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MAR 08 2012

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop OP1-17
Washington, DC 20555

SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED AMENDMENT NUMBER 281
TO UNIT 2 OPERATING LICENSE NO. NPF-22
TEMPORARY CHANGE TO ALLOW IMPLEMENTATION
OF MULTIPLE SPURIOUS OPERATIONS
MODIFICATIONS ON SSES UNIT 1 4160 V BUSES
UNIT 2 TECHNICAL SPECIFICATIONS 3.8.7 and 3.7.1
PLA-6817 **Docket No. 50-388**

Pursuant to 10 CFR 50.90, PPL Susquehanna, LLC (PPL), hereby requests approval of the following proposed amendment to the Susquehanna Steam Electric Station (SSES) Unit 2 Technical Specification (TS). The proposal would change Technical Specification 3.8.7 "Electrical Power Systems – Distribution Systems - Operating" and Technical Specification 3.7.1 "Plant Systems – RHRSW System and UHS."

This proposed change reflects a temporary extension of 24 hours to the Completion Time for Condition C in the SSES Unit 2 TS 3.8.7 "Distribution Systems - Operating" to allow a Unit 1 4160 V subsystem to be de-energized and removed from service for 96 hours to perform modifications on the bus. It also proposes a temporary extension of 24 hours to the Completion Time for Condition A in SSES Unit 2 TS 3.7.1 "Plant Systems – RHRSW System and UHS" to allow the Ultimate Heat Sink (UHS) spray array and spray array bypass valves associated with applicable division Residual Heat Removal Service Water (RHRSW) and in Condition B the applicable division Unit 2 RHRSW subsystem to be inoperable for 96 hours during the Unit 1 4160 V bus breaker control logic modifications.

As demonstrated in the enclosed evaluation, the proposed amendment does not involve a significant hazard consideration.

These temporary Technical Specification changes are necessary to support modifications to the breaker control logic on Unit 1 4160 V ESS buses that were identified during our implementation of the Multiple Spurious Operations Resolution Process addressed in EGM 09-002 and Regulatory Guide 1.189 Revision 2.

DESIGNATE AS ORIGINAL
BHALCHANDRA K. VAIDYA
PROJECT MANAGER
NRR/DORL/LPL1-1
MARCH 9, 2012

A001

In accordance with the provisions of 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (a)(6), PPL requests that this amendment be processed on an exigent basis to support timely installation of modifications to address 4 kV control circuit changes in response to the guidance provided in NRC Regulatory Guide 1.189 Revision 2 and Industry Guidance Document NEI 00-01 to resolve a longstanding issue on Multiple Fire-Induced Spurious Operations. The basis for the exigency is discussed in the Enclosure. In order to support the planned Unit 1 4160 V bus breaker control logic modifications during the spring of 2012 Unit 1 refueling outage, PPL requests that this change be approved by April 5, 2012. PPL further requests that the approved amendment be issued to be effective immediately upon approval with the implementation to be completed within 30 days.

The Enclosure to this letter also provides the Evaluation of this Proposed Changes to Unit 2 Technical Specification 3.8.7 and Technical Specification 3.7.1. Attachment 1 is the Technical Specification mark-up. Attachment 2 is a mark-up of the associated Technical Specification Bases changes provided for information.

There are no regulatory commitments associated with the proposed changes.

The need for this change has been discussed with the SSES NRC Project Manager, and it has also been reviewed by the SSES Plant Operations Review Committee and by the Susquehanna Review Committee.

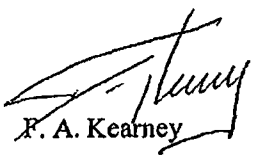
In accordance with 10 CFR 50.91(b), PPL Susquehanna, LLC is providing the Commonwealth of Pennsylvania with a copy of this proposed License Amendment request.

If you have any questions or require additional information, please contact Mr. Cornelius T. Coddington at (610) 774-4019.

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

Executed on: 3/8/12

Sincerely,



F. A. Kearney

Enclosure:

PPL Susquehanna, LLC Evaluation of Proposed Changes to Unit 2 Technical Specification 3.8.7, "Electrical Power Systems – Distribution Systems - Operating" and Unit 2 Technical Specification 3.7.1, "Plant Systems – RHRSW System and UHS"

Attachments:

Attachment 1 Proposed Changes to Unit 2 Technical Specification 3.8.7, "Electrical Power Systems – Distribution Systems - Operating" and Unit 2 Technical Specification 3.7.1, "Plant Systems – RHRSW System and UHS" (Mark-ups)

Attachment 2 Proposed Change to Unit 2 Technical Specifications Bases 3.8.7, "Electrical Power Systems – Distribution Systems - Operating" and Unit 2 Technical Specification Bases 3.7.1, "Plant Systems – RHRSW System and UHS" (Mark-ups provided for Information Only)

Attachment 3 Generic Outage Schedule for 4.16 kV ESS Bus Modifications

Copy: NRC Region I
Mr. J. W. Andersen, NRR/EEEB/BC
Mr. R. B. Elliot, NRR/STSB/BV
Mr. P. W. Finney, NRC Sr. Resident Inspector
Mr. D. M. Frumkin, NRR/AFPB
Mr. D. G. Harrison, NRR/APLA/BC
Mr. R. R. Janati, DEP/BRP
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Mr. G. S. Matharu, NRR/EEEB
Mr. K. V. Scales, NRR/EEEB
Mr. B. K. Vaidya, NRC Project Manager
Mr. G. M. Waig, NRR/STSB (Tech Specification Branch)
Mr. G. A. Wilson, NRR/DORL/LPL1-1/BC

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P. W. Brady	GENPL5
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T. A. Gorman	GENPL5
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A. T. Iliadis	NUCSB3
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J. J. Petrilla, III	NUCSA4
J. L. Tripoli	NUCSA4
T. G. Wales (DBD)	GENPL5
L. M. Yupco	NUCSB3
NRA File	GENPL4
DCS	GENPL4

Enclosure to PLA-6817

PPL Susquehanna, LLC Evaluation of Proposed Changes to Unit 2 Technical Specification 3.8.7 "Electrical Power Systems – Distribution Systems - Operating" and Unit 2 Technical Specification 3.7.1, "Plant Systems – RHRSW System and UHS"

PPL EVALUATION

Subject: PPL Susquehanna Evaluation of Proposed Changes to Unit 2 Technical Specification 3.8.7 Electrical Power Systems – Distribution Systems – Operating and Unit 2 Technical Specification 3.7.1, "Plant Systems – RHRSW System and UHS"

1. DESCRIPTION

The proposed change to the PPL Susquehanna (PPL) Unit 2 Technical Specification 3.8.7 reflects a temporary change to the Completion Time for Condition C to the SSES Unit 2 Technical Specification 3.8.7 to allow a Unit 1 4160 V subsystem to be de-energized and removed from service to perform modifications to the bus breaker control logic. These modifications are necessary to resolve issues identified during the resolution of the Multiple Fire-Induced Spurious Operations issue.

The proposed change to the SSES Unit 2 Technical Specification 3.7.1 reflects a temporary change to the Completion Time for Conditions A and B due to the extension of the completion time for a Unit 1 4160 V subsystem to be de-energized and removed from service.

2. PROPOSED CHANGE

A mark-up of the proposed change to the Unit 2 Technical Specifications (TS) 3.8.7 is included in Attachment 1 of this submittal. The Unit 2 TS 3.8.7, Condition C, Completion Time is revised to extend the Completion Time for a Unit 1 4160 V subsystem that is de-energized and removed from service. Condition C is revised as follows:

C. One Unit 1 AC electrical power distribution subsystem inoperable.	C.1 Restore Unit 1 AC electrical power distribution subsystem to OPERABLE status.	72 hours OR 96 hours during the installation of the multiple fire-induced spurious operations modifications in Unit 1 [1]

[1] Upon completion of the MSO modifications on all four Unit 1 4.16 kV buses, this temporary extension is no longer applicable and will expire on May 31, 2012.

A mark-up of the proposed change to The Unit 2 TS 3.7.1 is also included in Attachment 1. The SSES Unit 2 TS 3.7.1 Condition A Completion Time is being revised to extend the Completion Time for the Ultimate Heat Sink (UHS) spray array and spray array bypass valves associated with Residual Heat Removal Service Water (RHRSW) System to be inoperable for 96 hours (an extension of 24 hours) during the Unit 1 4160 V bus breaker control logic modifications to the Unit 1 1A201 and 1A202 4.16 kV buses. Condition A is revised as follows:

One valve in Table 3.7.1-2 inoperable. OR One valve in Table 3.7.1-3 inoperable. OR Any combination of valves in Table 3.7.1-1, Table 3.7.1-2, or Table 3.7.1-3 in the same return loop inoperable.	A.3	Restore the inoperable valve(s) to OPERABLE status.	8 hours from the discovery of an inoperable RHRSW subsystem in the opposite loop from the inoperable valve(s) AND 72 hours OR 96 hours during the installation of the multiple fire-induced spurious operations modifications in Unit 1 [1] (continued)

[1] Upon completion of the MSO modifications on all four Unit 1 4.16 kV buses, this temporary extension is no longer applicable and will expire on May 31, 2012.

The SSES Unit 2 TS 3.7.1 Condition B Completion Time is being revised to extend the Completion Time for the Unit 2 RHRSW subsystem to be inoperable for 96 hours (an extension of 24 hours) during the Unit 1 4160 V bus breaker control logic modifications to the Unit 1 1A201 and 1A202 4.16 kV buses. Condition B is revised as follows:

B. One Unit 2 RHRSW subsystem inoperable.	B.1	Restore the Unit 2 RHRSW subsystem to OPERABLE status.	72 hours from discovery of the associated Unit 1 RHRSW subsystem inoperable OR 96 hours during the installation of the multiple fire-induced spurious operations modifications in Unit 1 [1] AND 7 days

[1] Upon completion of the MSO modifications on all four Unit 1 4.16 kV buses, this temporary extension is no longer applicable and will expire on May 31, 2012.

This change will allow sufficient time to complete the required modifications.

The Unit 2 TS Bases Section B 3.8.1 and Section B 3.7.1 have also been revised based on this change.

3. BACKGROUND

Reason for Modifications

In response to the guidance provided in NRC Regulatory Guide 1.189 Revision 2 and Industry Guidance Document NEI 00-01, PPL is implementing changes to the 4 kV Control Circuits. The guidance in these documents is to resolve a longstanding Multiple Fire-Induced Spurious Operations (MSO) issue. The NRC granted enforcement discretion to the Industry under Enforcement Guidance Memorandum (EGM) 09-002. EGM 09-002 was issued on May 14, 2009. The EGM stated that the start of the enforcement discretion period was tied to the issuance of Regulatory Guide 1.189 Revision 2. Regulatory Guide 1.189 Revision 2 was published in the Federal Register on November 2, 2009. The Federal Register notice for Regulatory Guide 1.189 Revision 2 started the enforcement discretion clock. Implementation of the EGM required a three phased approach:

- MSO Identification in CAP [Phase 1]: The EGM provided enforcement discretion for all MSO Issues included in a licensee's corrective action program (CAP) with compensatory measures and risk significance of less then red provided these issues were included in CAP within 6 months (May 2, 2010).

- MSO Analysis [Phase 2]: Perform the analysis to determine which MSOs require a plant change.

- MSO Corrective Actions [Phase 3]: The EGM provided enforcement discretion for all MSOs meeting the Phase 1 requirement above until November 2, 2012 to complete the required plant changes.

Phase 1 Response:

The initial PPL Susquehanna, LLC effort upon issuance of Regulatory Guide 1.189 Revision 2 was to implement the requirements of NEI 00-01 Revision 2 by reviewing the BWR Generic List of MSOs in Appendix G to NEI 00-01 using an Expert Panel Process. The Expert Panel was completed in December of 2009. The Expert Panel Process resulted in the identification of 69 Plant Specific MSOs for PPL Susquehanna, LLC. Between December of 2009 and May of 2010, each of these Plant Specific MSOs was entered into CAP and evaluated for either generic compensatory measures or the need for MSO specific compensatory measures. All

Plant Specific MSOs were entered into CAP by May 2, 2010. This met the first phase requirement of the EGM.

Phase 2 & 3 Responses:

The EGM also required that any corrective actions required for any Plant Specific MSOs be completed within three years of the issuance of Regulatory Guide 1.189 Revision 2, i.e., November 2, 2012. Phase 2 and 3 were performed concurrently. To meet the EGM end date, each MSO had to be reviewed to determine if a plant change was required and, if a plant change was required, to determine if the plant change would require an outage to implement. The available Unit 1 outage windows within the EGM Enforcement Discretion Window were as follows:

- Unit 1 – 16th RIO – March of 2010: This outage occurred during the time period when Phase 1, Plant Specific MSOs, was being completed. As such, this outage was not available for completing any MSO plant changes.

- Unit 1 – 17th RIO – March of 2012: The milestone for the issuance of plant changes for this outage was around June of 2011. Given the need for analyzing each of the 69 Plant Specific MSOs to determine which required plant changes and the need to engineer the changes identified, this Unit 1 RIO became the outage available for completing the MSO plant changes.

Since the modifications affect common equipment powered from Unit 1 4160 V buses that support Unit 2 operation, changes to the Unit 2 Technical Specifications are required.

Justification and Basis for the Exigent Circumstances

As described above the timing of the enforcement discretion period under the EGM relative to the PPL Susquehanna, LLC Outage schedules require that the changes to the Unit 1 - 4.16 kV Breakers be accomplished in the upcoming Unit 1 – 17th RIO which starts March 31, 2012. Due to the late identification in the Appendix R Multiple Spurious Operations (MSOs) Project of the need for work on the Unit 1 – 4.16 kV Breakers, the planning effort that identified the need for each 4.16 kV Bus to be out of service to accomplish the work for a period of time that could challenge the LCO times associated with Technical Specifications 3.8.7 Condition C and 3.7.1 Conditions A and B was not completed until February of 2012. With the planned start of the Unit 1 – 17th RIO on March 31, 2012, insufficient time is available for PPL to submit a Technical Specification Change Request that would allow time for the 30-day prior public notice period. Since this change request does not involve a significant hazard and since time is not available for the 30-day prior public notice period, it is being submitted as an exigent Technical Specification Change.

The planning phase for this engineering change identified that the work would require approximately 60 hours to complete. Although this time appears to be within the 72-hour completion time allowed by TS 3.8.7 Condition C, and TS 3.7.1 Conditions A and B, it is only an estimate that is based upon currently available information and does not include any allowances for unforeseen circumstances. Since the modification scope is complex, and the modification involves special post maintenance testing, it is critical that maintenance is performed in a deliberate manner without perceived time pressure. The pre-job briefings for this work will clearly identify the expectations to stop work in the event that unanticipated circumstances arise or additional time is required to complete the specific tasks. The 24-hour extension will allow ample time to avoid undue time pressure to complete this first time evolution and will provide a reasonable period of time to resolve any unanticipated circumstances that may arise. This proposed extension also reduces the potential for the unnecessary burden of shutting down Unit 2.

Performing the MSO modifications while both Unit 1 and Unit 2 were online was discussed. In order to perform the modifications safely, the 4.16 kV buses need to be taken out of service. With Unit 1 online, the LCO completion time for one bus out of service is 8 hours. Since the scope of work requires ~ 60 hours per bus, this LCO time is not sufficient to perform the modifications. Therefore, an exigent Technical Specification change was requested.

Overview of SSES AC Distribution System

The SSES AC Distribution System transmits the output of the Unit 1 and Unit 2 Main Generators to offsite switchyards, and distributes power from the unit auxiliary and offsite power supplies to onsite AC loads. These loads are required for startup, normal unit operation, shutdown, and emergency plant operations. Voltage levels of 500 kV, 230 kV, 24 kV, 13.8 kV, 4.16 kV, 480 V and 208/120 V are provided for a variety of reasons.

The electric power distribution system (See Figure 1 for simplified AC Distribution System) includes Class 1E and non-Class 1E AC Power Systems. The non-Class 1E portion of the onsite power systems provides AC power for non-nuclear safety related loads. A limited number of non safety-related loads are important to the power generating equipment integrity and are fed from the Class 1E Distribution System. The non-Class 1E AC Power System distributes power at 13.8 kV, 4.16 kV, 480 V and 208/120 V grouped into two symmetrical distribution systems arising from the 13.8 kV buses.

The Class 1E AC Power System distributes power at 4.16 kV, 480 V, and 208/120 V to the safety-related loads. The Class 1E AC System is divided into four load group channels per unit (load Group Channels A, B, C, and D) such that any combination of three out of four load groups has the capability of supplying the minimum required safety loads. The 4.16 kV Bus of each Class 1E Load Group Channel is provided

with connections to two offsite power sources designated as preferred and alternate power supplies (Preferred and alternate power supplies up to the 4.16 kV Buses of the Class 1E Power System are considered as non-Class 1E). Diesel generators are provided as a standby power supply in the event of total loss of the preferred and alternate supplies.

Four independent diesel generators, shared between the two Units, provide emergency power for one of the four Class 1E AC load groups in each Unit when normal sources are lost. In addition, two divisionalized load groups are established from the four load groups (Division I is comprised of Channels A and C; Division II is comprised of Channels B and D) for those engineered safety feature loads which require one out of two load groups to meet the design basis requirements. A spare diesel generator (E-Diesel) is provided, which can be manually aligned as a replacement for any one of the other four diesel generators.

The ESS buses designated load group channel is as follow for Unit 1 and Unit 2 respectively:

ESS BUS	LOAD GROUP	480 VAC LOAD CENTER
1A201	A	1B210
1A203	C	1B230
1A202	B	1B220
1A204	D	1B240
2A201	A	2B210
2A203	C	2B230
2A202	B	2B220
2A204	D	2B240

Each ESS Bus (powered from the startup bus) powers a 4.16 kV/480 V ESS Load Center (LC) transformer used to supply an essential 480 V single-ended LC. The associated 4.16 kV ESS bus is the only source of power to the respective LC.

The ESS LC supplies power to the individual 480 V loads and to Motor Control Centers (MCCs) that power instrument AC Distribution panels 125 and 250 V DC Battery Chargers and Essential plant lighting.

The 250 V DC Battery Chargers on each unit are supplied by that unit's 4.16 kV ESS Bus. The 125 V DC Battery Chargers can be supplied from either unit's 4.16 kV ESS Bus.

Alignment Pertinent to this Technical Specification Change Request

During the Unit 1 – 17th Refueling and Inspection Outage (RIO), the following alignment of the SSES AC Distribution will apply.

Unit 1 will be in a shutdown condition for the Unit 1 – 17th RIO. During the course of the Unit 1 – 17th RIO, each of the four (4) Unit 1 4.16 kV ESS Buses will be taken out of service on a one-at-a-time basis to perform the work discussed in this submittal. Due to the Common Loads supplied by the Unit 1 - 4.16 kV ESS Buses, depending on which Unit 1 - 4.16 kV Bus is out of service, equipment required for the operation of common systems also supporting the operation of Unit 2 will be affected.

The following impacts will occur depending on which Unit 1 - 4.16 kV Bus is out of service:

4.16 kV ESS Bus	Common Equipment Impacted	Affected Unit 2 Tech Spec for this Equipment	Unit 2 Tech Spec LCO Duration for the Affected Equipment
1A201	ESW A Pump	3.7.2	7 Days
	RHRSW A LOOP Return Valves	3.7.1	72 Hours
1A202	ESW B Pump	3.7.2	7 Days
	RHRSW B LOOP Return Valves	3.7.1	72 Hours
1A203	ESW C Pump	3.7.2	7 Days
	SGTS Division 1	3.6.4.3	7 Days
	CREOASS Division 1	3.7.3	7 Days
	Control Room Floor Cooling Division 1	3.7.4	30 Days
1A204	ESW D Pump	3.7.2	7 Days
	SGTS Division 2	3.6.4.3	7 Days
	CREOASS Division 2	3.7.3	7 Days

4.16 kV ESS Bus	Common Equipment Impacted	Affected Unit 2 Tech Spec for this Equipment	Unit 2 Tech Spec LCO Duration for the Affected Equipment
	Control Room Floor Cooling Division 2	3.7.4	30 Days

Whenever a Unit 1 - 4.16 kV ESS Bus is taken out of service, Technical Specification 3.8.7 Condition C requires a Limiting Condition for Operation (LCO) to be entered for Unit 2 due to the Common Load Impacts. The duration of this Unit 2 LCO is 72 hours. As can be seen from the table above, the only 4.16 kV ESS Bus outages that would present a condition where the Technical Specification LCO duration for the specific system impacted is less than 7 days are 4.16 kV ESS Buses 1A201 and 1A202. This is due to the impact on the RHRSW System, which has an LCO duration of 72 hours for this condition. For all other 4.16 kV ESS Buses and impacted common systems, the LCO duration would be a minimum of 7 days which is three days longer than the current extension being requested in this Technical Specification Change Request. The significance of the increase in LCO duration for the RHRSW System is addressed in the next section of this submittal, entitled Overview of the RHRSW System.

With respect to the condition of the SSES AC Distribution System on Unit 2 throughout this evolution and regardless of which Unit 1 - 4.16 kV ESS bus is out of service is as follows:

- All four (4) Unit 2 - 4.16 kV ESS Busses are operable.
- All four (4) Common Emergency Diesel Generators are operable.
- All 125 V DC and 250 V DC Battery Chargers, Batteries and Distribution Systems for Unit 2 are operable.

The only equipment impacts to Unit 2 from the work being performed on Unit 1 are those specifically cited in the table above due to the common loads supplied from the Unit 1 - 4.16 kV ESS Buses.

Overview of Residual Heat Removal Service Water (RHRSW) System

The RHRSW System is designed to provide cooling water for the Residual Heat Removal (RHR) System heat exchangers, required for a safe reactor shutdown following a Design Basis Accident (DBA) or transient. The RHRSW System is operated whenever the RHR heat exchangers are required to operate in the shutdown cooling mode or in the suppression pool cooling or spray mode of the RHR System.

The RHRSW System consists of two independent and redundant subsystems. Each subsystem is made up of a header, one pump, a suction source, valves, piping, heat exchanger, and associated instrumentation. Either of the two subsystems is capable of providing the required cooling capacity to maintain safe shutdown conditions. The two subsystems are separated so that failure of one subsystem will not affect the operability of the other subsystem. One Unit 1 RHRSW subsystem and the associated (same division) Unit 2 RHRSW subsystem constitute a single RHRSW loop. The two RHRSW pumps in a loop can each be independently aligned to either Unit's heat exchanger. The RHRSW System is designed with sufficient redundancy so that no single active component failure can prevent it from achieving its design function. One such redundant feature is the use of a redundant manual isolation valve in each loop's bypass return line, which can be closed manually using a "reach-rod" through the top of the RHRSW Valve Vault missile shield without having to access the Valve Vault itself. The RHRSW System is described in the FSAR, Section 9.2.6.

Cooling water is pumped by the RHRSW pumps from the ultimate heat sink (UHS) through the tube side of the RHR heat exchangers. After removing heat from the RHRSW heat exchanger, the water is discharged to the spray pond (UHS) by way of the UHS return loops. The UHS return loops direct the return flow to a network of sprays that dissipate the heat to the atmosphere or directly to the UHS via a bypass header. The divisionalized UHS return loops are common to both units.

The system is initiated manually from the control room except for the back-up spray array bypass manual valves that can be operated locally in the event of a failure of the primary spray array bypass valves. The system can be started any time the LOCA signal is manually overridden or clears.

The ultimate heat sink system is composed of an approximately 3,300,000 cubic foot spray pond and associated piping and spray risers. Each UHS return loop contains a bypass line, a large spray array and a small spray array. The purpose of the UHS is to provide both a suction source of water and a return path for the RHRSW and Emergency Service Water (ESW) systems. The function of the UHS is to provide water to the RHRSW and ESW systems at a temperature less than the 97°F design temperature of the RHRSW and ESW systems. UHS temperature is maintained less than the design temperature by introducing the hot return fluid from the RHRSW and ESW systems into the spray loops and relying on spray cooling to maintain temperature. The UHS is designed to supply the RHRSW and ESW systems with all the cooling capacity required during a combination LOCA/LOOP for thirty days without fluid addition. The UHS is described in the FSAR, Section 9.2.7.

Alignment Pertinent to this Technical Specification Change Request

While work is being performed on the Unit 1 – 4.16 kV ESS Bus 1A201 and 1A202, RHRSW Loop A and B, respectively, will be affected. When 1A201 and 1A202 are out of service, 72 hour LCOs are required for Unit 2 under Unit 2 Technical

Specification Sections 3.8.7 Condition C, 3.7.1 Condition A and 3.7.1 Condition B. While work is being performed on the Unit 1 – 1A201 and 1A202 4.16 kV ESS buses, however, the following action will be taken to align the RHRSW System to optimally support Unit 2.

- The RHRSW Spray Pond Return Bypass Valve, HV01222A or B, on the out of service loop will be electrically de-powered in the open position.

With the out of service RHRSW Loop configured as described above, a return flow path will be established. Since the RHRSW Pumps on Unit 2 are not impacted by the Unit 1 – 4.16 kV ESS Bus outages, with this return flow path established, the affected RHRSW Loop on Unit 2 will be functional. With the RHRSW Spray Pond Return Bypass Valve, HV01222A or B, electrically de-powered, fire-induced circuit failures will not be able to affect the position of the valve. Note that this alignment provides for a functional RHRSW loop for Unit 2 while still maintaining the other Unit 2 RHRSW loop operable.

With the RHRSW Spray Pond Return Bypass Valve, HV01222A or B, electrically disabled, all flow through the affected loop will go directly to the Spray Pond. This flow path does not provide spray cooling to the returning process fluid and, under design basis conditions, will result in Spray Pond temperatures exceeding the temperature at which safe shutdown of both units is assured. Under design basis conditions, the manual return line bypass valve is closed within 3 hours and all cooling is accomplished using the unaffected loop. The conditions driving the elevated Spray Pond temperatures in the design basis analysis are as follows:

- The use of conservative reactor decay heat values.
- The use of conservative meteorology.
- The use of conservative initial Spray Pond temperatures, i.e., Technical Specification Maximum Temperature.

The use of conservative values for these parameters is required in the design and licensing basis for SSES. Calculations performed using still conservative, but more "best estimate" values for each of these parameters have determined that, with the bypass valve open for 12 hours and the large spray array valve open on the opposite loop, the peak Spray Pond temperatures are still approximately 4 degrees F below the peak Spray Pond temperature when safely shutting down both units.

The initial Spray Pond temperature, in the "best estimate" case discussed above, was around 80° F. The Spray Pond temperatures for the duration of this temporary change would not be expected to be anywhere near this level since the work is being performed in April when the daytime temperatures are less than 80 degrees F. Additionally, for the plant alignment pertinent to this change request, one of the operating units will already be in a safe shutdown condition.

Given this set of facts, it is expected that shutting down Unit 2 and continuing to cool Unit 1 through the open Spray Pond bypass valve, in the event that the operable loop of RHRSW were to fail in a configuration similar to that described above would be acceptable for a period approaching 20 hours with no additional actions on the part of the operators. In this 20 hour period, however, actions could be taken by the operators to access the RHRSW Spray Pond Valve Vault and to manually close the bypass valve and to manually open the spray array valves. Re-aligning the bypass and spray array valves would return the UHS to its design condition with spray cooling. These actions could be accomplished well within the available 20 hour time frame available. The valves requiring local manual manipulation are the valves within the system that are remotely cycled for system operation under design basis conditions. Therefore, it is expected that these valves which are periodically cycled would be capable of local manual manipulation should local manual manipulation be required.

Therefore, the safety consequences of this condition are not considered to be high.

Unit 1 4 kV Bus Outage Sequence

Only one Unit 1 bus will be removed from service at a time

All Unit 2 buses will remain energized and operable

Typical Outage Logic for a Unit 1 4.16 kV Bus:

- Deenergize bus
- Wiring changes
- Cold scheme checks of wiring changes
- Functional testing of offsite power breakers
- Functional testing of diesel generator (D/G) breaker
- Energize bus
- Modification closure
- Restore bus to operable status

The order of the planned bus outages is 'A', 'C', 'D', 'B'. The detailed generic outage schedule to be used for each of the Unit 1 4 kV buses is included in Attachment 3.

Unit 2 Work During Unit 1 4 kV Bus Outages

Planned Work on Unit 2 is as follows:

- Routine surveillances to maintain systems operable
  - This would include surveillances for battery checks, Residual Heat Removal (RHR) and Core Spray (CS) system flow tests, D/G monthly tests,

Standby Gas Treatment (SBGT), Control Room Emergency Outside Air (CREOAS), etc.

- Planned maintenance on the 'B' loop of RHRSW
  - o Entire loop drained impacting both units. This work will not be performed in parallel with Unit 1 4 kV bus work which impacts the other division of RHRSW.

- SBGT damper inspections
  - o Each inspection requires about 1 hour of a 4 hour Unit 2 LCO.

Emergent work on Unit 2 will be performed as required to keep the unit on line.

During the Unit 1 4.16 kV ESS bus outages, PPL's normal Maintenance Rule (a)4 Program on both the online and outage units will be used to identify and manage risk.

Scope of work

The scope of work driving the need for an exigent Technical Specification change to Section 3.8.7 is associated with changes to the 125 vdc control circuits for the Diesel Generator (04 Breaker), Primary Offsite Feeder (01 Breaker) and Secondary Offsite (09 Breaker) Feeder breakers on each of the Unit 1 4.16 kV Buses. The specific scope of work for each breaker is explained below:

- The 01 and 09, Primary and Secondary Feeder Breakers, will be modified to assure that a fire induced cable failure followed by a loss of offsite power will not prevent either of these breakers from tripping on bus under voltage. The changes to accomplish this involve the addition of a new fuse and a new diode in the breaker control circuitry for the 01 and 09 breakers on each of the 4.16 kV Buses.

- The 04, Diesel Generator Breaker, will be modified to assure that a fire-induced spurious closure of the breaker during a Control Room fire can be re-aligned using local operator actions. The changes to accomplish this involve moving a portion of the auto-start logic to a location under a contact from the Control Switch Lateral on each of the 04 Breakers on each of the 4.16 kV Buses.

Although the physical work associated with these changes is not extensive, when it is combined with the time to remove the bus from service, to perform the physical work, to perform the testing required to assure the acceptability of the change and to restore the bus to service, the evolution is considered to be significant. Additionally, installation uncertainties that cannot be verified until the bus is removed from service, pose an additional threat to the ability to complete this work in the 72 hours allotted prior to invoking a Unit 2 shutdown.

Fire Protection System Status Requirements

The common systems or functions impacted by the removal of a Unit 1 4.16 kV Bus from service for maintenance with the potential to impact Unit 2 are listed in the table below:

Table F1

Common System – Unit Impacted	Applicable LCO	Completion Time (one sub-system)	Potential Impact to Post-Fire Safe Shutdown
ESW – Unit 2	3.7.2	7 days	Yes
RHRSW – Unit 2	3.7.1	72 hours	Yes
SBGT – Unit 2	3.6.4.3	7 days	No
CREOAS – Unit 2	3.7.3	7 days	No
Control Room Floor Cooling – Unit 2	3.7.4	30 days	No

As can be seen from Table F1 above, the potential impact to Post-Fire Safe Shutdown on Unit 2 from the removal of a single 4.16 kV Bus on Unit 1 is the loss of ESW and RHRSW depending on which bus is out of service. The loss of the ESW functions applies when the 4.16 kV Buses on Unit 1 are out of service. It is important to note that, with all four 4.16 kV Buses on Unit 1 operable, should an impact to any of the ESW functions described below, e.g., an ESW Pump, occur due to a loss of that specific function, Unit 2 would be in a 7 day LCO. The loss of a Unit 1 - 4.16 kV Buses could affect the ESW functions listed in Table F2 below:

Table F2

ESW Function Potentially Impacted	Function Level Mitigation Available
ESW Pumps	During the duration of the Unit 1- 4.16 kV Bus work, the Diesel Driven Fire Pump will be treated as protected equipment to assure the availability of fire suppression. Additionally, Plant Procedures for the control of combustibles and for hot work will limit the potential for plant fires with the potential to damage any remaining ESW pumps.
ESSW Pumphouse HVAC	Loss of ESW HVAC will be mitigated by implementing the ESSW Pumphouse temporary cooling measures outlined in an operating.
ESW Diesel Generator Supply Valves (A-D)	These valves are normally open and required open. These valves are powered from 0B516, 0B526, 0B536, and 0B546 that are powered from Unit 2 4.16 kV buses when Unit 1 4.16 kV buses are out of service. Therefore, there is no impact to these valves during the work evolution discussed in this evaluation.
ESW Diesel Generator Return Valves (A-D)	These valves are normally open and required open. These valves are powered from 0B516, 0B526, 0B536, and 0B546 that are powered from Unit 2 4.16 kV buses when Unit 1 4.16 kV buses are is out of service. Therefore, there is no impact to these valves during the work evolution discussed in this evaluation.

The loss of RHRSW could affect the functions listed in Table F3 below:

Table F3

RHRSW Function Potentially Impacted	Function Level Mitigation Available
ESSW Pumphouse Fans 1/2 V 506A/B	Loss of ESW HVAC will be mitigated by implementing the ESSW Pumphouse temporary cooling measures outlined in an operating procedure.
RHRSW Loop A Return to Spray Pond Valves	These valves in the common ESW-RHRSW return line to the Spray Pond are powered from 0B517, which is powered from Unit 1 Bus 1A201. During the duration of the Unit 1- 4.16 kV Bus work, the Diesel Driven Fire Pump will be treated as protected equipment to assure the availability of fire suppression. Additionally, Plant Procedures for the control of combustibles and for hot work will limit the potential for plant fires with the potential to damage plant equipment. Based on the discussion under the section of this submittal on the Overview of the Residual Heat Removal Service Water (RHRSW) System, it is expected that this Loop would be functional even with the power to the RHRSW Return to the Spray Pond Valves not available.
RHRSW Loop B Return to Spray Pond Valves	These valves in the common ESW-RHRSW return line to the Spray Pond are powered from 0B527, which is powered from Unit 1 Bus 1A202. During the duration of the Unit 1- 4.16 kV Bus work, the Diesel Driven Fire Pump will be treated as protected equipment to assure the availability of fire suppression. Additionally, Plant Procedures for the control of combustibles and for hot work will limit the potential for plant fires with the potential to damage plant equipment. Based on the discussion under the section of this submittal on the Overview of the Residual Heat Removal Service Water (RHRSW) System, it is expected that this Loop would be functional even with the power to the RHRSW Return to the Spray Pond Valves not available.

Conclusion:

The 4.16 kV Bus Outages on Unit 1 will have an impact on the ESW and RHRSW Systems used for Post-Fire Safe Shutdown on Unit 2. The potential impacts to post-fire safe shutdown beyond those associated with the actual bus outage can be mitigated by existing plant procedures to: (1) provide temporary cooling to the ESSW Pumphouse should loss of HVAC Systems occur; (2) control combustibles and hot work to limit the potential for plant fires capable of damaging plant equipment, and; (3) protect the Diesel Driven Fire Pump to assure a source of fire water is available for fire suppression. Additionally, based on the discussion under the section of this submittal on the Overview of the Residual Heat Removal Service Water (RHRSW) System, it is expected that two Loops of RHRSW would be available. One would be operable and protected from the effects of fires. The other would be functional even with the power to the RHRSW Return to the Spray Pond Valves not available. With the RHRSW Return to the Spray Pond Bypass Valve open and de-energized, fire-induced spurious closure of the valve is not possible.

Protected Equipment

The equipment to be protected during the Unit 1 ESS bus outages was determined by licensed operators using the principles of our protected equipment program and considerations of Technical Specifications based on which bus was de-energized. The creation of the protected equipment list also considered risk insights from PPL's Maintenance Rule (a)4 model. The lists of protected equipment are shown in attached Table 1.

4. TECHNICAL ANALYSIS

During the upcoming Unit 1 refueling outage, Unit 1 17th RIO, 4 kV MSO modifications implementation are expected to occur which requires each Unit 1 4.16 kV ESS bus to be taken out of service. Unit 2 Technical Specifications (TS) 3.8.7 requires Unit 1 distribution system to be operable to support Unit 2 operation. The common loads required for Unit 2 continued operation need to remain powered by Unit 1 4.16 kV ESS buses. The scheduled modification activities on Unit 1 will be performed on one bus at the time. As such, the remaining three 4.16 kV ESS buses on Unit 1 remain capable of supplying the required loads for Unit 2. The proposed change to Unit 2 TS 3.8.7 Condition C completion time from 72 hours to 96 hours (an additional 24 hours) for each Unit 1 4.16 kV ESS bus outage is needed to provide sufficient time to implement scheduled MSO modifications and perform required post modification testing.

The table below lists the common supported systems and the TS conditions and completion times for one inoperable Unit 1 4.16 kV ESS bus.

4.16 kV ESS Bus	Common Equipment Impacted	Affected Unit 2 Tech Spec for this Equipment	Unit 2 Tech Spec LCO Duration for the Affected Equipment
1A201	ESW A Pump	3.7.2	7 Days
	RHRSW A LOOP Return Valves	3.7.1	72 Hours
1A202	ESW B Pump	3.7.2	7 Days
	RHRSW B LOOP Return Valves	3.7.1	72 Hours
1A203	ESW C Pump	3.7.2	7 Days
	SGTS Division 1	3.6.4.3	7 Days
	CREOASS Division 1	3.7.3	7 Days
	Control Room Floor Cooling Division 1	3.7.4	30 Days
1A204	ESW D Pump	3.7.2	7 Days
	SGTS Division 2	3.6.4.3	7 Days
	CREOASS Division 2	3.7.3	7 Days
	Control Room Floor Cooling Division 2	3.7.4	30 Days

Whenever a Unit 1 - 4.16 kV ESS Bus is taken out of service, Technical Specification 3.8.7 Condition C requires a Limiting Condition for Operation (LCO) to be entered for Unit 2 due to the Common Load Impacts. The duration of this Unit 2 LCO is 72 hours. As can be seen from the table above, the only 4.16 kV ESS Bus outages that would present a condition where the Technical Specification LCO duration for the specific system impacted is less than 7 days are 4.16 kV ESS Buses 1A201 and

1A202. This is due to the impact on the RHRSW System, which has an LCO duration of 72 hours for this condition. For all other 4.16 kV ESS Buses and for all other impacted common systems, the LCO duration would be a minimum of 7 days which is three days longer than the current extension being requested in this Technical Specification Change Request. The significance of the increase in LCO duration for the RHRSW System is addressed later in this section.

With respect to the condition of the SSES AC Distribution System on Unit 2 throughout this evolution and regardless of which Unit 1 - 4.16 kV ESS bus is out of service is as follows:

- All four (4) Unit 2 - 4.16 kV ESS Busses are operable.
- All four (4) Common Emergency Diesel Generators are operable.
- All 125 V DC and 250 V DC Battery Chargers, Batteries and Distribution Systems for Unit 2 are operable.

The only equipment impacts to Unit 2 from the work being performed on Unit 1 are those specifically cited in the table above due to the common loads supplied from the Unit 1 - 4.16 kV ESS Buses.

As seen in the table above, the UHS spray array and spray array bypass valves are powered from the Unit 1 1A201 and 1A202 4.16 kV ESS buses; therefore, an extension to their completion time in Condition A of TS 3.7.1 is needed to support work on the two Unit 1 4.16 kV buses.

While work is being performed on the Unit 1 – 4.16 kV ESS Bus 1A201 or 1A202, RHRSW Loop A or B, respectively, will be affected. When 1A201 or 1A202 are out of service, 72 hour LCOs are required for Unit 2 under Unit 2 Technical Specification Sections 3.8.7 Condition C, 3.7.1 Condition A and 3.7.1 Condition B. While work is being performed on the Unit 1 – 1A201 or 1A202 4.16 kV ESS buses, however, the following action will be taken to align the RHRSW System to optimally support Unit 2.

- The RHRSW Spray Pond Return Bypass Valve, HV01222A or B, on the out of service loop will be electrically de-powered in the open position.

With the out of service RHRSW Loop configured as described above, a return flow path will be established. Since the RHRSW Pumps on Unit 2 are not impacted by the Unit 1 – 4.16 kV ESS Bus outages, with this return flow path established, the affected RHRSW Loop on Unit 2 will be functional. With the RHRSW Spray Pond Return Bypass Valve, HV01222A or B, electrically de-powered, fire-induced circuit failures will not be able to affect the position of the valve.

With the RHRSW Spray Pond Return Bypass Valve, HV01222A or B, electrically disabled, all flow through the affected loop will go directly to the Spray Pond. This

flow path does not provide spray cooling to the returning process fluid and, under design basis conditions, will result in Spray Pond temperatures exceeding the temperature at which safe shutdown of both units is assured. Under design basis conditions, the manual return line bypass valve is closed within 3 hours and all cooling is accomplished using the unaffected loop. The conditions driving the elevated Spray Pond temperatures in the design basis analysis are as follows:

- The use of conservative reactor decay heat values.
- The use of conservative meteorology.
- The use of conservative initial Spray Pond temperatures, i.e., Technical Specification Maximum Temperature.

The use of conservative values for these parameters is required in the design and licensing basis for SSES. Calculations performed using still conservative, but more "best estimate" values for each of these parameters have determined that, with the bypass valve open for 12 hours and the large spray array valve open on the opposite loop, the peak Spray Pond temperatures are still approximately 4 degrees F below the peak Spray Pond temperature when safely shutting down both units.

The initial Spray Pond temperature, in the "best estimate" case discussed above, was around 80° F. The Spray Pond temperatures for the duration of this temporary change would not be expected to be anywhere near this level since the work is being performed in April when the daytime temperatures are less than 80 degrees F. Additionally, for the plant alignment pertinent to this change request, one of the operating units will already be in a safe shutdown condition.

Given this set of facts, it is expected that shutting down Unit 2 and continuing to cool Unit 1 through the open Spray Pond bypass valve, in the event that the operable loop of RHRSW were to fail in a configuration similar to that described above, would be acceptable for a period approaching 20 hours with no additional actions on the part of the operators. In this 20 hour period, however, actions could be taken by the operators to access the RHRSW Spray Pond Valve Vault and to manually close the bypass valve and to manually open the spray array valves. Re-aligning the bypass and spray array valves would return the UHS to its design condition with spray cooling. These actions could be accomplished well within the available 20 hour time frame available. The valves requiring local manual manipulation are the valves within the system that are remotely cycled for system operation under design basis conditions. Therefore, it is expected that these valves which are periodically cycled would be capable of local manual manipulation should local manual manipulation be required.

Therefore, the safety consequences of this condition are not considered to be high.

The Completion Time associated with Condition B of TS 3.7.1 is extended to 96 hours to allow the Unit 2 RHRSW subsystem to be restored to operable status. The declaration

that the Unit 2 RHRSW subsystem is inoperable is administrative. The Actions in Condition A require that the Unit 2 subsystem be declared inoperable due to the inoperability of the UHS spray array and spray array bypass valves. When the flow path is established as required by the actions in Condition A, the Unit 2 subsystem will be functional because of the following:

a. The subsystem's pump is operable (the Unit 1 4.16 kV ESS bus outage does not affect the power to the Unit 2 RHRSW pump.); and

b. The subsystem has an operable flow path (established as part of the Actions in Condition A) which is capable of taking suction from the UHS and transferring the water to the RHR heat exchanger and returning it to the UHS at the assumed flow rate, and

c. The UHS is operable.

NOTE: With an operable pump, operable flow path and an operable UHS, the Unit 2 RHRSW subsystem meets the operability definition. However, since Condition A requires the subsystem to be declared inoperable and Condition A can not be cleared until the UHS valves are operable, the Unit 2 subsystem is administratively declared inoperable even though it will perform its design function.

Operation of the Unit 2 ECCS equipment supplied by the Unit 2 AC Distribution Subsystem is not affected by the scheduled Unit 1 4.16 kV modification activities.

5. REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

This "No Significant Hazards Consideration" evaluates the following changes to the Technical Specifications:

a. The Unit 2 TS 3.8.7, Condition C, Completion Time is revised to extend the Completion Time from 72 hours to 96 hours for a Unit 1 4160 V subsystem that is de-energized and removed from service.

b. The Unit 2 TS 3.7.1, Condition A, Completion Time is revised to extend the Completion Time from 72 hours to 96 hours for a loop of UHS spray array and spray array bypass valves being inoperable due to the Unit 1 4160V subsystem completion time being extended.

c. The Unit 2 TS 3.7.1, Condition B, Completion Time is revised to extend the Completion Time from 72 hours to 96 hours for one Unit 2 RHRSW subsystem being inoperable due to the Unit 1 4160V subsystem completion time being extended.

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

Response: No

The temporary changes to the completion times for TS 3.8.7, Condition C and TS 3.7.1, Conditions A and B are necessary to implement plant changes which modify the 4 kV Control Circuits on the 4.16 kV ESS Buses in order to mitigate the consequences of multiple fire-induced spurious operations. These modifications decrease the probability that a fire-induced hot short will cause equipment malfunctions. The current assumptions in the safety analysis regarding accident initiators and mitigation of accidents are unaffected by these changes. No SSC failure modes or mechanisms are being introduced, and the likelihood of previously analyzed failures remains unchanged.

The Completion Time to restore the Unit 2 RHRSW subsystem has been extended to 96 hours in order to complete the modifications associated with the Multiple Fire-Induced Spurious Operations issue. This is a temporary extension of the Completion Time. The extended Completion Times for TS 3.7.1 Conditions A and B are only applicable when either the 1A 201 4.16 kV ESS Bus or the 1A 202 4.16 kV ESS Bus is out of service in order to implement modifications associated with the Multiple Fire-Induced Spurious Operations issue. The affected Unit 2 RHRSW subsystem remains functional, while the other subsystem of Unit 2 RHRSW will remain operable.

There are no changes to any accident initiators or to the mitigating capability of safety-related equipment supported by the Class 1E Electrical AC system. The protection provided by these safety-related systems will continue to be provided as assumed by the safety analysis.

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

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

Response: No

The proposed changes to Technical Specification 3.8.7 Condition C, and to Technical Specification 3.7.1 Condition A and Condition B involve the extension of completion time for a Unit 1 4.16 kV Bus to be out of service in order to modify the control circuits to mitigate the consequences of multiple fire-induced spurious operations, the completion time for the UHS spray array and spray array bypass valves to be inoperable and one Unit 2 RHRSW subsystem being

inoperable. No new equipment is being introduced, and installed equipment is not being operated in a new or different manner. There are no setpoints, at which protective or mitigative actions are initiated, affected by this change. These changes do not alter the manner in which equipment operation is initiated, nor will the function demands on credited equipment be changed. No alterations in the procedures that ensure the plant remains within analyzed limits are being proposed, and no major changes are being made to the procedures relied upon to respond to an off-normal event as described in the FSAR. As such, no new failure modes are being introduced. The proposed change does not alter assumptions made in the safety analysis and licensing basis.

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

3. Do the proposed changes involve a significant reduction in a margin of safety?

Response: No

The margin of safety is established through equipment design, operating parameters, and the setpoints at which automatic actions are initiated. The proposed changes are acceptable because the completion time extensions allow modifications to the 4.16 kV control circuits to mitigate the consequences of a fire-induced short damaging equipment. Therefore, the plant response to analyzed events is affected by this modification in that the plant will better cope with the fire-induced shorts and will continue to provide the margin of safety assumed by the safety analysis.

With the RHRSW Spray Pond Return Bypass Valves on the out of service loop electrically de-powered in the open position, a return flow path will be established. Since the RHRSW Pumps on Unit 2 are not impacted by the Unit 1 – 4.16 kV ESS Bus outages, with this return flow path established, the affected RHRSW Loop on Unit 2 will be functional. Also in this configuration a fire-induced circuit failures will not be able to affect the position of the valves. This configuration will continue to provide the margin of safety assumed by the safety analysis.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, PPL concludes that the proposed changes do not involve a 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

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 result in any change in the qualifications of any component; and

(b) 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.

Susquehanna conformance with the applicable General Design Criteria (GDC) related to the proposed Unit 2 TS 3.8.7 change is provided as follows:

GDC 5 – Sharing of Structures, Systems and Components

Offsite Power Supplies – The two preferred offsite power supplies are shared by both units 1 and 2. The capacity of each offsite power supply is sufficient to operate the Engineered Safety Features (ESF) of one unit and safe shutdown of the other unit. Additional details are provided in FSAR Section 8.2.

Diesel Generators - The Diesel Generators are shared systems important to safety. Loss of one of the four aligned diesel generators will not impair the capability to safely shutdown both units, since this can be done with three diesel generators. Additional details are provided in FSAR Section 8.3.1.4.

Unit 1 AC Distribution System - The Unit 1 AC Distribution system is a shared system between both units 1 and 2 since the common equipment (Emergency Service Water, RHR Service Water, Standby Gas Treatment System including the Reactor Recirculation Fans, Control Structure HVAC, and Control Room Floor Cooling) is energized only from the Unit 1 AC Distribution System. The capacity of the Unit 1 AC Distribution System is sufficient to operate the engineered safety features on one unit and the safe shutdown loads of the other unit.

GDC 17 – Electric Power Systems

Two offsite power transmission systems and four onsite standby diesel generators (A, B, C and D) with their associated battery systems are provided. Either of the two offsite transmission power systems or any three of the four onsite standby diesel generator systems have sufficient capability to operate safety related equipment for cooling the reactor core

and maintaining primary containment integrity and other vital functions in the event of a postulated accident in one unit with a safe shutdown of the other unit.

Additionally, a fifth diesel generator 'E' with its associated battery system is provided as a replacement, and has the capability of supplying the emergency loading for any one of the other four diesel generators (A, B, C or D). Diesel generator 'E' must be manually aligned to replace any one of the other four diesel generators in the event of a failure.

The two independent offsite power systems supply electric power to the onsite power distribution system via the 230 kV transmission grid. Each of the offsite power sources is supplied from a transmission line which terminates in switchyards (or Substations) not common to the other transmission line. The two transmission lines are on separate rights-of-way. These two transmission circuits are physically independent and are designed to minimize the possibility of their simultaneous failure under operating and postulated accident and environment conditions.

Each offsite power source can supply all Engineered Safety Feature (ESF) buses through the associated transformers. Power is available to the ESF buses from their preferred offsite power source during normal operation and from the alternate offsite power source if the preferred power is unavailable. Each diesel generator (A, B, C, or D) supplies standby power to one of the four ESF buses in each unit. Loss of both offsite power sources to an ESF bus results in automatic starting and connection of the associated diesel generator (A, B, C, or D) within 10 seconds. Loads are progressively and sequentially added to avoid generator instabilities.

There are four independent AC load groups provided to assure independence and redundancy of equipment function. These meet the safety requirements assuming a single failure since any three of the four load groups have sufficient capacity to supply the minimum loads required to safely shut down the unit. Independent routing of the preferred and alternate offsite power source circuits to the ESF buses are provided to meet the single failure safety requirements.

Additional discussion and details are provided in FSAR Sections 8.2 and 8.3.

Based on compliance with the General Design Criteria 5 and 17 above, (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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

6. ENVIRONMENTAL CONSIDERATION

10 CFR 51.22(c)(9) identifies certain licensing and regulatory actions, which 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, LLC 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:

Basis

As demonstrated in the "No Significant Hazards Consideration" evaluation, the proposed amendment does not involve a significant hazards consideration.

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 alteration of the plant (no new or different type of equipment will be installed) or change in methods governing normal plant operation.

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

7. REFERENCES

FSAR Sections 3.1, 3.13, 8.1, 8.2, 8.3, 9.2.6 and 9.2.7.

Unit 1 P&ID RHR Service Water System (M-112, sheets 1 and 2)
Unit 2 P&ID RHR Service Water System (M-2112, sheet 1)

TABLE 1

PROTECTED EQUIPMENT

1A 4 kV ESS Bus Outage
1B and 1D 4 kV Buses and Load Centers
If in service, Shutdown Cooling (SDC)
If in service, Supplemental Decay Heat Removal (SDHR)
1C004 and 1C005 Racks (Entire Outage)
1B Loop Core Spray (When only one injection source available when cavity flooded.)
Offsite Transformer T10
Offsite Transformer T20
230 kV and 500 kV Switchyards
1B and 1D 125 V DC Batteries
1B and 1D 250 V DC Batteries
2B and 2D 125 V DC Batteries
2B and 2D 250 V DC Batteries
151F067 RHR Shutdown Cooling Valve (When closed for work.)
U2 HPCI
U2 RCIC
2B and 2D 4 kV Buses and Load Centers
U2 B Loop RHR
U2 B Loop RHRSW
Diesel Driven Fire Pump
B Division ESW Pumphouse
B Diesel Generator
C Diesel Generator
D Diesel Generator

TABLE 1 (Continued)

1B 4 kV ESS Bus Outage
1A and 1C 4 kV Buses and Load Centers
If in service, Shutdown Cooling (SDC)
If in service, Supplemental Decay Heat Removal (SDHR)
1C004 and 1C005 Racks (Entire Outage)
1A Loop Core Spray (When only one injection source available when cavity flooded.)
Offsite Transformer T10
Offsite Transformer T20
230 kV and 500 kV Switchyards
1A and 1C 125 V DC Batteries
1A and 1C 250 V DC Batteries
2A and 2C 125 V DC Batteries
2A and 2C 250 V DC Batteries
151F067 RHR Shutdown Cooling valve (When closed for work.)
U2 HPCI
U2 RCIC
2A and 2C 4 kV Buses and Load Centers
U2 A Loop RHR
U2 A RHRSW
Diesel Driven Fire Pump
A Division ESW Pumphouse
A Diesel Generator
C Diesel Generator
D Diesel Generator

TABLE 1 (Continued)

1C 4 kV ESS Bus Outage
1B and 1D 4 kV Buses and Load Centers
If in service, Shutdown Cooling (SDC)
If in service, Supplemental Decay Heat Removal (SDHR)
1C004 and 1C005 Racks (Entire Outage)
1B Loop Core Spray (When only one injection source available when cavity flooded.)
Offsite Transformer T10
Offsite Transformer T20
230 kV and 500 kV Switchyards
1B and 1D 125 V DC Batteries
1B and 1D 250 V DC Batteries
2B and 2D 125 V DC Batteries
2B and 2D 250 V DC Batteries
151F067 RHR Shutdown Cooling valve (When closed for work.)
U2 HPCI
U2 RCIC
2B and 2D 4 kV Buses and Load Centers
U2 B Loop RHR
U2 B RHRSW
Diesel Driven Fire Pump
B Division ESW Pumphouse
A Diesel Generator
B Diesel Generator
D Diesel Generator

TABLE 1 (Continued)

1D 4 kV ESS Bus Outage
1A and 1C 4 kV Buses and Load Centers
If in service, Shutdown Cooling (SDC)
If in service, Supplemental Decay Heat Removal (SDHR)
1C004 and 1C005 Racks (Entire Outage)
1A Loop Core Spray (When only one injection source available when cavity flooded.)
Offsite Transformer T10
Offsite Transformer T20
230 kV and 500 kV Switchyards
1A and 1C 125 V DC Batteries
1A and 1C 250 V DC Batteries
2A and 2C 125 V DC Batteries
2A and 2C 250 V DC Batteries
151F067 RHR Shutdown Cooling valve (When closed for work.)
U2 HPCI
U2 RCIC
2A and 2C 4 kV Buses and Load Centers
U2 A Loop RHR
U2 A RHRSW
Diesel Driven Fire Pump
A Division ESW Pumphouse
A Diesel Generator
B Diesel Generator
C Diesel Generator

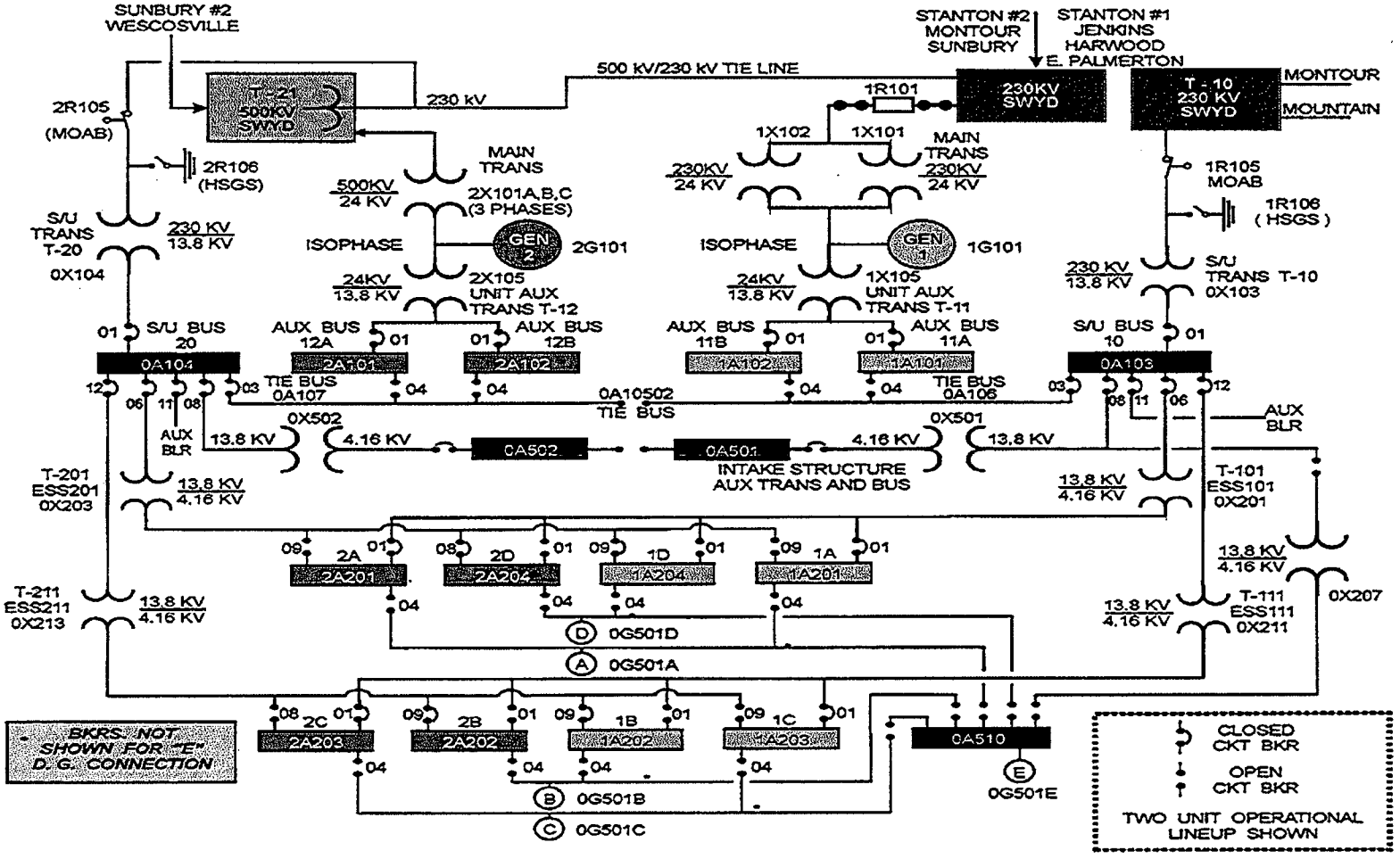


Figure 1

SIMPLIFIED SSES AC DISTRIBUTION SYSTEM

Attachment 1 to PLA-6817

PPL Susquehanna, LLC

Proposed Changes to Unit 2 Technical Specification 3.8.7 "Electrical Power Systems – Distribution Systems - Operating" and Unit 2 Technical Specification 3.7.1, "Plant Systems – RHRSW System and UHS" (Markups)

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Distribution Systems—Operating

LCO 3.8.7 The electrical power distribution subsystems in Table 3.8.7-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ----------NOTE---------- Not applicable to DG E DC Bus 0D597 ---------- One or more Unit 2 AC electrical power distribution subsystems inoperable.	----------Note---------- Enter applicable Conditions and Required Actions of LCO 3.8.4, "DC Sources - Operating," for DC source(s) made inoperable by inoperable power distribution subsystem(s). ---------- A.1 Restore Unit 2 AC electrical power distribution subsystem(s) to OPERABLE status.	8 hours AND 16 hours from discovery of failure to meet LCO 3.8.7 except for Condition F or G
B. ----------NOTE---------- Not applicable to DG E DC Bus 0D597 ---------- One or more Unit 2 DC electrical power distribution subsystems inoperable.	B.1 Restore Unit 2 DC electrical power distribution subsystem(s) to OPERABLE status.	2 hours AND 16 hours from discovery of failure to meet LCO 3.8.7 except for Condition F or G
C. One Unit 1 AC electrical power distribution subsystem inoperable.	C.1 Restore Unit 1 AC electrical power distribution subsystem to OPERABLE status.	72 hours OR 96 hours during the installation of the multiple fire-induced spurious operations modifications in Unit 1 [1]

(continued)

[1] Upon completion of the MSO modifications on all four Unit 1 4.16 kV buses, this temporary extension is no longer applicable and will expire on May 31, 2012.

3.7 PLANT SYSTEMS

3.7.1 Residual Heat Removal Service Water (RHRSW) System and the Ultimate Heat Sink (UHS)

LCO 3.7.1 Two RHRSW subsystems and the UHS shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

----------NOTE----------
Enter applicable Conditions and Required Actions of LCO 3.4.8, "Residual Heat Removal (RHR) Shutdown Cooling System-Hot Shutdown," for RHR shutdown cooling made inoperable by RHRSW System.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ----------NOTE---------- Separate Condition entry is allowed for each valve. ----------	A.1 Declare the associated RHRSW subsystems inoperable.	Immediately
	AND	
One valve in Table 3.7.1-1 inoperable.	A.2 Establish an open flow path to the UHS.	8 hours
OR	AND	
One valve in Table 3.7.1-2 inoperable.	A.3 Restore the inoperable valve(s) to OPERABLE status.	8 hours from the discovery of an inoperable RHRSW subsystem in the opposite loop from the inoperable valve(s)
OR		AND
One valve in Table 3.7.1-3 inoperable.		72 hours
OR		OR
Any combination of valves in Table 3.7.1-1, Table 3.7.1-2, or Table 3.7.1-3 in the same return loop inoperable.		96 hours during the installation of the multiple fire-induced spurious operations modifications in Unit 1[(1)]

(continued)

[(1)] Upon completion of the MSO modifications on all four Unit 1 4.16 kV buses, this temporary extension is no longer applicable and will expire on May 31, 2012.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One Unit 2 RHRSW subsystem inoperable.	B.1 Restore the Unit 2 RHRSW subsystem to OPERABLE status.	72 hours from discovery of the associated Unit 1 RHRSW subsystem inoperable OR 96 hours during the installation of the multiple fire-induced spurious operations modifications in Unit 1 [1] AND 7 days
C. Both Unit 2 RHRSW subsystems inoperable.	C.1 Restore one Unit 2 RHRSW subsystem to OPERABLE status.	8 hours from discovery of one Unit 1 RHRSW subsystem not capable of supporting associated Unit 2 RHRSW subsystem AND 72 hours
D. Required Action and associated Completion Time not met. OR UHS inoperable.	D.1 Be in MODE 3. AND D.2 Be in MODE 4.	12 hours 36 hours

[1] Upon completion of the MSO modifications on all four Unit 1 4.16 kV buses, this temporary extension is no longer applicable and will expire on May 31, 2012.

Attachment 2 to PLA-6817

PPL Susquehanna, LLC

Proposed Change to Unit 2 Technical Specification Bases 3.8.7 "Electrical Power Systems – Distribution Systems - Operating" and Unit 2 Technical Specification Bases 3.7.1, "Plant Systems – RHRSW System and UHS" (Markups provided for Information Only)

BASES

ACTIONS

C.1 (continued)

Time of 72 hours is consistent with the Completion Times associated with LCOs for the Unit 2 and common equipment potentially affected by loss of a Unit 1 AC electrical power subsystem.

The Completion Time has been extended to 96 hours in order to complete the modifications in Unit 1 associated with the Multiple Fire-Induced Spurious Operations issue. This is a temporary extension of the Completion Time. Upon completion of the MSO modifications on all four Unit 1 4.16 kV buses, this temporary extension is no longer applicable and will expire on May 31, 2012.

D.1

With two required Unit 1 AC buses, load centers, motor control centers, or distribution panels inoperable for the performance of Unit 1 SR 3.8.1.19 but not resulting in a loss of safety function, the remaining AC electrical power distribution subsystems are capable of supporting the minimum safety functions necessary to shut down the reactor and maintain it in a safe shutdown condition, assuming no single failure. The overall reliability is reduced, however, because a single failure in the remaining power distribution subsystems could result in the minimum required ESF functions not being supported. Therefore, the required AC buses, load centers, motor control centers, and distribution panels must be restored to OPERABLE status within 8 hours.

E.1and E.2

If the inoperable distribution subsystem cannot be restored to OPERABLE status within the associated Completion Time, the unit must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

F.1

If Diesel Generator E is not aligned to the Class 1E distribution system, the only supported safety function is for the ESW system. Therefore, under this condition, if Diesel Generator E DC power distribution subsystem is not OPERABLE, to ensure the OPERABILITY of the ESW system, actions are taken to either restore the power distribution subsystem to OPERABLE status or shutdown Diesel Generator E and

(continued)

BASES

ACTIONS

A.1, A.2 and A.3 (continued)

With any UHS return path valve listed in Tables 3.7.1-1, 3.7.1-2, or 3.7.1-3 inoperable, the UHS return path is no longer single failure proof.

For combinations of inoperable valves in the same loop, the UHS spray capacity needed to support the OPERABILITY of the associated Unit 1 and Unit 2 RHRSW subsystems is affected. As a result, the associated RHRSW subsystems must be declared inoperable.

The 8-hour completion time to establish the flow path provides sufficient time to open a path and de-energize the appropriate valve in the open position.

The 72-hour completion time is based on the fact that, although adequate UHS spray loop capability exists during this time period, both units are affected and an additional single failure results in a system configuration that will not meet design basis accident requirements.

The Completion Time has been extended to 96 hours in order to complete the modifications in Unit 1 associated with the Multiple Fire-Induced Spurious Operations issue. This is a temporary extension of the Completion Time and is applicable during the 1A201 and 1A202 bus modifications. In order to cope with the consequences of a LOOP, a LOCA in Unit 2 and the shutdown of Unit 1 during the extended Completion Time, the following compensatory actions are required: 1) the affected loop's spray array bypass valves are in the open position and 2) the affected loop's spray array valves are closed. Upon completion of the MSO modifications on all four Unit 1 4.16 kV buses, this temporary extension is no longer applicable and will expire on May 31, 2012.

If an additional RHRSW subsystem on either Unit is inoperable, cooling capacity less than the minimum required for response to a design basis event would exist. Therefore, an 8-hour Completion Time is appropriate. The 8-hour Completion Time provides sufficient time to restore inoperable equipment and there is a low probability that a design basis event would occur during this period.

B.1

Required Action B.1 is intended to ensure that appropriate actions are taken if one Unit 2 RHRSW subsystem is inoperable. Although designated and operated as a unitized system, the associated Unit 1 subsystem is directly connected to a common header which can supply the associated RHR heat exchanger in either unit. The associated Unit 1 subsystem is considered capable of supporting the associated Unit 2 RHRSW subsystem when the Unit 1 subsystem is OPERABLE and can provide the assumed flow to the Unit 2 heat exchanger. A Completion Time of 72 hours, when the associated Unit 1 RHRSW subsystem is not capable of supporting the associated Unit 2 RHRSW subsystem, is allowed to restore the Unit 2 RHRSW subsystem to OPERABLE status. In this configuration, the remaining OPERABLE Unit 2 RHRSW subsystem is adequate to perform the RHRSW heat removal function. However, the overall reliability is reduced because a single failure in the OPERABLE RHRSW subsystem

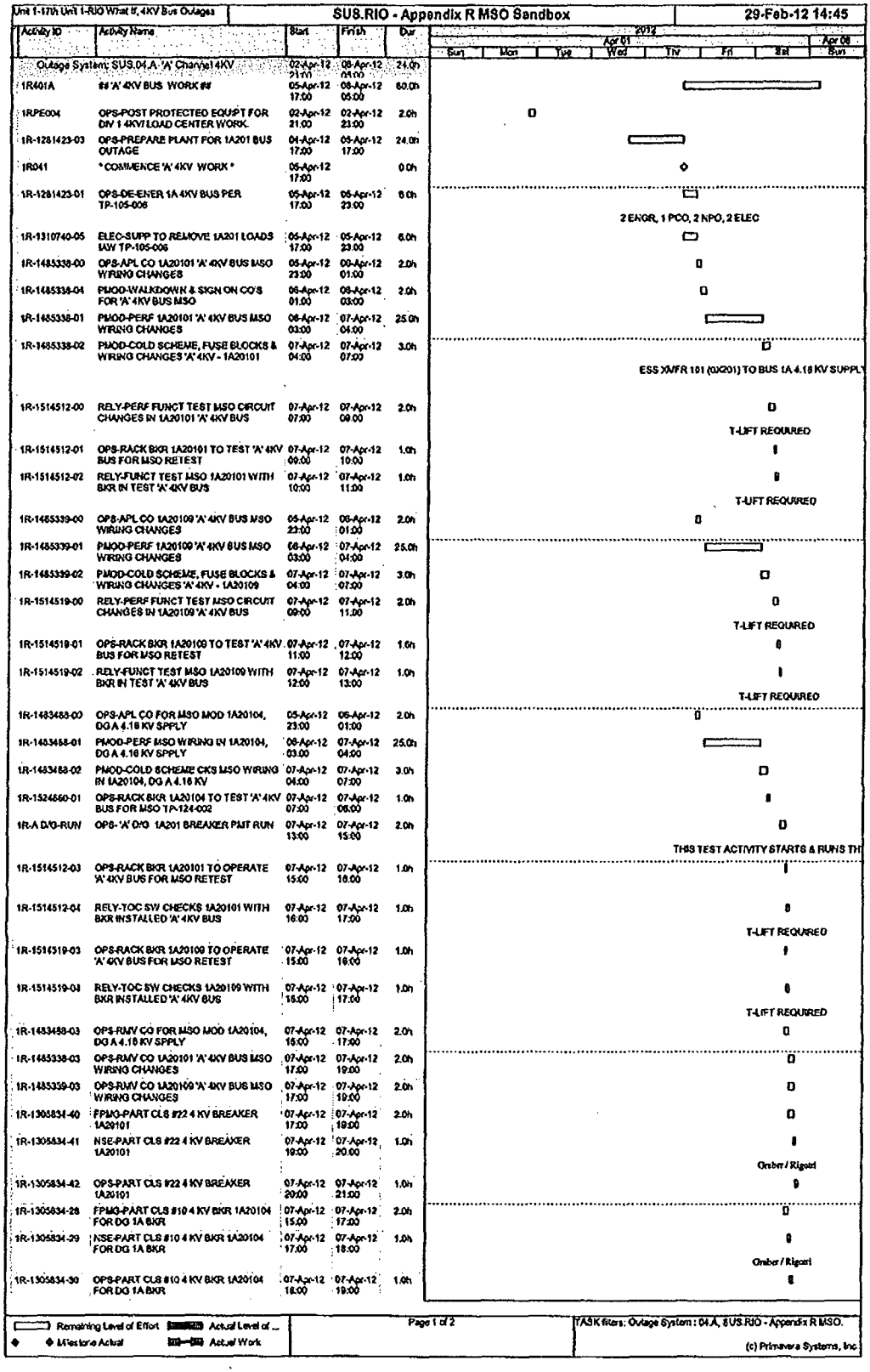
The Completion Time to restore the Unit 2 RHRSW subsystem as been extended to 96 hours in order to complete the modifications in Unit 1 associated with the Multiple Fire-Induced Spurious Operations issue. This is a temporary extension of the Completion Time and is applicable during the 1A201 and 1A202 bus modifications. The Unit 2 RHRSW subsystem remains functional since the subsystem has an operable pump, operable flow path and an operable UHS. Upon completion of the MSO modifications on all four Unit 1 4.16 kV buses, this temporary extension is no longer applicable and will expire on May 31, 2012.

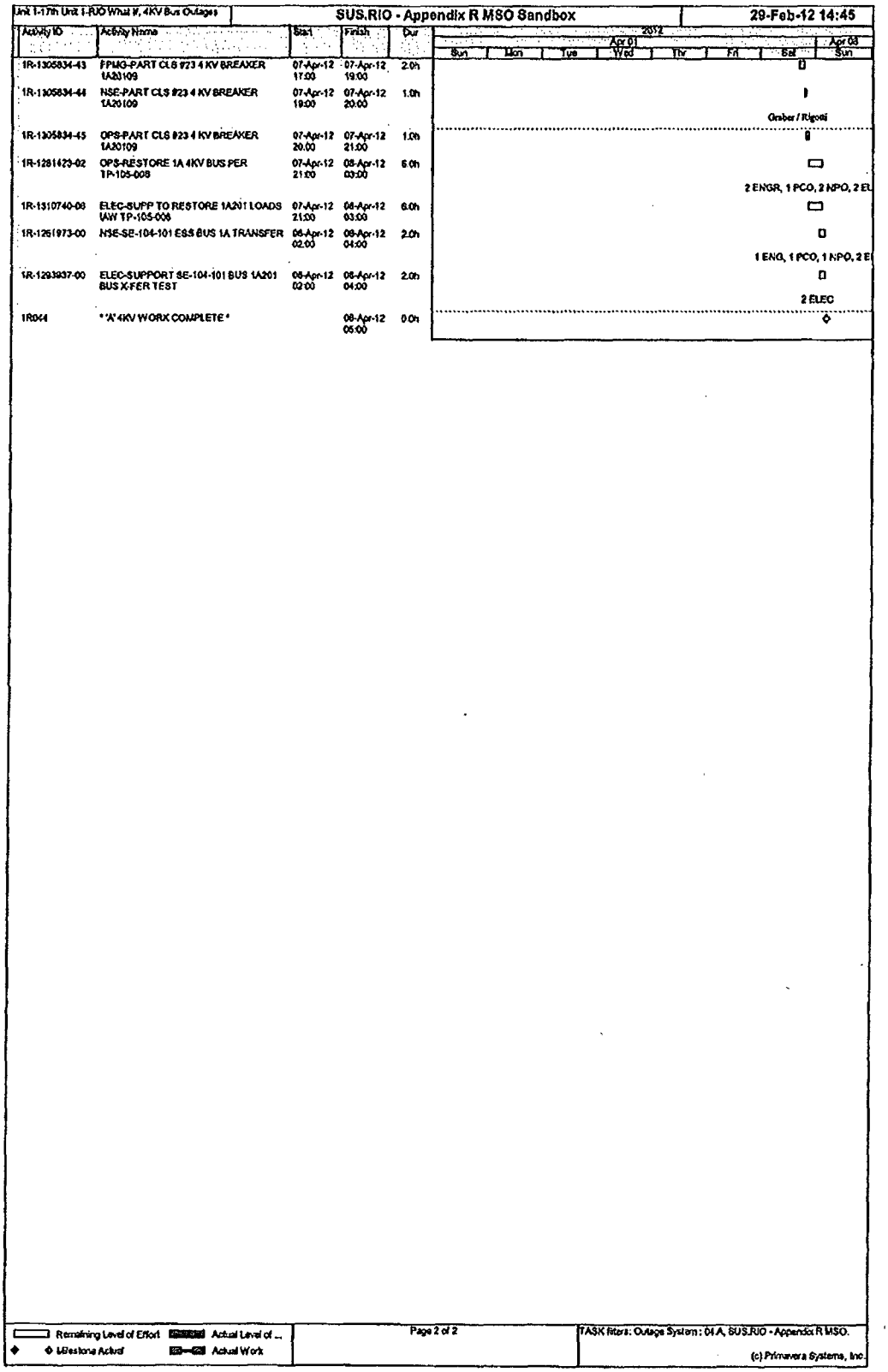
(continued)

Attachment 3 to PLA-6817

PPL Susquehanna, LLC

Generic Outage Schedule for 4.16 kV ESS Bus Modifications


Unit 1-17th Unit 1-RIO What If, 4KV Bus Outages
SUS.RIO - Appendix R MSO Sandbox
29-Feb-12 14:45
Activity ID
Activity Name
Start
Finish
Dur
2012
Apr 01
Apr 08
Sun Mon Tue Wed Thr Fri Sat Sun
Outage System: SUS.04.A 'A' Channel 4KV
02-Apr-12 21:00
06-Apr-12 05:00
24.0h
1R401A
'A' 4KV BUS WORK
05-Apr-12 17:00
06-Apr-12 05:00
60.0h
1RPE004
OPS-POST PROTECTED EQUIPT FOR DIV 1 4KV LOAD CENTER WORK
02-Apr-12 21:00
02-Apr-12 23:00
2.0h
1R-1281423-03
OPS-PREPARE PLANT FOR 1A201 BUS OUTAGE
04-Apr-12 17:00
05-Apr-12 17:00
24.0h
1R041
* COMMENCE 'A' 4KV WORK *
05-Apr-12 17:00
0.0h
1R-1281423-01
OPS-DE-ENER 1A 4KV BUS PER TP-105-006
05-Apr-12 17:00
06-Apr-12 23:00
6.0h
2 ENGR, 1 PCO, 2 NPO, 2 ELEC
1R-1310740-05
ELEC-SUPP TO REMOVE 1A201 LOADS IAW TP-105-006
05-Apr-12 17:00
05-Apr-12 23:00
6.0h
1R-1485338-00
OPS-APL CO 1A20101 'A' 4KV BUS MSO WIRING CHANGES
05-Apr-12 23:00
06-Apr-12 01:00
2.0h
1R-1485338-04
PMOD-WALKDOWN & SIGN ON CO'S FOR 'A' 4KV BUS MSO
06-Apr-12 01:00
06-Apr-12 03:00
2.0h
1R-1485338-01
PMOD-PERF 1A20101 'A' 4KV BUS MSO WIRING CHANGES
06-Apr-12 03:00
07-Apr-12 04:00
25.0h
1R-1485338-02
PMOD-COLD SCHEME, FUSE BLOCKS & WIRING CHANGES 'A' 4KV - 1A20101
07-Apr-12 04:00
07-Apr-12 07:00
3.0h
ESS XMFR 101 (0X201) TO BUS 1A 4.16 KV SUPPL
1R-1514512-00
RELY-PERF FUNCT TEST MSO CIRCUIT CHANGES IN 1A20101 'A' 4KV BUS
07-Apr-12 07:00
07-Apr-12 09:00
2.0h
T-LIFT REQUIRED
1R-1514512-01
OPS-RACK BKR 1A20101 TO TEST 'A' 4KV BUS FOR MSO RETEST
07-Apr-12 09:00
07-Apr-12 10:00
1.0h
1R-1514512-02
RELY-FUNCT TEST MSO 1A20101 WITH BKR IN TEST 'A' 4KV BUS
07-Apr-12 10:00
07-Apr-12 11:00
1.0h
T-LIFT REQUIRED
1R-1485339-00
OPS-APL CO 1A20109 'A' 4KV BUS MSO WIRING CHANGES
06-Apr-12 23:00
08-Apr-12 01:00
2.0h
1R-1485339-01
PMOD-PERF 1A20109 'A' 4KV BUS MSO WIRING CHANGES
08-Apr-12 03:00
07-Apr-12 04:00
25.0h
1R-1485339-02
PMOD-COLD SCHEME, FUSE BLOCKS & WIRING CHANGES 'A' 4KV - 1A20109
07-Apr-12 04:00
07-Apr-12 07:00
3.0h
1R-1514519-00
RELY-PERF FUNCT TEST MSO CIRCUIT CHANGES IN 1A20109 'A' 4KV BUS
07-Apr-12 09:00
07-Apr-12 11:00
2.0h
T-LIFT REQUIRED
1R-1514519-01
OPS-RACK BKR 1A20109 TO TEST 'A' 4KV BUS FOR MSO RETEST
07-Apr-12 11:00
07-Apr-12 12:00
1.0h
1R-1514519-02
RELY-FUNCT TEST MSO 1A20109 WITH BKR IN TEST 'A' 4KV BUS
07-Apr-12 12:00
07-Apr-12 13:00
1.0h
T-LIFT REQUIRED
1R-1483468-00
OPS-APL CO FOR MSO MOD 1A20104, DG A 4.16 KV SPPLY
05-Apr-12 23:00
06-Apr-12 01:00
2.0h
1R-1483468-01
PMOD-PERF MSO WIRING IN 1A20104, DG A 4.16 KV SPPLY
06-Apr-12 03:00
07-Apr-12 04:00
25.0h
1R-1483468-02
PMOD-COLD SCHEME CKS MSO WIRING IN 1A20104, DG A 4.16 KV
07-Apr-12 04:00
07-Apr-12 07:00
3.0h
1R-1524660-01
OPS-RACK BKR 1A20104 TO TEST 'A' 4KV BUS FOR MSO TP-124-002
07-Apr-12 07:00
07-Apr-12 08:00
1.0h
1R-A D/G-RUN
OPS-'A' D/G 1A201 BREAKER PMT RUN
07-Apr-12 13:00
07-Apr-12 15:00
2.0h
THIS TEST ACTIVITY STARTS & RUNS TH
1R-1514512-03
OPS-RACK BKR 1A20101 TO OPERATE 'A' 4KV BUS FOR MSO RETEST
07-Apr-12 15:00
07-Apr-12 16:00
1.0h
1R-1514512-04
RELY-TOC SW CHECKS 1A20101 WITH BKR INSTALLED 'A' 4KV BUS
07-Apr-12 16:00
07-Apr-12 17:00
1.0h
T-LIFT REQUIRED
1R-1514519-03
OPS-RACK BKR 1A20109 TO OPERATE 'A' 4KV BUS FOR MSO RETEST
07-Apr-12 15:00
07-Apr-12 16:00
1.0h
1R-1514519-04
RELY-TOC SW CHECKS 1A20109 WITH BKR INSTALLED 'A' 4KV BUS
07-Apr-12 16:00
07-Apr-12 17:00
1.0h
T-LIFT REQUIRED
1R-1483468-03
OPS-RMV CO FOR MSO MOD 1A20104, DG A 4.16 KV SPPLY
07-Apr-12 15:00
07-Apr-12 17:00
2.0h
1R-1485338-03
OPS-RMV CO 1A20101 'A' 4KV BUS MSO WIRING CHANGES
07-Apr-12 17:00
07-Apr-12 19:00
2.0h
1R-1485339-03
OPS-RMV CO 1A20109 'A' 4KV BUS MSO WIRING CHANGES
07-Apr-12 17:00
07-Apr-12 19:00
2.0h
1R-1305834-40
FPMO-PART CLS #22 4 KV BREAKER 1A20101
07-Apr-12 17:00
07-Apr-12 19:00
2.0h
1R-1305834-41
NSE-PART CLS #22 4 KV BREAKER 1A20101
07-Apr-12 19:00
07-Apr-12 20:00
1.0h
Graber / Rigert
1R-1305834-42
OPS-PART CLS #22 4 KV BREAKER 1A20101
07-Apr-12 20:00
07-Apr-12 21:00
1.0h
1R-1305834-28
FPMO-PART CLS #10 4 KV BKR 1A20104 FOR DG 1A BKR
07-Apr-12 15:00
07-Apr-12 17:00
2.0h
1R-1305834-29
NSE-PART CLS #10 4 KV BKR 1A20104 FOR DG 1A BKR
07-Apr-12 17:00
07-Apr-12 18:00
1.0h
Graber / Rigert
1R-1305834-30
OPS-PART CLS #10 4 KV BKR 1A20104 FOR DG 1A BKR
07-Apr-12 18:00
07-Apr-12 19:00
1.0h
Remaining Level of Effort
Actual Level of ...
Milestone Actual
Actual Work
Page 1 of 2
TASK filters: Outage System : 04.A, SUS.RIO - Appendix R MSO.
(c) Primavera Systems, Inc.


Unit 1-17th Unit 1-R/O What If, 4KV Bus Outages
SUS.RIO - Appendix R MSO Sandbox
29-Feb-12 14:45
Activity ID
Activity Name
Start
Finish
Dur
2012
Apr 01
Apr 08
Sun Mon Tue Wed Thr Fri Sat Sun
1R-1305834-43 FPMG-PART CLS #23 4 KV BREAKER 1A20109 07-Apr-12 17:00 07-Apr-12 19:00 2.0h
1R-1305834-44 NSE-PART CLS #23 4 KV BREAKER 1A20109 07-Apr-12 19:00 07-Apr-12 20:00 1.0h
Graber / Rigoni
1R-1305834-45 OPS-PART CLS #23 4 KV BREAKER 1A20109 07-Apr-12 20:00 07-Apr-12 21:00 1.0h
1R-1281423-02 OPS-RESTORE 1A 4KV BUS PER TP-105-008 07-Apr-12 21:00 08-Apr-12 03:00 6.0h
2 ENGR, 1 PCO, 2 NPO, 2 EL
1R-1310740-00 ELEC-SUPP TO RESTORE 1A201 LOADS IAW TP-105-008 07-Apr-12 21:00 08-Apr-12 03:00 6.0h
1R-1261973-00 NSE-SE-104-101 ESS BUS 1A TRANSFER 08-Apr-12 02:00 08-Apr-12 04:00 2.0h
1 ENG, 1 PCO, 1 NPO, 2 E
1R-1293937-00 ELEC-SUPPORT SE-104-101 BUS 1A201 BUS X-FER TEST 08-Apr-12 02:00 08-Apr-12 04:00 2.0h
2 ELEC
1R044 * 'A' 4KV WORK COMPLETE * 08-Apr-12 05:00 0.0h
Remaining Level of Effort
Actual Level of ...
Milestone Actual
Actual Work
Page 2 of 2
TASK filters: Outage System : 01A, SUS.RIO - Appendix R MSO.
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