UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

September 19, 1986

Docket Nos: 50-387
and 50-388

Mr. Harold W. Keiser
Vice President
Nuclear Operations
Pennsylvania Power and Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101

Dear Mr. Keiser:

Subject: Issuance of Amendment No. 60 to Facility Operating License No. NPF-14 and Amendment No. 30 to Facility Operating License No. NPF-22 - Susquehanna Steam Electric Station, Units 1 and 2

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 60 to Facility Operating License No. NPF-14 and Amendment No. 30 to Facility Operating License No. NPF-22 for the Susquehanna Steam Electric Station, Units 1 and 2. These amendments are in partial response to your letter dated April 23, 1986, as revised on July 17, and August 29, 1986.

These amendments revise the Susquehanna Unit 1 and 2 Technical Specifications by reducing the required diesel testing necessary at Susquehanna in accordance with Generic Letter 84-15.

A copy of the related safety evaluation supporting Amendment No. 60 to Facility Operating License No. NPF-14 and Amendment No. 30 to Facility Operating License No. NPF-22 is enclosed.

Sincerely,

Elinor G. Adensam

Elinor G. Adensam, Director
BWR Project Directorate No. 3
Division of BWR Licensing

Enclosures:
1. Amendment No. 60 to NPF-14
2. Amendment No. 30 to NPF-22
3. Safety Evaluation

cc w/enclosures:
See next page

DESIGNATED ORIGINAL

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AMENDMENT NO. 60 TO FACILITY OPERATING LICENSE NO. NPF-14 - SUSQUEHANNA, UNIT 1
AMENDMENT NO. 30 TO FACILITY OPERATING LICENSE NO. NPF-22 - SUSQUEHANNA, UNIT 2

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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. 60
License No. NPF-14

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:

   A. The application for the amendment filed by the Pennsylvania Power & Light Company, dated April 23, 1986, as revised on July 17, and August 29, 1986, complies 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 set forth in 10 CFR Chapter I;

   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. 60 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.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Elinor G. Adensam, Director
BWR Project Directorate No. 3
Division of BWR Licensing

Enclosure:
Changes to the Technical
Specifications

Date of Issuance: September 19, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 60

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. The corresponding overleaf pages are also provided to maintain document completeness.

| REMOVE | INSERT |
|---|---|
| 3/4 8-1 | 3/4 8-1 |
| 3/4 8-1a | 3/4 8-2 |
| 3/4 8-2 | |
| 3/4 8-3 | 3/4 8-3 (overleaf) |
| 3/4 8-4 | 3/4 8-4 |
| 3/4 8-5 | 3/4 8-5 |
| 3/4 8-6 | 3/4 8-6 |
| 3/4 8-7 | 3/4 8-7 |
| 3/4 8-8 | 3/4 8-8 (overleaf) |

## 3/4.8 ELECTRICAL POWER SYSTEMS

### 3/4.8.1 A.C. SOURCES

### A.C. SOURCES - OPERATING

### 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 between the offsite transmission network and the onsite Class 1E distribution system, and

b. Four separate and independent diesel generators*, each with:

1. Separate engine mounted day fuel tanks containing a minimum of 325 gallons of fuel,

2. A separate fuel storage system containing a minimum of 47,570 gallons of fuel, and

3. A separate fuel transfer pump.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

a. With one offsite circuit of the above 3.8.1.1.a required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter and Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours sequentially on four diesel generators; restore at least two offsite circuits to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. With one diesel generator of 3.8.1.1.b inoperable, demonstrate the OPERABILITY of the A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours; restore the diesel generator to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

*Shared with Unit 2.

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

c. With one offsite circuit and one diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaning A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours, restore one of the inoperable sources to OPERABLE status within 12 hours or be in at lease HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. Restore the other A.C. power source (offsite circuitor diesel generator) to OPERABLE status in accordance with the provisions of Section 3.8.1 Action Statement a or b, as appropriate,with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable A.C. power source.

d. With one diesel generator of the above required A.C. electrical power sources inoperable, in addition to ACTION b or c, above, verify within 2 hours that all required systems, subsystems, trains, components and devices that depend on the remaining diesel generators as a source of emergency power are also OPERABLE; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

e. With two of the above required offsite circuits inoperable, demonstrate the OPERABILITY of four diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.4, for one diesel generator at a time, within eight hours unless the diesel generators are already operating; restore at least one of the inoperable offsite circuits to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours. With only one offsite circuit restored to OPERABLE status, restore at least two offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

f. With two or more of the above required diesel generators inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter and 4.8.1.1.2.a.4, for one diesel generator at a time, within 2 hours, and at least once per 8 hours thereafter; restore at least three of the diesel generators to OPERABLE status within 2 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. Restore four diesel generators to OPERABLE status within 72 hours from time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 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 and indicated power availability, and

b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring, manually and automatically, unit power supply from the normal circuit to the alternate circuit.

4.8.1.1.2 Each of the above required diesel generators shall be demonstrated OPERABLE:

a. In accordance with the frequency specified in Table 4.8.1.1.2-1 on a STAGGERED TEST BASIS by:

1. Verifying the fuel level in the engine-mounted day fuel tank.

2. Verifying the fuel level in the fuel storage tank.

3. Verifying the fuel transfer pump starts and transfers fuel from the storage system to the engine-mounted day fuel tank.

4. Verifying the diesel starts from ambient condition and accelerates to at least 600 rpm in less than or equal to 10 seconds. The generator voltage and frequency shall be 4160 ± 200 volts and 60 ± 0.5 Hz within 10 seconds after the start signal. The diesel generator shall be started for this test by using one of the following signals:

a) Manual.
b) Simulated loss of offsite power by itself.
c) Simulated loss of offsite power in conjunction with an ESF actuation test signal.
d) An ESF actuation test signal by itself.

5. Verifying the diesel generator is synchronized, loaded to greater than or equal to 4000 kw in less than or equal to 90 seconds, and operates with this load for at least 60 minutes.

6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

7. Verifying the pressure in all diesel generator air start receivers to be greater than or equal to 240 psig.

b. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by checking for and removing accumulated water from the engine-mounted day fuel tanks.

SURVEILLANCE REQUIREMENTS (Continued)

c. At least once per 92 days and from new fuel oil prior to addition to the storage tanks by verifying that a sample obtained in accordance with ASTM-D270-1975 has a water and sediment content of less than or equal to .05 volume percent and a kinematic viscosity @ 40°C of greater than or equal to 1.3 but less than or equal to 2.4 for 1D oil or $\geq$1.9 but $\leq$4.1 for 2D oil when tested in accordance with ASTM-D975-77, and an impurity level of less than 2 mg. of insolubles per 100 ml. when tested in accordance with ASTM-D2274-70.

d. 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 diesel generator capability to reject a load of greater than or equal to 1425 kw while maintaining voltage at 4160 ± 400 volts and frequency at 60 ± 3.0 Hz.

3. Verifying the diesel generator capability to reject a load of 4000 kw without tripping. The generator voltage shall not exceed 4560 volts during and following the load rejection.

4. Simulating a loss of offsite power by itself, 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 and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown 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.

5. Verifying that on an ECCS actuation 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 4160 ± 400 volts and 60 ± 3.0 Hz within 10 seconds after the auto-start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test.

SURVEILLANCE REQUIREMENTS (Continued)

6. 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.

7. Verifying with at least one unit in OPERATIONAL CONDITION 4 or 5 that 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.

8. Verify the hot restart capability of the diesel by verifying the diesel generator starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady state voltage and frequancy of the emergency busses shall be maintained at 4160 ± 400 volts and 60 ± 3.0 Hz during this test. This test shall be performed within 5 minutes of completing a one hour run at 4000 KW or within 5 minutes after operating temperatures have stabilized at a load of 4000 KW.

9. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000-hour rating of 4700 kW.

SURVEILLANCE REQUIREMENTS (Continued)

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.

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 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.

13. Verifying that the following diesel generator lockout features do not prevent diesel generator starting and/or operation when not 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 10 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 XI Article IWD-5000.

4.8.1.1.3 Reports - All diesel generator failures, valid or non-valid, shall be reported to the Commission in a Special Report pursuant to Specification 6.9.2 within 30 days. 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 diesel generator 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 |
|---|---|
| $\leq 1$ | At least once per 31 days |
| 2 | At least once per 14 days |
| $\geq 3$ | At least once per 7 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 diesel generator 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 UNIT 2
DIESEL GENERATOR LOADING TIMERS

| DEVICE TAG NO. | SYSTEM | LOCATION | TIME SETTING |
|---|---|---|---|
| 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 |
| 62A-20102 | RHR Pump 2A | 2A201 | 3 sec |
| 62A-20202 | RHR Pump 2B | 2A202 | 3 sec |
| 62A-20302 | RHR Pump 2C | 2A203 | 3 sec |
| 62A-20402 | RHR Pump 2D | 2A204 | 3 sec |
| 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 |
| K116A | CS pp 2A | 2C626 | 10.5 sec |
| K116B | CS pp 2B | 2C627 | 10.5 sec |
| K125A | CS pp 2C | 2C626 | 10.5 sec |
| K125B | CS pp 2D | 2C627 | 10.5 sec |
| 62AX2-20108 | Emergency Service Water (ESW) | 1A201 | 40 sec |
| 62AX2-20208 | Emergency Service Water (ESW) | 1A202 | 40 sec |
| 62AX2-20303 | Emergency Service Water (ESW) | 1A203 | 44 sec |
| 62AX2-20403 | Emergency Service Water (ESW) | 1A204 | 48 sec |
| 62X3-20304 | Control Structure Chilled Water System | OC877A | 60 sec |
| 62X3-20404 | Control Structure Chilled Water System | OC877B | 60 sec |
| 62X-20104 | Emergency Switchgear Rm. Cooler A & RHR SW pp H&V Fan A | OC877A | 60 sec |

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PENNSYLVANIA POWER & LIGHT COMPANY

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-388

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 30
License No. NPF-22

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:

   A. The application for the amendment filed by the Pennsylvania Power & Light Company, dated April 23, 1986, as revised on July 17, and August 29, 1986, complies 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 set forth in 10 CFR Chapter I;

   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-22 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. 30 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.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Elinor G. Adensam

Elinor G. Adensam, Director
BWR Project Directorate No. 3
Division of BWR Licensing

Enclosure:
Changes to the Technical
Specifications

Date of Issuance: September 19, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 30

FACILITY OPERATING LICENSE NO. NPF-22

DOCKET NO. 50-388

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. The corresponding overleaf pages are also provided to maintain document completeness.

| REMOVE | INSERT |
|---|---|
| 3/4 8-1 | 3/4 8-1 |
| 3/4 8-1a | 3/4 8-2 |
| 3/4 8-2 | |
| 3/4 8-3 | 3/4 8-3 (overleaf) |
| 3/4 8-4 | 3/4 8-4 (overleaf) |
| 3/4 8-5 | 3/4 8-5 |
| 3/4 8-6 | 3/4 8-6 |
| 3/4 8-7 | 3/4 8-7 |
| 3/4 8-8 | 3/4 8-8 (overleaf) |

## 3/4.8 ELECTRICAL POWER SYSTEMS

### 3/4.8.1 A.C. SOURCES

### A.C. SOURCES - OPERATING

### 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 between the offsite transmission network and the onsite Class 1E distribution system, and

b. Four separate and independent diesel generators*, each with:

1. Separate engine mounted day fuel tanks containing a minimum of 325 gallons of fuel,

2. A separate fuel storage system containing a minimum of 47,570 gallons of fuel, and

3. A separate fuel transfer pump.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

a. With one offsite circuit of the above 3.8.1.1.a required A.C. electrical power source inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter and Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours sequentially on four diesel generators; restore at least two offsite circuits to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. With one diesel generator of 3.8.1.1.b inoperable, demonstrate the OPERABILITY of the A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours; restore the diesel generator to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

*Shared with Unit 1.

ACTION (Continued)

c. With one offsite circuit and one diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaning A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours, restore one of the inoperable sources to OPERABLE status within 12 hours or be in at lease HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. Restore the other A.C. power source (offsite circuitor diesel generator) to OPERABLE status in accordance with the provisions of Section 3.8.1 Action Statement a or b, as appropriate,with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable A.C. power source.

d. With one diesel generator of the above required A.C. electrical power sources inoperable, in addition to ACTION b or c, above, verify within 2 hours that all required systems, subsystems, trains, components and devices that depend on the remaining diesel generators as a source of emergency power are also OPERABLE; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

e. With two of the above required offsite circuits inoperable, demonstrate the OPERABILITY of four diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.4, for one diesel generator at a time, within eight hours, unless the diesel generators are already operating; restore at least one of the inoperable offsite circuits to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours. With only one offsite circuit restored to OPERABLE status, restore at least two offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

f. With two or more of the above required diesel generators inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter and 4.8.1.1.2.a.4, for one diesel generator at a time, within 2 hours, and at least once per 8 hours thereafter; restore at least three of the diesel generators to OPERABLE status within 2 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. Restore four diesel generators to OPERABLE status within 72 hours from time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 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 and indicated power availability, and

b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring, manually and automatically, unit power supply from the normal circuit to the alternate circuit.

4.8.1.1.2 Each of the above required diesel generators shall be demonstrated OPERABLE:

a. In accordance with the frequency specified in Table 4.8.1.1.2-1 on a STAGGERED TEST BASIS by:

1. Verifying the fuel level in the engine-mounted day fuel tank.

2. Verifying the fuel level in the fuel storage tank.

3. Verifying the fuel transfer pump starts and transfers fuel from the storage system to the engine-mounted day fuel tank.

4. Verifying the diesel starts from ambient condition and accelerates to at least 600 rpm in less than or equal to 10 seconds. The generator voltage and frequency shall be 4160 ± 400 volts and 60 ± 3.0 Hz within 10 seconds after the start signal. The diesel generator shall be started for this test by using one of the following signals:

a) Manual.
b) Simulated loss of offsite power by itself.
c) Simulated loss of offsite power in conjunction with an ESF actuation test signal.
d) An ESF actuation test signal by itself.

5. Verifying the diesel generator is synchronized, loaded to greater than or equal to 4000 kw in less than or equal to 90 seconds, and operates with this load for at least 60 minutes.

6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

7. Verifying the pressure in all diesel generator air start receivers to be greater than or equal to 240 psig.

b. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by checking for and removing accumulated water from the engine-mounted day fuel tanks.

SURVEILLANCE REQUIREMENTS (Continued)

c. At least once per 92 days and from new fuel oil prior to addition to the storage tanks by verifying that a sample obtained in accordance with ASTM-D270-1975 has a water and sediment content of less than or equal to 0.05 volume percent and a kinematic viscosity @ 40°C of greater than or equal to 1.3 but less than or equal to 2.4 for 1D oil or $\geq$1.9 but $\leq$4.1 for 2D oil when tested in accordance with ASTM-D975-77, and an impurity level of less than 2 mg of insolubles per 100 mL when tested in accordance with ASTM-D2274-70.

d. 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 diesel generator capability to reject a load of greater than or equal to 1425 kW while maintaining voltage at 4160 ± 400 volts and frequency at 60 ± 3.0 Hz.

3. Verifying the diesel generator capability to reject a load of 4000 kW without tripping. The generator voltage shall not exceed 4560 volts during and following the load rejection.

4. Simulating a loss-of-offsite power by itself, 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 and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown 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.

5. Verifying that on an ECCS actuation 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 4160 ± 400 volts and 60 ± 3.0. Hz within 10 seconds after the auto-start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test.

SURVEILLANCE REQUIREMENTS (Continued)

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.

7. Verifying with at least one unit in OPERATIONAL CONDITION 4 or 5 that 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.

8. Verify the hot restart capability of the diesel by verifying the diesel generator starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown 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. This test shall be performed within 5 minutes of completing a one hour run at 4000 KW or within 5 minutes after operating temperatures have stabilized at a load of 4000 KW.

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,

SURVEILLANCE REQUIREMENTS (Continued)

b) Transfer its loads to the offsite power source, and

c) Be restored to its standby status.

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 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.

13. Verifying that the following diesel generator lockout features do not prevent diesel generator starting and/or operation when not 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 10 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 XI Article IWD-5000.

4.8.1.1.3 Reports - All diesel generator failures, valid or nonvalid, shall be reported to the Commission in a Special Report pursuant to Specification 6.9.2 within 30 days. 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 diesel generator 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 |
|---|---|
| $\leq 1$ | At least once per 31 days |
| 2 | At least once per 14 days |
| $\geq 3$ | At least once per 7 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 diesel generator 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 UNIT 2

DIESEL GENERATOR LOADING TIMERS

| DEVICE TAG NO. | SYSTEM | LOCATION | TIME SETTING |
|---|---|---|---|
| 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 |
| 62A-20102 | RHR Pump 2A | 2A201 | 3 sec |
| 62A-20202 | RHR Pump 2B | 2A202 | 3 sec |
| 62A-20302 | RHR Pump 2C | 2A203 | 3 sec |
| 62A-20402 | RHR Pump 2D | 2A204 | 3 sec |
| 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 |
| K116A | CS pp 2A | 2C626 | 10.5 sec |
| K116B | CS pp 2B | 2C627 | 10.5 sec |
| K125A | CS pp 2C | 2C626 | 10.5 sec |
| K125B | CS pp 2D | 2C627 | 10.5 sec |
| 62AX2-20108 | Emergency Service Water (ESW) | 1A201 | 40 sec |
| 62AX2-20208 | Emergency Service Water (ESW) | 1A202 | 40 sec |
| 62AX2-20303 | Emergency Service Water (ESW) | 1A203 | 44 sec |
| 62AX2-20403 | Emergency Service Water (ESW) | 1A204 | 48 sec |
| 62X3-20304 | Control Structure Chilled Water System | 0C877A | 60 sec |
| 62X3-20404 | Control Structure Chilled Water System | 0C877B | 60 sec |
| 62X-20104 | Emergency Switchgear Rm Cooler A & RHR SW pp H&V Fan A | 0C877A | 60 sec |

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 60 TO FACILITY OPERATING LICENSE NO. NPF-14 AND

AMENDMENT NO. 30 TO FACILITY OPERATING LICENSE NO. NPF-22

PENNSYLVANIA POWER & LIGHT COMPANY

SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

DOCKET NOS. 50-387 AND 50-388

## 1.0 INTRODUCTION

By letters dated April 23, July 17, and August 29, 1986, the licensee requested changes to Technical Specification 3.8.1.1 which would reduce the number of required diesel generator starts when in a limiting condition of operation (LCO) or during the 18 month surveillance test. The licensee's requested changes are in accordance with NRC Generic Letter 84-15 and do not reduce the ability of the diesels to mitigate the consequences of an accident but are intended to increase the diesel's reliability by not causing undue wear due to excessive testing.

In the submittal of July 17, 1986, the licensee proposed changes to Technical Specifications (TS) 4.8.1.1.2.d.4, 4.8.1.1.2.d.5, and 4.8.1.1.2.d.6 to delete a loss of offsite power test and an ECCS actuation test and to substitute signal testing only without diesel start. The licensee also proposed changes to TS 4.8.1.1.2.d.8 to clarify the verification of loads for each diesel generator would be performed by calculation. These proposed changes were susbsequently withdrawn by the August 29, 1986, submittal. The August 29, 1986, submittal also clarified the mode of operation under which the 24 hour surveillance run of TS 4.8.1.1.2.d.7 is conducted.

All changes requested by the licensee in their August 29, 1986, submittal were granted except for Specification 3.8.1.1 Action a which has been granted in part. The words "unless previously and successfully tested within the last 24 hours" have been removed from Action a. The staff will address this issue in a later action.

## 2.0 BACKGROUND

The objective of diesel generator periodical surveillance testing is to meet the reliability goals of Regulatory Guide 1.108 for the diesel generators. Such surveillance testing provides a degree of assurance of the availability of the diesel generators in mitigating various transients and postulated events following a loss of offsite power. Therefore, the existing DG testing concept is that the above assurance has to be demonstrated with more frequent testing as the number of failure increases. Thus, Standard Technical Specifications require that the DGs be tested in

accordance with Regulatory Guide 1.108 where the test interval depends on the demonstrated DG performance. Furthermore, the test interval is established conservatively on a per nuclear unit basis rather than on a per diesel generator basis.

## 3.0 EVALUATION

The Pennsylvania Power & Light Company has proposed the changes to Technical Specifications to accomplish its objective to reduce unnecessary testing of the diesel generator. The staff has for some time been evaluating the frequency of DG testing and the associated potential for severe degradation of engine parts due to excessive testing. The test interval is established conservatively on a per nuclear unit basis rather than on a per diesel generator basis. Thus, improper diagnosis of a DG failure could potentially result in more frequent testing of all the diesel generators. Also, test intervals that are too short could have an adverse impact on DG reliability. The staff concludes that this test frequency can be reduced to minimize this potential without affecting the overall DG reliability. The licensee was also encouraged to propose TS changes in additional areas identified below to reduce excessive DG testing. These changes are consistent with Generic Letter 84-15 guidelines. The guidelines are summarized as follows:

(1) Reduced testing of diesel generators from every eight hours to once within 24 hours when a diesel generator or an offsite power supply is inoperable.

(2) Testing of DG based on the number of failures on a per diesel generator basis rather than unnecessarily testing all diesel generators in the nuclear plant.

(3) Reduced test frequency for an individual diesel generator based on the number of failures from the present minimum interval of every three days to a minimum interval of seven days.

The staff has reviewed the proposed changes to determine whether these changes are in line with the above guidelines. The result of our review follows:

1. TS 3.8.1.1, ACTION a and b:

   Present TS ACTION Statement a "With either one offsite circuit or one diesel generator,..." is divided into the two Action Statements, which are ACTION Statement a "With one offsite circuit,..." and ACTION Statement b "With one diesel generator...". Proposed ACTION Statement a also added the following phrase "...unless previously and successfully tested within the last 24 hours..." regarding the necessity of testing all four

diesel generators within 24 hours. The objective of the Action Statement in the existing Technical Specifications is to demonstrate the immediate operability of the remaining A.C. electrical sources by performing the Surveillance Requirements in the event one offsite circuit or one diesel generator is inoperable. At this time, the staff does not believe successful testing of the required A.C. electrical sources for operability prior to entry into this Action Statement meets the above stated objective or provides positive assurance of the availability of the remaining A.C. electrical sources after entry into the Action Statement. The staff will address this issue in a later action.

The remainder of the ACTION a and ACTION b statements are in accordance with the above guideline and, therefore, are acceptable.

2. TS 3.8.1.1, ACTION c:

The time requirement for testing the remaining three operable diesel generators is presently within two hours and at least once per eight hours thereafter. The proposed change will require testing of the operable diesel generators pursuant to Specification 4.8.1.1.2.a.4, within eight hours. This change is consistent with the intent of the above guideline of GL 84-15 and, therefore, is acceptable.

The last sentence of the restoration statement for the other A.C. power sources has been added with proposed ACTION c changes. The addition of the restoration statement is purely administrative and is proposed only for clarification and, therefore, the proposed change to add the last sentence is acceptable.

3. TS 3.8.1.1, ACTION d:

The only change to ACTION d is editorial in nature due to the proposed renumbering of the Action Statements and, therefore, reference to ACTION a or b should be changed to ACTION b or c as applicable.

4. TS 3.8.1.1, ACTION e:

Present test requirements for four diesel generators with two of the required offsite circuits inoperable are to perform 4.8.1.1.2.a.4 for one diesel generator at a time, within four hours and at least once per eight hours thereafter. The proposed change will allow diesel generator testing to be performed within eight hours. The proposed change complies with the above guideline to reduce excessive diesel generator testing and, therefore, is acceptable.

5. TS 3.8.1.1, ACTION f:

The performance of Surveillance Requirement 4.8.1.1.1.a, verification of breaker alignment, will be performed within one hour after entering

the Action Statement and at least once per eight hours thereafter. The proposed change to add the following sentence "at least once per eight hours thereafter" is consistent with Action Statements a, b and c. This change is also consistent with Standard Technical Specifications and, therefore, is acceptable.

6. TS 4.8.1.1.3 and Table 4.8.1.1.2-1

Testing the diesel generator provides a degree of assurance of the availability of the DGs between tests. The DG testing concept reflected on this table is that the above assurance has to be demonstrated with more frequent testing as the number of DG failures increases. Thus, current TS require that diesel generators be tested in accordance with RG 1.108 where the test interval depends on the demonstrated DG failures. Also, the test interval is established conservatively on a per nuclear unit basis rather than on a per diesel generator basis. Test intervals that are too short could have an adverse impact on DG reliability. The staff and industry consensus is that current requirements for testing of OPERABLE DGs do not improve reliability of the OPERABLE DGs and may be a factor in potential for degradation of the OPERABLE DGs and may have negative effects on their overall expected life and hence such testing is not warranted. Therefore, we concur with the licensee's proposal to limit DG failure on a per diesel generator basis and the frequency of testing a DG will be based on its own failure rate. This is consistent with GL 84-15 guidelines on DG reliability and is, therefore, acceptable.

Also, according to the guideline of GL 84-15 to reduce unnecessary testing of a DG, the staff approves a change to current Technical Specifications Table 4.8.1.1.2-1 of the minimum interval of every three days to a minimum interval of every seven days.

7. TS 4.8.1.1.2.d.11

The licensee requested the deletion of Technical Specification 4.8.1.1.2.d.11. This specification requires that the licensee verify 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. Regulatory Guide 1.108, which describes a method for complying with the Commission's regulations regarding periodic testing of the diesel generators and support systems, suggests a demonstration every 18 months that the engine will perform its intended function if switching from one fuel oil supply system to another where necessary. FSAR Section 9.5.4.2 discusses the diesel generator fuel oil storage tanks and transfer pumps. There are four 50,000 gallon capacity storage tanks (one for each diesel), which are sufficient for seven days of continuous full load (the largest operating load indicated in FSAR Section 8.3 for a Design Basis Accident (DBA) operation). The licensee has not taken credit in any analysis

for the transfer of fuel between the fuel oil storage tanks to diesel generato day tanks to which it is not normally aligned. Each diesel generator day tank is filled from its associated fuel oil storage tank, which contains sufficient fuel to meet the seven day requirement. The fuel transfer pumps are capable of providing an increase in the day tank inventory even while the diesels are running, if necessary. The fuel oil inventory in the storage tanks and day tanks is continuously monitored. The level is indicated at the local control panel in the diesel generator building. The proposed deletion is acceptable.

8. TS 4.8.1.1.2.d.7

The licensee requested that Technical Specification 4.8.1.1.2.d.7 be modified. The licensee proposed separating the performance of the hot restart capability test from the 24 hour load run test. The licensee will perform the hot restart test when the diesel has run for one hour or reached stable operating temperatures. The purpose of this test is to demonstrate that the diesel generators can auto start and accept load while the machine is at normal operating temperatures and pressures.

A 24 hour period is not required to bring the diesel generator up to normal operating conditions therefore it is of no advantage to perform this verification following a 24 hour run.

The licensee is not proposing to eliminate any testing, rather re-arrange the sequence in which the testing is performed. The diesel generator is not suspected of being any less reliable as a result of this change since current technical specifications provide for the same testing in the event the hot restart is not sucessfully completed after the 24 hour run. The proposed modification is acceptable.

Because the diesel generators are shared between two units, the licensee has proposed performing the 24 hour endurance run with at least one Unit in Operational Condition 4 or 5. This change to the surveillance requirements addresses the concerns identified in IE Information Notice 84-69 and is acceptable.

9. TS 4.8.1.1.2.d.3, Susquehanna Unit 1

The licensee noted that the surveillance indicates generator voltage shall not exceed 4360 volts. The number "4360" is a typographical error made in Amendment No. 36 to NPF-14. The correct value is 4560. The proposed modification is acceptable.

10. TS 4.8.1.1.2.d.13

The licensee proposed a change in the wording of the surveillance for verifying lockout features. The change is intended to reflect more

accurately, the manner in which the lockout features are verified. This is a wording change only that says the same thing and is, therefore, acceptable.

The licensee has proposed general reductions in the testing frequency requirements for the onsite emergency diesel generators in the Susuquehanna Technical Specifications. These changes involve both routine surveillance testing and special testing due to restriction of the plant operation. The staff has reviewed the licensee's submittals and concludes the following:

(1) Reckoning diesel generator failure on a per diesel generator basis rather than on a per nuclear unit basis is consistent with GL 84-15 guideline and is, therefore, acceptable.

(2) Changing Technical Specification Table 4.8.1.1.2-1 of the minimum interval of every three days to a minimum interval of every seven days complies with the guideline of GL 84-15 and is, therefore, acceptable.

(3) Reducing testing of diesel generators on Susquehanna from every eight hours to within 24 hours when one diesel generator or one offsite supply is inoperable is in accordance with GL 84-15 guideline and is, therefore, acceptable. However, an additional condition to ACTION Statement a which reads "unless previously and successfully tested within the last 24 hours" is inconsistent with Standard Technical Specification and outside the scope of GL 84-15. The staff will address this in a later action.

(4) Changing Action Statement F to perform the Surveillance Requirement 4.8.1.1.1.a, verification of breaker alignment, within one hour after entering the action and at least once per eight hours thereafter is acceptable.

(5) Deleting Technical Specification surveillance requirement 4.8.1.1.2.d.11 is acceptable.

(6) Modifying Technical Specification surveillance requirement 4.8.1.1.2.d.7 is acceptable, since the licensee is not eliminating testing, but rearranging the testing sequence.

(7) Correcting the typographical error contained in Technical Specification surveillance requirement 4.8.1.1.2.d.3 is acceptable.

(8) Modifying the wording of Technical Specification 4.8.1.1.2.d.13 is administrative and acceptable.

## 3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration, and there has been no public comment on such finding. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement nor environmental assessment need be prepared in connection with the issuance of these amendments.

## 4.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (51 FR 29008) on August 13, 1986, and consulted with the state of Pennsylvania. No public comments were received, and the state of Pennsylvania did not have any comments.

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security nor to the health and safety of the public.

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