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OCT 24 2014

10 CFR 50

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

**SUSQUEHANNA STEAM ELECTRIC STATION  
10 CFR 50.59 SUMMARY REPORT AND  
CHANGES TO REGULATORY COMMITMENTS  
PLA-7247**

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**Docket No. 50-387  
and 50-388**

*Reference: 1) PLA-6912, J. M. Helsel (PPL) to Document Control Desk (USNRC),  
"10 CFR 50.59 Summary Report and Changes to Regulatory Commitments,"  
dated October 4, 2012.*

Attachment 1 is the summary report of the PPL Susquehanna, LLC (PPL) 10 CFR 50.59 Summary of Changes, Tests, and Experiments approved during the period between September 1, 2012 and August 31, 2014. This report is required by 10 CFR 50.59(d)(2) and is to be submitted at intervals not to exceed 24 months. The previous report (Reference 1) included the period from September 1, 2010 to August 31, 2012.

The summary of the 50.59 Evaluations documented in Attachment 1 is formatted as follows:

- 50.59 Evaluation No:** Unique number for each evaluation.
- Cross-Reference:** Reference to the document for which the 50.59 Evaluation was prepared.
- Description of Change:** A brief description of the changes, tests, and experiments.
- Summary:** A summary of PPL Susquehanna, LLC's basis for concluding that a license amendment was not required pursuant to 10 CFR 50.59(c)(1).

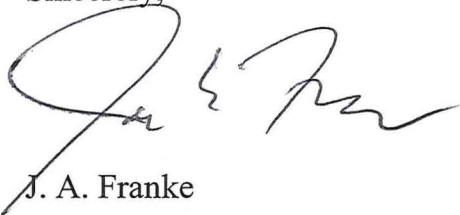
Attachment 2 is a Summary of Changes to Regulatory Commitments for commitments that were changed in accordance with the guidance of NEI 99-04, "Guidelines for Managing NRC Commitment Changes" and SECY-00-045. Per NEI 99-04, commitment changes are required to be reported to the NRC either annually or with a Final Safety Analysis Report

(FSAR) update per 10CFR50.71(e). PPL is providing commitment changes along with the 10 CFR 50.59 Summary Report rather than including them in an FSAR update. The next FSAR update is required to be issued to the NRC in the fall of 2015.

For each commitment change, a unique change number, the description of the change and the justification for the commitment change is provided.

If you have any questions regarding this information, please contact Mr. Duane L. Filchner at (570) 542-6501.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. A. Franke', written over a horizontal line.

J. A. Franke

Attachment 1: 10 CFR 50.59 Summary of Changes, Tests, and Experiments

Attachment 2: Summary of Changes to Regulatory Commitments

Copy: NRC Region I

Mr. J. E. Greives, NRC Sr. Resident Inspector

Mr. J. A. Whited, NRC Project Manager

Mr. L. J. Winker, PA DEP/BRP

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**Attachment 1 to PLA-7247**

**10 CFR 50.59 Summary of  
Changes, Tests, and Experiments**

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**50.59 Evaluation No.:** 50.59 SE 00023

**Cross-Reference:** LDCN No. 5116

**Description of Change:**

The purpose of the proposed Licensing Document Change Notice (LDCN) is to update the inspection intervals of the low pressure (LP) turbines from 10 years as presently stated in Final Safety Analysis Report (FSAR) Section 10.2.3.6 to 100,000 operating hours. This action will align the inspection interval shown in the FSAR to be consistent with the missile probability analysis, thus enabling full use of the required maintenance interval of the LP turbines as defined by the turbine manufacturer.

**Summary:**

Updating the inspection interval of the LP turbines from 10 years to 100,000 operating hours does not represent an activity that requires prior Nuclear Regulatory Commission (NRC) approval. The proposed change does not result in more than a minimal increase in the frequency of accidents. This activity does not introduce the possibility of a change in the likelihood of a malfunction because it is not an initiator of any new malfunctions and no new failure modes are introduced. As a result, there is no increase in the consequences of an accident or of a malfunction. There are no new accidents or malfunctions that need to be postulated. This activity does not affect any system, performance or response parameters; therefore, the design basis limit for a fission product barrier as described in the FSAR will not be exceeded or altered. This activity is not a change in the methodology described in the FSAR for the missile probability analysis. Based on this discussion prior NRC approval is not needed to implement the proposed change.



**50.59 Evaluation No.:** 50.59 SE 00024

**Cross-Reference:** LDCN Nos. 5147, 5148 and 5149

**Description of Change:**

The proposed activity will increase the allowed Standby Gas Treatment System (SGTS) exhaust flow rate from secondary containment assumed in the Design Basis Accident Loss of Coolant Accident (DBA LOCA) dose analysis from 100%/day of the secondary containment free air volume to 140%/day of the secondary containment free air volume and will credit shielding of the core spray piping. Technical Specification Bases Surveillance Requirement 3.6.4.1.5 specifies the allowed SGTS exhaust flow rate from secondary containment. The flow rates are changed to the following values, which conservatively use 135%/day (rounded to the nearest 100 cfm) even though the analysis is performed at 140%/day:

Zones I, II & III (Railroad Bay Aligned to Secondary Containment): 5400 cfm (from 4000 cfm)

Zones I & III (Railroad Bay Aligned to Secondary Containment): 3900 cfm (from 2885 cfm)

Zones II & III (Railroad Bay Aligned to Secondary Containment): 4000 cfm (from 2960 cfm)

Zones I, II & III (Railroad Bay Aligned as a No Zone): 5300 cfm (from 3910 cfm)

Zones I & III (Railroad Bay Aligned as a No Zone): 3800 cfm (from 2800 cfm)

Zones II & III (Railroad Bay Aligned as a No Zone): 3900 cfm (from 2875 cfm)

Additionally, to limit the dose increase to the control room operator, shielding (0.75 inch steel plate) will be provided to reduce the dose from core spray piping. This core spray piping is routed vertically along the north and south end of the control structure east wall. This routing creates a shine dose to control room personnel in the Shift Technical Advisor (STA) Office, Operational Support Center, Electrical Equipment Room, and the NRC conference room. The new doses for the combined change are 12.0 Rem Total Effective Dose Equivalent (TEDE) for the 2 hour Exclusion Area Boundary (EAB), 4.53 Rem TEDE for the Low Population Zone (LPZ) and 4.69 Rem TEDE for the control room operator.

**Summary:**

The proposed change will increase the allowed SGTS exhaust flow rate from secondary containment assumed in the DBA LOCA dose analysis to 140%/day of the secondary containment free air volume and will provide shielding to the core spray piping.

**Summary Continued:**

The resultant dose increase to the public does not create a new equipment malfunction or failure mode. Therefore, there is no increase in the probability of an accident or increase in the consequence due to a malfunction or failure associated with the proposed change. The proposed change is not an accident initiator so there is no increase in the probability of an accident. The increase in public dose (note control room operator dose decreases) is a minimal increase in consequences. The proposed change does not result in a change to a design basis limit for a fission product barrier (DBLFPB) since the SGTS exhaust flow rate is not a DBLFPB. The proposed change is not a change to a method of evaluation described in the FSAR. Based on this discussion prior NRC approval is not needed to implement the proposed change.

**50.59 Evaluation No.:** 50.59 SE 00025

**Cross-Reference:** Condition Report (CR) 1724393

**Description of Change:**

An interim compensatory measure for crediting the Recirculation Pump Motor Generator (MG)-set high speed stop setpoints in the Recirculation Flow Controller Failure (RFCF) licensing analysis was required to address the degraded condition described in CR 1724393. The compensatory measure was in effect for approximately two weeks in July of 2013 until the condition was corrected.

CR 1724393 states that main steam control valve #3 slowly closed on Unit 1 with control valves 1, 2 and 4 opening to compensate. The closure of the #3 control valve reduces the maximum steam relieving capability of the main steam system. This reduction in steam relieving capability negatively impacts the RFCF analysis, which determines the minimum critical power ratio (MCPR), and linear heat generation rate (LHGR) flow dependent thermal limits. An interim compensatory measure is required to negate the effect of the reduction in steam relieving capability on the RFCF analysis.

The flow dependent MCPR and LHGR operating limits are determined by the RFCF event described in FSAR 15.4.5. The RFCF as described in FSAR 15.4.5 does not credit for the MG-set high speed stop setpoints (FSAR 15.4.5.2.2). However, the interim compensatory measure consists of crediting the MG-set high speed stop setpoints for the RFCF to ensure that the flow dependent MCPR and LHGR operating limits remain valid.

In accordance with Regulatory Issue Summary 2005-20, R1, these interim compensatory actions are being evaluated under the 50.59 process. The focus of this evaluation is on whether the interim compensatory actions, not the non-conforming condition, impacts other aspects of the facility as described in the FSAR.

**Summary:**

The proposed interim compensatory measure consists of crediting the MG-set high speed stop setpoints for the RFCF to ensure that the flow dependent MCPR and LHGR operating limits remain valid.

The proposed interim compensatory measure is not an initiator of any accident and no new failure modes are introduced. There is less than a minimal increase in the likelihood of occurrence of a malfunction of the MG-set high speed stops due to the negligible

**Summary Continued:**

probability of failure of the stops. Since there is a negligible probability of failure of the stops, there are no impacts on consequences for the RFCF analysis. There are no methodology changes required to credit the MG-set high speed stops for the RFCF analysis. Therefore, the proposed activity may be implemented without prior NRC approval.



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**Attachment 2 to PLA-7247**

**Summary of Changes to Regulatory Commitments**

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**Commitment Change No:** LDCN 5076

**Description of Change:**

On page 30 to the Enclosure to PLA-6076 "Proposed License Amendment Numbers 285 for Unit 1 Operating License NPF-14 and 253 for Unit 2 Operating License NPF-22 Constant Pressure Power Uprate", PPL committed to revise the operation procedure to require visual confirmation of the absence of flow through the bypass lines when the sprays are called upon to operate. The commitment was added to OP-116-001 in Revision 28 in 2007.

Delete the commitment in OP-116-001 to require visual confirmation of the absence of flow through the bypass lines when the sprays are called upon to operate.

**Summary:**

Leakage past the spray pond bypass valve seats is bounded by accident analysis for the stuck open bypass valve scenarios. Under accident conditions, Operations is directed to close the new manual spray bypass isolation valves; this will isolate the bypass line including any seat leakage.

Not performing direct observation of flow from the bypass piping does not affect any structure, system, component, or the operator's ability to keep the plant safe since there are other means of verifying bypass flow.

**Commitment Change No:** LDCN 5079

**Description of Change:**

In Enclosure 2 to PLA-6927, PPL committed to complete installation of satellite phone base stations and antennas for the Control Room and Technical Support Center by January 31, 2014. This commitment was in response to request for information regarding Recommendations 2.1, 2.3 and 9.3 of the Near-Term Task Force review of insights from the Fukushima Dai-Ichi accident dated March 12, 2012.

The schedule for completion of the installation of satellite phones and antennas for the Control Room and Technical Support Center is now June 30, 2014.

**Summary:**

The change in the scheduled completion date is due to the original date not reflecting the design and physical work associated with PPL's (at the time) evolving mitigation strategy for temporary power which is needed to completely implement the satellite phone communication requirement.

The NRC was informed of the date change in PLA-7091 dated November 14, 2013.