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U. S. Nuclear Regulatory Commission
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SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED LICENSE AMENDMENT
NUMBERS 263 FOR UNIT 1 AND 228 FOR UNIT 2
FOR A ONE-TIME CHANGE TO TECHNICAL
SPECIFICATIONS 3.6.4.1 AND 3.6.4.3, COMPLETION
TIME FOR SECONDARY CONTAINMENT AND
STANDBY GAS TREATMENT SUBSYSTEMS
PLA-5734

Docket Nos. 50-387
and 50-388

Pursuant to 10 CFR 50.90, PPL Susquehanna, LLC (PPL) hereby requests the following amendments to the Susquehanna Steam Electric Station (SSES) Unit 1 and Unit 2 Technical Specifications (TS), as described in the enclosure. The proposed amendments would change the Technical Specifications for Secondary Containment and the Standby Gas Treatment System (SGTS) to extend, on a one-time basis, the allowable Completion Time for Required Actions for Secondary Containment inoperable and two SGTS subsystems inoperable, in Mode 1, 2, or 3, from 4 hours to 48 hours. This change is needed to allow sufficient time for the planned replacement of the Reactor Building Recirculating Fan Damper Motors while both units remain at power, thus avoiding a two unit shutdown. The reason for the replacement is to complete required Equipment Qualification preventive maintenance on these dampers.

As demonstrated in the enclosed evaluation, the proposed amendments do not involve a significant hazards consideration.

The justification for the change to the Secondary Containment and Standby Gas Treatment Required Action Completion Times is based upon the evaluation presented in the Enclosure.

PPL Susquehanna, LLC requests approval of the proposed one-time change to the SSES Technical Specifications by August 1, 2005 to support the planned replacement of the Reactor Building Recirculating Fan Damper Motors, to be performed in September 2005. This one-time change would be effective from the date of issuance until December 31, 2005.

A00

Attachments 1 and 2 are the Technical Specifications marked-up and retyped. Attachment 3 lists the PPL Susquehanna, LLC Regulatory Commitments that would derive from NRC's approval of the proposed amendment. For your information, Attachment 4 is a mark-up showing the changes to the Technical Specification Bases.

The need for this change has been discussed with the SSES NRC Project Manager.

The proposed changes have been approved by the SSES Plant Operations Review Committee and reviewed by the Susquehanna Review Committee. In accordance with 10 CFR 50.91(b), PPL Susquehanna LLC is providing the Commonwealth of Pennsylvania with a copy of this proposed License Amendment request.

Should you have any questions or require additional information, please contact Mr. Michael H. Crowthers at (610) 774-7766.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 9-8-05

B. T. McKinney

Enclosure:
PPL Susquehanna Evaluation of the Proposed Changes

Attachments:
Attachment 1 – Proposed Technical Specification Changes (Mark-up)
Attachment 2 – Proposed Technical Specification Pages (Retyped)
Attachment 3 – List of Regulatory Commitments
Attachment 4 – Changes to Technical Specifications Bases Pages (Mark-up)

Copy: NRC Region 1
Mr. A. J. Blamey, Sr. Resident NRC Inspector
Mr. R. V. Guzman, NRC Project Manager
Mr. R. Janati DEP/BRP

Enclosure to PLA-5734

PPL Susquehanna Evaluation of Proposed One-Time Change to Technical Specifications 3.6.4.1 and 3.6.4.3, Completion Time for Secondary Containment and two Standby Gas Treatment Subsystems Inoperable

SUBJECT: Application for a one-time amendment to Technical Specifications 3.6.4.1 and 3.6.4.3, to allow extension of Completion Time of Required Actions for Secondary Containment inoperable and two Standby Gas Treatment Subsystems inoperable.

1.0 DESCRIPTION

The proposal would change the Technical Specification for Secondary Containment and the Standby Gas Treatment System (SGTS), to extend, on a one-time basis, the allowable Completion Time for Required Actions for Secondary Containment and two SGTS subsystems inoperable in Mode 1, 2, or 3, from 4 hours to 48 hours, while both units remain at power. The requested changes are based upon the Susquehanna Steam Electric Station (SSES) Technical Analysis presented in Section 4.0 of the evaluation. The proposed changes would allow sufficient time for the planned replacement of the two Reactor Building Recirculating Fan Damper Motors (HDMO7545A and HDMO7545B), while both units remain at power.

Damper motor HDMO7545B is at the end of its qualification life. The lifetime was extended via reanalysis. It has been determined that replacement is required. Although damper motor HDMO7545A does not require replacement at this time, it is deemed prudent to replace it concurrently. Following replacement, both dampers will be qualified to the end of current plant life.

2.0 PROPOSED CHANGE

In order to effect this one-time change, Technical Specification (TS) 3.6.4.1 Secondary Containment would be revised by modifying the Completion Time for Required Action A. The modification includes a new Completion Time, which reads "48 hours for a one-time outage for replacement of the Reactor Building Recirculating Fan Damper Motors, to be completed by December 31, 2005." This new Completion Time will be connected with a logical connector "OR." The changes to TS 3.6.4.1 are marked-up on Technical Specification pages in Attachment 1.

TS 3.6.4.3 SGTS System would also be revised by modifying the Completion Time for Required Action D. The modification includes a new Completion Time, which reads "48 hours for a one-time outage for replacement of the Reactor Building Recirculating Fan Damper Motors, to be completed by December 31, 2005." This new Completion Time will be connected with a logical connector "OR." The changes to TS 3.6.4.3 are marked-up on Technical Specification pages in Attachment 1.

Upon approval of the proposed change, PPL Susquehanna will revise TS Bases 3.6.4.1 and 3.6.4.3 under the Technical Specifications Bases Control program, by inserting the information below (see Attachment 4).

> A temporary (one-time) Completion Time is connected to the Completion Time requirements above (4 hours) with an "OR" connector. The temporary Completion Time is 48 hours and applies to the replacement of the Reactor Building Recirculating Fan Damper Motors. The temporary Completion Time of 48 hours may only be used once, and expires on December 31, 2005.

Marked-up and retyped Technical Specification pages and marked-up Technical Specification Bases pages, which incorporate the proposed changes, are provided in Attachments 1, 2, and 4, respectively. Attachment 3 is the list of Regulatory Commitments.

3.0 BACKGROUND

During normal operation, the Secondary Containment is required to be kept at a minimum negative pressure of 0.25 inches of water gauge with respect to outside. This is to assure that all leakage will be into the Secondary Containment. During normal operation this is accomplished by non-safety related HVAC systems.

When a Secondary Containment isolation signal is received, the safety related Reactor Building (RB) Recirculating and SGTS fans start and the normal operating, non-safety related HVAC systems are tripped. The isolated Secondary Containment zones will align to the RB Recirculation Plenum by opening of isolation dampers. The SGTS is connected to and draws air from the RB Recirculation Plenum. The removal of air from the Recirculation Plenum maintains the Secondary Containment at a negative pressure of 0.25 inches of water gauge with respect to outside.

3.1 Definition of Zone Boundaries

The Secondary Containment is divided into three isolated ventilation zones. Zones I and II surround respective Units 1 and 2 Primary Containment below the floor at elevation 779 ft-1 in. and also include stairwells and elevator machine rooms and shafts above elevation 779 ft-1 in. Zone III includes Units 1 and 2 Secondary Containment above the floor at elevation 779 ft-1 in. including the refueling floor, but excluding the HVAC fan and equipment rooms.

3.2 System Descriptions

3.2.1 Secondary Containment

The following are provided to control fission products within the Secondary Containment following a design basis accident:

a) A Secondary Containment that completely surrounds each of the two Primary Containments.

b) The Standby Gas Treatment System (SGTS).

c) A Recirculation System.

The Secondary Containment consists of a reinforced concrete structure up to the refueling floor (El. 818 ft. 1 in.) and of a metal sided superstructure above El. 818 ft. 1 in.

The Secondary Containment consists of the three ventilation zones (I, II, and III) discussed above.

The SGTS is used to maintain the affected zone(s) of the Secondary Containment at a negative pressure.

3.2.2 Standby Gas Treatment System (SGTS)

The Standby Gas Treatment System is designed to accomplish the following safety related objectives:

a) Exhaust sufficient filtered air from the reactor building to maintain a minimum negative pressure of 0.25 inches of water in the affected volumes following Secondary Containment isolation for the following design basis events:

(1) Irradiated fuel handling accident in the refueling floor area

(2) Loss of Coolant Accident (LOCA)

b) Filter the exhausted air to remove radioactive particulates and both radioactive and non-radioactive forms of iodine to limit the offsite dose to the guidelines of 10 CFR 100.

Non-safety-related objectives for design of the SGTS are as follows:

a) Filter and exhaust air from the Primary Containment for purging and ventilating.

b) Filter and exhaust discharge from the High Pressure Coolant Injection HPCI barometric condenser.

c) Filter and exhaust from the Primary Containment pressure relief line.

d) Filter and exhaust nitrogen from the Primary Containment for nitrogen purging.

The airflow diagram for the SGTS is shown on the enclosed P&ID M-175, Sheet 2 and on the FSAR Figures in Section 6.2.3.

A common Recirculation system is provided for Units 1 and 2 to perform the following safety-related functions:

a) Mix the atmosphere in the Reactor Building to obtain a lesser and more uniform concentration of radioactivity following a Design Basis Accident (DBA) Loss Of Coolant Accident (LOCA) or a refueling accident.

b) Prevent the spread of radioactivity by the heating-ventilating-cooling systems between Zone III and Zones I or II during and after an irradiated fuel handling accident.

c) Provide mixing of the atmosphere within the Reactor Building. This may involve mixing the atmosphere of all three zones; of Zone I or Zone II and the refueling area (Zone III); or of Zone III alone, particularly in case of the fuel handling accident in b), above.

The Reactor Building Recirculating System is shown on the enclosed Standby Gas Treatment System flow diagram, P&ID M-175, Sheet 2.

3.3 Configuration Impacts

During this work evolution, the access hatch to the reactor building recirculation plenum will be removed for the duration of the work activity. Removal of the access hatch allows the recirculation plenum air space to interact with the surrounding environment (Unit 1 railroad bay). For this evolution, the Unit 1 Railroad Bay will be aligned to Secondary Containment (Zone III). Therefore, opening the reactor building recirculation plenum hatch does not allow Secondary Containment to directly communicate with the environment and therefore does not represent a leakage pathway out of Secondary Containment.

To provide for worker safety, the power to the SGTS fans and Recirculation fans will be isolated during the work evolution, necessitating entry into the two LCO's. Therefore, should a Secondary Containment isolation signal occur, these fans will not perform their intended functions until power is restored and the recirculation plenum hatch is reinstalled.

3.4 FSAR References

Related background in the SSES FSAR (Reference 1) is found in Section 1.2. Compliance with NRC design criteria is described in detail in FSAR Sections 3.1 and 3.13. Detailed descriptions can be found in the SSES FSAR Section 6.2.3 Secondary Containment Functional Design, Section 6.5.1.1 Standby Gas Treatment System, and Section 6.5.3.2 Secondary Containment.

4.0 TECHNICAL ANALYSIS

The proposed changes have been evaluated. It has been determined that current regulations and applicable requirements continue to be met, that adequate defense-in-depth and sufficient safety margins are maintained, as discussed in Section 4.2.

The justification for the use of a 48-hour Secondary Containment and Standby Gas Treatment subsystems extended Completion Time is based upon:

1) a radiological evaluation of the impact on DBA-LOCA doses including doses offsite, control room habitability, and exposures for personnel access (Section 4.1),
2) the risk-mitigating requirements (i.e., equipment required to be maintained operable), which will exist during the replacement of the Reactor Building Recirculation Fan Damper Motors (Section 4.2.1 - 4.2.4), and
3) the Susquehanna Steam Electric Station risk management process which will assess the risk impacts of planned and emergent work during the replacement.

4.1 Radiological Evaluation

Two radiological dose analyses have been performed to evaluate the one-time SGTS Technical Specification change:

4.1.1. DBA-LOCA Doses – Offsite and Control Room Habitability Analysis

An evaluation of the impact on the FSAR Chapter 15 DBA-LOCA dose analysis was performed assuming restoration of Secondary Containment and the Standby Gas Treatment System (SGTS) is within the worst case time scenario. This analysis addresses both offsite and control room doses. For the discussions given below, use of the term Reactor Building is synonymous with secondary containment.

This analysis uses Reactor Building leakage rates consistent with DBA-LOCA conditions. Since the Reactor Building will be isolated for a DBA-LOCA, no ventilation systems will be operating during the time period it takes to restore SGTS. Therefore, the only driving force for airborne leakage from the Reactor Building to the environment during this time period would be post-accident airborne leakage from containment (1% per day) and Engineered Safety Features (ESF) Recirculation system leakage (20 gpm). Therefore, for the time period to restore SGTS, the activity release rate to the environment from the Reactor Building is assumed to be at a volumetric leakage rate equivalent to the leakages from containment and from ESF system leakage. This includes containment airborne leakage and ESF Recirculation systems leakage.

In support of this assumption, a parametric study was performed to evaluate the impact that Reactor Building leakage will have on DBA-LOCA doses for restoration of SGTS. This parametric study demonstrates that Reactor Building leakage rates would have to be significantly higher than expected, under DBA-LOCA conditions with SGTS not operating, for 10 CFR 100 offsite dose limits or 10 CFR 50, Appendix B, Criterion 19 control room dose limits to be exceeded. All other assumptions used for this analysis will be the same as used in FSAR DBA-LOCA Section 15.6.5.

DBA-LOCA doses are evaluated for the worst case time scenario for restoration of SGTS. This worst case scenario assumes restoration of SGTS is completed within 200 minutes. Personnel actions and restoration times for these actions are discussed in Section 4.2.3.

Activity flow path models for both the FSAR DBA-LOCA Chapter 15.6.5 analysis and the DBA-LOCA dose analysis for restoration of SGTS for recirculation fan damper work are given in Figures 1 and 2. The accident sequence of events for each of these dose models is given in Tables 1 and 2. The model used to evaluate DBA-LOCA doses for restoration of SGTS differs from the FSAR DBA-LOCA model with respect to reactor building mixing volume modeling and reactor building leakage rates to the environment. These differences are discussed below:

FSAR DBA-LOCA Chapter 15.6.5 Dose Analysis

The activity release rate to the environment from the reactor building for the FSAR DBA-LOCA model is based on ventilation systems operating and the design reactor building leakage rate of 200 %/day for a 50% building mixing efficiency. During a postulated DBA-LOCA, containment leakage into the reactor building will occur in reactor building ventilation Zones 1 for a Unit 1 event or in Zone II for a Unit 2 event. There is no containment leakage path directly into reactor building Zone III, which is the refueling floor for both units located on elevation 818'-1". Activity transport into Zone III under DBA-LOCA conditions can only occur if the reactor building recirculation system is running. The sequence of events identified in Table 1 for the FSAR DBA-LOCA

actually shows that reactor building ventilation systems will not be operating for the first ten seconds post-accident. However, in order to simplify the FSAR DBA-LOCA activity release model, reactor building mixing in all three ventilation zones was assumed for this 10-second time period. Since the reactor building leakage rate is specified as one percent per day, the assumption of two zone vs. three zone mixing has no impact on the reactor building activity release rate to the environment. Also, even though ventilation systems are not operating, the design reactor building leakage rate to the environment was also conservatively assumed for the first ten seconds. This was also done to simplify the activity release model. Since this only involved a ten second release duration, these assumptions had no significant impact on DBA-LOCA doses.

DBA-LOCA Dose Analysis For Restoration Of SGTS For Recirculation Fan Damper Work

The activity release rate from the reactor building to the environment for the time it takes to restore the Standby Gas Treatment and Recirculation Systems is based on ventilation systems not operating . Since there is no containment leakage path directly into reactor building Zone III for the 200 minute time period to restore SGTS, one zone mixing (Zone I or Zone II mixing) is conservatively assumed. The activity release rate to the environment from the reactor building during this time period when ventilation systems are not operating is assumed to be at a volumetric leakage rate equivalent to the rate of containment and ESF system leakage into the reactor building. This leakage rate is equivalent to 10 SCFM. The sequence of events for restoring SGTS for recirculation fan damper work is discussed in Section 4.2.3. After SGTS is restored, the reactor building mixing model and leakage rates are the same as used for the FSAR DBA-LOCA Chapter 15.6.5 analysis. Also, all reactor building volume mixing models assume a 50% mixing efficiency.

4.1.2 DBA-LOCA Doses – Personnel Exposures Analysis

The second analysis performed determined doses to plant personnel who would be taking the restoration actions described in Section 4.2.3, restoring under the highly unlikely assumption that a DBA-LOCA occurs during the Reactor Building Recirculation Fan Damper Motor work. This analysis addresses personnel doses in each of the work areas for work tasks to restore SGTS and the dose resulting from ingress/egress to these areas. This analysis is consistent with SSES FSAR Section 18.1.20. Personnel radiation exposures for restoration of SGTS are evaluated for DBA-LOCA component/piping contained sources. Personnel requirements and restoration times are given in Section 4.2.3.

4.1.3 Radiological Results

An evaluation of the impact on the DBA-LOCA dose analysis, assuming that restoration of SGTS occurs within 200 minutes due to Reactor Building Recirculation Fan damper

motor work, was performed. Reactor Building leakage rates consistent with DBA-LOCA conditions and ventilation systems inside the Reactor Building not operating were used. Results of this analysis show that sufficient time exists to restore SGTS without impact on current DBA-LOCA doses, as given in FSAR Chapter 15.6.5, which are well within the limits of 10 CFR 100, and without impact on control room doses, as specified in 10 CFR 50, Appendix A, GDC19.

A dose analysis was also performed to evaluate the impact of Reactor Building leakage for restoration of SGTS under DBA-LOCA conditions. The Reactor Building leakage rate during restoration of SGTS, necessary to equate to the limits of 10 CFR 100 and GDC 19, is 424 SCFM (82%/day). The expected Reactor Building leakage rate without ventilation systems operating is 10 SCFM (1.935%/day). These results show that Reactor Building leakage rates would have to be significantly higher, during the 200 minute delay in startup SGTS, than the leakage rate expected under DBA-LOCA conditions with Reactor Building Ventilation Systems not operating for 10 CFR 100 or 10 CFR 50, Appendix A, GDC19 limits to be exceeded.

Personnel DBA-LOCA radiation exposures for restoration of SGTS during damper motor replacement of the Reactor Building Recirculation Fan damper motor are as follows:

Maximum dose to an individual = 0.035 Rem
Total Exposure To All Individuals = 0.19 person-Rem

The personnel radiation exposure limit for vital area access under design basis accident conditions is 5 Rem whole body or its equivalent to any part of the body (10 CFR 50, Appendix A, GDC 19). DBA-LOCA doses to personnel for restoration of SGTS are well within the 5 Rem dose limit.

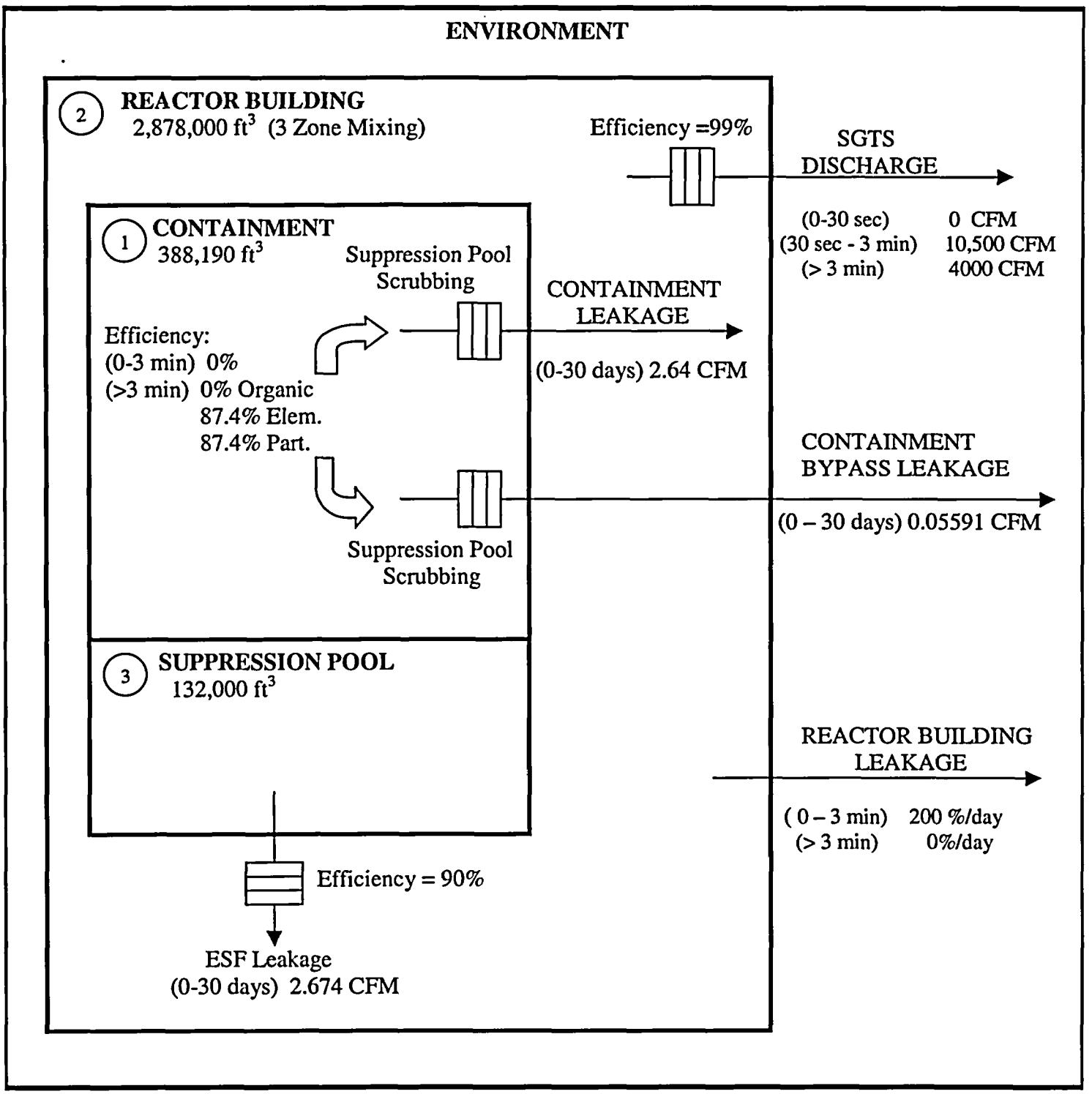


FIGURE 1. DBA-LOCA TACT5 ACTIVITY FLOW PATH MODEL; FSAR LICENSING BASIS ANALYSIS

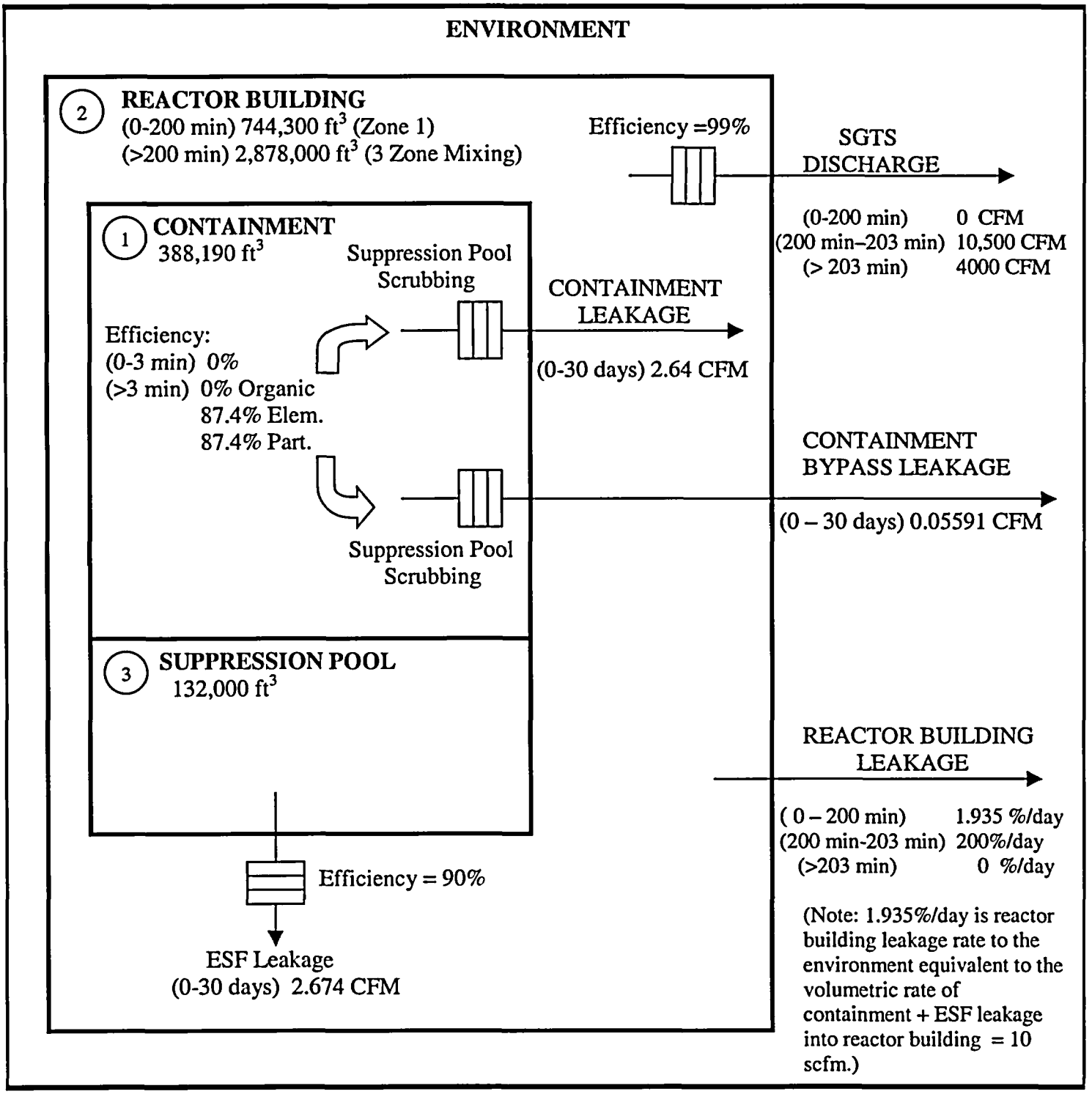


FIGURE 2. DBA-LOCA TACT5 ACTIVITY FLOW PATH MODEL; SGTS RESTORATION TIME = 200 MINUTES FOR RECIRCULATION FAN DAMPER WORK

TABLE 1. SEQUENCE OF EVENTS - DBA-LOCA FSAR LICENSING BASIS ANALYSIS (See Figure 1 for Activity Flow Path Model)	
Time From DBA-LOCA	**Description**
0	--DBA-LOCA occurs
10 sec	--Standby Gas Treatment System Exhaust Fans Start --Reactor Building Recirc Fan Fails To Start
25 sec	--Standby Gas Treatment System Exhaust Fans Reach Full Flow --Second Reactor Building Recirc Fan Starts (15 Second Timer)
30 sec	--Reactor Building Recirc Fan Reaches Full Flow
3 min	--Reactor Building drawdown to negative pressure complete --End of reactor coolant system blowdown and suppression pool scrubbing

TABLE 2. SEQUENCE OF EVENTS - DBA-LOCA-SGTS RESTORATION TIME = 200 MINUTES FOR RECIRCULATION FAN DAMPER WORK (See Figure 2 for Activity Flow Path Model)	
Time From DBA-LOCA	**Description**
0	--DBA-LOCA occurs
3 min	--End of reactor coolant system blowdown and suppression pool scrubbing
200 min	--SGTS restored --Standby Gas Treatment System Exhaust Fans Start --Reactor Building Recirc Fan Starts
203 min	--Reactor Building drawdown to negative pressure complete
Note: For restoration of SGTS, no credit for a delay in the SGTS fans or the reactor building recirculation fans reaching full flow is conservatively assumed.	

4.2 Deterministic Considerations

SSES is designed and operated consistent with the defense-in-depth philosophy. The defense-in-depth philosophy in reactor design and operation results in multiple means to accomplish safety functions and prevent release of radioactive material. The impact of the proposed Technical Specification changes were evaluated and determined to be consistent with the defense-in-depth philosophy.

The unavailability of Secondary Containment and two Standby Gas Treatment subsystems is already considered in the plant design and is allowed by the current Technical Specifications for four hours. Even with the Standby Gas Treatment System out of service, the Reactor Building is still an intact structure, which mitigates any potential release. The Radiological Analysis confirms the adequacy of defense-in-depth and that protection of the public health and safety are ensured. Implementation of the proposed changes will be done in a manner consistent with the defense-in-depth philosophy. Station procedures will ensure consideration of prevailing conditions, including other equipment out of service, and implementation of compensatory actions to assure adequate defense-in-depth while the Reactor Building Recirculation Fan Damper Motors are replaced.

These proposed changes do not require any new operator response or introduce any new opportunities for operator errors not previously considered. Experienced personnel will perform the Reactor Building Recirculation Fan Damper Motors replacement within the time available, while both units remain on-line. No other new operator actions are necessary.

The performance of the damper motor replacement has been added to the dual-unit shutdown list. Should that opportunity occur prior to the planned replacement, the motors will be replaced at that time and thus the proposed change will not be used.

4.2.1 Compensatory Actions / Restrictions

The following mitigating measures will be taken, prior to and/or during the work, to increase the ability to identify and take appropriate actions before a problem arises:

- Engineering Inspections of Containment will be performed. These will include, prior to the work:
  - Testing for leak tightness of the Secondary Containment Structure per Technical Specification Surveillance Requirement 3.6.4.1.4 & 3.6.4.1.5
  - Testing for Secondary Containment Bypass Leakage paths
- Movement of irradiated fuel within secondary containment will be prohibited during the extended LCO period.

- High-risk activities within the confines of the plant that may result in a loss of offsite power during the replacement will be prohibited.

- High-risk grid activities that may result in a loss of offsite power during the replacement will be prohibited.

- For the duration of the damper motor replacement, Transmission and Distribution Operations will not grant any work requests that would jeopardize the reliability of offsite power.

- Surveillance testing of Diesel Generator 'E' (Fifth Non-Technical Specification) will be performed before damper motor replacement to assure its availability.

- Reactor Building HVAC will be required to be available during damper motor replacement.

4.2.2 External Events Monitoring

Per normal operating procedures, the Control Room will monitor weather conditions for imminent external events such as external flood or forest fire threat prior to and during the replacement.

Additionally, geomagnetic activity from solar storms will be monitored via forecasts provided to the PJM Interconnection, prior to and during the replacement.

The Control Room will instruct modification of work if conditions warrant.

4.2.3 Contingency Planning (Work Planning Actions)

The provisions, which will be made, to restore a functional train of SGTS during replacement of the actuator for the Recirculation plenum fan discharge damper are given in Table 3. Note that preparations will be made for Blade Seal Replacement, however, it is anticipated that this will not be necessary. Arrangements will be made for a dedicated secondary containment and SGTS restoration team.

Table 3

Sequence of Events and Manpower Estimates to Restore SGTS During Replacement of the Actuator for the Recirculation Plenum Fan Discharge Damper			
Time Post-LOCA (minutes)	**Task**	**Manpower Requirement**	**Work Location**
0 - 30	Blade Seal Replacement	3 Mechanics	Reactor Building Unit 1 Elevation 779'-1", Recirculation Supply Plenum Chamber, Room I-615
30 - 60	Wire Damper Closed	3 Electricians	Reactor Building Unit 1 Elevation 779'-1", Recirculation Supply Plenum Chamber, Room I-615
60 -120	Take Down and Secure Scaffold Picks	3 Mechanics	Reactor Building Unit 1 Elevation 779'-1", Recirculation Supply Plenum Chamber, Room I-615
120 - 140	Install Plenum Hatch	2 Mechanics	Reactor Building Unit 1 Elevation 779'-1", Recirculation Supply Plenum Chamber, Room I-615
140 – 170	Restore Power to 0V201A and/or B	2 Operators	Reactor Building Elevation Unit 1 749'-1" ESS Switchgear Rooms I-507 & I-510
170 – 200	Restore Power to 0V109A and/or B	2 Operators	Control Structure Elevation 783'-0", H&V Equipment Room C-700

Note:

These tasks were established using input from personnel familiar with the activity. The tasks and durations were validated during a planning walkdown entry into the Recirculation Plenum. Human performance tools are being factored into the final work plans. Work Plan briefings and rehearsals will be performed.

4.2.4 Prohibitions on Preventive Maintenance

The following systems and components are required to be available during the replacement to reduce the plant risk:

Description
STATION PORTABLE DIESEL GENERATOR - BLUE MAX
DIESEL GENERATOR A ESS 480V MOTOR CONTROL CENTER
DIESEL GENERATOR B ESS 480V MOTOR CONTROL CENTER
DIESEL GENERATOR 'A'
DIESEL GENERATOR 'B'
DIESEL GENERATOR 'C'
DIESEL GENERATOR 'D'
DIESEL GENERATOR 'E'
U-1 125V DC BATTERY CHARGER BREAKER 0B516073
U-1 125V DC BATTERY CHARGER BREAKER 0B526073
U-1 125V DC BATTERY CHARGER 1D613
U-1 125V DC BATTERY CHARGER 1D623
RHR LOOP A INJECTION OB ISO VLV, (Unit 1)
RHR LOOP A INJECTION FLOW CONTROL VLV, (Unit 1)
RHR LOOP B INJECTION FLOW CONTROL VLV, (Unit 1)
RHR LOOP B INJECTION OB ISO VLV, (Unit 1)
U-2 125V DC BATTERY CHARGER BREAKER 0B516071
U-2 125V DC BATTERY CHARGER BREAKER 0B526071
U-2 125V DC BATTERY CHARGER 2D613
U-2 125V DC BATTERY CHARGER 2D623
RHR LOOP A INJECTION FLOW CONTROL VLV, (Unit 2)
RHR LOOP A INJECTION OB ISO VLV, (Unit 2)
RHR LOOP B INJECTION OB ISO VLV, (Unit 2)
RHR LOOP B INJECTION FLOW CONTROL VLV, (Unit 2)
RHR/RHRSW CROSS TIE VALVES (Unit 1)
RHR/RHRSW CROSS TIE VALVES (Unit 2)
HPCI (UNIT 1)
HPCI (UNIT 2)
RCIC (UNIT 1)
RCIC (UNIT 2)
REACTOR BUILDING HVAC

To ensure these systems and components are available, elective maintenance will not be performed and these systems will be maintained operable. Any failed system/component will be returned to operable status as soon as possible. (The failed system/component shall be worked around the clock.)

Should any of the above equipment or systems become unavailable or inoperable, SSES will immediately begin and promptly complete an evaluation of the impact, to determine if the basis for the change to LCO 3.6.4.3 remains valid, and within 1 hour of identification, contact the NRC Resident Inspector.

4.3 Risk Consideration

This section provides the results of the risk considerations, and details the risk insights pertaining to the proposed Completion Time for the work.

The Reactor Building Recirculation Fan damper motor replacement requires entry into the Secondary Containment TS 3.6.4.1A and the SGTS TS LCO 3.6.4.3.D, since a manway into the Recirculation Plenum will be open, and since both Recirculation fans and both SGTS fans will be tagged out for personnel protection. The Recirculation Plenum is common to the two SGTS subsystems, hence both SGTS subsystems will be inoperable until the Recirculation Plenum hatch is restored. A 48-hour work window is requested for this activity. During this work evolution, the integrity function of Secondary Containment will not be affected. Opening the Recirculation Plenum does not allow Secondary Containment to communicate with the outside environment. (See Section 3.3.)

SGTS does not provide any core damage mitigation and would not be credited in a full level 2 analyses to mitigate LERF (PPL has a CDF and LERF model but does not have a full level 2 model). Hence, if a risk model were used for the risk evaluation, there would be no change in risk because SGTS does not change any initiating event frequency, it does not mitigate core damage, and does not mitigate a large early release.

PPL's risk model (without SGTS) was peer reviewed in October 2003 and there were no comments concerning the exclusion of SGTS from either the CDF or LERF portions of the model.

4.3.1 Core Damage Mitigation

SGTS does not provide any core damage mitigation because it does not provide any makeup capability to the reactor vessel nor does it support depressurizing the reactor vessel.

SGTS is designed to accomplish the safety related objectives listed in Section 3.2. One of the design bases employed for sizing the filters, fans, and associated ductwork is as follows:

Each train is sized and specified for treating incoming air mixture at a maximum of 125°F, and containing fission products and incoming particulates equivalent to 1.0 volume percent per day of the fission products available in the Primary Containment as determined in accordance with Regulatory Guide 1.3 and TID14844 (References 1 and 2).

The situations in which SGTS can be effective in mitigating a release are those, after an initiating event, which result in core damage, the containment pressurizes, a leak path exists to the Reactor Building and the Secondary Containment release boundary is intact. All four elements, core damage, containment pressure (the driving force for a release), a leak path, and an intact Secondary Containment release boundary are necessary for SGTS to be effective in mitigating a release. It should be also noted that SGTS has limitations as to the quantity of leakage it can process.

4.3.2 Large Early Release

The following discussion illustrates why SGTS is not effective for a large release.

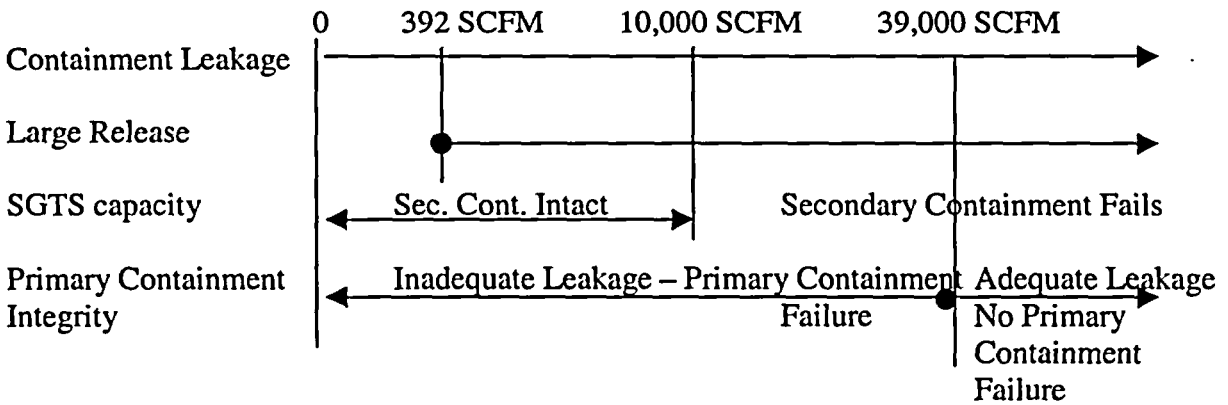
To be a large release, which could potentially be mitigated by SGTS, a release would need to be from the Reactor Building, and the Secondary Containment release boundary would need to be intact. The release would need to be caused by fuel damage, containment pressurization, and either containment failure or containment isolation failure. SSES has modeled two mechanisms for containment failure, Containment Over Pressure Failure (COPF) and Containment Over Temperature Failure (COTF). A COTF failure is caused by the heating of the containment atmosphere directly by the fuel or by a concrete-core interaction. This can occur two ways, a low-pressure vessel failure with no drywell sprays or by a high-pressure vessel failure with the exiting fuel directly heating the containment atmosphere (DCH). In the low-pressure vessel failure case with drywell spray failure, the fuel interacts with the drywell floor, heating the containment atmosphere from the concrete-core interaction. In the high-pressure vessel failure case, the fuel is expelled from the failed vessel in the form of small fragments, which causes a rapid expansion of the containment atmosphere. In both of these cases, the containment fails due to overpressure or on loss of the pressure boundary, i.e., melting of the liner plate or the head seal. In the case of COTF, pressurization is caused by rapid heating of the containment atmosphere. The COPF is also containment failure by pressure but, in this case, the pressure increase is caused by a failure of decay heat removal (suppression pool cooling) which allows the vapor pressure of the suppression pool to increase. The COPF failures are not rapid.

Both COPF and COTF entail a failed containment. Given that containment fails, it is predicted that Secondary Containment will also fail due to the sudden release of gas from Primary Containment into Secondary Containment. With Secondary Containment breached, SGTS will be ineffective at mitigating a release to the environment.

SGTS is not designed for and in fact is ineffective at mitigating a large release, i.e., the SGTS capacity is insufficient to prevent Secondary Containment failure given a primary containment failure.

PPL has calculated a containment leakage rate of 392 SCFM to be equivalent to a "large release." This is the flow rate that would pass through a one inch opening and corresponds to 35 x La, where La is the Technical Specification allowed leakage. 35 La is the flow rate, which would be indicative of a breach of containment. This flow is within the design of SGTS (10,000 SCFM). However, to achieve this leakage rate equipment or operator failures would have to have occurred. Primary Containment would continue to pressurize with this leak present and ultimately fail. PPL calculates a primary containment "leak" rate of 55,000 CFM per unit (at 14.7 psia and 280°F) is required to prevent primary containment over-pressure failures. Adjusting this leak rate to SCFM yields 39,000 SCFM, which is well beyond the SGTS capacity. Hence, if primary containment was leaking at 55,000 CFM, the primary containment would not rupture; however, Secondary Containment would pressurize and breach. With the Secondary Containment breached, SGTS is ineffective in mitigating a large release. Note that if the containment failure mode is COTF, leakage rates higher than 55,000 CFM are expected because of non-condensable gas generation from the metal-water and core-concrete interactions.

The containment leakage rate requirements are shown graphically below.



4.3.3 Defense in Depth

Extending the AOT for SGTS results in no increase in CDF and LERF. However, for the purpose of defense in depth, PPL will have a recovery plan in place to restore SGTS and

at least one Reactor Building Recirculation Fan. The work in the Recirculation Plenum is staged so that at least one Recirculation fan can be restored and the duct closed within a maximum of 200 minutes. All COPF failures, except the ones associated with an ATWS, occur 12 or more hours from an initiating event. Given an initiating event has occurred, the probability of an ATWS per unit is small (2E-6), therefore it will not significantly detract from the validity of the defense in depth approach. Note, although the COTF can occur in less than 4 hours, the pressure rise in containment is rapid and release rates are well beyond the capacity of SGTS.

4.3.4 External Events

Consideration of external events such as flooding and fire will not affect the extension of the SGTS AOT since it has been shown that SGTS is ineffective in mitigating a large release. The CDF and LERF will be the same with or without SGTS available.

A seismic event has the potential to fail the closed-cooling system water piping. Failure of the closed cooling water piping containment isolation valves was found not to be an issue since the piping is not open to the containment atmosphere. However, if a seismic event occurs, the piping integrity can be lost and containment isolation would need to be maintained by the penetration's containment isolation valves.

The PRA for one unit uses a probability of 1E-4 for containment isolation failure. Combined with a seismic frequency of 8.5E-5 per year this would yield a frequency of 8.5E-9 containment isolation failures per year due to a seismic event.

A seismic event could also cause a loss of off site power (LOOP). To assess the incremental LERF contribution due to a seismic event, the CDF is divided by the LOOP frequency since the seismic event is assumed to cause a LOOP, and multiplied by the frequency of a seismic event causing a containment isolation failure. This yields: [(3.4E-6 CDF)/(2.98E-2 LOOP initiation frequency)]*(8.5E-9 frequency of a seismic event failing containment isolation), which results in a 9.7E-13 incremental increase in LERF. This conservatively assumes that all of the CDF is due to a LOOP. Considering that the base SSES LERF is 6.7E-7, an increase of 9.7E-13 is insignificant.

Given that the AOT is only 48 hours, the incremental probability of a large early release is 9.7E-13*2/365 which is 5.3E-15.

4.3.5 Conclusion

SGTS provides no mitigation for CDF and LERF. When internal events or external events are considered, there is no mitigation from SGTS. Therefore there is no risk increase resulting from an extension of the Secondary Containment and SGTS AOT to 48 hours.

5.0 REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

The proposed amendments would change the Technical Specifications for Secondary Containment and the Standby Gas Treatment System (SGTS) to extend, on a one-time basis, the allowable Completion Time for Required Actions for Secondary Containment inoperable and two SGTS subsystems inoperable, in Mode 1, 2, or 3, from 4 hours to 48 hours. This change is needed to allow sufficient time for the planned replacement of the Reactor Building Recirculating Fan Damper Motors, while both units remain at power. The reason for the replacement is to complete Equipment Qualification required preventive maintenance on these dampers.

PPL Susquehanna, LLC has evaluated whether or not a significant hazards consideration is involved with the proposed change by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change does not involve a significant increase in the probability of an accident previously evaluated because neither Secondary Containment nor the Standby Gas Treatment System is an initiator of an accident. Both mitigate accident consequences.

The consequences of a Design Basis Analysis-Loss of Coolant Accident (DBA-LOCA) have been evaluated in the FSAR. Increasing the completion time for Secondary Containment and two SGTS subsystems inoperable from 4 hours to 48 does not result in a significant increase in the consequences of a DBA-LOCA event nor change the evaluation of DBA-LOCA events as stated in the FSAR evaluation. The radiological evaluation of DBA-LOCA doses, including doses offsite, Control Room habitability, and exposures for personnel access demonstrates that there would be no significant impact. Movement of irradiated fuel within Secondary Containment will be prohibited during the extended LCO period, to preclude a fuel handling accident, which might lead to a radiological consequence.

Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed changes do not involve a physical alteration of the plant. No new or different type of equipment will be installed (damper motors will be replaced) nor will there be changes in methods governing normal plant operation.

The accident analyses affected by this extension are the radiological events that are discussed in the FSAR. The potential for the loss of other plant systems or equipment to mitigate the effects of an accident is not altered.

The proposed changes do not require any new operator response or introduce any new opportunities for operator error not previously considered.

Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed change does not involve a significant reduction in margin of safety.

The increase in completion time for Standby Gas Treatment does not result in any effect on the margin of safety. There is no increase in Core Damage Frequency (CDF) or Large Early Release Frequency (LERF). A recovery plan will be in place to restore the SGTS and Secondary Containment to functional, if a DBA-LOCA accident should occur. Implementation of the compensatory measures minimizes the probability that an accident will be initiated, maximizes the probability that accident mitigation equipment will be available and ensures that SGTS and Secondary Containment will be able to be restored in a timely manner. Thus the potential impact of extending the Completion Time is small. Therefore, this one-time extension will not involve a significant reduction in safety margin.

Based on the above, the PPL Susquehanna concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

5.2 Applicable Regulatory Requirements / Criteria

5.2.1 Analysis

SSES FSAR Sections 3.1 and 3.13 provide detailed discussion of SSES compliance with the applicable regulatory requirements and guidance. The proposed TS amendment:

(a) Does not alter the design or function of any reactivity control system;
(b) Does not result in any change in the qualifications of any component; and
(c) Does not result in the reclassification of any component's status in the areas of shared, safety related, independent, redundant, and physically or electrically separated.

General Design Criteria:

The following applicable General Design Criteria (GDC) for the Standby Gas Treatment System require that containment atmosphere cleanup systems reduce the amount of radioactive material released to the environment following a postulated design basis accident.

GDC 41 - Containment Atmosphere Cleanup
GDC 42 - Inspection of Containment Atmosphere Systems
GDC 43 - Testing of Containment Atmosphere Systems

Regulatory Guide 1.52:

Regulatory Guide 1.52 is titled "Design, Testing, and Maintenance Criteria for Engineered-Safety Feature Atmosphere Cleanup Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants." Regulatory Guide 1.52 addresses the atmosphere cleanup system, including the various components and ductwork, in a postulated design basis radiological accident environment.

The current Completion Times associated with Secondary Containment and Standby Gas Treatment are intended to minimize the time an operating plant is exposed to a reduction in radiological accident mitigation capability.

Conformance with GDC 41, 42, and 43, as well as conformance with Regulatory Guide 1.52 are not affected by these proposed changes, because a recovery plan will be in place to restore the system to be functional, if an accident should occur.

Thus, the proposed extended Completion Times do not change the conformance with the above General Design Criteria and regulatory guidance.

5.2.2 Conclusion

Based on the analyses provided in Section 4.0 Technical Analysis, the proposed changes are consistent with all applicable regulatory requirements and criteria. In conclusion, there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, such activities will be conducted in compliance with the Commission's regulations, and the approval of the proposed change will not be inimical to the common defense and security or to the health and safety of the public.

6.0 ENVIRONMENTAL CONSIDERATION

10 CFR 51.22(c)(9) identifies certain licensing and regulatory actions that are eligible for categorical exclusion from the requirement to perform an environmental assessment. A proposed amendment to an operating license for a facility does not require an environmental assessment if operation of the facility in accordance with the proposed amendment would not (1) involve a significant hazards consideration; (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite; or (3) result in a significant increase in individual or cumulative occupational radiation exposure. PPL Susquehanna has evaluated the proposed change and has determined that the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22 (c)(9). Accordingly, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with issuance of the amendment. The basis for this determination, using the above criteria, follows:

1. As demonstrated in the No Significant Consideration Evaluation, the proposed amendment does not involve a significant hazards consideration.

2. There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite. The proposed change does not involve any physical modification or alteration of plant equipment (no new or different type of equipment will be installed) or change in methods governing normal plant operation.

3. There is no significant increase in individual or cumulative occupational radiation exposure. The proposed change does not involve any physical modification or alteration of plant equipment (no new or different type of equipment will be installed) or change in methods governing normal plant operation.

7.0 SUMMARY

The radiological evaluations of the proposed one-time Technical Specification change show the following:

1. The proposed change meets the current regulation as discussed in Section 5.0, Regulatory Safety Analysis, under Applicable Regulatory Requirements/Criteria.

2. The proposed change is consistent with the defense-in-depth philosophy as discussed in Section 4.2, Deterministic Considerations.

3. Safety Margins are adequately maintained as discussed in Section 5.0, Regulatory Safety Analysis, under the No Significant Hazards Consideration.

Therefore, PPL Susquehanna has concluded that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operating 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.

8.0 REFERENCES

1. Susquehanna Steam Electric Station Final Safety Analysis Report, Docket Numbers 50-387 and 50-388.

2. USNRC Regulatory Guide 1.3, "Assumptions Used for Evaluating the Potential Radiological Consequences of a Loss of Coolant Accident for Boiling Water Reactors," Revision 2, June 1974.

3. TID 14844, "Calculation of Distance Factors for Power and Test Reactor Sites," J. J. DiNunno et al., U. S. Atomic Energy Commission (now USNRC), 1962.

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

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Rev. No. 7, Sheet No. 2
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UNIT 1, P & ID
REACTOR BLDG. AIR FLOW DIAGRAM

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OR BY SEARCHING USING
DWG. NO. M-175

D-01

ATTACHMENT 1 to PLA-5734

Proposed Technical Specification Change (Mark-Up)

3.6 CONTAINMENT SYSTEMS

3.6.4.1 Secondary Containment

LCO 3.6.4.1 The secondary containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of irradiated fuel assemblies in the secondary containment,
During CORE ALTERATIONS,
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Secondary containment inoperable in MODE 1, 2, or 3.	A.1 Restore secondary containment to OPERABLE status.	4 hours OR 48 HOURS FOR A ONE-TIME OUTAGE FOR REPLACEMENT OF THE REACTOR BUILDING RECIRCULATING FAN DAMPER MOTORS, TO BE COMPLETE BY DECEMBER 31, 2025.
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours
C. Secondary containment inoperable during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	C.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in the secondary containment. AND	 Immediately (continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2.1 Suspend movement of irradiated fuel assemblies in secondary containment. AND	Immediately
	C.2.2 Suspend CORE ALTERATIONS. AND	Immediately
	C.2.3 Initiate action to suspend OPDRVs.	Immediately
D. Two SGT subsystems inoperable in MODE 1, 2, or 3.	D.1 Restore one SGT subsystem to OPERABLE status.	4 hours OR 48 HOURS FOR A ONE-TIME OUTAGE FOR REPLACEMENT OF THE REACTOR BUILDING RECIRCULATING FAN DAMPER MOTORS TO BE COMPLETED BY DECEMBER 31, 2005.
E. Required Action and associated Completion Time of Condition D not met in MODE 1, 2, or 3.	E.1 Be in MODE 3. AND	12 hours
	E.2 Be in MODE 4.	36 hours
F. Two SGT subsystems inoperable during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	F.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in secondary containment. AND	Immediately

(continued)

3.6 CONTAINMENT SYSTEMS

3.6.4.1 Secondary Containment

LCO 3.6.4.1 The secondary containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of irradiated fuel assemblies in the secondary containment,
During CORE ALTERATIONS,
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Secondary containment inoperable in MODE 1, 2, or 3.	A.1 Restore secondary containment to OPERABLE status.	4 hours OR 48 HOURS FOR A ONE-TIME OUTAGE FOR REPLACEMENT OF THE REACTOR BUILDING-RECIRCULATING DAMPER MOTORS, TO BE COMPLETED BY DECEMBER 31, 2005.
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours
C. Secondary containment inoperable during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	C.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in the secondary containment. AND	 Immediately

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2.1 Suspend movement of irradiated fuel assemblies in secondary containment. AND	Immediately
	C.2.2 Suspend CORE ALTERATIONS. AND	Immediately
	C.2.3 Initiate action to suspend OPDRVs.	Immediately
D. Two SGT subsystems inoperable in MODE 1, 2, or 3.	D.1 Restore one SGT subsystem to OPERABLE status.	4 hours OR 48 hours For a one-time outage For Replacement of the Reactor Building Recirculating Fan Damper Motors to be Completed by December 31, 2005.
E. Required Action and associated Completion Time of Condition D not met in MODE 1, 2, or 3.	E.1 Be in MODE 3. AND E.2 Be in MODE 4.	12 hours 36 hours
F. Two SGT subsystems inoperable during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	F.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in secondary containment. AND	Immediately

(continued)

ATTACHMENT 2 to PLA-5734

Proposed Technical Specification Pages (Retyped)

3.6 CONTAINMENT SYSTEMS

3.6.4.1 Secondary Containment

LCO 3.6.4.1 The secondary containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of irradiated fuel assemblies in the secondary containment,
During CORE ALTERATIONS,
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Secondary containment inoperable in MODE 1, 2, or 3.	A.1 Restore secondary containment to OPERABLE status.	4 hours OR 48 hours for a one-time outage for replacement of the Reactor Building Recirculating Fan Damper Motors, to be completed by December 31, 2005.
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Secondary containment inoperable during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	C.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in the secondary containment.	Immediately
	AND	
	C.2 Suspend CORE ALTERATIONS.	Immediately
	AND	
	C.3 Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify secondary containment vacuum is ≥ 0.25 inch of vacuum water gauge.	24 hours
SR 3.6.4.1.2	Verify all required secondary containment removable walls and equipment hatches required to be closed are closed and sealed.	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.6.4.1.3	Verify each secondary containment access door is closed except when the access opening is being used for entry and exit, then at least one door shall be closed.	31 days
SR 3.6.4.1.4	----------NOTE---------- The maximum time allowed for secondary containment draw down is dependent on the secondary containment configuration. ---------- Verify each standby gas treatment (SGT) subsystem will draw down the secondary containment to ≥ 0.25 inch of vacuum water gauge in less than or equal to the maximum time allowed for the secondary containment configuration that is OPERABLE.	----------NOTE---------- Once every 60 months testing will be performed in three zone configuration. ---------- 24 months on a STAGGERED TEST BASIS
SR 3.6.4.1.5	----------NOTE---------- The maximum flow allowed for maintaining secondary containment vacuum is dependent on the secondary containment configuration. ---------- Verify each SGT subsystem can maintain ≥ 0.25 inch of vacuum water gauge in the secondary containment for at least 1 hour at a flow rate less than or equal to the maximum flow rate permitted for the secondary containment configuration that is OPERABLE.	----------NOTE---------- Once every 60 months testing will be performed in three zone configuration. ---------- 24 months on a STAGGERED TEST BASIS

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2.1 Suspend movement of irradiated fuel assemblies in secondary containment. AND C.2.2 Suspend CORE ALTERATIONS. AND C.2.3 Initiate action to suspend OPDRVs.	Immediately Immediately Immediately
D. Two SGT subsystems inoperable in MODE 1, 2, or 3.	D.1 Restore one SGT subsystem to OPERABLE status.	4 hours OR 48 hours for a one-time outage for replacement of the Reactor Building Recirculating Fan Damper Motors, to be completed by December 31, 2005.
E. Required Action and associated Completion Time of Condition D not met in MODE 1, 2, or 3.	E.1 Be in MODE 3. AND E.2 Be in MODE 4.	12 hours 36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Two SGT subsystems inoperable during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	F.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in secondary containment.	Immediately
	AND	
	F.2 Suspend CORE ALTERATIONS.	Immediately
	AND	
	F.3 Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.3.1	Operate each SGT filter train for ≥ 10 continuous hours with heaters operating.	31 days
SR 3.6.4.3.2	Perform required SGT filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.4.3.3	Verify each SGT subsystem actuates on an actual or simulated initiation signal.	24 months
SR 3.6.4.3.4	Verify each SGT filter cooling bypass and outside air damper opens and the fan starts on high charcoal temperature.	24 months

3.6 CONTAINMENT SYSTEMS

3.6.4.1 Secondary Containment

LCO 3.6.4.1 The secondary containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of irradiated fuel assemblies in the secondary containment,
During CORE ALTERATIONS,
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Secondary containment inoperable in MODE 1, 2, or 3.	A.1 Restore secondary containment to OPERABLE status.	4 hours OR 48 hours for a one-time outage for replacement of the Reactor Building Recirculating Fan Damper Fan Damper Motors, to be completed by December 31, 2005.
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Secondary containment inoperable during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	C.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in the secondary containment.	Immediately
	AND	
	C.2 Suspend CORE ALTERATIONS.	Immediately
	AND	
	C.3 Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify secondary containment vacuum is ≥ 0.25 inch of vacuum water gauge.	24 hours
SR 3.6.4.1.2	Verify all required secondary containment removable walls and equipment hatches required to be closed are closed and sealed.	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.6.4.1.3	Verify each secondary containment access door is closed except when the access opening is being used for entry and exit, then at least one door shall be closed.	31 days
SR 3.6.4.1.4	----------NOTE---------- The maximum time allowed for secondary containment draw down is dependent on the secondary containment configuration. ---------- Verify each standby gas treatment (SGT) subsystem will draw down the secondary containment to ≥ 0.25 inch of vacuum water gauge in less than or equal to the maximum time allowed for the secondary containment configuration that is OPERABLE.	----------NOTE---------- Once every 60 months testing will be performed in three zone configuration. ---------- 24 months on a STAGGERED TEST BASIS
SR 3.6.4.1.5	----------NOTE---------- The maximum flow allowed for maintaining secondary containment vacuum is dependent on the secondary containment configuration. ---------- Verify each SGT subsystem can maintain ≥ 0.25 inch of vacuum water gauge in the secondary containment for at least 1 hour at a flow rate less than or equal to the maximum flow rate permitted for the secondary containment configuration that is OPERABLE.	----------NOTE---------- Once every 60 months testing will be performed in three zone configuration. ---------- 24 months on a STAGGERED TEST BASIS

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2.1 Suspend movement of irradiated fuel assemblies in secondary containment. AND C.2.2 Suspend CORE ALTERATIONS. AND C.2.3 Initiate action to suspend OPDRVs.	Immediately Immediately Immediately
D. Two SGT subsystems inoperable in MODE 1, 2, or 3.	D.1 Restore one SGT subsystem to OPERABLE status.	4 hours OR 48 hours for a one-time outage for replacement of the Reactor Building Recirculating Fan Damper Motors, to be completed by December 31, 2005.
E. Required Action and associated Completion Time of Condition D not met in MODE 1, 2, or 3.	E.1 Be in MODE 3. AND E.2 Be in MODE 4.	12 hours 36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Two SGT subsystems inoperable during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs.	F.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in secondary containment. AND F.2 Suspend CORE ALTERATIONS. AND F.3 Initiate action to suspend OPDRVs.	 Immediately Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.3.1	Operate each SGT filter train for ≥ 10 continuous hours with heaters operating.	31 days
SR 3.6.4.3.2	Perform required SGT filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.4.3.3	Verify each SGT subsystem actuates on an actual or simulated initiation signal.	24 months
SR 3.6.4.3.4	Verify each SGT filter cooling bypass and outside air damper opens and the fan starts on high charcoal temperature.	24 months

ATTACHMENT 3 to PLA-5734

List of Regulatory Commitments

LIST OF REGULATORY COMMITMENTS

The following table identifies those actions committed to by PPL Susquehanna in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to Mr. Michael H. Crowthers.

REGULATORY COMMITMENTS	Due Date/Event
	All commitments will be applicable prior to and/or during the damper motor replacement, as indicated below:
1. The performance of the damper motor replacement has been added to the dual-unit shutdown list. Should that opportunity occur prior to the planned replacement, the motors will be replaced at that time and thus the proposed change will not be used.	Before damper motor replacement
2. Provision will be made to restore Secondary Containment and the Standby Gas Treatment System to be functional, within 200 minutes of an accident initiation.	Before and during damper motor replacement
3. To minimize the damper motor replacement time, experienced personnel will perform the damper motor replacement.	Before and during damper motor replacement
4. Mitigating Measures: The following mitigating measures will be taken to increase the ability to identify and take appropriate actions before a problem arises:	
• Engineering Inspections of Containment will be performed. These will include: ➢ Testing for leak tightness of the Secondary Containment Structure per Technical Specification Surveillance Requirement 3.6.4.1.4 & 3.6.4.1.5 ➢ Testing for Secondary Containment Bypass Leakage paths	Before and during damper motor replacement

REGULATORY COMMITMENTS	Due Date/Event
• Movement of irradiated fuel, within Secondary Containment will be prohibited during the extended LCO period.	During damper motor replacement
• High-risk activities within the confines of the plant that may result in a loss of offsite power during the damper motor replacement will be prohibited.	During damper motor replacement
• High-risk grid activities that may result in a loss of offsite power during the damper motor replacement will be prohibited.	During damper motor replacement
• For the duration of the damper motor replacement, Transmission and Distribution Operations will not grant any work requests that would jeopardize the reliability of offsite power.	During damper motor replacement
• Surveillance testing of the Emergency Diesel 'E' (Fifth Non-Technical Specification)	Before damper motor replacement
• Reactor Building HVAC will be required to be available.	During damper motor replacement
• Dedicated Secondary Containment SGTS Restoration Team	During damper motor replacement
5. External Events monitoring • Geomagnetic activity from solar storms will be monitored via forecasts provided to the PJM.	Before and during damper motor replacement
6. The Susquehanna Steam Electric Station Risk Management Process will assess the impacts of planned and emergent work prior to and during the damper motor replacement.	Prior to and during damper motor replacement
7. The following systems and components will be required to be available during the damper motor replacement to reduce the plant risk. Elective maintenance will not be performed on these systems and components. Any failed system or component will be returned to operable status as soon as possible. (The	During damper motor replacement

REGULATORY COMMITMENTS	Due Date/Event
failed system/component shall be worked around the clock.) If one of these systems or components become unavailable or inoperable, SSES will immediately begin and promptly complete an evaluation to determine if the basis for the proposed one-time change to LCOs 3.6.4.2.1 and 3.6.4.3 remain valid, and within one hour of identification, contact the NRC Resident Inspector. • Station Portable Diesel Generator - Blue Max • Diesel Generator A ESS 480V Motor Control • Diesel Generator B ESS 480V Motor Control • Diesel Generator 'A' • Diesel Generator 'B' • Diesel Generator 'C' • Diesel Generator 'D' • Diesel Generator 'E' • U-1 125V DC Battery Charger Breaker 0B516073 • U-1 125V DC Battery Charger Breaker 0B526073 • U-1 125V DC Battery Charger 1D613 • U-1 125V DC Battery Charger 1D623 • RHR LOOP A Injection OB ISO VLV, (Unit 1) • RHR LOOP A Injection Flow Control VLV, (Unit 1) • RHR LOOP B Injection Flow Control VLV, (Unit 1) • RHR LOOP B Injection OB ISO VLV, (Unit 1) • U-2 125V DC Battery Charger Breaker 0B516071 • U-2 125V DC Battery Charger Breaker 0B526071 • U-2 125V DC Battery Charger 2D613 • U-2 125V DC Battery Charger 2D623 • RHR LOOP A Injection Flow Control VLV, (Unit 2) • RHR LOOP A Injection OB ISO VLV, (Unit 2) • RHR LOOP B Injection OB ISO VLV, (Unit 2) • RHR LOOP B Injection Flow Control VLV, (Unit 2) • RHR/RHRSW Cross Tie Valves, (Unit 1) • RHR/RHRSW Cross Tie Valves, (Unit 2) • HPCI (UNIT 1) • HPCI (UNIT 2) • RCIC (UNIT 1) • RCIC (UNIT 2) • REACTOR BUILDING HVAC	

ATTACHMENT 4 to PLA- 5734

Changes to Technical Specification Bases

BASES

LCO (continued)

The required boundary encompasses the zones which can be postulated to contain fission products from accidents required to be considered for the condition of each unit.

APPLICABILITY

In MODES 1, 2, and 3, a LOCA could lead to a fission product release to primary containment that leaks to secondary containment. Therefore, secondary containment OPERABILITY is required during the same operating conditions that require primary containment OPERABILITY.

In MODES 4 and 5, the probability and consequences of the LOCA are reduced due to the pressure and temperature limitations in these MODES. Therefore, maintaining secondary containment OPERABLE is not required in MODE 4 or 5 to ensure a control volume, except for other situations for which significant releases of radioactive material can be postulated, such as during operations with a potential for draining the reactor vessel (OPDRVs), during CORE ALTERATIONS, or during movement of irradiated fuel assemblies in the secondary containment.

ACTIONS

A.1

If secondary containment is inoperable, it must be restored to OPERABLE status within 4 hours. The 4 hour Completion Time provides a period of time to correct the problem that is commensurate with the importance of maintaining secondary containment during MODES 1, 2, and 3. This time period also ensures that the probability of an accident (requiring secondary containment OPERABILITY) occurring during periods where secondary containment is inoperable is minimal.

A TEMPORARY (ONE-TIME) COMPLETION TIME IS CONNECTED TO THE COMPLETION TIME REQUIREMENTS ABOVE (4 HOURS) WITH AN "OR" CONNECTOR. THE TEMPORARY COMPLETION TIME IS 48 HOURS AND APPLIES TO THE REPLACEMENT OF THE REACTOR BUILDING RECIRCULATING FAN DAMPER MOTORS. THE TEMPORARY COMPLETION TIME OF 48 HOURS MAY ONLY BE USED ONCE, AND EXPIRES ON DECEMBER 31, 2005.

(continued)

BASES

ACTIONS

C.1, C.2.1, C.2.2, and C.2.3 (continued)

should immediately be placed in operation. This action ensures that the remaining filter train is OPERABLE, that no failures that could prevent automatic actuation have occurred, and that any other failure would be readily detected.

An alternative to Required Action C.1 is to immediately suspend activities that represent a potential for releasing radioactive material to the secondary containment, thus placing the plant in a condition that minimizes risk. If applicable, CORE ALTERATIONS and movement of irradiated fuel assemblies must immediately be suspended. Suspension of these activities must not preclude completion of movement of a component to a safe position. Also, if applicable, actions must immediately be initiated to suspend OPDRVs in order to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until OPDRVs are suspended.

The Required Actions of Condition C have been modified by a Note stating that LCO 3.0.3 is not applicable. If moving irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, in either case, inability to suspend movement of irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown.

A TEMPORARY (ONE TIME) COMPLETION TIME IS CONNECTED TO THE COMPLETION TIME REQUIREMENTS ABOVE (4-HOURS) WITH AN "OR" CONNECTOR. THE TEMPORARY COMPLETION TIME IS 48 HOURS AND APPLIES TO THE REPLACEMENT OF THE REACTOR BUILDING RECIRCULATING FAN DAMPER MOTORS. THE TEMPORARY COMPLETION TIME OF 48 HOURS MAY ONLY BE USED ONCE, AND EXPIRES ON DECEMBER 31, 2005.

D.1

If both SGT subsystems are inoperable in MODE 1, 2, or 3, the SGT system may not be capable of supporting the required radioactivity release control function. The 4 hour Completion Time provides a period of time to correct the problem that is commensurate with the importance of maintaining the SGT System contribution to secondary containment during MODES 1, 2, and 3. This time period also ensures that the probability of an accident (requiring SGT OPERABILITY) occurring during periods where SGT is inoperable is minimal.

(continued)

BASES

LCO (continued)

The required boundary encompasses the zones which can be postulated to contain fission products from accidents required to be considered for the condition of each unit.

APPLICABILITY

In MODES 1, 2, and 3, a LOCA could lead to a fission product release to primary containment that leaks to secondary containment. Therefore, secondary containment OPERABILITY is required during the same operating conditions that require primary containment OPERABILITY.

In MODES 4 and 5, the probability and consequences of the LOCA are reduced due to the pressure and temperature limitations in these MODES. Therefore, maintaining secondary containment OPERABLE is not required in MODE 4 or 5 to ensure a control volume, except for other situations for which significant releases of radioactive material can be postulated, such as during operations with a potential for draining the reactor vessel (OPDRVs), during CORE ALTERATIONS, or during movement of irradiated fuel assemblies in the secondary containment.

ACTIONS

A.1

If secondary containment is inoperable, it must be restored to OPERABLE status within 4 hours. The 4 hour Completion Time provides a period of time to correct the problem that is commensurate with the importance of maintaining secondary containment during MODES 1, 2, and 3. This time period also ensures that the probability of an accident (requiring secondary containment OPERABILITY) occurring during periods where secondary containment is inoperable is minimal.

A TEMPORARY (ONE-TIME) COMPLETION TIME IS CONNECTED TO THE COMPLETION TIME REQUIREMENTS ABOVE (4 HOURS) WITH AN "OR" CONNECTOR. THE TEMPORARY COMPLETION TIME IS 48 HOURS AND APPLIES TO THE REPLACEMENT OF THE REACTOR BUILDING RECIRCULATING FAN DAMPER MOTORS. THE TEMPORARY COMPLETION TIME OF 48 HOURS MAY ONLY BE USED ONCE, AND EXPIRES ON DECEMBER 31, 2005.

(continued)

BASES

ACTIONS

C.1, C.2.1, C.2.2, and C.2.3 (continued)

ensures that the remaining filter train is OPERABLE, that no failures that could prevent automatic actuation have occurred, and that any other failure would be readily detected.

An alternative to Required Action C.1 is to immediately suspend activities that represent a potential for releasing radioactive material to the secondary containment, thus placing the plant in a condition that minimizes risk. If applicable, CORE ALTERATIONS and movement of irradiated fuel assemblies must immediately be suspended. Suspension of these activities must not preclude completion of movement of a component to a safe position. Also, if applicable, actions must immediately be initiated to suspend OPDRVs in order to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until OPDRVs are suspended.

The Required Actions of Condition C have been modified by a Note stating that LCO 3.0.3 is not applicable. If moving irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, in either case, inability to suspend movement of irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown.

A TEMPORARY (ONE-TIME) COMPLETION TIME IS CONNECTED TO THE COMPLETION TIME REQUIREMENTS ABOVE (4-HOURS) WITH AN "OR" CONNECTOR. THE TEMPORARY COMPLETION TIME IS 48 HOURS AND APPLIES TO THE REPLACEMENT OF THE REACTOR BUILDING RECIRCULATING FAN DAMPER MOTORS. THE TEMPORARY COMPLETION TIME OF 48 HOURS MAY ONLY BE USED ONCE, AND EXPIRES ON DECEMBER 31, 2005.

D.1

If both SGT subsystems are inoperable in MODE 1, 2, or 3, the SGT system may not be capable of supporting the required radioactivity release control function. The 4 hour Completion Time provides a period of time to correct the problem that is commensurate with the importance of maintaining the SGT System contribution to secondary containment during MODES 1, 2, and 3. This time period also ensures that the probability of an accident (requiring SGT OPERABILITY) occurring during periods where SGT is inoperable is minimal.

(continued)