ATTACHMENT "A"
(Existing Specifications)
Unit 2

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.9	----------NOTE---------- Credit may be taken for unplanned events that satisfy this SR. ---------- Verify each DG, when operating with design basis kW loading and maximum kVAR loading permitted during testing, rejects a load ≥ 682 kW, and: a. Following load rejection, the frequency is ≤ 66.75 Hz; b. Within 4 seconds following load rejection, the voltage is ≥ 3924 V and ≤ 4796 V; and c. Within 4 seconds following load rejection, the frequency is ≥ 58.8 Hz and ≤ 61.2 Hz.	24 months
SR 3.8.1.10	----------NOTE---------- Credit may be taken for unplanned events that satisfy this SR. ---------- Verify each DG, when operating with design basis kW loading and maximum kVAR loading permitted during testing, does not trip and voltage is maintained ≤ 5450 V during and following a load rejection of ≥ 4450 kW and ≤ 4700 kW.	24 months

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.1.6 (continued)

to maintain an adequate volume of fuel oil in the day tanks during or following DG testing. In such a case, a 31 day Frequency is appropriate.

SR 3.8.1.7

See SR 3.8.1.2.

SR 3.8.1.8

Transfer of each 4.16 kV ESF bus power supply from the normal offsite circuit to the alternate offsite circuit demonstrates the OPERABILITY of the alternate circuit distribution network to power the shutdown loads. The 24 month Frequency of the Surveillance is based on engineering judgment, taking into consideration the unit conditions required to perform the Surveillance, and is intended to be consistent with expected fuel cycle lengths. Operating experience has shown that these components usually pass the SR when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

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

SR 3.8.1.9

Each DG is provided with an engine overspeed trip to prevent damage to the engine. Recovery from the transient caused by the loss of a large load could cause diesel engine overspeed, which, if excessive, might result in a trip of the engine. This Surveillance demonstrates the DG load response characteristics and capability to reject the largest single load without exceeding predetermined voltage and frequency and while maintaining a specified margin to the overspeed trip. For this unit, the single load for each DG is the Auxiliary Feedwater pump and its horsepower rating is 800 HP. As required by IEEE-308 (Ref. 13), the load rejection test is acceptable if the increase in diesel speed does not exceed 75% of the difference between synchronous

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.1.9 (continued)

speed and the overspeed trip setpoint, or 15% above synchronous speed, whichever is lower.

The time, voltage, and frequency tolerances specified in this SR are derived from Regulatory Guide 1.9 (Ref. 3) recommendations for response during load sequence intervals. The 4 seconds specified is equal to 80% of a typical 5 second load sequence interval associated with sequencing of the largest load. The voltage and frequency specified are consistent with the design range of the equipment powered by the DG. SR 3.8.1.9.a corresponds to the maximum frequency excursion, while SR 3.8.1.9.b and SR 3.8.1.9.c are steady state voltage and frequency values to which the system must recover following load rejection. The 24 month Frequency is consistent with the recommendation of Regulatory Guide 1.9 (Ref. 3).

In order to ensure that the DG is tested under load conditions that are as close to design basis conditions as possible, testing is performed using design basis kW loading and maximum kVAR loading permitted during testing. These loadings represent the inductive loading that the DG would experience to the extent practicable and is consistent with the intent of Regulatory Guide 1.9 (Ref. 3).

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

SR 3.8.1.10

This Surveillance demonstrates the DG capability to reject a load equal to 94.5% to 100% of its continuous rating without overspeed tripping or exceeding the predetermined voltage limits. The DG full load rejection may occur because of a system fault or inadvertent breaker tripping. This Surveillance ensures proper engine generator load response under the simulated test conditions. This test simulates the loss of the total connected load that the DG experiences following a full load rejection and verifies that the DG will not trip upon loss of the load. These acceptance criteria provide DG damage protection. While the DG is not expected to experience this transient during an event and

(continued)

ATTACHMENT "B"
(Existing Specifications)
Unit 3

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.9	----------NOTE---------- Credit may be taken for unplanned events that satisfy this SR. ---------- Verify each DG, when operating with design basis kW loading and maximum kVAR loading permitted during testing, rejects a load ≥ 682 kW, and: a. Following load rejection, the frequency is ≤ 66.75 Hz; b. Within 4 seconds following load rejection, the voltage is ≥ 3924 V and ≤ 4796 V; and c. Within 4 seconds following load rejection, the frequency is ≥ 58.8 Hz and ≤ 61.2 Hz.	24 months
SR 3.8.1.10	----------NOTE---------- Credit may be taken for unplanned events that satisfy this SR. ---------- Verify each DG, when operating with design basis kW loading and maximum kVAR loading permitted during testing, does not trip and voltage is maintained ≤ 5450 V during and following a load rejection of ≥ 4450 kW and ≤ 4700 kW.	24 months

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.1.6 (continued)

to maintain an adequate volume of fuel oil in the day tanks during or following DG testing. In such a case, a 31 day Frequency is appropriate.

SR 3.8.1.7

See SR 3.8.1.2.

SR 3.8.1.8

Transfer of each 4.16 kV ESF bus power supply from the normal offsite circuit to the alternate offsite circuit demonstrates the OPERABILITY of the alternate circuit distribution network to power the shutdown loads. The 24 month Frequency of the Surveillance is based on engineering judgment, taking into consideration the unit conditions required to perform the Surveillance, and is intended to be consistent with expected fuel cycle lengths. Operating experience has shown that these components usually pass the SR when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

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

SR 3.8.1.9

Each DG is provided with an engine overspeed trip to prevent damage to the engine. Recovery from the transient caused by the loss of a large load could cause diesel engine overspeed, which, if excessive, might result in a trip of the engine. This Surveillance demonstrates the DG load response characteristics and capability to reject the largest single load without exceeding predetermined voltage and frequency and while maintaining a specified margin to the overspeed trip. For this unit, the single load for each DG is the Auxiliary Feedwater pump and its horsepower rating is 800 HP. As required by IEEE-308 (Ref. 13), the load rejection test is acceptable if the increase in diesel speed does not exceed 75% of the difference between synchronous

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.1.9 (continued)

speed and the overspeed trip setpoint, or 15% above synchronous speed, whichever is lower.

The time, voltage, and frequency tolerances specified in this SR are derived from Regulatory Guide 1.9 (Ref. 3) recommendations for response during load sequence intervals. The 4 seconds specified is equal to 80% of a typical 5 second load sequence interval associated with sequencing of the largest load. The voltage and frequency specified are consistent with the design range of the equipment powered by the DG. SR 3.8.1.9.a corresponds to the maximum frequency excursion, while SR 3.8.1.9.b and SR 3.8.1.9.c are steady state voltage and frequency values to which the system must recover following load rejection. The 24 month Frequency is consistent with the recommendation of Regulatory Guide 1.9 (Ref. 3).

In order to ensure that the DG is tested under load conditions that are as close to design basis conditions as possible, testing is performed using design basis kW loading and maximum kVAR loading permitted during testing. These loadings represent the inductive loading that the DG would experience to the extent practicable and is consistent with the intent of Regulatory Guide 1.9 (Ref. 3).

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

SR 3.8.1.10

This Surveillance demonstrates the DG capability to reject a load equal to 94.5% to 100% of its continuous rating without overspeed tripping or exceeding the predetermined voltage limits The DG full load rejection may occur because of a system fault or inadvertent breaker tripping. This Surveillance ensures proper engine generator load response under the simulated test conditions. This test simulates the loss of the total connected load that the DG experiences following a full load rejection and verifies that the DG will not trip upon loss of the load. These acceptance criteria provide DG damage protection. While the DG is not expected to experience this transient during an event and

(continued)

ATTACHMENT "C"
(Proposed Specifications)
Unit 2

SURVEILLANCE		FREQUENCY
SR 3.8.1.9	----------NOTE---------- Credit may be taken for unplanned events that satisfy this SR. ---------- ~~Verify each DG, when operating with design basis kW loading and maximum kVAR loading permitted during testing, rejects a load ≥ 682 kW, and:~~ Verify each DG rejects a load greater than or equal to its associated single largest post-accident load, and: a. Following load rejection, the frequency is ≤ 66.75 Hz; b. Within 4 seconds following load rejection, the voltage is ≥ ~~3924~~ 4297 V and ≤ ~~4796~~ 4576 V; and c. Within 4 seconds following load rejection, the frequency is ≥ ~~58.8~~ 59.7 Hz and ≤ 61.2 Hz.	24 months

SR 3.8.1.9

Each DG is provided with an engine overspeed trip to prevent damage to the engine. Recovery from the transient caused by the loss of a large load could cause diesel engine overspeed, which, if excessive, might result in a trip of the engine. This Surveillance demonstrates the DG load response characteristics and capability to reject the largest single post-accident load without exceeding predetermined voltage and frequency and while maintaining a specified margin to the overspeed trip. For this unit, the largest single post-accident load for each DG is the Auxiliary Feedwater pump ~~and its horsepower rating is~~ which has a nameplate rating of 800 HP. As required by IEEE-308 (Ref. 13), the load rejection test is acceptable if the ~~increase in diesel speed~~ DG frequency does not exceed 66.75 Hz, which is 75% of the difference between synchronous speed (60 Hz) and the overspeed trip setpoint (69 Hz) ~~or 15% above synchronous speed, whichever is lower~~.

The time, voltage, and frequency tolerances specified in this SR are derived from Regulatory Guide 1.9 (Ref. 3) recommendations for response during load ~~sequence intervals~~ sequencing and load rejection. The 4 seconds specified is equal to 80% of ~~a typical~~ the 5 second load sequence interval associated with sequencing of the largest load. Since SONGS specific analyses demonstrate the acceptability of overlapping load groups (i.e. adjacent load groups that start at the same time due to load sequence timer tolerance), the use of 80% of load sequence interval for voltage recovery is consistent with the requirements of Regulatory Guide 1.9 (Ref. 3). The voltage and frequency specified are consistent with the design range of the equipment powered by the DG. SR 3.8.1.9.a corresponds to the maximum frequency excursion, while SR 3.8.1.9.b and SR 3.8.1.9.c are steady state voltage and frequency values to which the system must recover following load rejection. The 24 month Frequency is consistent with the recommendation of Regulatory Guide 1.9 (Ref. 3).

In order to ensure that the DG is tested under load conditions that are as close to design basis conditions as possible, testing is performed ~~using design basis kW loading and maximum kVAR loading permitted during testing. These loadings represent the inductive loading that the DG would experience to the extent practicable and is~~ by rejecting an inductive load with kW and kVAR greater than or equal to the single largest post-accident load (683 kW, 369 kVAR). These test conditions

are consistent with the ~~intent~~ power factor requirements of Regulatory Guide 1.9 (Ref. 3) and the recommendations of Information Notice 91-13 (Ref. 16).

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

ATTACHMENT "D"
(Proposed Specifications)
Unit 3

SURVEILLANCE		FREQUENCY
SR 3.8.1.9	----------NOTE---------- Credit may be taken for unplanned events that satisfy this SR. ---------- ~~Verify each DG, when operating with design basis kW loading and maximum kVAR loading permitted during testing, rejects a load ≥ 682 kW, and:~~ Verify each DG rejects a load greater than or equal to its associated single largest post-accident load, and: a. Following load rejection, the frequency is ≤ 66.75 Hz; b. Within 4 seconds following load rejection, the voltage is ≥ ~~3924~~ 4297 V and ≤ ~~4796~~ 4576 V; and c. Within 4 seconds following load rejection, the frequency is ≥ ~~58.8~~ 59.7 Hz and ≤ 61.2 Hz.	24 months

SR 3.8.1.9

Each DG is provided with an engine overspeed trip to prevent damage to the engine. Recovery from the transient caused by the loss of a large load could cause diesel engine overspeed, which, if excessive, might result in a trip of the engine. This Surveillance demonstrates the DG load response characteristics and capability to reject the largest single post-accident load without exceeding predetermined voltage and frequency and while maintaining a specified margin to the overspeed trip. For this unit, the largest single post-accident load for each DG is the Auxiliary Feedwater pump ~~and its horsepower rating is~~ which has a nameplate rating of 800 HP. As required by IEEE-308 (Ref. 13), the load rejection test is acceptable if the increase in ~~diesel speed~~ DG frequency does not exceed 66.75 Hz, which is 75% of the difference between synchronous speed (60 Hz) and the overspeed trip setpoint (69 Hz) ~~or 15% above synchronous speed, whichever is lower~~.

The time, voltage, and frequency tolerances specified in this SR are derived from Regulatory Guide 1.9 (Ref. 3) recommendations for response during load ~~sequence intervals~~ sequencing and load rejection. The 4 seconds specified is equal to 80% of ~~a typical~~ the 5 second load sequence interval associated with sequencing of the largest load. Since SONGS specific analyses demonstrate the acceptability of overlapping load groups (i.e. adjacent load groups that start at the same time due to load sequence timer tolerance), the use of 80% of load sequence interval for voltage recovery is consistent with the requirements of Regulatory Guide 1.9 (Ref. 3). The voltage and frequency specified are consistent with the design range of the equipment powered by the DG. SR 3.8.1.9.a corresponds to the maximum frequency excursion, while SR 3.8.1.9.b and SR 3.8.1.9.c are steady state voltage and frequency values to which the system must recover following load rejection. The 24 month Frequency is consistent with the recommendation of Regulatory Guide 1.9 (Ref. 3).

In order to ensure that the DG is tested under load conditions that are as close to design basis conditions as possible, testing is performed ~~using design basis kW loading and maximum kVAR loading permitted during testing. These loadings represent the inductive loading that the DG would experience to the extent practicable and is~~ by rejecting an inductive load with kW and kVAR greater than or equal to the single largest post-accident load (683 kW, 369 kVAR). These test conditions

are consistent with the ~~intent~~ power factor requirements of Regulatory Guide 1.9 (Ref. 3) and the recommendations of Information Notice 91-13 (Ref. 16).

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