Mr. James A. Hutton
Director-Licensing, MC 62A-1
PECO Energy Company
Nuclear Group Headquarters
Correspondence Control Desk
P.O. Box No. 195
Wayne, PA 19087-0195

April 5, 2000

Complete NRR-058

SUBJECT: LIMERICK GENERATING STATION, UNITS 1 AND 2 - ISSUANCE OF AMENDMENT RE: ACTION STATEMENT CONCERNING INOPERABLE REACTOR COOLANT LEAKAGE DETECTION SYSTEMS (TAC NOS. MA5682 AND MA5683)

Dear Mr. Hutton:

The Commission has issued the enclosed Amendment No. 140 to Facility Operating License No. NPF-39 and Amendment No. 103 to Facility Operating License No. NPF-85 for the Limerick Generating Station, Units 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated June 7, 1999, as supplemented September 27, 1999.

These amendments revise the Limerick Generating Station, Units 1 and 2 TSs Section 3/4.4.3 to reflect changes to refine and clarify the action statement concerning inoperable reactor coolant leakage detection systems.

A copy of our safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,
/RA/

Bartholomew C. Buckley, Sr. Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-352 and 50-353

Enclosures: 1. Amendment No.140 to License No. NPF-39
2. Amendment No.103 to License No. NPF-85
3. Safety Evaluation

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*SE input dated 11/15/99 was provided and no major changes were made.

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Mr. James A. Hutton
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*SE input dated 11/15/99 was provided and no major changes were made.

Official Record Copy

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 5, 2000

Mr. James A. Hutton
Director-Licensing, MC 62A-1
PECO Energy Company
Nuclear Group Headquarters
Correspondence Control Desk
P.O. Box No. 195
Wayne, PA 19087-0195

SUBJECT: LIMERICK GENERATING STATION, UNITS 1 AND 2 - ISSUANCE OF AMENDMENT RE: ACTION STATEMENT CONCERNING INOPERABLE REACTOR COOLANT LEAKAGE DETECTION SYSTEMS (TAC NOS. MA5682 AND MA5683)

Dear Mr. Hutton:

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These amendments revise the Limerick Generating Station, Units 1 and 2 TSs Section 3/4.4.3 to reflect changes to refine and clarify the action statement concerning inoperable reactor coolant leakage detection systems.

A copy of our safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Bartholomew C. Buckley

Bartholomew C. Buckley, Sr. Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-352 and 50-353

Enclosures: 1. Amendment No.140 to License No. NPF-39
2. Amendment No.103 to License No. NPF-85
3. Safety Evaluation

cc w/encls: See next page

Limerick Generating Station, Units 1 & 2

cc:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PECO ENERGY COMPANY

DOCKET NO. 50-352

LIMERICK GENERATING STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 140
License No. NPF-39

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

   A. The application for amendment by PECO Energy Company (the licensee) dated June 7, 1999, as supplemented September 27, 1999, 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.

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 Operating License No. NPF-39 is hereby amended to read as follows:

   Technical Specifications

   The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 140 , are hereby incorporated into this license. PECO Energy Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

James W. Clifford, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the
Technical Specifications

Date of Issuance: April 5, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 140

FACILITY OPERATING LICENSE NO. NPF-39

DOCKET NO. 50-352

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
3/4 4-8	3/4 4-8
—	3/4 4-8a
B 3/4 4-3	B 3/4 4-3
—	B 3/4 4-3a
—	B 3/4 4-3b
—	B 3/4 4-3c
—	B 3/4 4-3d
—	B 3/4 4-3e

REACTOR COOLANT SYSTEM

3/4.4.3 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.3.1 The following reactor coolant leakage detection systems shall be OPERABLE:

a. The primary containment atmosphere gaseous radioactivity monitoring system,

b. The drywell floor drain sump flow monitoring system,

c. The drywell unit coolers condensate flow rate monitoring system, and

d. The primary containment pressure and temperature monitoring system.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.*
* - The primary containment gaseous radioactivity monitor is not required to be operable until Operational Condition 2.

ACTIONS:
NOTE: The provisions of 3.0.4 do not apply to ACTIONS A, B, D and E below.

A. With the primary containment atmosphere gaseous radioactivity monitoring system inoperable, analyze grab samples of primary containment atmosphere at least once per 12 hours AND restore primary containment atmosphere gaseous radioactivity monitoring system to OPERABLE status within 30 days.

B. With the drywell floor drain sump flow monitoring system INOPERABLE, restore the drywell floor drain sump flow monitoring system to OPERABLE status within 30 days AND increase monitoring frequency of drywell unit cooler condensate flow rate (SR 4.4.3.2.1.c) to once every 8 hours.

C. With the drywell unit coolers condensate flow rate monitoring system INOPERABLE, AND the primary containment atmosphere gaseous radioactivity monitoring system OPERABLE, perform a channel check of the primary containment atmosphere gaseous radioactivity monitoring system (SR 4.4.3.1.a) once per 8 hours.

D. With the primary containment pressure and temperature monitoring system INOPERABLE, restore the primary containment pressure and temperature monitoring system to OPERABLE status within 30 days. NOTE: All other Tech Spec Limiting Conditions For Operation and Surveillance Requirements associated with the primary containment pressure/temperature monitoring system still apply. Affected Tech Spec Sections include: 3/4.3.7.5, 4.4.3.2.1, 3/4.6.1.6, and 3/4.6.1.7.

E. With the primary containment atmosphere gaseous radioactivity monitoring system INOPERABLE AND the drywell unit coolers condensate flow rate monitoring system INOPERABLE, restore the primary containment atmosphere gaseous radioactivity monitoring system to OPERABLE status within 30 days OR restore the drywell unit coolers condensate flow rate monitoring system to OPERABLE status within 30 days. With the primary containment atmosphere gaseous radioactivity monitoring system inoperable, analyze grab samples of primary containment atmosphere at least once per 12 hours.

ACTIONS (Continued)

F. With any other two or more leak detection systems inoperable other than ACTION E above OR with required Actions and associated Completion Time of ACTIONS A, B, C, D or E not met, be in HOT SHUTDOWN within 12 hours AND in COLD SHUTDOWN within the next 24 hours.

SURVEILLANCE REQUIREMENTS

4.4.3.1 The reactor coolant system leakage detection systems shall be demonstrated operable by:

a. Perform a CHANNEL CHECK of the primary containment atmosphere gaseous radioactivity monitoring system at least once per 12 hours.

b. Perform a CHANNEL FUNCTIONAL TEST of required leakage detection instrumentation at least once per 31 days. This does not apply to containment pressure and temperature monitoring system.

c. Perform a CHANNEL CALIBRATION of required leakage detection instrumentation at least once per 24 months. This does not apply to containment pressure and temperature monitoring system.

d. Monitor primary containment pressure once per 12 hours AND monitor primary containment temperature at least once per 24 hours.

3/4.4.3 REACTOR COOLANT SYSTEM LEAKAGE

3/4.4.3.1 LEAKAGE DETECTION SYSTEMS

BACKGROUND

UFSAR Safety Design Basis (Ref. 1), requires means for detecting and, to the extent practical, identifying the location of the source of Reactor Coolant System (RCS) PRESSURE BOUNDARY LEAKAGE. Regulatory Guide 1.45 (Ref. 2) describes acceptable methods for selecting leakage detection systems.

Limits on leakage from the reactor coolant pressure boundary (RCPB) are required so that appropriate action can be taken before the integrity of the RCPB is impaired (Ref. 2). Leakage detection systems for the RCS are provided to alert the operators when leakage rates above normal background levels are detected and also to supply quantitative measurement of leakage rates.

Systems for separating the leakage of an identified source from an unidentified source are necessary to provide prompt and quantitative information to the operators to permit them to take immediate corrective action. Leakage from the RCPB inside the drywell is detected by at least one of four (4) independently monitored variables which include drywell drain sump level changes over time yielding drain flow rates, and drywell gaseous radioactivity, drywell unit cooler condensate flow rate and drywell pressure/temperature levels. The primary means of quantifying leakage in the drywell are the drywell floor drain sump flow monitoring system for UNIDENTIFIED LEAKAGE and the drywell equipment drain tank flow monitoring system for IDENTIFIED LEAKAGE. IDENTIFIED leakage is not germane to this Tech Spec and the associated drywell equipment drain tank flow monitoring system is not included.

The drywell floor drain sump flow monitoring system monitors UNIDENTIFIED LEAKAGE collected in the floor drain sump. UNIDENTIFIED LEAKAGE consists of leakage from RCPB components inside the drywell which are not normally subject to leakage and otherwise routed to the drywell equipment drain sump. The primary containment floor drain sump has transmitters that supply level indication to the main control room via the plant monitoring system. The floor drain sump level transmitters are associated with High/Low level switches that open/close the sump tank drain valves automatically. The level instrument processing unit calculates an average leak rate (gpm) for a given measurement period which resets whenever the sump drain valve closes. The level processing unit provides an alarm to the main control room each time the average leak rate changes by a predetermined value since the last time the alarm was reset. For the drywell floor drain sump flow monitoring system, the setpoint basis is a 1 gpm change in UNIDENTIFIED LEAKAGE.

In addition to the drywell floor drain sump flow monitoring system described above, the discharge of each sump is monitored by an independent flow element. The measured flow rate from the flow element is integrated and recorded. A main control room alarm is also provided to indicate an excessive sump discharge rate measured via the flow element. This system, referred to as the "drywell floor drain flow totalizer", is not credited for drywell floor drain sump flow monitoring system operability.

BACKGROUND (Continued)

The primary containment atmospheric gaseous radioactivity monitoring system continuously monitors the primary containment atmosphere for gaseous radioactivity levels. A sudden increase of radioactivity, which may be attributed to RCPB steam or reactor water leakage, is annunciated in the main control room. The primary containment atmospheric gaseous radioactivity monitoring system is not capable of quantifying leakage rates, but is sensitive enough to detect increased leakage rates of 1 gpm within 1 hour. Larger changes in leakage rates are detected in proportionally shorter times (Ref. 4).

Condensate from the eight drywell air coolers is routed to the drywell floor drain sump and is monitored by a series of flow transmitters that provide indication and alarms in the main control room. The outputs from the flow transmitters are added together by summing units to provide a total continuous condensate drain flow rate. The high flow alarm setpoint is based on condensate drain flow rate in excess of 1 gpm over the currently identified preset leak rate. The drywell air cooler condensate flow rate monitoring system serves as an added indicator, but not quantifier, of RCS UNIDENTIFIED LEAKAGE (Ref. 5).

The drywell temperature and pressure monitoring systems provide an indirect method for detecting RCPB leakage. A temperature and/or pressure rise in the drywell above normal levels may be indicative of a reactor coolant or steam leakage (Ref. 6).

APPLICABLE SAFETY ANALYSES

A threat of significant compromise to the RCPB exists if the barrier contains a crack that is large enough to propagate rapidly. Leakage rate limits are set low enough to detect the leakage emitted from a single crack in the RCPB (Refs. 7 and 8). Each of the leakage detection systems inside the drywell is designed with the capability of detecting leakage less than the established leakage rate limits and providing appropriate alarms of excess leakage in the control room.

A control room alarm allows the operators to evaluate the significance of the indicated leakage and, if necessary, shut down the reactor for further investigation and corrective action. The allowed leakage rates are well below the rates predicted for critical crack sizes (Ref. 8). Therefore, these actions provide adequate response before a significant break in the RCPB can occur.

RCS leakage detection instrumentation satisfies Criterion 1 of the NRC Policy Statement.

LIMITING CONDITION FOR OPERATION (LCO)

The drywell floor drain sump flow monitoring system is required to quantify the UNIDENTIFIED LEAKAGE from the RCS. The other monitoring systems provide early alarms to the operators so closer examination of other detection systems will be made to determine the extent of any corrective action that may be required. With any leakage detection system inoperable, monitoring for leakage in the RCPB is degraded.

APPLICABILITY

In OPERATIONAL CONDITIONS 1, 2, and 3, leakage detection systems are required to be OPERABLE to support LCO 3.4.3.2. This applicability is consistent with that for LCO 3.4.3.2.

ACTIONS

A. With the primary containment atmosphere gaseous monitoring system inoperable, grab samples of the primary containment atmosphere must be taken and analyzed to provide periodic leakage information. [Provided a sample is obtained and analyzed once every 12 hours, the plant may be operated for up to 30 days to allow restoration of the radioactivity monitoring system. The plant may continue operation since other forms of drywell leakage detection are available.]

   The 12 hour interval provides periodic information that is adequate to detect leakage. The 30 day Completion Time for Restoration recognizes other forms of leakage detection are available. The Required ACTIONS are modified by a Note that states that the provisions of LCO 3.0.4 are not applicable. As a result, an OPERATIONAL CONDITION change is allowed when the primary containment atmospheric gaseous monitoring system is inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage.

B. With the drywell floor drain sump flow monitoring system inoperable, no other form of sampling can provide the equivalent information to quantify leakage at the required 1 gpm/hour sensitivity. However, the primary containment atmospheric gaseous monitor [and the primary containment air cooler condensate flow rate monitor] will provide indication of changes in leakage.

   With the drywell floor drain sump flow monitoring system inoperable, drywell condensate flow rate monitoring frequency increased from 12 to every 8 hours, and UNIDENTIFIED LEAKAGE and total leakage being determined every 8 hours (Ref: SR 4.4.3.2.1.b) operation may continue for 30 days. To the extent practical, the surveillance frequency change associated with the drywell condensate flow rate monitoring system, makes up for the loss of the drywell floor drain sump monitoring system which had a normal surveillance requirement to monitor leakage every 8 hours. Also note that in this instance, the drywell floor drain tank flow totalizer will be used to comply with SR 4.4.3.2.1.b. The 30 day Completion Time of the required ACTION is acceptable, based on operating experience, considering the multiple forms of leakage detection that are still available. The required ACTION is modified by a Note that states that the provisions of LCO 3.0.4 are not applicable. As a result, an OPERATIONAL CONDITION change is allowed when the drywell floor drain sump monitoring system is inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage.

ACTIONS (Continued)

C. With the required primary containment air cooler condensate flow rate monitoring system inoperable, SR 4.4.3.1.a must be performed every 8 hours to provide periodic information of activity in the primary containment at a more frequent interval than the routine frequency of every 12 hours. The 8 hour interval provides periodic information that is adequate to detect leakage and recognizes that other forms of leakage detection are available. The required ACTION has been clarified to state that the additional surveillance requirement is not applicable if the required primary containment atmosphere gaseous radioactivity monitoring system is also inoperable. Consistent with SR 4.0.3, surveillances are not required to be performed on inoperable equipment. In this case, ACTION Statement A. and E. requirements apply.

D. With the primary containment pressure and temperature monitoring system inoperable, operation may continue for up to 30 days given the system's indirect capability to detect RCS leakage. However, other more limiting Tech Spec requirements associated with the primary containment pressure/temperature monitoring system will still apply.

E. With both the primary containment atmosphere gaseous radioactivity monitor and the primary containment air cooler condensate flow rate monitor inoperable, the only means of detecting leakage is the drywell floor drain sump monitor and the drywell pressure/temperature instrumentation. This condition does not provide the required diverse means of leakage detection. The required ACTION is to restore either of the inoperable monitors to OPERABLE status within 30 days to regain the intended leakage detection diversity. The 30 day Completion Time ensures that the plant will not be operated in a degraded configuration for a lengthy time period. The required ACTIONS are modified by a Note that states that the provisions of LCO 3.0.4 are not applicable. As a result, an OPERATIONAL CONDITION change is allowed when both the primary containment atmosphere gaseous radioactivity monitor and air cooler condensate flow rate monitors are inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage. While the primary containment atmosphere gaseous radioactivity monitor is INOPERABLE, Primary containment atmospheric grab samples will be taken and analyzed every 12 hours since ACTION Statement A. requirements also apply.

F. If any required ACTION of Conditions A, B, C, D or E cannot be met within the associated Completion Time, the plant must be brought to an OPERATIONAL CONDITION in which the LCO does not apply. To achieve this status, the plant must be brought to at least HOT SHUTDOWN within 12 hours and COLD SHUTDOWN within the next 24 hours. The allowed Completion Times are reasonable, based on operating experience, to perform the ACTIONS in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 4.4.3.1.a
This SR is for the performance of a CHANNEL CHECK of the required primary containment atmospheric monitoring system. The check gives reasonable confidence that the channel is operating properly. The Frequency of 12 hours is based on instrument reliability and is reasonable for detecting off normal conditions.

SURVEILLANCE REQUIREMENTS (Continued)

SR 4.4.3.1.b
This SR is for the performance of a CHANNEL FUNCTIONAL TEST of the required RCS leakage detection instrumentation. The test ensures that the monitors can perform their function in the desired manner. The test also verifies the alarm setpoint and relative accuracy of the instrument string. The Frequency of 31 days considers instrument reliability, and operating experience has shown it proper for detecting degradation.

SR 4.4.3.1.c
This SR is for the performance of a CHANNEL CALIBRATION of required leakage detection instrumentation channels. The calibration verifies the accuracy of the instrument string, including the instruments located inside containment. The Frequency of 24 months is for a typical refueling cycle and considers channel reliability. Operating experience has proven this frequency to be acceptable.

SR 4.4.3.1.d
This SR provides a routine check of primary containment pressure and temperature for indirect evidence of RCS leakage. Operating experience has proven this frequency to be acceptable.

REFERENCES

1. LGS UFSAR, Section 5.2.5.1.
2. Regulatory Guide 1.45, May 1973.
3. LGS UFSAR, Section 5.2.5.2.1.3.
4. LGS UFSAR, Section 5.2.5.2.1.5.
5. LGS UFSAR, Section 5.2.5.2.1.4.
6. LGS UFSAR, Section 5.2.5.2.1.1(2).
7. GEAP-5620, April 1968.
8. NUREG-75/067, October 1975.
9. LGS UFSAR, Section 5.2.5.6.

3/4.4.3.2 OPERATIONAL LEAKAGE

The allowable leakage rates from the reactor coolant system have been based on the predicted and experimentally observed behavior of cracks in pipes. The normally expected background leakage due to equipment design and the detection capability of the instrumentation for determining system leakage was also considered. The evidence obtained from experiments suggests that for leakage somewhat greater than that specified for UNIDENTIFIED LEAKAGE the probability is small that the imperfection or crack associated with such leakage would grow rapidly. However, in all cases, if the leakage rates exceed the values specified or the leakage is located and known to be PRESSURE BOUNDARY LEAKAGE, the reactor will be shutdown to allow further investigation and corrective action. The limit of 2 gpm increase in UNIDENTIFIED LEAKAGE over a 24-hour period and the monitoring of drywell floor drain sump and drywell equipment drain tank flow rate at least once every eight (8) hours conforms with NRC staff positions specified in NRC Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping," as revised by NRC Safety Evaluation dated March 6, 1990. The ACTION requirement for the 2 gpm increase in UNIDENTIFIED LEAKAGE limit ensures that such leakage is identified or a plant shutdown is initiated to allow further investigation and corrective action. Once identified, reactor operation may continue dependent upon the impact on total leakage.

3/4.4.3.2 OPERATIONAL LEAKAGE (Continued)

The ACTION requirements for pressure isolation valves (PIVs) are used in conjunction with the system specifications for which PIVs are listed in Table 3.4.3.2-1 and with primary containment isolation valve requirements to ensure that plant operation is appropriately limited.

The Surveillance Requirements for the RCS pressure isolation valves provide added assurance of valve integrity thereby reducing the probability of gross valve failure and consequent intersystem LOCA. Leakage from the RCS pressure isolation valves is IDENTIFIED LEAKAGE and will be considered as a portion of the allowed limit.

3/4.4.4 CHEMISTRY

The water chemistry limits of the reactor coolant system are established to prevent damage to the reactor materials in contact with the coolant. Chloride limits are specified to prevent stress corrosion cracking of the stainless steel. The effect of chloride is not as great when the oxygen concentration in the coolant is low, thus the 0.2 ppm limit on chlorides is permitted during POWER OPERATION. During shutdown and refueling operations, the temperature necessary for stress corrosion to occur is not present so a 0.5 ppm concentration of chlorides is not considered harmful during these periods.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PECO ENERGY COMPANY

DOCKET NO. 50-353

LIMERICK GENERATING STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 103
License No. NPF-85

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

   A. The application for amendment by PECO Energy Company (the licensee) dated June 7, 1999, as supplemented September 27, 1999, 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.

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 Operating License No. NPF-85 is hereby amended to read as follows:

   Technical Specifications

   The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 103 , are hereby incorporated in the license. PECO Energy Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

James W. Clifford

James W. Clifford, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the
Technical Specifications

Date of Issuance: April 5, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 103

FACILITY OPERATING LICENSE NO. NPF-85

DOCKET NO. 50-353

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
3/4 4-8	3/4 4-8
—	3/4 4-8a
B 3/4 4-3	B 3/4 4-3
B 3/4 4-3a	B 3/4 4-3a
—	B 3/4 4-3b
—	B 3/4 4-3c
—	B 3/4 4-3d
—	B 3/4 4-3e

REACTOR COOLANT SYSTEM

3/4.4.3 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.3.1 The following reactor coolant leakage detection systems shall be OPERABLE:

a. The primary containment atmosphere gaseous radioactivity monitoring system,

b. The drywell floor drain sump flow monitoring system,

c. The drywell unit coolers condensate flow rate monitoring system, and

d. The primary containment pressure and temperature monitoring system.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.*
* - The primary containment gaseous radioactivity monitor is not required to be operable until Operational Condition 2.

ACTIONS:
NOTE: The provisions of 3.0.4 do not apply to ACTIONS A, B, D and E below.

A. With the primary containment atmosphere gaseous radioactivity monitoring system inoperable, analyze grab samples of primary containment atmosphere at least once per 12 hours AND restore primary containment atmosphere gaseous radioactivity monitoring system to OPERABLE status within 30 days.

B. With the drywell floor drain sump flow monitoring system INOPERABLE, restore the drywell floor drain sump flow monitoring system to OPERABLE status within 30 days AND increase monitoring frequency of drywell unit cooler condensate flow rate (SR 4.4.3.2.1.c) to once every 8 hours.

C. With the drywell unit coolers condensate flow rate monitoring system INOPERABLE, AND the primary containment atmosphere gaseous radioactivity monitoring system OPERABLE, perform a channel check of the primary containment atmosphere gaseous radioactivity monitoring system (SR 4.4.3.1.a) once per 8 hours.

D. With the primary containment pressure and temperature monitoring system INOPERABLE, restore the primary containment pressure and temperature monitoring system to OPERABLE status within 30 days. NOTE: All other Tech Spec Limiting Conditions For Operation and Surveillance Requirements associated with the primary containment pressure/temperature monitoring system still apply. Affected Tech Spec Sections include: 3/4.3.7.5, 4.4.3.2.1, 3/4.6.1.6, and 3/4.6.1.7.

E. With the primary containment atmosphere gaseous radioactivity monitoring system INOPERABLE AND the drywell unit coolers condensate flow rate monitoring system INOPERABLE, restore the primary containment atmosphere gaseous radioactivity monitoring system to OPERABLE status within 30 days OR restore the drywell unit coolers condensate flow rate monitoring system to OPERABLE status within 30 days. With the primary containment atmosphere gaseous radioactivity monitoring system inoperable, analyze grab samples of primary containment atmosphere at least once per 12 hours.

ACTIONS (Continued)

F. With any other two or more leak detection systems inoperable other than ACTION E above OR with required Actions and associated Completion Time of ACTIONS A, B, C, D or E not met, be in HOT SHUTDOWN within 12 hours AND in COLD SHUTDOWN within the next 24 hours.

SURVEILLANCE REQUIREMENTS

4.4.3.1 The reactor coolant system leakage detection systems shall be demonstrated operable by:

a. Perform a CHANNEL CHECK of the primary containment atmosphere gaseous radioactivity monitoring system at least once per 12 hours.

b. Perform a CHANNEL FUNCTIONAL TEST of required leakage detection instrumentation at least once per 31 days. This does not apply to containment pressure and temperature monitoring system.

c. Perform a CHANNEL CALIBRATION of required leakage detection instrumentation at least once per 24 months. This does not apply to containment pressure and temperature monitoring system.

d. Monitor primary containment pressure once per 12 hours AND monitor primary containment temperature at least once per 24 hours.

3/4.4.3 REACTOR COOLANT SYSTEM LEAKAGE

3/4.4.3.1 LEAKAGE DETECTION SYSTEMS

BACKGROUND

UFSAR Safety Design Basis (Ref. 1), requires means for detecting and, to the extent practical, identifying the location of the source of Reactor Coolant System (RCS) PRESSURE BOUNDARY LEAKAGE. Regulatory Guide 1.45 (Ref. 2) describes acceptable methods for selecting leakage detection systems.

Limits on leakage from the reactor coolant pressure boundary (RCPB) are required so that appropriate action can be taken before the integrity of the RCPB is impaired (Ref. 2). Leakage detection systems for the RCS are provided to alert the operators when leakage rates above normal background levels are detected and also to supply quantitative measurement of leakage rates.

Systems for separating the leakage of an identified source from an unidentified source are necessary to provide prompt and quantitative information to the operators to permit them to take immediate corrective action. Leakage from the RCPB inside the drywell is detected by at least one of four (4) independently monitored variables which include drywell drain sump level changes over time yielding drain flow rates, and drywell gaseous radioactivity, drywell unit cooler condensate flow rate and drywell pressure/temperature levels. The primary means of quantifying leakage in the drywell are the drywell floor drain sump flow monitoring system for UNIDENTIFIED LEAKAGE and the drywell equipment drain tank flow monitoring system for IDENTIFIED LEAKAGE. IDENTIFIED leakage is not germane to this Tech Spec and the associated drywell equipment drain tank flow monitoring system is not included.

The drywell floor drain sump flow monitoring system monitors UNIDENTIFIED LEAKAGE collected in the floor drain sump. UNIDENTIFIED LEAKAGE consists of leakage from RCPB components inside the drywell which are not normally subject to leakage and otherwise routed to the drywell equipment drain sump. The primary containment floor drain sump has transmitters that supply level indication to the main control room via the plant monitoring system. The floor drain sump level transmitters are associated with High/Low level switches that open/close the sump tank drain valves automatically. The level instrument processing unit calculates an average leak rate (gpm) for a given measurement period which resets whenever the sump drain valve closes. The level processing unit provides an alarm to the main control room each time the average leak rate changes by a predetermined value since the last time the alarm was reset. For the drywell floor drain sump flow monitoring system, the setpoint basis is a 1 gpm change in UNIDENTIFIED LEAKAGE.

In addition to the drywell floor drain sump flow monitoring system described above, the discharge of each sump is monitored by an independent flow element. The measured flow rate from the flow element is integrated and recorded. A main control room alarm is also provided to indicate an excessive sump discharge rate measured via the flow element. This system, referred to as the "drywell floor drain flow totalizer", is not credited for drywell floor drain sump flow monitoring system operability.

BACKGROUND (Continued)

The primary containment atmospheric gaseous radioactivity monitoring system continuously monitors the primary containment atmosphere for gaseous radioactivity levels. A sudden increase of radioactivity, which may be attributed to RCPB steam or reactor water leakage, is annunciated in the main control room. The primary containment atmospheric gaseous radioactivity monitoring system is not capable of quantifying leakage rates, but is sensitive enough to detect increased leakage rates of 1 gpm within 1 hour. Larger changes in leakage rates are detected in proportionally shorter times (Ref. 4).

Condensate from the eight drywell air coolers is routed to the drywell floor drain sump and is monitored by a series of flow transmitters that provide indication and alarms in the main control room. The outputs from the flow transmitters are added together by summing units to provide a total continuous condensate drain flow rate. The high flow alarm setpoint is based on condensate drain flow rate in excess of 1 gpm over the currently identified preset leak rate. The drywell air cooler condensate flow rate monitoring system serves as an added indicator, but not quantifier, of RCS UNIDENTIFIED LEAKAGE (Ref. 5).

The drywell temperature and pressure monitoring systems provide an indirect method for detecting RCPB leakage. A temperature and/or pressure rise in the drywell above normal levels may be indicative of a reactor coolant or steam leakage (Ref. 6).

APPLICABLE SAFETY ANALYSES

A threat of significant compromise to the RCPB exists if the barrier contains a crack that is large enough to propagate rapidly. Leakage rate limits are set low enough to detect the leakage emitted from a single crack in the RCPB (Refs. 7 and 8). Each of the leakage detection systems inside the drywell is designed with the capability of detecting leakage less than the established leakage rate limits and providing appropriate alarms of excess leakage in the control room.

A control room alarm allows the operators to evaluate the significance of the indicated leakage and, if necessary, shut down the reactor for further investigation and corrective action. The allowed leakage rates are well below the rates predicted for critical crack sizes (Ref. 8). Therefore, these actions provide adequate response before a significant break in the RCPB can occur.

RCS leakage detection instrumentation satisfies Criterion 1 of the NRC Policy Statement.

LIMITING CONDITION FOR OPERATION (LCO)

The drywell floor drain sump flow monitoring system is required to quantify the UNIDENTIFIED LEAKAGE from the RCS. The other monitoring systems provide early alarms to the operators so closer examination of other detection systems will be made to determine the extent of any corrective action that may be required. With any leakage detection system inoperable, monitoring for leakage in the RCPB is degraded.

APPLICABILITY

In OPERATIONAL CONDITIONS 1, 2, and 3, leakage detection systems are required to be OPERABLE to support LCO 3.4.3.2. This applicability is consistent with that for LCO 3.4.3.2.

ACTIONS

A. With the primary containment atmosphere gaseous monitoring system inoperable, grab samples of the primary containment atmosphere must be taken and analyzed to provide periodic leakage information. [Provided a sample is obtained and analyzed once every 12 hours, the plant may be operated for up to 30 days to allow restoration of the radioactivity monitoring system. The plant may continue operation since other forms of drywell leakage detection are available.]

The 12 hour interval provides periodic information that is adequate to detect leakage. The 30 day Completion Time for Restoration recognizes other forms of leakage detection are available. The Required ACTIONS are modified by a Note that states that the provisions of LCO 3.0.4 are not applicable. As a result, an OPERATIONAL CONDITION change is allowed when the primary containment atmospheric gaseous monitoring system is inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage.

B. With the drywell floor drain sump flow monitoring system inoperable, no other form of sampling can provide the equivalent information to quantify leakage at the required 1 gpm/hour sensitivity. However, the primary containment atmospheric gaseous monitor [and the primary containment air cooler condensate flow rate monitor] will provide indication of changes in leakage.

With the drywell floor drain sump flow monitoring system inoperable, drywell condensate flow rate monitoring frequency increased from 12 to every 8 hours, and UNIDENTIFIED LEAKAGE and total leakage being determined every 8 hours (Ref: SR 4.4.3.2.1.b) operation may continue for 30 days. To the extent practical, the surveillance frequency change associated with the drywell condensate flow rate monitoring system, makes up for the loss of the drywell floor drain sump monitoring system which had a normal surveillance requirement to monitor leakage every 8 hours. Also note that in this instance, the drywell floor drain tank flow totalizer will be used to comply with SR 4.4.3.2.1.b. The 30 day Completion Time of the required ACTION is acceptable, based on operating experience, considering the multiple forms of leakage detection that are still available. The required ACTION is modified by a Note that states that the provisions of LCO 3.0.4 are not applicable. As a result, an OPERATIONAL CONDITION change is allowed when the drywell floor drain sump monitoring system is inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage.

ACTIONS (Continued)

C. With the required primary containment air cooler condensate flow rate monitoring system inoperable, SR 4.4.3.1.a must be performed every 8 hours to provide periodic information of activity in the primary containment at a more frequent interval than the routine frequency of every 12 hours. The 8 hour interval provides periodic information that is adequate to detect leakage and recognizes that other forms of leakage detection are available. The required ACTION has been clarified to state that the additional surveillance requirement is not applicable if the required primary containment atmosphere gaseous radioactivity monitoring system is also inoperable. Consistent with SR 4.0.3, surveillances are not required to be performed on inoperable equipment. In this case, ACTION Statement A. and E. requirements apply.

D. With the primary containment pressure and temperature monitoring system inoperable, operation may continue for up to 30 days given the system's indirect capability to detect RCS leakage. However, other more limiting Tech Spec requirements associated with the primary containment pressure/temperature monitoring system will still apply.

E. With both the primary containment atmosphere gaseous radioactivity monitor and the primary containment air cooler condensate flow rate monitor inoperable, the only means of detecting leakage is the drywell floor drain sump monitor and the drywell pressure/temperature instrumentation. This condition does not provide the required diverse means of leakage detection. The required ACTION is to restore either of the inoperable monitors to OPERABLE status within 30 days to regain the intended leakage detection diversity. The 30 day Completion Time ensures that the plant will not be operated in a degraded configuration for a lengthy time period. The required ACTIONS are modified by a Note that states that the provisions of LCO 3.0.4 are not applicable. As a result, an OPERATIONAL CONDITION change is allowed when both the primary containment atmosphere gaseous radioactivity monitor and air cooler condensate flow rate monitors are inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage. While the primary containment atmosphere gaseous radioactivity monitor is INOPERABLE, Primary containment atmospheric grab samples will be taken and analyzed every 12 hours since ACTION Statement A. requirements also apply.

F. If any required ACTION of Conditions A, B, C, D or E cannot be met within the associated Completion Time, the plant must be brought to an OPERATIONAL CONDITION in which the LCO does not apply. To achieve this status, the plant must be brought to at least HOT SHUTDOWN within 12 hours and COLD SHUTDOWN within the next 24 hours. The allowed Completion Times are reasonable, based on operating experience, to perform the ACTIONS in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 4.4.3.1.a
This SR is for the performance of a CHANNEL CHECK of the required primary containment atmospheric monitoring system. The check gives reasonable confidence that the channel is operating properly. The Frequency of 12 hours is based on instrument reliability and is reasonable for detecting off normal conditions.

SURVEILLANCE REQUIREMENTS (Continued)

SR 4.4.3.1.b
This SR is for the performance of a CHANNEL FUNCTIONAL TEST of the required RCS leakage detection instrumentation. The test ensures that the monitors can perform their function in the desired manner. The test also verifies the alarm setpoint and relative accuracy of the instrument string. The Frequency of 31 days considers instrument reliability, and operating experience has shown it proper for detecting degradation.

SR 4.4.3.1.c
This SR is for the performance of a CHANNEL CALIBRATION of required leakage detection instrumentation channels. The calibration verifies the accuracy of the instrument string, including the instruments located inside containment. The Frequency of 24 months is for a typical refueling cycle and considers channel reliability. Operating experience has proven this frequency to be acceptable.

SR 4.4.3.1.d
This SR provides a routine check of primary containment pressure and temperature for indirect evidence of RCS leakage. Operating experience has proven this frequency to be acceptable.

REFERENCES

1. LGS UFSAR, Section 5.2.5.1.
2. Regulatory Guide 1.45, May 1973.
3. LGS UFSAR, Section 5.2.5.2.1.3.
4. LGS UFSAR, Section 5.2.5.2.1.5.
5. LGS UFSAR, Section 5.2.5.2.1.4.
6. LGS UFSAR, Section 5.2.5.2.1.1(2).
7. GEAP-5620, April 1968.
8. NUREG-75/067, October 1975.
9. LGS UFSAR, Section 5.2.5.6.

3/4.4.3.2 OPERATIONAL LEAKAGE

The allowable leakage rates from the reactor coolant system have been based on the predicted and experimentally observed behavior of cracks in pipes. The normally expected background leakage due to equipment design and the detection capability of the instrumentation for determining system leakage was also considered. The evidence obtained from experiments suggests that for leakage somewhat greater than that specified for UNIDENTIFIED LEAKAGE the probability is small that the imperfection or crack associated with such leakage would grow rapidly. However, in all cases, if the leakage rates exceed the values specified or the leakage is located and known to be PRESSURE BOUNDARY LEAKAGE, the reactor will be shutdown to allow further investigation and corrective action. The limit of 2 gpm increase in UNIDENTIFIED LEAKAGE over a 24-hour period and the monitoring of drywell floor drain sump and drywell equipment drain tank flow rate at least once every eight (8) hours conforms with NRC staff positions specified in NRC Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping," as revised by NRC Safety Evaluation dated March 6, 1990. The ACTION requirement for the 2 gpm increase in UNIDENTIFIED LEAKAGE limit ensures that such leakage is identified or a plant shutdown is initiated to allow further investigation and corrective action. Once identified, reactor operation may continue dependent upon the impact on total leakage.

3/4.4.3.2 OPERATIONAL LEAKAGE (Continued)

The ACTION requirements for pressure isolation valves (PIVs) are used in conjunction with the system specifications for which PIVs are listed in Table 3.4.3.2-1 and with primary containment isolation valve requirements to ensure that plant operation is appropriately limited.

The Surveillance Requirements for the RCS pressure isolation valves provide added assurance of valve integrity thereby reducing the probability of gross valve failure and consequent intersystem LOCA. Leakage from the RCS pressure isolation valves is IDENTIFIED LEAKAGE and will be considered as a portion of the allowed limit.

3/4.4.4 CHEMISTRY

The water chemistry limits of the reactor coolant system are established to prevent damage to the reactor materials in contact with the coolant. Chloride limits are specified to prevent stress corrosion cracking of the stainless steel. The effect of chloride is not as great when the oxygen concentration in the coolant is low, thus the 0.2 ppm limit on chlorides is permitted during POWER OPERATION. During shutdown and refueling operations, the temperature necessary for stress corrosion to occur is not present so a 0.5 ppm concentration of chlorides is not considered harmful during these periods.

Conductivity measurements are required on a continuous basis since changes in this parameter are an indication of abnormal conditions. When the conductivity is within limits, the pH, chlorides and other impurities affecting conductivity must also be within their acceptable limits. With the conductivity meter inoperable, additional samples must be analyzed to ensure that the chlorides are not exceeding the limits.

The surveillance requirements provide adequate assurance that concentrations in excess of the limits will be detected in sufficient time to take corrective action.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 140 AND 103 TO FACILITY OPERATING

LICENSE NOS. NPF-39 AND NPF-85

PECO ENERGY COMPANY

LIMERICK GENERATING STATION, UNITS 1 AND 2

DOCKET NOS. 50-352 AND 50-353

1.0 INTRODUCTION

By letter dated June 7, 1999 (Reference 1), as supplemented by letter dated September 27, 1999 (Reference 2), PECO Energy Company (PECO), the licensee, requested a Technical Specification (TS) change for Limerick Generating Station, Units 1 and 2 (Limerick Units 1 and 2). The license amendment would clarify the action statement concerning inoperative reactor coolant leakage detection systems in TS 3/4.4.3.1. The requested changes would also make the TS and bases more consistent with the Improved Standard Technical Specifications (STS), NUREG-1433, Revision 1, (Reference 3). The September 27, 1999, letter provided clarifying information that did not change the staff's initial proposed no significant hazards consideration determination.

2.0 EVALUATION

Regulatory Guide (RG) 1.45 (Reference 4) provides the staff's position on reactor coolant pressure boundary leakage detection systems. In particular, regulatory positions 3 and 9, below, are applicable to the licensee's request.

> *3. At least three separate detection methods should be employed and two of these methods should be (1) sump level and flow monitoring and (2) airborne particulate radioactivity monitoring. The third method may be selected from the following:*
>
> *a. Monitoring of condensate flow rate from air coolers,*
>
> *b. Monitoring of airborne gaseous radioactivity.*
>
> *Humidity, temperature, or pressure monitoring of the containment atmosphere should be considered as alarms or indirect indication of leakage to the containment.*
>
> *9. The technical specifications should include the limiting conditions for identified and unidentified leakage and address the availability of various type of instruments to assure adequate coverage at all times.*

The current Limerick Units 1 and 2 TS 3/4.4.3.1, "Reactor Coolant System (RCS) Leakage - Leakage Detection Systems, Limiting Condition for Operation (LCO)," requires four leakage detection systems to be operable. These include (1) the primary containment atmosphere gaseous radioactivity monitoring system, (2) the drywell floor drain sump and drywell equipment drain tank flow monitoring system, (3) the drywell unit coolers condensate flow rate monitoring system, and (4) the primary containment pressure and temperature monitoring system.

The licensee has proposed to modify the LCO with regards to the drywell floor drain sump and drywell equipment drain tank flow monitoring system. Since the drywell equipment drain tank does not provide indication of potential RCS unidentified leakage, the revised LCO would not require the drywell equipment drain tank to be operable. As such, the proposed LCO would read as follows:

The following reactor coolant leakage detection systems shall be OPERABLE:

a. *The primary containment atmosphere gaseous radioactivity monitoring system,*

b. *The drywell floor drain sump flow monitoring system,*

c. *The drywell unit coolers condensate flow rate monitoring system, and*

d. *The primary containment pressure and temperature monitoring system.*

The proposed LCO is consistent with NUREG-1433, Revision 1, STS 3.4.6, RCS Leakage Detection Instrumentation. Additionally, the proposed LCO meets the intent of the guidance of RG 1.45, regulatory position 3. Based on this information, the staff finds the proposed LCO acceptable.

The licensee proposed to replace the current Action Statements, TS 3.4.3.1, with Action Statements (A, B, C, D, E, and F) that are consistent with NUREG-1433, Revision 1. The licensee also proposed an additional Action Statement which would address the primary containment pressure and temperature monitoring system. The following proposed Action Statements are consistent with NUREG-1433, Revision 1.

A. *With the primary containment atmosphere gaseous radioactivity monitoring system inoperable, analyze grab samples of primary containment atmosphere at least once per 12 hours AND restore primary containment atmosphere gaseous radioactivity monitoring system to OPERABLE status within 30 days.*

C. *With the drywell unit coolers condensate flow rate monitoring system INOPERABLE, AND the primary containment atmosphere gaseous radioactivity monitoring system OPERABLE, perform a channel check of the primary containment atmosphere gaseous radioactivity monitoring system (SR 4.4.3.1.a) once per 8 hours.*

E. With the primary containment atmosphere gaseous radioactivity monitoring system INOPERABLE AND the drywell unit coolers condensate flow rate monitoring system INOPERABLE, restore the primary containment atmosphere gaseous radioactivity monitoring system to OPERABLE status within 30 days OR restore the drywell unit coolers condensate flow rate monitoring system to OPERABLE status within 30 days. With the primary containment atmosphere gaseous radioactivity monitoring system inoperable, analyze grab samples of primary containment atmosphere at least once per 12 hours.

F. With any other two or more leak detection systems inoperable other than ACTION E above OR with required Actions and associated Completion Time of ACTIONS A, B, C, D or E not met, be in HOT SHUTDOWN within 12 hours AND in COLD SHUTDOWN within the next 24 hours.

Proposed Action Statement B is also consistent with NUREG-1433, Revision 1, however it includes a statement which increases the surveillance frequency from 12 to 8 hours.

B. With the drywell floor drain sump flow monitoring system INOPERABLE, restore the drywell floor drain sump flow monitoring system to OPERABLE status within 30 days AND increase monitoring frequency of drywell unit cooler condensate flow rate (SR 4.4.3.2.1.c) to once every 8 hours.

Proposed Action Statement D applies to the primary containment pressure and temperature monitoring system.

D. With the primary containment pressure and temperature monitoring system INOPERABLE, restore the primary containment pressure and temperature monitoring system to OPERABLE status within 30 days. NOTE: All other Tech Spec Limiting Conditions For Operation and Surveillance Requirements associated with the primary containment pressure/temperature monitoring system still apply. Affected Tech Spec Sections include: 3/4.3.7.5, 4.4.3.2.1, 3/4.6.1.6, and 3/4.6.1.7.

The staff has reviewed the proposed Action Statements and has confirmed that the Action Statements are consistent with NUREG-1433, Revision 1. With regards to proposed Action Statements B and D, the staff concludes that the proposed Action Statements are appropriate to ensure the operability of the primary containment pressure and temperature monitoring system and the drywell floor drain sump flow monitoring system. The staff concludes that the revised Action Statements meets the guidance of RG 1.45, regulatory position 9, in that they include the limiting conditions for identified and unidentified leakage and address the availability of various types of instruments to assure adequate coverage at all times. Based on this information, the staff finds the proposed Action Statements acceptable.

The licensee proposed to replace the current Surveillance Requirements (SR), SR 4.4.3.1, with SRs that are consistent with NUREG-1433, Revision 1. The licensee also proposed an additional SR which would address the primary containment pressure and temperature monitoring system. The following proposed SRs are consistent with NUREG-1433, Revision 1.

a. *Perform a CHANNEL CHECK of the primary containment atmosphere gaseous radioactivity monitoring system at least once per 12 hours.*

b. *Perform a CHANNEL FUNCTIONAL TEST of required leakage detection instrumentation at least once per 31 days. This does not apply to containment pressure and temperature monitoring system.*

c. *Perform a CHANNEL CALIBRATION of required leakage detection instrumentation at least once per 24 months. This does not apply to containment pressure and temperature monitoring system.*

d. *Monitor primary containment pressure once per 12 hours AND monitor primary containment temperature at least once per 24 hours.*

The proposed SRs, a, b, and c, are consistent with NUREG-1433, Revision 1. The surveillance frequency of once-per-24-months in SR 4.4.3.1.c is consistent with the current Limerick Units 1 and 2 TS 3/4.4.3.1. SR 4.4.3.1 is also consistent with the current requirements of TS 3/4.4.3.1. Based on this information, the staff concludes that the proposed SRs are acceptable.

The licensee has also proposed to replace the current TS Bases 3/4.4.3.1. The revised Bases would provide a detailed discussion of the leakage detection systems including background and applicable safety analyses. The proposed Bases also discuss the leakage detection capabilities of each system. The staff finds that the proposed Bases enhance the current TS Bases, and therefore, are acceptable.

3.0 SUMMARY

The staff has reviewed PECO's submittals and supporting documentation. The staff has concluded that the proposed TS and Bases changes are consistent with RG 1.45 and NUREG-1433, Revision 1, and therefore are acceptable. Regarding proposed Action Statements B and D, the staff concludes that the proposed Action Statements are appropriate to ensure the operability of the primary containment pressure and temperature monitoring system and the drywell floor drain sump flow monitoring system. The staff concludes that there is reasonable assurance that plant operation in this manner poses no undue risk to the health and safety of the public.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Pennsylvania State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change the surveillance requirements. The NRC 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 the amendments involve no significant hazards consideration, and there has been no public comment on such finding (64 FR 38034). Accordingly, the 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 or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: K. Kavanagh

Date: April 5, 2000