AMENDMENT NO. 20 TO FACILITY OPERATING LICENSE NPF-2 - JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 1

AMENDMENT NO. 2 TO FACILITY OPERATING LICENSE NPF-8 - JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 2

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Docket File 50-343 & 50-364 NRC PDR Local PDR NSIC TERA A. Rosenthal, ASLAB ASLBP ACRS (16) B. Scharf - 10

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JUL 8 1981

Docket Hos.: 50-348 and 50-36

er. F. L. Clayton Senior Vice President Alabama Power Company Post Office Box 2641 Birmingham, Alabama 35291

Dear Mr. Clayton:

Enclosures:

Subject: Issuance of Amendments to NPF-2 and NPF-8 - Joseph M. Farley Nuclear Plant, Units 1 and 2

The Commission has issued the enclosed Amendment No. 20 to Facility Operating License No. NPF-2 for the Joseph M. Farley Nuclear Plant, Unit No. 1 and Amendment No. 2 to Facility Operating License No. NPF-8 for the Joseph M. Farley Nuclear Plant, Unit No. 2. The amendment consists of changes to the Tecnnical Specifications in response to your telecopy request, dated May 10, 1981, as confirmed by letter dated May 10, 1981. You requested temporary relief from diesel generator operability and surveillance frequency requirements to allow continued plant operation during repairs to diesel generator 1C.

The amendment approves the relief request and associated Technical Specification changes. Telephone authorization for this amendment was given Nay 11, 1981 and confirmed by letter dated Nay 11, 1981.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

sincerely,

Steven A. Varga, Chief Operating Reactors Branch No. 1 Division of Licensing

 Amendment No. 20 to NPF-2 Amendment No. 2 to NPF-8 Safety Evaluation Federal Register Notice 				REGULATORY DOCKET FILE COPY				
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Mr. F. L. Clayton Alabama Power Company

cc: Mr. W. O. Whitt Executive Vice President Alabama Power Company Post Office Box 2641 Birmingham, Alabama 35291

> Ruble A. Thomas, Vice President Southern Company Services, Inc. Post Office Box 2625 Birmingham, Alabama 35202

Seorge F. Trowbridge, Esquire Shaw, Pittman, Potts and Trowbridge 1300 M Street, N.W. Washington, D. C. 20036

Chairman Houston County Commission Dothan, Alabama 36301

Mr. Robert A. Buettner, Esquire Balch, Bingham, Baker, Hawthorne, Williams and Ward Post Office Box 306 Birmingham, Alabama 35201

George S. Houston Memorial Library 212 W. Burdeshaw Street Dothan, Alabama 36303

Resident Inspector U.S. Nuclear Regulatory Commission Post Office Box 24-Route 2 Columbia, Alabama 36319

State Department of Public Health ATTN: State Health Officer State Office Building Montgomery, Alabama 36104

Director, Criteria and Standards Division Office of Radiation Programs (ANR-460) U. S. Environmental Protection Agency Washington, D. C. 20460

U. S. Environmental Protection Agency Region IV Office ATTN: EIS COORDINATOR 345 Courtland Street, N.E. Atlanta, Georgia 30308 Mr. F. L. Clubble, Gr., Senior Vice President Alabama Power Company Post Office Clubber Birmingham, Alabama 35291

cc: Mr. W. C. Whitt Executive Vice President Alabama Power Company Post Office Box 2641 Birmingham, Alabama 35291

> Mr. Ruble A. Thomas Vice President Southern Company Services, Inc. Post Office Box 2625 Birmingnam, Alabama 35202

Mr. George F. Trowbridge Shaw, Pittman, Potts and Trowbridge 1800 M Street, N. W. Washington, D. C. 20036

Mr. W. Bradford NRC Resident Inspector P. O. Box 24, Route 2 Columbia, Alabama 36319 ALABAMA PUNER COMPANY

DUCKET HU. 50-364

JUSEPH M. FARLEY NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO FACILITY LICENSE

Amendment No. 2 License No. NPF-8

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The request for amendment by Alabama Power Company (the licensee), dated May 10, 1981, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I:
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations:
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility License No. NPF-8 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A as revised through Amendment No. 2, and the Environmental Protection Plan, Appendix B, are hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment was effective May 11, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

B. J. Youngblood, Chief Licensing Branch No. 1 Division of Licensing

Attachment: Changes to the Technical Specifications

Date of Issuance: JUL 8 1981

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ATTACHMENT TO LICENSE AMENDMENT NO. 2

FACILITY LICENSE NO. NPF-8

DOCKET NO. 50-364

Revise Appendix A as follows:

Remove Uld Pages	Insert Revised Pages				
3/4 8-1	3/4 8-1				
3/4 8-2	3/4 8-2				
3/4 8-3	3/4 8-3				

3/4.3 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPEPATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be CPERABLE:

- a. Two physically independent circuits between the offsite transmission network to the switchyard and two physically independent circuits from the switchyard to the onsite Class IE distribution system, and
- b. Two separate and independent diesel generator sets (Set A: DG 1-2A and DG-1C, Set B: DG-2B and DG-2C) each with:
 - 1. Separate day tanks containing a minimum volume of 900 gallons of fuel for the 4075 kw diesel generators and 700 gallons of fuel for the 2850 kw diesel generator.
 - 2. A separate fuel transfer pump for each diesel.
- c. A fuel storage system consisting of four, independent storage tanks each containing a minimum of 25,000 gallons of fuel.*

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTICN:

- a. With an offsite circuit inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a and 4.8.1.1.2.a.4 within one hour and at least once per 8 hours thereafter; restore at least two offsite circuits to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one diesel generator set inoperable, demonstrate the operability of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a and 4.8.1.1.2.a.4 within one hour and at least once per 8 hours thereafter. Restore both diesel generator sets to OPERABLE status within 72 hours or comply with the following:
 - 1) Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

FARLEY-UNIT 2

^{*}One inoperable fuel storage tank is equivalent to one inoperable diesel cenerator set.

^{**}One time only exception for repair of Diesel 1C - the 72 hour action statement for operability of Diesel 1C may be extended to a period of 13 days provided Unit 2 is in modes 2, 3, 4, 5 or 6; and Diesel 1C is returned to OPERABLE status as soon as maintenance is completed. The provisions of specification 3.0.4 are not applicable for this one time change.

^{***}One time only exception during repair of Diesel 1C - the 8 hour interval test is extended to 72 hours.

STORAGE AT AR SYSTEMS

ACTION (Continued)

- One diesel generator set may be made inoperable for up to 14 days
 to perform scheduled maintenance and testing on diesel generators
 1C (or 2C) provided all the following are satisfied:
 - a) Unit 1 is in MODE 5 or 6 and appropriate technical specifications covering the diesel generator sets are satisfied.
 - b) The remaining Unit 2 diesel generators 1-2A, 2B, 1C (or 2C) are OPERABLE.
 - c) The service water system is recirculated to the pond and surveillance requirement 4.7.6.2.1 is verified prior to removing 1C (or 2C) from service and once per 8 hours thereafter.
 - d) Diesel Generator 1C (or 2C) is returned to GPERAE'E status as soon as maintenance is completed.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

- c. With one offsite circuit and one diesel generator set of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8, J.1.1.a and 4.8.1.1.2.a.4 within one hour and at least once per 8 hours thereafter; restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore at least two offsite circuits and both diesel generator sets to OPERABLE status within 72*hours from the time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. With two of the above required offsite A.C. circuits inoperable, demonstrate the OPERABILITY of both diesel generator sets by performing Surveillance Requirement 4.8.1.1.2.a.4 within one hour and at least once per 8 hours thereafter, unless the diesel generators are already operating; restore at least one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. With only one offsite source restored, restore both offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- *One time only exception for repair of Diesel 1C the 72 hour action statement for operability of Diesel 1C may be extended to a period of 13 days provided Unit 2 is in modes 2, 3, 4, 5 or 6; and Diesel 1C is returned to OPERABLE status as soon as maintenance is completed. The provisions of specification 3.0.4 are not applicable for this one time change.
- **One time only exception during repair of Diesel 1C the 8 hour interval test is extended to 72 hours.

FARLEY-UNIT 2

ELECTRICAL FORER SYSTEMS

ACTION: (Continued)

e. With both of the above required diesel generator sets inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by parforming Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours*thereafter; restore at least one of the inoperable diesel generator sets to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore both diesel generator sets to OPERABLE status within 72* hours from time of initial loss or be in least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:

- a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments, indicated power availability, and
- b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring unit power supply from the normal circuit to the alternate circuit.
- 4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:
 - a. In accordance with the frequency specified in Table 4.8-1 on a STAGGERED TEST BASIS by:
 - 1. Verifying the fuel level in the day tank,
 - 2. Verifying the fuel level in the fuel storage tanks,
 - 3. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the day tank,
 - 4. Verifying the diesel starts from ambient condition and accelerates to at least 900 rpm, for the 2850 kw generator and 514 rpm for the 4075 kw generators, in less than or equal to 10 seconds. The generator voltage and frequency shall be \geq 3952 volts and \geq 57 Hz within 10 seconds after the start signal.
 - 5. Verifying the generator is synchronized, loaded to greater than or equal to its continuous rating, and operates for greater than or equal 60 minutes,

**One time only exception during repair of Diesel 1C - the 8 hour interval test is extended to 72 hours.

FARLEY-UNIT 2

^{*}One time only exception for repair of Diesel 1C - 72 hour action statement for operability of Diesel 1C may be extended to a period of 13 days provided Unit 2 is in modes 2, 3, 4, 5 or 6; and Diesel 1C is returned to OPERABLE status as soon as maintenance is completed. The provisions of specification 3.0.4 are not applicable for this one time change.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
- b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank obtained in accordance with ASTM-D270-65 is within the acceptable limits specified in Table 1 of ASTM-D975-74 when checked for viscosity, water and sediment.
- c. At least once per 18 months by:
 - 1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service,
 - 2. Verifying the capability to reject a load of greater than or equal to the largest single load associated with that diesel generator, while maintaining voltage between 3120 and 4910 volts and speed less than or equal to 75% of the difference between nominal speed and the overspeed trip setpoint and verifying recovery to 4160 ± 420 volts and 60 ± 1.2 Hz within 2 seconds.
 - 3. Verifying the generator capability to reject a load equal to its continuous rating without tripping. The generator voltage shall not exceed 120% during and following the load rejection.
 - 4. Simulating a loss of offsite power by itself, and:
 - a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.
 - b) Verifying the diesel starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds,* energizes the auto-connected shutdown loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization of all loads, the steady state voltage and frequency of the emergency busses shall be maintained at 4160 + 420 volts and 60 + 1.2 Hz during this test.
 - 5. Verifying that on an Safety Injection test signal (without loss of offsite power) the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be \geq 3952 volts and \geq 57 Hz within 10 seconds after the auto-start signal; the steady state generator voltage and frequency shall be maintained between 4160 ± 420 volts and 60 ± 1.2 Hz during this test.

*Energization of the Unit 2 emergency bus for diesel 2C is achieved within 24 seconds.

Amendment No.1

ALAUADA POWER COMPANY

DUCKET NO. 50-348

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT NO. 1

ANENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 20 License No. NPF-2

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The request for amendment by Alabama Power Company (the licensee) dated May 10, 1981, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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- Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility uperating License No. NPF-2 is hereby amended to read as follows:
 - (2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 20, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

- 2 -

3. This license amendment was effective May 11, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

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Steven A. Varga, Chief Operating Reactors Branch #1 Division of Licensing

Attachment: Changes to the Technical Specifications

Date of Issuance: JUL 8 1981

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ATTACHMENT TO LICENSE AMENDMENT AMENDMENT NO. 20 TO FACILITY OPERATING LICENSE NO. NPF-2

DUCKET NO. 50-348

Revise Appendix A as follows:

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3/4 8-1	3/4 8-1			
3/4 8-2	3/4 8-2			

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3/4.8.1 A.C. SOURCES

EPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits from the offsite transmission network to the switchyard and two physically indipendent circuits from the switchyard to the onsite Class 1E distribution system, and
- b. Two separate and independent diesel generator sets (one 4075 Kw and one 2250 Kw) each with:
 - Separate day tanks containing a minimum volume of 900 gallons of fuel for the 4075 kw diesel generators and 700 gallons of fuel for the 2850 kw diesel generators.
 - 2. A separate fuel transfer pump for each diesel.
- c. A fuel storage system consisting of four independent storage tanks each containing a minimum of 25,000 gallons of fuel.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With either an offsite circuit or a diesel generator set of the above required A.C. electrical power sources inoperable, demonstrate the CPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a and 4.8.1.1.2.a.4 within one hour and at least once per 8 hours thereafter; restore at least two offsite circuits and both diesel generator sets to OPERABLE status within 72* hours or be in at least HOT STAND3Y within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one offsite circuit and one diesel generator set of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a and 4.8.1.1.2.a.4 within one hour and at least once per 8 hours thereafter; restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore at least two offsite circuits and both diesel generator sets to OPERABLE status within 72* hours from the time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- *One time only exception for repair of Diesel 1C the 72 hour action statement for operability of Diesel 1C may be extended to a period of 13 days provided Unit 2 is in modes 2, 3, 4, 5 or 6; and Diesel 1C is returned to OPERABLE status as soon as maintenance is completed. The provisions of specification 3.0.4 are not applicable for this one time change.
- **One time only exception during repair of Diesel 1C the 8 hour interval test is extended to 72 hours.

FARLEY-UNIT 1

LECTRICAL FREER SYSTEMS

ACTION (Continued)

- c. With two of the above required offsite A.C. circuits inoperable, demonstrate the OPERABILITY of both diesel generator sets by performing Surveillance Requirement 4.8.1.1.2.a.4 within one hour and at least once per 8 hours thereafter, unless the diesel generators are already operating; restore at least one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. With only one offsite source restored, restore at least two offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. With both of the above required diesel generator sets inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; restore at least one of the inoperable diesel generator sets to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore both diesel generator sets to OPERABLE status within 72* hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:

- a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments, indicated power availability, and
- b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring unit power supply from the normal circuit to the alternate circuit.

4.8.1.1.2 Each diesel generator set shall be demonstrated OPERABLE:

- a. At least once per 31 days, on a STAGGERED TEST BASIS, by:
 - 1. Verifying the fuel level in the day tank,
 - 2. Verifying the fuel level in the fuel storage tanks,

*One time only exception for repair of Diesel 1C - the 72 hour action statement for operability of Diesel 1C may be extended to a period of 13 days provided Unit 2 is in modes 2, 3, 4, 5 or 6; and Diesel 1C is returned to OPERABLE status as soon as maintenance is completed. The provisions of specification 3.0.4 arenot applicable for this one time change.

**One time only exception during repair of Diesel 1C - the 8 hour interval test is extended to 72 hours.

FARLEY-UNIT 1

JUL 8 1331

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO ADENDMENT NO. 20 TO FACILITY OPERATING LICENSE NO. NPF-2

AND TU ANENDMENT NU. 2 TU FAULLITY UPERATING LIVENSE NU. NPF-8

ALADAHA PUNER CUMPANY

JUSEPH II. FARLEY NULLEAR PLANT, UNITS NU. 1 AND 2

DUCKET NU. 50-348 AND 50-304

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Unley 8, 1951, at 5:17 p.m., while performing surveillance tests on dissel generator 10 it was determined that the packet cooling water had then introduced into the number 10 cylinder. At this time, dissel generator 10 was declared inoperable and the 72 hour ACTION statement was invoked. After exceeding the 72 hour ACTION statement, both Units 1 and 2 must be placed in hOT STANDBY. Preliminary investigations revealed that an excess of 72 hours would be required to return dissel generator 10 to OPERADLE status. By letter dated may 10, 1981, the licensee requested a one time exception to permit plant operation up to 15 days to allow repair of dissel generator 10 without shutting down the Unit 1 facility.

The Technical Specifications also state that during the 72 hour period when a diesel generator is declared inoperable, the remaining diesels must be started every eight hours to verify their operability. Since this would amount to over 150 combined starts for the remaining diesels, the licensee has requested that the period be increased to 72 hours curing this one time repair because accelerated wear and degradation $h_{\rm out}$ occur due to the large number of startups.

viscussion and Evaluation

Availability of Safety Trains

Three of the five Farley Plant diesel generators are designed as swing diesels capable of serving either unit. Diesel generator 1C is one of the swing diesels. The licensee has shown that for all combinations of loss of offsite power with and without a coincident LOCA at one of the units, there will be at least one train of safety related equipment available at each unit.

In addition, the staff has investigated the possibility of each unit experiencing a single failure of a remaining diesel generator coincident with loss of offsite power to both units and a LUCA occuring at one unit. But even under these postulated conditions, the flexibility of the diesels result in one safety train being available on each unit to supply power to the required loads.

- 2 -

Station Blackout

Station blackout is characterized by the loss of both offsite and emergency ac power for an extended period of time. Core melt can occur if the turbine-driven auxiliary feedwater system fails or if the reactor coolant pump seals fail subsequently because of lack of cooling.

The sequence probabilities noted in Table 1 represent estimates for the next 13 days of operation with only 4 diesels available. As indicated in Table 1, the total probability of a core melt associated with a Station Blackout during the next 13 days is approximately 3×10^{-5} . This one time risk is considered acceptable. An explanation of the core melt probabilities follows:

There has been one loss-of-offsite power event in 4 years of operation or a point estimate of 0.25/Reactor Year (RY) which is consistent with generic results. Since we are concerned about 13 days with only 4 diesels, the probability of loss of AC is 0.25 x 13/360 = 0.009 during the 13 days.

Based on Westinghouse analysis of loss of all feedwater, the core would begin to uncover in about 4000 seconds and would be completely uncovered in 5000 seconds. Thus, if offsite power is not restored in about 1-1/2 to 2 hours (assuming no emergency power), core melt could occur. An estimate of the probability of not recovering offsite power in 1-1/2 hours is 0.22/demand (D). Core melt would probably be well underway with the postulated conditions in about three hours. The probability of not restoring offsite power in three hours is estimated to be 0.15/D. Sufficient information is not available to estimate the time for RCP seal failure in the absense of any cooling.

Unile diesel generator 1C is out of commission, the emergency ac power supply consists of four diesel generators which power emergency buses for Units 1 and 2. Alabama Power Company's commitments concerning procedures for loading the diesels is discussed in another section of this report. A minimum of one emergency bus is required for each unit. A faulted condition resulting in the loss of 3 out of 4 of the diesel generators would result in one unit not having an emergency bus available.

Based on data obtained since March 1981 and during 1977 and 1978, the point estimate of diesels failing to start given a loss of offsite power is 16/148 = 0.11/D. This unavailability is above generic experience. The common cause failure of a second diesel to start given the failure of one diesel is .05 to 0.16. We will assume 0.16/D. Similarly, we arbitrarily assumed the probability of a third diesel to start given the failure of two diesels is 0.3/D. Thus, the unavailability of 3 out of 4 diesels is 4 x 0.11 x 0.16 x .3 = 0.20/D which is about 5 times higher than the probability of random failures of 3 out of 4 diesels.

JUL 8 1231

The unavailability of the turbine-driven AFW pump is 0.06/D based on operating experience since 1977 (two failures out of 35 trials).

- 3 -

Diesel Testing

The reduced testing frequency requested is acceptable provided staggered testing of the four diesels is scheduled within the 72 hour time frame. During a telecon on May 11, 1981 between Mr. T. Novak (NRR) and Mr. O. Kingsley (APCO), we were advised of the following actions being taken:

- APCO will modify plant procedures to assure operators are aware of the staggered diesel test frequency and proper bus loading procedures with diesel 1C out of commission.
- 2. APCO will assure that each Senior Reactor Operator briefs each oncoming shift and the Shift Technical Advisor.
- 3. APCO currently has a Task Force reviewing diesel failures.

Summary

The licensee has shown that for all combinations of loss of offsite power with and without a coincident LOCA at one of the units, there will always be power available to run at least one of the redundant safety trains at each unit. Staff analyses also showed that the inclusion of single failures of a remaining diesel generator at either or both units would not change this result.

The probability of core melt during the one-time 13 day Technical Specification crange is acceptably low. Therefore, the proposed Technical Specification change is acceptable on a one-time only basis.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

(現現 3)

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Conclusion:

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin; the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

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The following staff members provided inputs to this safety evaluation report:

John Thoma, Farley 2 Project Manager Edward Reeves, Farley 1 Project Hanager Bouglas Pickett, Principal Reviewer - Operating Reactors Assessment Branch IVI.E. 1

CORE MELT FROMADILITIES FOR STATION PLACKOUT FOR NEXT 13 DAYS

	Loss of AFW Sequenc e	Loss of RCP Seal Sequence
Probability of loss-of-offsite power - 13 days	0.009	0.00 9
Probability of failure to recover offsite power in 1-1/2 hours in 3 hours	0.22/D NA	NA 0.15
Probability of failure of emergency ac power 3 out of 4 DG given no offsite power	2 x 10 ⁻² /D	$2 \times 10^{-2}/D$
Probability of failure of turbine AFW train - given no ac power	0.06/D	NA
Probability of significant failure of RCP seal	NA 2 x 10-6	1 3 x 10-5

UNITED STATES NUCLEAR REGULATORY COMMISSION DOCKET NO. 50-348 AND 50-364 ALABAMA POWER COMPANY NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 20 to Facility Operating License No. NPF-2 and Amendment No. 2 to Facility Operating License No. NPF-8 issued to Alabama Power Company (the licensee), which revised Technical Specifications for operation of the Joseph M. Farley Nuclear Plant, Units No. 1 and 2 (the facilities) located in Houston County, Alabama. The amendment was effective May 11, 1981.

The amendments were authorized by telephone on May 11, 1981 and confirmed by letter on the same date. The amendments grant temporary relief on a one-time only basis from diesel generator operability and surveillance frequency requirements to allow continued plant operation during repairs to diesel generator 1C.

The application for the amendments comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since these amendments do not involve a significant hazards consideration.

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7590-01

The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR \$51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of these amendments.

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For further details with respect to this action, see (1) the request for amendments, dated May 10, 1981, (2) Amendment No. 20 to License No. NPF-2, (3) Amendment No. 2 to License No. NPF-8, and (4) the Commission's related Safety Evaulation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the George S. Houston Memorial Library, 212 W. Burdeshaw Street, Dothan, Alabama 36303. A copy of items (2), (3) and (4) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this $8 \stackrel{\frown}{=} day$ of

FOR THE NUCLEAR REGULATORY COMMISSION

Steven A. Varga, Chief Operating Reactors Branch #1 Division of Licensing

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