

ATTACHMENT A

AMENDMENT NO. 127 APPROVED TECHNICAL SPECIFICATIONS AND BASES  
UNIT 2

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.18 -----NOTE----- Credit may be taken for unplanned events that satisfy this SR. -----</p> <p>Verify interval between each sequenced load block is within <math>\pm 10\%</math> of design interval for each emergency and shutdown load programmed time interval load sequence.</p>	<p>24 months</p>

(continued)

BASES

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SURVEILLANCE  
REQUIREMENTS  
(continued)

SR 3.8.1.18

As required by Regulatory Guide 1.108 (Ref. 9), paragraph 2.a.(2), each DG is required to demonstrate proper operation for the DBA loading sequence to ensure that voltage and frequency are maintained within the required limits. Under accident conditions, prior to connecting the DGs to their respective buses, all loads are shed except load center feeders and those motor control centers that power Class 1E loads (referred to as "permanently connected" loads). Upon reaching 90% of rated voltage and frequency, the DGs are then connected to their respective buses. Loads are then sequentially connected to the bus by the programmed time interval load sequence. The sequencing logic controls the permissive and starting signals to motor breakers to prevent overloading of the DGs due to high motor starting currents. The 10% load sequence start time tolerance ensures that sufficient time exists for the DG to restore frequency and voltage prior to applying the next load and that safety analysis assumptions regarding ESF equipment time delays are not violated. Reference 2 provides a summary of the automatic loading of ESF buses.

The Frequency of 24 months is consistent with the recommendations of Regulatory Guide 1.108 (Ref. 9), paragraph 2.a.(2); takes into consideration unit conditions required to perform the Surveillance; and is intended to be consistent with expected fuel cycle lengths.

This SR is modified by a Note which acknowledges that credit may be taken for unplanned events that satisfy this SR.

SR 3.8.1.19

In the event of a DBA coincident with a loss of offsite power, the DGs are required to supply the necessary power to ESF systems so that the fuel, RCS, and containment design limits are not exceeded.

This Surveillance demonstrates the DG operation, as discussed in the Bases for SR 3.8.1.11, during a loss of offsite power actuation test signal in conjunction with an ESF actuation signal (SIAS). In lieu of actual

(continued)

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ATTACHMENT B

AMENDMENT NO. 116 APPROVED TECHNICAL SPECIFICATIONS AND BASES  
UNIT 3

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.18 -----NOTE-----  Credit may be taken for unplanned events  that satisfy this SR.  -----</p> <p>Verify interval between each sequenced load  block is within <math>\pm 10\%</math> of design interval  for each emergency and shutdown load  programmed time interval load sequence.</p>	<p>24 months</p>

(continued)

BASES

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SURVEILLANCE  
REQUIREMENTS  
(continued)

SR 3.8.1.18

As required by Regulatory Guide 1.108 (Ref. 9), paragraph 2.a.(2), each DG is required to demonstrate proper operation for the DBA loading sequence to ensure that voltage and frequency are maintained within the required limits. Under accident conditions, prior to connecting the DGs to their respective buses, all loads are shed except load center feeders and those motor control centers that power Class 1E loads (referred to as "permanently connected" loads). Upon reaching 90% of rated voltage and frequency, the DGs are then connected to their respective buses. Loads are then sequentially connected to the bus by the programmed time interval load sequence. The sequencing logic controls the permissive and starting signals to motor breakers to prevent overloading of the DGs due to high motor starting currents. The 10% load sequence start time tolerance ensures that sufficient time exists for the DG to restore frequency and voltage prior to applying the next load and that safety analysis assumptions regarding ESF equipment time delays are not violated. Reference 2 provides a summary of the automatic loading of ESF buses.

The Frequency of 24 months is consistent with the recommendations of Regulatory Guide 1.108 (Ref. 9), paragraph 2.a.(2); takes into consideration unit conditions required to perform the Surveillance; and is intended to be consistent with expected fuel cycle lengths.

This SR is modified by a Note which acknowledges that credit may be taken for unplanned events that satisfy this SR.

SR 3.8.1.19

In the event of a DBA coincident with a loss of offsite power, the DGs are required to supply the necessary power to ESF systems so that the fuel, RCS, and containment design limits are not exceeded.

This Surveillance demonstrates the DG operation, as discussed in the Bases for SR 3.8.1.11, during a loss of offsite power actuation test signal in conjunction with an ESF actuation signal (SIAS). In lieu of actual

(continued)

ATTACHMENT C

PROPOSED TECHNICAL SPECIFICATIONS AND BASES  
UNIT 2

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.18 -----NOTE----- Credit may be taken for unplanned events that satisfy this SR. -----</p> <p>Verify timing of each sequenced load block is within <math>\pm 10\%</math> of its setting or <math>\pm 2.5</math> seconds, whichever is greater, with the exception of the 5 second load group which is <math>-0.5, +2.5</math> seconds (refer to Table B 3.8.1-1), for each emergency and shutdown load programmed time interval load sequence.</p>	<p>24 months</p>

(continued)



BASES

SURVEILLANCE  
REQUIREMENTS  
(continued)

SR 3.8.1.18

As required by Regulatory Guide 1.108 (Ref. 9), paragraph 2.a.(2), each DG is required to demonstrate proper operation for the DBA loading sequence to ensure that voltage and frequency are maintained within the required limits. Under accident conditions, prior to connecting the DGs to their respective buses, all loads are shed except load center feeders and those motor control centers that power Class 1E loads (referred to as "permanently connected" loads). At or near rated voltage and frequency, the DGs are then connected to their respective buses. Loads are then sequentially connected to the bus by the programmed time interval load sequence. The sequencing logic controls the permissive and starting signals to motor breakers to prevent overloading of the DGs due to high motor starting currents. The load sequence start time tolerance ensures that sufficient time exists for the DG to restore frequency and voltage prior to applying the next load and that safety analysis assumptions regarding ESF equipment time delays are not violated. Reference 2 provides a summary of the automatic loading of ESF buses. Table B 3.8.1-1 provides a matrix of loads sequenced by the ESF timing logic. The timer as-left setting requirement and the as-found acceptance criteria are provided in Table B 3.8.1-1.

The Frequency of 24 months is consistent with the recommendations of Regulatory Guide 1.108 (Ref. 9), paragraph 2.a.(2); takes into consideration unit conditions required to perform the Surveillance; and is intended to be consistent with expected fuel cycle lengths.

This SR is modified by a Note which acknowledges that credit may be taken for unplanned events that satisfy this SR.

SR 3.8.1.19

In the event of a DBA coincident with a loss of offsite power, the DGs are required to supply the necessary power to ESF systems so that the fuel, RCS, and containment design limits are not exceeded.

This Surveillance demonstrates the DG operation, as discussed in the Bases for SR 3.8.1.11, during a loss of offsite power actuation test signal in conjunction with an ESF actuation signal (SIAS). In lieu of actual

(continued)

TABLE B 3.8.1-1: DG LOAD SEQUENCING TIMER ACCEPTANCE CRITERIA

		Start Time (Sec)	Nominal Setting (As Left) Tolerance (Sec)	As-Found Tolerance (Sec)
1.	LPSI Pumps P015, P016	5.00	±0.5	-0.5 +2.5
2.	Dome Air Circ Fans A071, A074, A072, A073	5.00	±0.5	-0.5 +2.5
3.	Control Room AC Units E418, E419	5.00	±0.5	-0.5 +2.5
4.	Containment Spray Pumps P012, P013	10.00	±0.5	±2.5
5.	Diesel Gen Radiator Fans E546, E550, E547, E549	10.00	±0.5	±2.5
6.	Component Cooling Pumps P024, P025, P026	15.00	±0.5	±2.5
7.	DG Bldg Emergency Fans A274, A275, A276, A277	15.00	±0.5	±2.5
8.	Salt Water Cooling Pumps P112, P307, P113, P114	20.00	±0.5	±2.5
9.	Aux Feed Water Pumps P141, P504	30.00	±0.5	±3.0
10.	Emergency Chillers E336, E335	35.00	±0.5	±3.5

ATTACHMENT D  
PROPOSED TECHNICAL SPECIFICATIONS AND BASES  
UNIT 3

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.18 -----NOTE----- Credit may be taken for unplanned events that satisfy this SR. -----</p> <p>Verify timing of each sequenced load block is within <math>\pm 10\%</math> of its setting or <math>\pm 2.5</math> seconds, whichever is greater, with the exception of the 5 second load group which is -0.5, +2.5 seconds (refer to Table B 3.8.1-1), for each emergency and shutdown load programmed time interval load sequence.</p>	<p>24 months</p>

(continued)

BASES

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SURVEILLANCE  
REQUIREMENTS  
(continued)

SR 3.8.1.18

As required by Regulatory Guide 1.108 (Ref. 9), paragraph 2.a.(2), each DG is required to demonstrate proper operation for the DBA loading sequence to ensure that voltage and frequency are maintained within the required limits. Under accident conditions, prior to connecting the DGs to their respective buses, all loads are shed except load center feeders and those motor control centers that power Class 1E loads (referred to as "permanently connected" loads). At or near rated voltage and frequency, the DGs are then connected to their respective buses. Loads are then sequentially connected to the bus by the programmed time interval load sequence. The sequencing logic controls the permissive and starting signals to motor breakers to prevent overloading of the DGs due to high motor starting currents. The load sequence start time tolerance ensures that sufficient time exists for the DG to restore frequency and voltage prior to applying the next load and that safety analysis assumptions regarding ESF equipment time delays are not violated. Reference 2 provides a summary of the automatic loading of ESF buses. Table B 3.8.1-1 provides a matrix of loads sequenced by the ESF timing logic. The timer as-left setting requirement and the as-found acceptance criteria are provided in Table B 3.8.1-1.

The Frequency of 24 months is consistent with the recommendations of Regulatory Guide 1.108 (Ref. 9), paragraph 2.a.(2); takes into consideration unit conditions required to perform the Surveillance; and is intended to be consistent with expected fuel cycle lengths.

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SR 3.8.1.19

In the event of a DBA coincident with a loss of offsite power, the DGs are required to supply the necessary power to ESF systems so that the fuel, RCS, and containment design limits are not exceeded.

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		Start Time (Sec)	Nominal Setting (As Left) Tolerance (Sec)	As-Found Tolerance (Sec)
1.	LPSI Pumps P015, P016	5.00	±0.5	-0.5 +2.5
2.	Dome Air Circ Fans A071, A074, A072, A073	5.00	±0.5	-0.5 +2.5
3.	Control Room AC Units E418, E419	5.00	±0.5	-0.5 +2.5
4.	Containment Spray Pumps P012, P013	10.00	±0.5	±2.5
5.	Diesel Gen Radiator Fans E546, E550, E547, E549	10.00	±0.5	±2.5
6.	Component Cooling Pumps P024, P025, P026	15.00	±0.5	±2.5
7.	DG Bldg Emergency Fans A274, A275, A276, A277	15.00	±0.5	±2.5
8.	Salt Water Cooling Pumps P112, P307, P113, P114	20.00	±0.5	±2.5
9.	Aux Feed Water Pumps P141, P504	30.00	±0.5	±3.0
10.	Emergency Chillers E336, E335	35.00	±0.5	±3.5

ATTACHMENT E  
SUPPORTING ANALYSES