuclear Regulatory Commission

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cc: Mr. R. A. Thomas
Mr. J. P. O'Reilly
Mr. E. A. Reeves
Mr. W. H. Bradford
Mr. T. Conlon

Mr. O. D. Kingsley, Jr.
Mr. W. G. Hairston, III
Mr. J. W. McGowan
Mr. C. D. Nesbitt
Mr. R. G. Berryhill
Mr. D. E. Mansfield
Mr. J. A. Ripple
Mr. W. G. Ware
Mr. L. B. Long
Mr. B. J. George
Mr. J. R. Crane
Mr. K. C. Gandhi
Reference Listing

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ATTACHMENT 1

SUMMARY OF EACH DEFICIENCY
IDENTIFIED IN THE TERS
FOR UNITS 1 AND 2

0057627

UNIT 1

I. OPERATORS FOR MOTOR OPERATED VALVES (MOV's)

0057623
ONE

TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
1,3	Containment Isolation (MOV3350A,B,C) (MOV3232A,B,C) (MOV3536) (MOV3530) (MOV3528A,B,C,D) (MOV3535A,B) (MOV3872A,B) (MOV8112) (MOV3660) (MOV33188) (MOV3046) (MOV3441 A,B,C,D) (MOV3131)	II.a.	Adequate Similarity Between Equip- ment and Test Specimen Established Aging Degradation Evaluated Adequately Qualified Life or Replacement Schedule Established (If Required)	Limitorque letter dated October 13, 1980 documented similarity. Limitorque Test Report "Nuclear Qualification" Section 3.1 establishes qualification in excess of 40 years.
2	Containment Isolation (MOV8808A,B,C)	III.a	Exempt	None Required.

II. SOLENOID VALVES

UNIT ONE	TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	4,8,9	Actuate Air Operated Valve for Isolation	II.a	Qualified Life or Replacement Schedule Established (If Required) Criteria Regarding Submergence Satisfied	A qualified life of 8 years has been established for ASCO solenoid valves inside containment. These solenoids are located above the flood level or will perform their intended function prior to becoming submerged and will not mislead the operators
	5,10,13, 14,15	Actuate Air Operated V. for Isolation	I.b	Pending Modification	These valves were replaced with qualified ASCO NP or 206 series solenoid valves that have a qualified life of 8 years inside containment and 18 years outside containment.
	7	Reactor Head Vent System	I.b	Pending Modification	APCo will review the Target Rock solenoid valve test report when issued by Westinghouse for applicability to FNP. The test report is currently scheduled to be issued during the second quarter of 1984.
	6,11,12	Actuate Air Operated Valve for Isolation	II.c	Qualified Life or Replacement Schedule Established (If Required)	A qualified life of 18 years has been established for ASCO solenoid valves outside containment, and a qualified life of 8 years has been established for ASCO solenoid valves inside containment.

0057629

0057030

III. NUTRITIONAL RECOMMENDATIONS

UNIT ONE	ITEM NO.	FUNCTION/DESCRIPTION	NUTRITIONAL CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	16	Hydrogen Concentration Reduction (KDO1A,B)	1-a	None	None Required

IV. ELECTRIC MOTORS

UNIT ONE	TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
0057631	17	Hydrogen Concentration Reduction and Containment Cooling	II.a	Adequate Similarity Between Equip- ment and Test Specimen Established	American Air Filter letter dated March 22, 1983 documen- ted Joy Manufacturing Company's Report X-604 dated April 6, 1977 is applicable to the fan motors for the FNP Unit 1 containment coolers. The motor data for motors used in the Post-LOCA Hydrogen Control system indicates that these motors are generically the same as the motors tested in Joy's Test Report X-604, and hence are fully qualified for use inside the FNP containment.

V. TEMPERATURE MEASURING DEVICES

0057632

UNIT ONE	TR ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	18, 19	Reactor Trip	1.b	Aging Degradation Concern Qualified Life or Replacement Schedule Established (If Required) Criteria Regarding Spray Criteria Regarding Functional Testing Criteria Regarding Instrument Accuracy	See Supplement 1

VI RADIATION DETECTORS

0057633

UNIT ONE	TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	20	Radiation Monitor	1.b	Adequate Similarity Between Equipment and Test Specimens Established	Victoreen Qualification Test Report No. 950.301 dated June 19, 1981, fully supports the qualification of the detector (Model 877-1) and the cable (Model 878-1) installed at FNP. Duplication of the sealing procedure followed in the Victoreen Test Report No. 950.301 was implemented on the detectors installed at FNP and, therefore, maintained qualification.

VII. PRESSURE AND LEVEL TRANSMITTERS

UNIT ONE	TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	21 26,45	Post Accident Monitor Level Indication	I.D	Aging Degradation Concern Qualified Life or Replacement Schedule Established (If Required) Criteria Regarding Submergence Criteria Regarding Instrument Accuracy	See Supplement 2
	22	Reactor Trip	I.D	Aging Degradation Concern Qualified Life or Replacement Schedule Established (If Required) Criteria Regarding Radiation Criteria Regarding Test Sequence	See Supplement 3
	23 25	Main Feed Pump Trip Post Accident Level Monitor	II.D	Adequate Similarity Between Equipment and Test Specimens Established Aging Degradation Concern Criteria Regarding Test Failure or Severe Anomalies (If Any)	See Supplement 4

0057034

VII. PRESSURE AND LEVEL TRANSMITTERS (Cont'd)

UNIT ONE	TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	24	Level Indication	1.b	Documented Evidence of Qualification Adequate	These level transmitters were installed as a result of a commitment to monitor the narrow range containment sump to satisfy NUREG 0588. The actual test was completed during the fourth quarter of 1982 and the test results were issued from Wyle Laboratories on December 8, 1982, as NEQ Test Report 45700-1. Based on the results of this test report, the Gems-Delavel level monitor in the containment leakage collection sump is environmentally qualified for use in the FNP containment.
	27	Feedwater Control	1.b	Aging Degradation Concern Qualified Life or Replacement Schedule Established (If Required) Criteria Regarding Radiation Criteria Regarding Instrument Accuracy Test Duration Margin (3 hour and Function Time)	See Supplement 3

VIII. LIMIT SWITCHES

UNIT ONE	TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	28, 32	Valve Position Indication	11.c	Qualified Life or Replacement Schedule Established (If Required)	A qualified life of 8 years has been established for NAMCO EA-180 limit switches inside containment.
	29, 30 31, 46	Valve Position Indication	11.b	Pending Modification	These limit switches have been replaced with qualified NAMCO EA-180 limit switches. The NAMCO EA 180 limit switches have a qualified life of 8 years inside containment and 18 years outside containment.
	33	Valve Position Indication	11.a	Qualified Life or Replacement Schedule Established (If Required) Criteria Regarding Submergence Satisfied	A qualified life of 8 years has been established for NAMCO EA-180 limit switches inside containment. These limit switches will not be subject to submergence or will perform their intended function prior to becoming submerged and any circuit shorts that could occur will not mislead the operator. (Reference APCo submittal response to TER dated March 14, 1983.)

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UNIT
ONE

IX. ELECTRICAL PENETRATIONS

UNIT ONE	ITEM NO.	FUNCTION/DESCRIPTION	NIC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	34	Containment Boundary Electrical Penetration	1.4	None	None Required.
	35	Containment Isolation			

0057637

UNIT
ONE

N. TERMINAL BLOCKS

ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
36, 37, 38	Conductor Termination	1-A	None	None Required.

XI. CABLE

0057638

UNIT ONE	TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	39, 40, 41	Electrical Instrumentation	IV	Documentation not Available	The FNP cables have been fully qualified by Boston Insulated Wire and Cable Company's Test Report 73E062, dated September 7, 1983, and their clarification letter dated August 27, 1981. The test report was submitted to the NRC in the May 20, 1983 response to IOCF050.49. The test conditions envelop the FNP service requirements.
	42, 43, 44	Electrical Power and Control	II.a	Adequate Similarity Between Equipment and Test Specimen Established	<p>In a letter dated June 22, 1981, the Okonite Company has certified that all power and control cables supplied for Joseph M. Farley Nuclear Plant Unit 2 are qualified by Test Report M-1, dated July 3, 1978.</p> <p>As documented by Bechtel letter AP-6185 dated September 2, 1981, the cables for Joseph M. Farley Nuclear Plant Unit 1 were procured to the same specifications as the Unit 2 cables and are identical in construction to the Unit 2 cables. Therefore, all qualified power and control cables are fully qualified by Test Report M-1, dated July 3, 1978.</p>

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UNIT 2

1. OPERATORS FOR MOTOR OPERATED VALVES (MOV's)

0057640 UNIT TWO

ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
1,3	Containment Isolation (MOV3350A,B,C) (MOV3232A,B,C) (MOV3536) (MOV3530) (MOV33188) (MOV8112) (MOV3872A,B) (MOV3660)	II.a.	Adequate Similarity Between Equipment and Test Specimen Established Aging Degradation Evaluated Adequately Qualified Life or Replacement Schedule Established (If Required)	Similarity is documented by Limitorque in letter dated October 13, 1980. Limitorque Test Report "Nuclear Qualifications" Section 3.1 established qualification in excess of 20 years.
2	Containment Isolation (MOV8808A,B,C)	III.a	Exempt	None Required.

II. SOLENOID VALVES

UNIT TWO	ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	4	Actuate Air Operated Valve for Isolation	II.a	Qualified Life or Replacement Schedule Established (If Required) Criteria Regarding Submergence Satisfied	A qualified life of 8 years has been established for ASCO solenoid valves inside containment. These solenoids are located above the flood level inside containment or will perform their intended function prior to becoming submerged and will not mislead the operator.
	6	Reactor Head Vent System	I.7	Pending Modification	APCo will review the Target Rock solenoid valve test report when issued by Westinghouse for applicability to FNP. This test report is currently scheduled to be issued by Westinghouse during the second quarter of 1984.
	7,9	Actuate Air Operated Valve for Isolation	I.b.	Pending Modification	These valves were replaced with qualified ASCO NP series solenoid valves that have a qualified life of 8 years inside containment and a qualified life of 18 years outside containment.
	5,8,10	Actuate Air Operated Valve for Isolation	II.c	Qualified Life or Replacement Schedule Established (If Required)	ASCO NP series solenoid valves have a qualified life of 18 years outside containment.

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III. HYDROGEN RECOMBINERS

UNIT Type	ITEM NO.	FUNCTION/DESCRIPTION	MEC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	11	Hydrogen Concentration Reduction (K001A,B)	1.0	None	None Required.

IV. ELECTRIC MOTORS

0057643

UNIT TWO	TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	12	Hydrogen Concentration Reduction and Containment Cooling	11.a	Adequate Similarity Between Equip- ment and Test Specimen Established	American Air Filter letter dated March 22, 1983 documented Joy Manufacturing Company's Report X-604 dated March 6, 1977 is applicable to the fan motors for the FNP Unit 1 containment coolers. The FNP Unit 2 containment coolers are identical to those installed in Unit 1 and were supplied by Joy Manufacturing. Therefore, the units in Unit 2 are fully qualified. The motor data for motors used in the Post-LOCA Hydrogen Control system indicates that these motors are generically the same as the motors tested in Joy's Test Report X-604, and hence are fully qualified for use inside the FNP containment.

V. TEMPERATURE MEASURING DEVICES

UNIT
TWO

0057044

ITER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
13, 14	Reactor Trip	1.b	Aging Degradation Concern Qualified life or Replacement Schedule Established (If Required) Criteria Regarding Spray Criteria Regarding Functional Testing Criteria Regarding Instrument Accuracy	See Supplement 1

VI RADIATION DETECTORS

0057645

UNIT TWO	TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	15	Radiation Monitor	1.b	Adequate Similarity Between Equipment and Test Specimens Established	Victoreen Qualification Test Report No. 950.301 dated June 19, 1981, fully supports the qualification of the detector (Model 877.1) and the cable (Model 878.1) installed at FNP. Duplication of the sealing procedure followed in the Victoreen Test Report No. 950.301 was implemented on the detectors installed at FNP and, therefore, maintaining qualification.

VII. PRESSURE AND LEVEL TRANSMITTERS

UNIT Two	TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	16 17 21 22	Post-Accident Monitors Reactor Trip Pressurizer Level, Feedwater Control, Level Indication Feedwater Control	IV	Documentation Not Made Available	Westinghouse proprietary document WCAP-9685 is the qualification document for Barton Transmitter (Lot 2). See Supplement 2 for additional information.
	18 20	Main Feed Pump Trip Post-Accident Level Monitor	II.b	Adequate Similarity Between Equipment and Test Specimens Aging Degradation Evaluated Criteria Regarding Test Failure or Severe Anomalies (If Any)	See Supplement 4
	19	Level Indication	I.b	Pending Modification - Testing Not Completed	Wyle Laboratories Test Report 45700-1 dated December 8, 1982 documents qualification of the GEMS-Delaval level monitors.

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VIII. LIMIT SWITCHES

UNIT TWO	TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	23,25,27	Valve Position Indication	11.c	Qualified Life or Replacement Schedule Established (If Required)	NAMCO EA-180 limit switches have a qualified life of 8 years inside containment and 18 years outside containment.
	24	Valve Position Indication	11.a	Aging Degradation Evaluated Adequately Criteria Regarding Submergence Satisfied	NAMCO EA-180 limit switches located outside containment have a qualified life of 18 years. These limit switches are located above the flood level or have watertight fittings installed on them that have been qualified by test in accordance with submergence requirements of NUREG-0588, Section 2.2(5), Category II. (Reference APCo submitted response to TER dated March 14, 1983)
	26	Valve Position Indication	11.a	Qualified Life or Replacement Schedule Established (If Required) Criteria Regarding Submergence Satisfied	NAMCO EA-180 limit switches located inside containment have a qualified life of 8 years. These limit switches are located above the flood level or will perform their intended function prior to becoming submerged and any circuit shorts that could occur will not mislead the operator. (Reference APCo submittal response to TER dated March 14, 1983)

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UNIT
Two

IX. ELECTRICAL PENETRATIONS

ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
28 29	Containment Isolation Containment Boundary Electrical Penetration	1-a	None	None Required.

K. TERMINAL BLOCKS

UNIT	TER	FUNCTION/DESCRIPTION	MHC	DEFECTS	PROPOSED SOLUTION
TWO	ITEM NO.		CATEGORY		
30, 31, 32, 33		Conductor Termination	1-a	None	None Required.

XI. CABLE

UNIT TWO	TER ITEM NO.	FUNCTION/DESCRIPTION	NRC CATEGORY	DEFICIENCIES	PROPOSED SOLUTION
	34,35,36,37	Electrical Instrumentation	IV	Documentation not available	Boston Insulated Wire and Cable Company's Test Report 73E062, submitted to the NRC in the May 20, 1983 response, fully qualifies the referenced cable.
	38,39,40,41	Electrical Power and Control	II.a	Adequate Similarity Between Equipment and Test Specimen Established	Okonite Cable Company letter dated June 22, 1981 certified all cable supplied to FNP is qualified by their test report W-1, dated July 3, 1978.

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Supplement 1
Proposed Solution for the Rosemount RTD's
Unit 1 TER Items 18 and 19
Unit 2 TER Items 13 and 14

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0057652

Supplement 2

Proposed Solution for the Barton Lot 1 and 2 Transmitters

Unit 1 TER Item Nos. 21, 26 and 45 (Lot 1)

Unit 2 TER Item Nos. 16, 17, 21 and 22 (Lot 2)

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Supplement 2

0057653

Proposed Solution for the Barton Lot 1 and 2 Transmitters

Unit 1 TER Item Nos. 21, 26 and 45 (Lot 1)

Unit 2 TER Item Nos. 16, 17 21 and 22 (Lot 2)

Page 2

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Supplement 3
Proposed Solution for the Foxboro Models E11 (MCA)
and E13DM Transmitters
Unit 1 TER Item No. 22 and 27

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Supplement 3
Proposed Solution for the Foxboro Models E11 (MCA)
and E13DM Transmitters
Unit 1 TER Item No. 22, 27
Page 2

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Supplement 4
Proposed Solution for the Gems DeLaval Transmitters
(Models LS36497 and XM36495)
Unit 1 TER Item Nos. 23 and 25
Unit 2 TER Item Nos. 18 and 20

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Resolutions to Specific NRC Staff Comments
Identified at the January 11, 1984 Meeting

1. NRC Comment

Provide criteria and methodology utilized to develop the Equipment Master List for Farley Nuclear Plant Units 1 and 2.

APCo Response

The criteria and methodology utilized to develop the Equipment Master List for Farley Nuclear Plant Units 1 and 2 are as follows:

- 1) Electrical systems and components in a harsh environment required to perform a safety-related function are included in the Master List.
- 2) The control circuitry of components identified in Item 1) above was reviewed for connections (interlocks) to other safety-related and nonsafety-related components. If spurious or inadvertent operation due to environmentally induced failures of the connected components in the harsh environment could adversely affect the completion of a safety function, the connected (interlocks) safety-related or nonsafety-related components were included in the Equipment Master List.
- 3) The instrumentation circuitry of components identified in Item 1) above was reviewed for connection to other safety-related and nonsafety-related components. If spurious or inadvertent operation due to environmentally induced failures of the connected components in the harsh environment could cause erroneous indication of the status of safety-related components, the connected safety-related or nonsafety-related components were included in the Equipment Master List.
- 4) The power circuitry of components identified in Item 1) above, inside the harsh environment was reviewed. If environmentally induced failures could result in a loss of power to components required to complete a safety-related function, the safety-related or nonsafety-related power circuitry components were included in the Equipment Master List. There are no connected safety/related/nonsafety-related power circuits in the harsh environment.

The Equipment Master List developed from this review criteria and methodology identifies safety-related equipment that is relied upon to remain functional during and following design basis events and nonsafety-related equipment whose environmentally caused failure could unacceptably impair the intended function of safety-related equipment. In the opinion of Alabama Power Company, the equipment identified in the Equipment Master List complies with paragraphs (b)(1) and (b)(2) of 10CFR50.49.

2. NRC Comment

Provide a description of the Environmental Qualification Administrative Program (EQAP) implemented at Farley Nuclear Plant.

APCo Response

APCo has developed an EQAP to ensure that currently qualified equipment within the scope of 10CFR50.49 will be maintained qualified throughout the life of the plant. It is the position of APCo that this program complies with 10CFR50.49, DOR Guidelines and NUREG-0588 as described herein.

Design Control

The EQAP requires that each design change will identify equipment that must be environmentally qualified and, for equipment models not previously installed at FNP, will reference the test report applicable to the equipment. The designer is responsible to ensure that the specified configuration is qualified and satisfies the Farley-specific harsh environment. A list of vendor test reports (Acceptable Test Report List) previously reviewed and found acceptable is maintained as a controlled document by Farley Document Control.

Procurement Control

The EQAP requires that Material Requisitions identify equipment requiring qualification and the test report associated with the specified equipment as indicated by the Equipment Master List and Acceptable Test Report List. The program requires that engineered requisitions be prepared by the designers for equipment specified in a design change but not included on the Acceptable Test Report List. The Equipment Master List, a controlled document maintained by Farley Document Control, identifies, by plant I.D. numbers, all equipment to be qualified. The EQAP provides that subcomponents not assigned a plant I.D. number satisfy the applicable environmental requirements of the equipment having a plant I.D. number of which the subcomponent is a constituent part. The Acceptable Test Report List identifies all test reports that have been reviewed and found acceptable. The vendor is required to submit a test report for equipment not previously installed at FNP or, for equipment previously installed at FNP, a certificate of conformance to a report identified on the Material Requisition. All new test reports not identified on the Acceptable Test

Report List as required to be reviewed and their acceptability documented before the issuance of a purchase order.

In accordance with the EQAP, components used to maintain qualified equipment must be qualified to the applicable requirements of the equipment being maintained. Identical components used to maintain the qualification of equipment are to be qualified by existing test reports which have been reviewed to meet the requirements of the DOR guidelines or NUREG-0588. If identical components cannot be obtained, the existing equipment is required to be replaced with new components procured to meet provisions of test reports that have been reviewed and accepted by APCo to the requirements of 10CFR50.49. A component used for the maintenance of environmental qualification is not to be considered identical if its installation requires a design change or its environmental qualification test report has not been reviewed and accepted by APCo.

Storeroom Control

The EQAP assures that the storeroom provides qualified equipment, which is identified by plant I.D. number on the Equipment Master List, for installation into the plant by completing a Material Issuance Form. Inventory level is maintained by the use of the FNP Inventory Record System. Material is stored and handled in accordance with appropriate vendor's instructions and storeroom practices. Proper segregation of environmentally qualified equipment from equipment that is not qualified is employed using storage room bins and locator numbers.

Preventive Maintenance

The EQAP identifies components requiring maintenance and their maintenance frequency. The EQAP provides scheduled maintenance of limited and indeterminate life components/subcomponents and materials and will schedule the normal maintenance of 40-year life equipment. Limited life equipment has a qualified life of less than 40 years. Indeterminate life equipment has not been subjected to thermal age testing and does not include material and subcomponents that are known to be susceptible to significant age degradation. Maintenance activities include selection of the component for which surveillance is performed. Component examination is required to be performed by maintenance personnel in accordance with the Environmental Qualification

Surveillance program during maintenance activities. The program requires that the results of the component examination be assessed for aging in accordance with the Environmental Qualification Surveillance program described below. Failure to replace components on schedule requires justification for interim operation.

Environmental Qualification Surveillance

The EQAP requires the assessment of the effects of in-service aging. This is a program of visual examination and document evaluation. The in-service surveillance procedures are keyed to the degradation mechanisms that have been identified and are capable of detection and interpretation by the FNP Staff. The methods of interpretation are not based on a statistical analysis of equipment failures or reliance on one indication, but rather a consideration and review of the total evidence of equipment operability based on in-house records, licensing documents and vendor information. There are three types of equipment addressed by the program: equipment with an indeterminate life, equipment with a limited life, and equipment with a 40-year life. Each of these categories is required to have an incremental increase in surveillance requirements to compensate for the susceptibility to, or indeterminate aspects of, aging degradation. The functional capability of 40-year life equipment, as with all equipment, is required to be subject to the normal cognitive responsibilities of plant personnel; no additional surveillance requirements will be specified by this program. The limited life equipment surveillance includes a documented examination of a sample of the subcomponents (specimen) replaced at the end of their life. The examination of the specimen will be documented on the Specimen Surveillance Checklist during the replacement of the subcomponents. The indeterminate life equipment surveillance includes an examination of a specimen as well as completion of a documented evaluation of in-house records providing insights to the condition of the equipment. The evaluation of in-house records are to be documented on the Document Summary Sheet. An evaluation of the Specimen Surveillance Checklist and the Document Summary Sheets will be performed and the necessary action taken (e.g. procedure revisions, modification of qualified life, no action necessary, etc.).

Document Control

The EQAP ensures that documentation is forwarded to Document Control for permanent retention. The following is kept in the environmental qualification central file or appropriately referenced to other file locations: test reports, evaluation documents, justifications for interim operation, certificates of conformance, maintenance requirements, Specimen Surveillance Checklists, Document Summary Sheets, Work Authorizations, Production Change Notices (PCNs), Engineering Support (ES) Authorizations, Systems Performance Group Problem Reports, Problem Report Response Sheets and Material Issuance Forms. Also, Document Control maintains the Acceptable Test Report List and Equipment Master List as control documents for issuance to the appropriate organizations.

3. NRC Comment

Provide a discussion on the approach used to evaluate the information in IE Information Notices (IEN) regarding environmental qualification problems and the mechanisms used by APCo to take any appropriate action. Specifically address IENs 81-29, 82-52 and 83-72.

APCo Response

Responses to IE Information Notices (IENs) and Circulars (IEC) are not required to be submitted to the NRC. However, it is APCo policy that all notices and circulars are reviewed for applicability to FNP and formally documented in the FNP files for permanent retention. All required corrective action to any notice or circular applicable to FNP is determined prior to the response being written to ensure that all documented responses address each notice or circular.

Specifically, IENs 81-29, 82-52, and 83-72 have been issued regarding adverse environmental qualification testing experience. Described herein is the current status of APCo's review on these IENs.

IEN 81-29

IEN 81-29 identified ten items for which anomalous test results were documented during environmental qualification. FNP has three items installed in various locations throughout the plant. These three items have been reviewed with corresponding corrective actions identified. These actions include a plant design change and the development of additional justification for each item.

IEN 82-52

This information notice was provided to inform the licensees of the status and test results published in IEN 81-29. APCo has reviewed IEN 82-52 and determined that no additional action is required at this time and actions taken as a result of IEN 81-29 were not affected by this additional information.

IEN 83-72

IEN 83-72 provided information of environmental qualification test failures on twelve equipment items. APCo is presently evaluating those items applicable to FNP to determine if any corrective action is required to provide compliance with the notice. The conclusion of this review will be formally documented in the FNP files for permanent retention noting any required actions.

4. NRC Comment

Address the current leakage of States Terminal Blocks and its effects on equipment within the scope of 10CFR50.49.

APCO Response

The environmental qualification test report for States Company Terminal Blocks, Wyle Laboratories Report 44354-1 provides the values of leakage currents. The States Terminal Blocks were LOCA tested with an applied voltage of 137.5 VDC which is the normal operation voltage of the terminal blocks. Instrumentation was attached to the terminal blocks at the conclusion of the LOCA test and leakage current values were recorded. The values of leakage current were recorded from terminal point-to-point and point-to-ground on the States Terminal Block. Also included were conductor-to-conductor and conductor-to-ground leakage current. These values were recorded for multiple combinations with an applied voltage of 137.5 VDC.

The test leakage current values are being used in the development of the revised FNP Emergency Operating Procedures (EOPs) presently being prepared by Westinghouse/APCo.

5. NRC Comment

Confirm that design basis events at FNP, which could result in a potentially harsh environment including flooding outside containment, were addressed in the identification of safety-related electrical equipment at FNP required to be environmentally qualified.

0057663

APCo Response

The flooding and environmental (temperature and pressure parameters) effects resulting from the worst case High Energy Line Break (HELB) outside containment was considered in the IEB 79-01B and NUREG-0588 analyses. The main steam valve room is the only area outside containment which is subject to a HELB and contains components required to mitigate the accident. The action taken to ensure equipment functions as intended is documented in the IEB 79-01B and NUREG-0588 submittals. The effects of flooding from HELB in areas outside containment other than the main steam valve room was analyzed as documented in FSAR Appendix 3K.

6. NRC Comment

Identify the mechanism for verifying the accuracy of vendor's evaluation of the similarity of the test specimen to FNP installed equipment.

APCo Response

APCo has vendor documents located in the FNP Central File which confirm or certify similarity between environmentally tested equipment and the equipment installed in FNP. These vendors include Gems DeLaval, Joy Manufacturing, American Air Filter, Limitorque and Okonite Companies.

As verification of the accuracy of vendor similarity evaluations, APCo is requesting each identified vendor to provide a discussion on the methodology used to reach the conclusions of their similarity evaluation. This discussion on methodology will be included in the FNP Central File. It is the judgement of APCo that the acceptance of the vendor similarity evaluation information will provide reasonable confidence in the accuracy of vendor documents on similarity.

7. NRC Comment

Ensure electrical equipment within the scope of environmental qualification is returned to its original installed configuration after maintenance is performed.

APCo Response

As stated in the Environmental Qualification Administrative Program, "efforts will be made to ensure that corrective maintenance will not compromise the qualification status of the equipment identified on the Equipment Master Lists". Equipment within the scope of environmental qualification is identified on the plant work requests during planning of the work activity. Planning is performed by a plant staff group to ensure that the maintenance activity will not compromise the qualification status of the equipment identified on the Equipment Master List. For such equipment, a statement on the plant work request clearly states that the equipment is environmentally qualified. In addition, the journeymen performing the work are routinely trained to return such equipment to its original installed configuration. Also, drawings are used for maintenance on cables and conduits that provide visual installation details to ensure resealing of the cables to their original configuration. Consequently, equipment is returned to its original configuration unless work is being performed as a result of a design modification.

0057665

ATTACHMENT 3

WESTINGHOUSE AFFIDAVIT REQUESTING
INFORMATION IN SUPPLEMENTS 1, 2, 3 and 4
TO BE WITHHELD
FROM PUBLIC DISCLOSURE

AFFIDAVIT

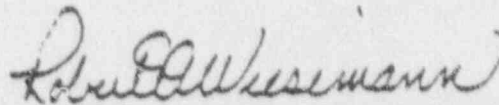
0057666

COMMONWEALTH OF PENNSYLVANIA:

ss

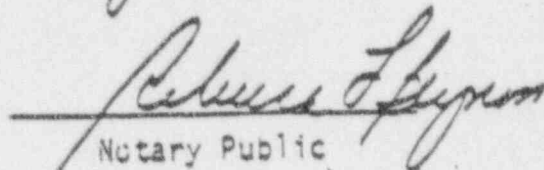
COUNTY OF ALLEGHENY:

Before me, the undersigned authority, personally appeared Robert A. Wiesemann, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Corporation ("Westinghouse") and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:



Robert A. Wiesemann, Manager
Regulatory and Legislative Affairs

Sworn to and subscribed
before me this 18 day
of June 1980.


Notary Public

0057667

- (1) I am Manager, Regulatory and Legislative Affairs, in the Nuclear Technology Division, of Westinghouse Electric Corporation and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing or rule-making proceedings, and am authorized to apply for its withholding on behalf of the Westinghouse Water Reactor Divisions.
- (2) I am making this Affidavit in conformance with the provisions of 10CFR Section 2.790 of the Commission's regulations and in conjunction with the Westinghouse application for withholding accompanying this Affidavit.
- (3) I have personal knowledge of the criteria and procedures utilized by Westinghouse Nuclear Energy Systems in designating information as a trade secret, privileged or as confidential commercial or financial information.
- (4) Pursuant to the provisions of paragraph (b)(4) of Section 2.790 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
 - (i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.

- (ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitutes Westinghouse policy and provides the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

- (a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.
- (b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.

- (c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.
- (d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.
- (e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.
- (f) It contains patentable ideas, for which patent protection may be desirable.
- (g) It is not the property of Westinghouse, but must be treated as proprietary by Westinghouse according to agreements with the owner.

There are sound policy reasons behind the Westinghouse system which include the following:

- (a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.

- (b) It is information which is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to sell products and services involving the use of the information.
- (c) Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.
- (d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.
- (e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition in those countries.
- (f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.

- (iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10CFR Section 2.790, it is to be received in confidence by the Commission.
- (iv) The information sought to be protected is not available in public sources to the best of our knowledge and belief.
- (v) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in the attachment to Westinghouse Letter No. NS-TMA-2257, Anderson to Miller, dated June 16, 1980 concerning the Westinghouse Equipment Qualification Program to address Regulatory Guides 1.89 and 1.100. The letter and attachment are being submitted to complete the information provided in WCAP-8587, Supplement 1, which was requested by the NRC via PBS Standard Question No. 4, "Environmental Qualification of Class 1E Equipment."

This information enables Westinghouse to:

- (a) Develop test inputs and procedures to satisfactorily verify the design of Westinghouse supplied equipment.
- (b) Assist its customers to obtain licenses.

Further, the information has substantial commercial value as follows:

- (a) Westinghouse can sell the use of this information to customers.

- (b) Westinghouse uses the information to verify the design of equipment which is sold to customers.
- (c) Westinghouse can sell testing services based upon the experience gained and the test equipment and methods developed.

Public disclosure of this information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to design, manufacture, verify, and sell electrical equipment for commercial power reactors without commensurate expenses. Also, public disclosure of the information would enable others having the same or similar equipment to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

The development of the equipment described in part by the information is the result of many years of development by Westinghouse and the expenditure of a considerable sum of money.

This could only be duplicated by a competitor if he were to invest similar sums of money and provided he had the appropriate talent available and could somehow obtain the requisite experience.

Further the deponent sayeth not.