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OCT 4 1982

Docket No.: 50-387

Mr. Norman W. Curtis
Vice President
Engineering and Construction - Nuclear
Pennsylvania Power & Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101

Dear Mr. Curtis:

Subject: Amendment No. 3 to Facility Operating License No. NPF-14 -
Susquehanna Steam Electric Station, Unit 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 3 to Facility Operating License No. NPF-14 for the Susquehanna Steam Electric Station, Unit 1. The amendment is in response to your letters dated September 24, 1982 (PLA-1314) and September 24, 1982 (PLA-1315). This amendment changes the ESW pump timer settings in Table 4.8.1.1.2-2 of Technical Specification 4.8.1.1.2 and revised the diesel surveillance requirement in Technical Specification 4.8.1.1.2.d.12.

A copy of the related safety evaluation supporting Amendment No. 3 to Facility Operating License NPF-14 is enclosed. Also enclosed is a copy of a related notice which has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Original signed by:
William Kane

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

Enclosures:

1. Amendment No. 3 to NPF-14
2. Safety Evaluation
3. Federal Register Notice

cc w/encls.: See next page

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DATE	10/2/82	10/4/82	10/4/82	10/4/82			

OFFICIAL RECORD COPY

Susquehanna

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Vice President
Engineering and Construction
Pennsylvania Power & Light Company
Allentown, Pennsylvania 18101

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PENNSYLVANIA POWER & LIGHT COMPANY
ALLEGHENY ELECTRIC COOPERATIVE, INC.
DOCKET NO. 50-387
SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 3
License No. NPF-14

1. The Nuclear Regulatory Commission (the Commission or the NRC) having found that:
 - A. The applications for amendments filed by the Pennsylvania Power & Light Company, dated September 24, 1982 (PLA-1314) and September 24, 1982 (PLA-1315) comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 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.
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 the Facility Operating License No. NPF-14 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. 3, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. PP&L shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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3. This amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by:

William Kane



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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: OCT 4 1982

OFFICE	DL:LB#2	DL:LB#1					
SURNAME	RPerch/1g	B. J. Youngblood					
DATE	10/2/82	10/4/82					

ATTACHMENT TO LICENSE AMENDMENT NO. 3
FACILITY OPERATING LICENSE NO. NPF-14
DOCKET NO. 50-387

Replace the following pages of the Appendix "A" Technical Specifications with enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

REMOVE

3/4 8-5
3/4 8-6

3/4 8-7
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INSERT

3/4 8-5
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ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

7. Simulating a loss of offsite power in conjunction with an ECCS actuation test signal, and:
 - a) Verifying deenergization of the emergency busses and load shedding from the emergency busses.
 - b) Verifying the diesel generator starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds, energizes the auto-connected loads through the load timers and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained at 4160 ± 400 volts and 60 ± 3.0 Hz during this test.
 - c) Verifying that all automatic diesel generator trips, except engine overspeed, generator differential and engine low lube oil pressure, are automatically bypassed upon loss of voltage on the emergency bus concurrent with an ECCS actuation signal.
8. Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 4700 kw and during the remaining 22 hours of this test, the diesel generator shall be loaded to 4000 kw. The generator voltage and frequency shall be 4160 ± 400 volts and 60 ± 3.0 Hz within 10 seconds after the start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test. Within 5 minutes after completing this 24-hour test, perform Surveillance Requirement 4.8.1.1.2.d.4.b).*
9. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000-hour rating of 4700 kw.
10. Verifying the diesel generator's capability to:
 - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,
 - b) Transfer its loads to the offsite power source, and
 - c) Be restored to its standby status.

* If Surveillance Requirement 4.8.1.1.2.d.4.b) is not satisfactorily completed, it is not necessary to repeat the preceding 24 hour test. Rather, the diesel generator may be operated at 4000 kw for one hour or until operating temperature has stabilized.

SURVEILLANCE REQUIREMENTS (Continued)

11. Verifying that with the diesel generator operating in a test mode and connected to its bus, a simulated ECCS actuation signal overrides the test mode by (1) returning the diesel generator to standby operation, and (2) automatically energizes the emergency loads with offsite power.
12. Verifying that with all diesel generator air start receivers pressurized to less than or equal to 240 psig and the compressors secured, the diesel generator starts at least 5 times from ambient conditions and accelerates to at least 600 rpm in less than or equal to 10 seconds for the first 2 starts and accelerates to at least 600 rpm in less than or equal to 19 seconds for the remaining 3 starts.
13. Verifying that the fuel transfer pump transfers fuel from each fuel storage tank to the engine-mounted day tank of each diesel via the installed cross connection lines.
14. Verifying that each diesel generator loading sequence timer shown in Table 4.8.1.1.2-2 is OPERABLE with its setpoint within + 10% of its design setpoint.
15. Verifying that the following diesel generator lockout features prevent diesel generator starting and/or operation only when required:
 - a) Engine overspeed.
 - b) Generator differential.
 - c) Engine low lube oil pressure.
- e. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting all diesel generators simultaneously, during shutdown, and verifying that all diesel generators, accelerate to at least 600 rpm in less than or equal to 13 seconds.
- f. At least once per 10 years by:
 1. Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite or equivalent solution, and
 2. Performing a pressure test of those portions of the diesel fuel oil system designed to Section III, subsection ND of the ASME Code in accordance with ASME Code Section II Article IWD-5000.

4.8.1.1.3 Reports - All diesel generator failures, valid or non-valid, shall be reported to the Commission pursuant to Specification 6.9.1. Reports of diesel generator failures shall include the information recommended in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August 1977. If the number of failures in the last 100 valid tests, on a per nuclear unit basis, is greater than or equal to 7, the report shall be supplemented to include the additional information recommended in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August 1977.

TABLE 4.8.1.1.2-1

DIESEL GENERATOR TEST SCHEDULE

Number of Failures in
Last 100 Valid Tests*

Test Frequency

≤ 1	At least once per 31 days
2	At least once per 14 days
3	At least once per 7 days
≥ 4	At least once per 3 days

*Criteria for determining number of failures and number of valid tests shall be in accordance with Regulatory Position C.2.e of Regulatory Guide 1.108, Revision 1, August 1977, where the last 100 tests are determined on a per nuclear unit basis. For the purposes of this test schedule, only valid tests conducted after the OL issuance date shall be included in the computation of the "last 100 valid tests." Entry into this test schedule shall be made at the 31 day test frequency.

TABLE 4.8.1.1.2-2
UNIT 1 AND COMMON
DIESEL GENERATOR LOADING TIMERS

<u>DEVICE TAG NO.</u>	<u>SYSTEM</u>	<u>LOCATION</u>	<u>TIME SETTING</u>
K116A	CS pp 1A	1C626	10.5 sec
K116B	CS pp 1B	1C627	10.5 sec
K125A	CS pp 1C	1C626	10.5 sec
K125B	CS pp 1D	1C627	10.5 sec
62X-20104	Emerg Switchgear Rm cooler A & RHR SN pp H&V fan A	0C877A	60 sec
62X-20204	Emerg Switchgear Rm cooler B & RHR SN pp H&V fan B	0C877B	60 sec
62X1-20304	Control Structure Chillwater System	0C877A	3 min
62X1-20404	Control Structure Chillwater System	0C877B	3 min
62X2-20304	Control Structure Chillwater System	0C877A	3.5 min
62X2-20404	Control Structure Chillwater System	0C877B	3.5 min
62X3-20304	Control Structure Chillwater System	0C877A	60 sec
62X3-20404	Control Structure Chillwater System	0C877B	60 sec
62X-20310	Control Structure Chillwater System	0C876A	3 min
62X-20410	Control Structure Chillwater System	0C876B	3 min
62AX2-20108	Emerg SW	1A201	40 sec
62AX2-20208	Emerg SW	1A202	40 sec
62AX2-20303	Emerg SW	1A203	53 sec
62AX2-20403	Emerg SW	1A204	57 sec
62X-516	DG Rm Exh Fan A	0B516	2 min
62X-526	DG Rm Exh Fan B	0B526	2 min
62X-536	DG Rm Exh Fan C	0B536	2 min
62X-546	DG Rm Exh Fan D	0B546	2 min
62A-20102	RHR Pump 1A	1A201	3 sec
62A-20202	RHR Pump 1B	1A202	3 sec
62A-20302	RHR Pump 1C	1A203	3 sec
62A-20402	RHR Pump 1D	1A204	3 sec

SAFETY EVALUATION
AMENDMENT NO. 3 TO NPF-14
SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1
DOCKET NO. 50-387

Introduction

The licensee proposed changes to the Technical Specifications of the operating license for Susquehanna Steam Electric Station, Unit 1 which are as follows:

- (a) In Specification 4.8.1.1.2.d.12, change the diesel surveillance requirement for the initial start in less than or equal to 10 seconds and the subsequent four starts in less than or equal to 25 seconds.
- (b) In Table 4.8.1.1.2-2 to Specification 4.8.1.1.2, change the four emergency service water pump time settings from 55 seconds to 40 seconds, 40 seconds, 53 seconds and 57 seconds, respectively.

Evaluation

a) Diesel Surveillance Requirement

In Specification 4.8.1.1.2.d.12, the licensee requested a change in the requirement by the addition of "for the initial start and less than or equal to 25 seconds for each subsequent start.", to the end of the present statement.

In support of this request, the licensee provided a letter dated September 24, 1982 which reiterated a previous request contained in a letter dated July 9, 1982. Supplemental information was provided by the licensee on July 14, 1982. The staff did not agree with the initial proposal, but deferred the effective date of Specification 4.8.1.1.2.d.12 to after first exceeding 5% of rated thermal power and requested additional information from the licensee on July 22, 1982. The licensee responded to this request in a letter dated September 2, 1982. The starting times provided by the licensee in the letter of July 14, 1982 were compared against the assumptions used in the FSAR ECCS analyses for Susquehanna. The first two start times provided in the July 14, 1982 letter satisfy the ECCS analysis assumptions. From the information available in the letter of September 2, 1982, the fifth start of the diesels was accomplished in less than 19 seconds. The licensee has not provided an updated ECCS analysis to support start times up to the proposed 25 seconds. The staff evaluated diesel generator starting times up to 19 seconds in the ECCS analysis which indicated the maximum peak clad temperatures will not be exceeded. Therefore, diesel generator starting times up to 19 seconds or less are acceptable for Susquehanna. On this basis, the staff has revised Specification 4.8.1.1.2.d.12 with the addition of "for the first 2 starts and accelerates to at least 600 rpm in less than or equal to 19 seconds for the remaining 3 starts.", to the end of the present statement.

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b) Emergency Service Water Pump Time Settings

In Table 4.8.1.1.2-2 of Specification 4.8.1.1.2, the licensee requested a change to the timer settings for the Emergency Service Water (ESW) pumps which previously started simultaneously at 55 seconds after a diesel start, to a staggered start with A and B ESW pumps started at 40 seconds, the C pump started at 53 seconds and the D pump started at 57 seconds after a diesel start. The licensee requested the change to mitigate water hammer effects on the ESW system through a more gradual filling of the system. The licensee stated the staggered start of the ESW pumps does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment related to safety as previously evaluated. Based on a review of plant voltage studies and the diesel generator load sequence study, the licensee stated the proposed change does not affect the integrity of the equipment being cooled and does not adversely affect the diesel generator loading or the 4kV system if offsite power is available. The staff has reviewed the licensee's justification and finds the changes to the ESW pump timer settings acceptable.

Environmental Consideration

We have determined that this amendment does not authorize a change in effluent types or total amount nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that this amendment involves action which is insignificant from the standpoint of environmental impact, and, pursuant to 10 CFR Section 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 statement.

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, does not create the possibility of an accident of a type different from any evaluated previously, 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) such activities will be conducted in compliance with the Commission's 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.

Dated: OCT 4 1982

OFFICE	DL:LB#2 <i>RP</i>	DL:LB#1 <i>RP</i>					
SURNAME	RPerch/1g	B. Youngblood					
DATE	10/4/82	10/4/82					

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-387PENNSYLVANIA POWER & LIGHT COMPANYALLEGHENY ELECTRIC COOPERATIVE, INC.NOTICE OF ISSUANCE OF AMENDMENT OF FACILITYOPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 3 to Facility Operating License No. NPF-14, issued to Pennsylvania Power & Light Company and Allegheny Electric Cooperative, Inc., for Susquehanna Steam Electric Station, Unit 1 (the facility) located in Luzerne County, Pennsylvania. This amendment grants changes to Technical Specifications to change the diesel generator loading timer settings for the emergency service water pumps to provide a staggered start and to revise the diesel generator surveillance requirement on air receiver capacity to allow longer starting times for subsequent starts after the initial two starts. This amendment is effective as of the date of issuance.

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

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

For further details with respect to this action, see (1) the applications for the amendments dated September 24, 1982 (PLA-1314) and September 24, 1982 (PLA-1315); (2) Amendment No. 3 to License NPF-14 dated October 4, 1982 ; and (3) the Commission's evaluation dated October 4, 1982 . All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. 20555, and at the Osterhout Free Library, Reference Department, 71 South Franklin Street, Wilkes-Barre, Pennsylvania 18701. A copy of items (1), (2) and (3) 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 4th day of October 1982.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by:
William Kane

William F. Kane, Acting Branch Chief
Licensing Branch No. 1
Division of Licensing

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