(4) PPL Susquehanna, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(5) PPL Susquehanna, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

PPL Susquehanna, LLC is authorized to operate the facility at reactor core power levels not in excess of 3489 megawatts thermal in accordance with the conditions specified herein and in Attachment 1 to this license. The preoperational tests, startup tests and other items identified in Attachment 1 to this license shall be completed as specified. Attachment 1 is hereby incorporated into this license.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 238, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. PPL Susquehanna, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

For Surveillance Requirements (SRs) that are new in Amendment 178 to Facility Operating License No. NPF-14, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 178. For SRs that existed prior to Amendment 178, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment 178.

(3) Conduct of Work Activities During Fuel Load and Initial Startup

The operating licensee shall review by committee all facility construction, Preoperational Testing, and System Demonstration activities performed concurrently with facility initial fuel loading or with the facility Startup Test

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Diesel Generator E DC electrical power subsystem inoperable, when aligned to the Class 1E distribution system.	D.1 Declare Diesel Generator E inoperable.	2 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.4.1	Verify battery terminal voltage is greater than or equal to the minimum established float voltage.	7 days
SR 3.8.4.2	Verify each required battery charger supplies its associated battery at the following rates for ≥ 4 hours at greater than or equal to the minimum established float voltages. a. ≥ 100 amps for the 125V Battery b. ≥ 300 amps for the 250V Battery c. ≥ 200 amps for the 125V Diesel Generator E Battery	24 months

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.4.3	----------NOTES---------- 1. The modified performance discharge test in SR 3.8.6.6 may be performed in lieu of SR 3.8.4.3. 2. This Surveillance shall not be Performed in Mode 1, 2, or 3 except for the Diesel Generator E DC electrical power subsystem. This Surveillance can be performed on the Diesel Generator E DC electrical power subsystem when the Diesel Generator E is not aligned to the Class 1E distribution system. However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.	24 months

Table 3.8.4-1 (page 1 of 1)
Unit 1 DC Electrical Power Subsystems

TYPE	VOLTAGE	DIVISION I	DIVISION II
Battery Banks	250 V	1D650 1D653A (Charger) or 1D653B (Charger)	1D660 1D663 (Charger)
	125 V	1D610 (Subsys. A) 1D613 (Charger A) 1D630 (Subsys. C) 1D633 (Charger C)	1D620 (Subsys. B) 1D623 (Charger B) 1D640 (Subsys. D) 1D643 (Charger D)
DG E Battery Banks	125 V	0D595 0D596 (Charger)	

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SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.8.5.1	----------NOTE---------- The following SRs must be met, but are not required to be performed: SR 3.8.4.2, and SR 3.8.4.3. ----------	
	For DC sources required to be OPERABLE the following SRs are applicable: SR 3.8.4.1 SR 3.8.4.2 SR 3.8.4.3	In accordance with applicable SRs

3.8 ELECTRICAL POWER SYSTEMS

3.8.6 Battery Parameters

LCO 3.8.6 Battery parameters for the Class 1E 250 V batteries and Class 1E 125 V batteries shall be within limits.

APPLICABILITY: When associated DC electrical power subsystems are required to be OPERABLE.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each battery.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One 125 VDC electrical power subsystem or one 250 VDC electrical power subsystem with one or more battery cells float voltage < 2.07 V.	A.1 Perform SR 3.8.4.1 AND A.2 Perform SR 3.8.6.1 AND A.3 Restore affected cell voltage ≥ 2.07 V.	2 hours 2 hours 24 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One 125 VDC electrical power subsystem or one 250 VDC electrical power subsystem with float current > 2 amps.	B.1 Perform SR 3.8.4.1 AND B.2 Restore battery float current to ≤ 2 amps.	2 hours 12 hours
C. ----------NOTE---------- Required Action C.2 shall be completed if electrolyte level was below the top of plates. ---------- One 125 VDC electrical power subsystem or one 250 VDC electrical power subsystem with one or more cells electrolyte level less than minimum established design limits.	----------NOTE---------- Required Actions C.1 and C.2 are only applicable if electrolyte level was below the top of plates. ---------- C.1 Restore electrolyte level to above top of plates. AND C.2 Verify no evidence of leakage. AND C.3 Restore electrolyte level to greater than or equal to minimum established design limits.	 8 hours 12 hours 31 days
D. One 125 VDC electrical power subsystem or one 250 VDC electrical power subsystem with pilot cell electrolyte temperature less than minimum established design limits.	D.1 Restore battery pilot cell temperature to greater than or equal to minimum established design limits	12 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two 125 VDC electrical power subsystems or both 250 VDC electrical power subsystems with battery parameters not within limits.	E.1 Restore battery parameters for batteries in one 125 VDC electrical power subsystem or one 250 VDC electrical power subsystem to within limits.	2 hours
F. Required Action and associated Completion Time of Condition A, B, C, D, or E not met. OR One battery on one 125 VDC electrical power subsystem or one 250 VDC electrical power subsystem with one or more battery cells float voltage < 2.07 V and float current > 2 amps.	F.1 Declare associated battery inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.8.6.1	----------NOTE---------- Not required to be met when battery terminal voltage is less than the minimum established float voltage of SR 3.8.4.1. ---------- Verify each battery float current is ≤ 2 amps.	7 days
SR 3.8.6.2	Verify each battery pilot cell voltage is ≥ 2.07 V.	31 days
SR 3.8.6.3	Verify each battery connected cell electrolyte level is greater than or equal to minimum established design limits.	31 days
SR 3.8.6.4	Verify each battery pilot cell temperature is greater than or equal to minimum established design limits.	31 days
SR 3.8.6.5	Verify each battery connected cell voltage is ≥ 2.07 V.	92 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.8.6.6	----------NOTE---------- This Surveillance shall not be Performed in Mode 1, 2, or 3. However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify battery capacity is ≥ 80% of the manufacturer's rating when subjected to a performance discharge test or a modified performance discharge test.	60 months AND 12 months when battery shows degradation or has reached 85% of expected service life with capacity < 100% of manufacturer's rating AND 24 months when battery has reached 85% of the expected service life with capacity ≥ 100% of manufacturer's rating

5.5 Programs and Manuals (continued)

5.5.13 Battery Monitoring and Maintenance Program

This program provides for battery restoration and maintenance, which includes the following:

a. Actions to restore battery cells with float voltage < 2.13 V; and

b. Actions to equalize and test battery cells that had been discovered with electrolyte level below the top of the plates; and

c. Actions to verify that the remaining cells are ≥ 2.07 V when a cell or cells have been found to be < 2.13 V.

(4) PPL Susquehanna, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(5) PPL Susquehanna, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

PPL Susquehanna, LLC is authorized to operate the facility at reactor core power levels not in excess of 3489 megawatts thermal (100% power) in accordance with the conditions specified herein and in Attachment 1 to this license. The preoperational test, startup tests and other items identified in Attachment 1 to this license shall be completed as specified. Attachment 1 is hereby incorporated into this license.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 215, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. PPL Susquehanna, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

For Surveillance Requirements (SRs) that are new in Amendment 151 to Facility Operating License No. NPF-22, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 151. For SRs that existed prior to Amendment 151, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment 151.

2.C.(3) PPL Susquehanna, LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Fire Protection Review Report for the facility and as approved in Fire Protection Program, Section 9.5, SER, SSER#1, SSER#2, SSER#3, SSER#4, SSER#6, Safety Evaluation of Fire Protection Report dated August 9, 1989, Safety Evaluation

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.4.1	Verify battery terminal voltage is greater than or equal to the minimum established float voltage.	7 days
SR 3.8.4.2	Verify each required battery charger supplies its associated battery at the following rates for ≥ 4 hours at greater than or equal to the minimum established float voltages: a) ≥ 100 amps for the 125V Battery b) ≥ 300 amps for the 250V Battery c) ≥ 200 amps for the125V Diesel Generator E Battery	24 months

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.4.3	----------NOTES---------- 1. The modified performance discharge test in SR 3.8.6.6 may be performed in lieu of SR 3.8.4.3. 2. This Surveillance shall not be Performed in Mode 1, 2 or 3 except for the Diesel Generator E DC electrical power subsystem. This Surveillance can be performed on the Diesel Generator E DC electrical power subsystem when the Diesel Generator E is not aligned to the Class 1E distribution system. However, credit may be taken for unplanned events that satisfy this SR. ----------	
	Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.	24 months
SR 3.8.4.4	----------NOTE---------- When Unit 1 is in MODE 4 or 5, or moving irradiated fuel assemblies in the secondary containment, the Note to Unit 1 SR 3.8.5.1 is applicable. ----------	
	For required Unit 1 DC electrical power subsystems, the SRs for Unit 1 Specification 3.8.4 are applicable.	In accordance with applicable SRs

Table 3.8.4-1 (page 1 of 1)
Unit 2 DC Electrical Power Subsystems

TYPE	VOLTAGE	DIVISION I	DIVISION II
Battery Banks	250 V	2D650 2D653A (Charger) or 2D653B (Charger)	2D660 2D663 (Charger)
	125 V	1D610 (Subsys. A) 1D613 (Charger A) 2D610 (Subsys. A) 2D613 (Charger A) 1D630 (Subsys. C) 1D633 (Charger C) 2D630 (Subsys. C) 2D633 (Charger C)	1D620 (Subsys. B) 1D623 (Charger B) 2D620 (Subsys. B) 2D623 (Charger B) 1D640 (Subsys. D) 1D643 (Charger D) 2D640 (Subsys. D) 2D643 (Charger D)
DG E Battery Banks	125 V	0D595 0D596 (Charger)	

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SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.8.5.1	----------NOTE---------- The following SRs must be met, but are not required to be performed: SR 3.8.4.2 and SR 3.8.4.3. ---------- For DC sources required to be OPERABLE the following SRs are applicable: SR 3.8.4.1 SR 3.8.4.2 SR 3.8.4.3	In accordance with applicable SRs
SR 3.8.5.2	----------NOTE---------- When Unit 1 is in MODE 4 or 5, or moving irradiated fuel assemblies in the secondary containment, the Note to Unit 1 SR 3.8.5.1 is applicable. ---------- For required Unit 1 DC electrical power subsystems, the SRs for Unit 1 Specification 3.8.4 are applicable.	In accordance with applicable SRs

3.8 ELECTRICAL POWER SYSTEMS

3.8.6 Battery Parameters

LCO 3.8.6 Battery parameters for the Class 1E 250 V batteries and Class 1E 125 V batteries shall be within limits.

APPLICABILITY: When associated DC electrical power subsystems are required to be OPERABLE.

ACTIONS

---NOTE---
Separate Condition entry is allowed for each battery.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One 125 VDC electrical power subsystem or one 250 VDC electrical power subsystem with one or more battery cells float voltage < 2.07 V.	A.1 Perform SR 3.8.4.1 AND A.2 Perform SR 3.8.6.1 AND A.3 Restore affected cell voltage ≥ 2.07 V.	2 hours 2 hours 24 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One 125 VDC electrical power subsystem or one 250 VDC electrical power subsystem with float current > 2 amps.	B.1 Perform SR 3.8.4.1 AND B.2 Restore battery float current to ≤ 2 amps	2 hours 12 hours
C. ----------NOTE---------- Required Action C.2 shall be completed if electrolyte level was below the top of plates. ---------- One 125 VDC electrical power subsystem or one 250 VDC electrical power subsystem with one or more cells electrolyte level less than minimum established design limits.	----------NOTE---------- Required Actions C.1 and C.2 are only applicable if electrolyte level was below the top of plates. ---------- C.1 Restore electrolyte level to above top of plates. AND C.2 Verify no evidence of leakage. AND C.3 Restore electrolyte level to greater than or equal to minimum established design limits.	 8 hours 12 hours 31 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One 125 VDC electrical power subsystem or one 250 VDC electrical power subsystem with pilot cell electrolyte temperature less than minimum established design limits.	D.1 Restore battery pilot cell temperature to greater than or equal to minimum established design limits.	12 hours
E. Two 125 VDC electrical power subsystems or both 250 VDC electrical power subsystems with battery parameters not within limits.	E.1 Restore battery parameters for batteries in one 125 VDC electrical power subsystem or one 250 VDC electrical power subsystem to within limits.	2 hours
F. Required Action and associated Completion Time of Condition A, B, C, D, or E not met. OR One battery on one 125 VDC electrical power subsystem or on one 250 VDC electrical power subsystem with one or more battery cells float voltage < 2.07 V and float current > 2 amps.	F.1 Declare associated battery inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.6.1	----------NOTE---------- Not required to be met when battery terminal voltage is less than the minimum established float voltage of SR 3.8.4.1. ---------- Verify each battery float current is ≤ 2 amps.	7 days
SR 3.8.6.2	Verify each battery pilot cell voltage is ≥ 2.07 V.	31 days
SR 3.8.6.3	Verify each battery connected cell electrolyte level is greater than or equal to minimum established design limits.	31 days
SR 3.8.6.4	Verify each battery pilot cell temperature is greater than or equal to minimum established design limits.	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.8.6.5	Verify each battery connected cell voltage is ≥ 2.07 V.	92 days
SR 3.8.6.6	----------NOTE---------- This Surveillance shall not be Performed in Mode 1, 2, or 3. However, credit may be taken for unplanned events that satisfy this SR. ----------	
	Verify battery capacity is ≥ 80% of the manufacturer's rating when subjected to a performance discharge test or a modified performance discharge test.	60 months AND 12 months when battery shows degradation or has reached 85% of expected service life with capacity < 100% of manufacturer's rating AND 24 months when battery has reached 85% of the expected service life with capacity ≥ 100% of manufacturer's rating

5.5 Programs and Manuals (continued)

5.5.13 Battery Monitoring and Maintenance Program

This program provides for battery restoration and maintenance, which includes the following:

a. Actions to restore battery cells with float voltage < 2.13 V; and

b. Actions to equalize and test battery cells that had been discovered with electrolyte level below the top of the plates; and

c. Actions to verify that the remaining cells are ≥ 2.07 V when a cell or cells have been found to be < 2.13 V.