

- (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. 239, 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

1.1 Definitions (continued)

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**CHANNEL FUNCTIONAL TEST** A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY, including required alarm, interlock, display, and trip functions, and channel failure trips. The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total channel steps so that the entire channel is tested.

**CORE ALTERATION** CORE ALTERATION shall be the movement of any fuel, sources, or reactivity control components, within the reactor vessel with the vessel head removed and fuel in the vessel. The following exceptions are not considered to be CORE ALTERATIONS:

- a. Movement of source range monitors, local power range monitors, intermediate range monitors, traversing incore probes, or special movable detectors (including undervessel replacement); and
- b. Control rod movement, provided there are no fuel assemblies in the associated core cell.

Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.

**CORE OPERATING LIMITS REPORT (COLR)** The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific limits shall be determined for each reload cycle in accordance with Specification 5.6.5. Plant operation within these limits is addressed in individual Specifications.

**DOSE EQUIVALENT I-131** DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries per gram) which alone would produce the same total effective dose equivalent (sum of committed effective dose equivalent {CEDE} from inhalation plus deep dose equivalent {DDE} or nominally equivalent to the effective dose equivalent {EDE} from external exposure {submersion}) as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The conversion factors that are used for this calculation of committed effective dose equivalent (CEDE) from inhalation shall be those listed in Table 2.1 of Federal Guidelines Report 11, "Limiting Values of Radionuclide Intake and Air

(continued)

1.1 Definitions

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DOSE EQUIVALENT I-131  
(continued)

Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion," EPA, 1988, as described in Regulatory Guide 1.183. The factors in the column headed "effective" yield doses corresponding to the CEDE. The conversion factors that are used for the calculation of EDE (or DDE) from external exposure (submersion) shall be those listed in Table III.1 of Federal Guidance Report 12, "External Exposure to Radionuclides in Air, Water, and Soil," EPA, 1993, as described in Regulatory Guide 1.183. The factors in the column headed "effective" yield doses corresponding to the EDE.

EMERGENCY CORE COOLING  
SYSTEM (ECCS) RESPONSE  
TIME

The ECCS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ECCS initiation setpoint at the channel sensor until the ECCS equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.

END OF CYCLE  
RECIRCULATION PUMP TRIP  
(EOC RPT) SYSTEM  
RESPONSE TIME

The EOC RPT SYSTEM RESPONSE TIME shall be that time interval from initial signal generation by the associated turbine stop valve limit switch or from when the turbine control valve hydraulic oil control oil pressure drops below the pressure switch setpoint to complete suppression of the electric arc between the fully open contacts of the recirculation pump circuit breaker. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.

ISOLATION SYSTEM  
RESPONSE TIME

The ISOLATION SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its isolation initiation setpoint at the channel sensor until the isolation valves travel to their required positions. Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.

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3.1 REACTIVITY CONTROL SYSTEMS

3.1.7 Standby Liquid Control (SLC) System

LCO 3.1.7 Two SLC subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Concentration of sodium pentaborate in solution < 13.6 weight percent but within limits of Figure 3.1.7-1.	A.1 Restore concentration of sodium pentaborate in solution to within limits >13.6 weight percent.	72 hours  <u>AND</u> 10 days from discovery of failure to meet the LCO
B. One SLC subsystem inoperable for reasons other than Condition A.	B.1 Restore SLC subsystem to OPERABLE status.	7 days  <u>AND</u> 10 days from discovery of failure to meet the LCO.
C. Two SLC subsystems inoperable for reasons other than Condition A.	C.1 Restore one SLC subsystem to OPERABLE status.	8 hours.
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3  <u>AND</u> D.2 Be in MODE 4	12 hours  36 hours

Table 3.3.6.1-1 (page 5 of 6)  
 Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
5. Reactor Water Cleanup (RWCU) System Isolation					
a. RWCU Differential $\Delta$ Flow – High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.6	$\leq$ 67 gpm
b. RWCU Penetration Area Temperature - High	1,2,3	1	F	SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5	$\leq$ 137°F
c. RWCU Pump Area Temperature – High	1,2,3	1	F	SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5	$\leq$ 154°F
d. RWCU Heat Exchanger Area Temperature – High	1,2,3	1	F	SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5	$\leq$ 154°F
e. SLC System Initiation	1,2,3	2 <sup>(b)</sup>	I	SR 3.3.6.1.5	NA
f. Reactor Vessel Water Level -Low Low, Level 2	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5	$\geq$ -45 inches
g. RWCU Flow - High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5	$\leq$ 472 gpm
h. Manual Initiation	1,2,3	1	G	SR 3.3.6.1.5	NA

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(b) SLC System Initiation only inputs into one of the two trip systems.

- (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

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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

1.1 Definitions (continued)

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1.1 Definitions

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DOSE  
EQUIVALENT I-131  
(continued)

for this calculation of committed effective dose equivalent (CEDE) from inhalation shall be those listed in Table 2.1 of Federal Guidelines Report 11, "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion," EPA, 1988, as described in Regulatory Guide 1.183. The factors in the column headed "effective" yield doses corresponding to the CEDE. The conversion factors that are used for the calculation of EDE (or DDE) from external exposure (submersion) shall be those listed in Table III.1 of Federal Guidance Report 12, "External Exposure to Radionuclides in Air, Water, and Soil," EPA, 1993, as described in Regulatory Guide 1.183. The factors in the column headed "effective" yield doses corresponding to the EDE.

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b. RWCU Penetration Area Temperature - High	1,2,3	1	F	SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5	$\leq 137^\circ\text{F}$
c. RWCU Pump Area Temperature - High	1,2,3	1	F	SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5	$\leq 154^\circ\text{F}$
d. RWCU Heat Exchanger Area Temperature - High	1,2,3	1	F	SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5	$\leq 154^\circ\text{F}$
e. SLC System Initiation	1,2,3	2 <sup>(b)</sup>	I	SR 3.3.6.1.5	NA
f. Reactor Vessel Water Level -Low Low, Level 2	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5	$\geq -45$ inches
g. RWCU Flow - High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5	$\leq 472$ gpm
h. Manual Initiation	1,2,3	1	G	SR 3.3.6.1.5	NA

(continued)

(b) SLC System Initiation only inputs into one of the two trip systems.