ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Actions and associated Completion Times not met in MODES 1, 2, 3, or 4.	D.1 Be in MODE 3. AND D.2 Be in MODE 5.	6 hours 36 hours
E. Required Action and associated Completion Time not met when the associated DG is required OPERABLE by LCO 3.8.2.	E.1 Enter applicable Condition(s) and Required Action(s) for the associated DG made inoperable by LOP DG start instrumentation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.5.1	Perform COT.	92 days
SR 3.3.5.2	Perform CHANNEL CALIBRATION with Nominal Trip Setpoint and Allowable Value as follows: A. Loss of voltage Allowable Value ≥ 2912 V with a time delay of ≤ 0.8 second. Loss of voltage Nominal Trip Setpoint ≥ 2975 V with a time delay of ≤ 0.8 second. B. Degraded voltage Allowable Value ≥ 3683 V with a time delay of ≤ 20 seconds. Degraded voltage Nominal Trip Setpoint ≥ 3746 V with a time delay of ≤ 20 seconds.	18 months

(continued)

BASES

BACKGROUND (continued)

Trip Setpoints and Allowable Values

The Trip Setpoints used in the bistables are based on the analytical limits presented in FSAR, Chapter 15 (Ref. 2). The selection of these Trip Setpoints is such that adequate protection is provided when all sensor and processing time delays are taken into account.

These analytical limits have been incorporated into SR 3.3.5.2 as the Allowable Values.

~~The actual nominal Trip Setpoint entered into the relays is normally still more conservative than that required by the Allowable Value. If the measured setpoint does not exceed the Allowable Value, the relay is considered OPERABLE.~~

~~Setpoints adjusted in accordance with the Allowable Value ensure that the consequences of accidents will be acceptable, providing the unit is operated from within the LCOs at the onset of the accident and that the equipment functions as designed.~~

~~Allowable Values and/or Trip Setpoints are specified for each Function in the LCO. Nominal Trip Setpoints are also specified in the unit specific setpoint calculations. The nominal setpoints are selected to ensure that the setpoint measured by the surveillance procedure does not exceed the Allowable Value if the bistable is performing as required. If the measured setpoint does not exceed the Allowable Value, the relay is considered OPERABLE. Operation with a Trip Setpoint less conservative than the nominal Trip Setpoint, but within the Allowable Value, is acceptable provided that operation and testing is consistent with the assumptions of the unit specific setpoint calculation. Each Allowable Value and/or Trip Setpoint specified is more conservative than the analytical limit assumed in the transient and accident analyses in order to account for instrument uncertainties appropriate to the trip function. These uncertainties are defined in the "Unit Specific Setpoint Calculation."~~

APPLICABLE SAFETY ANALYSES

The LOP DG start instrumentation is required for the ESF Systems to function in any accident with a loss of offsite power. Its design basis is that of the ESFAS.

(continued)

BASES

ACTIONS

E.1 (continued)

required to be entered immediately. The actions of this LCO provide for adequate compensatory actions to support unit safety.

SURVEILLANCE REQUIREMENTS

SR 3.3.5.1

SR 3.3.5.1 is the performance of a COT. This test is performed every 92 days. A COT is performed on each required channel to ensure the entire channel will perform the intended Function. Setpoints must be found within the specified Allowable Values. The Frequency is based on the known reliability of the equipment and controls and the multichannel redundancy available, and has been shown to be acceptable through operating experience.

SR 3.3.5.2

INSERT

SR 3.3.5.2 is the performance of a CHANNEL CALIBRATION.

The setpoints, as well as the response to a loss of voltage and a degraded voltage test, shall include a single point verification that the trip occurs within the required time delay.

A CHANNEL CALIBRATION is performed every 18 months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy.

The Frequency of 18 months is based on operating experience and consistency with the typical industry refueling cycle and is justified by the assumption of an 18 month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

(continued)

INSERT FOR BASES FOR SR 3.3.5.2

The Nominal Trip Setpoint considers factors that may affect channel performance such as rack drift, etc. Therefore, the Nominal Trip Setpoint (within the calibration tolerance) is the expected value for the CHANNEL CALIBRATION. However, the Allowable Value is the value that was used for the loss of voltage and degraded grid studies. Therefore, a channel with an actual Trip Setpoint value that is conservative with respect to the Allowable Value is considered OPERABLE; but the channel should be reset to the Nominal Trip Setpoint value (within the calibration tolerance) to allow for factors which may affect channel performance (such as rack drift) prior to the next surveillance.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Actions and associated Completion Times not met in MODES 1, 2, 3, or 4.	D.1 Be in MODE 3. AND D.2 Be in MODE 5.	6 hours 36 hours
E. Required Action and associated Completion Time not met when the associated DG is required OPERABLE by LCO 3.8.2.	E.1 Enter applicable Condition(s) and Required Action(s) for the associated DG made inoperable by LOP DG start instrumentation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.5.1	Perform COT.	92 days
SR 3.3.5.2	Perform CHANNEL CALIBRATION with Nominal Trip Setpoint and Allowable Value as follows: A. Loss of voltage Allowable Value ≥ 2912 V with a time delay of ≤ 0.8 second. Loss of voltage Nominal Trip Setpoint 2975 V with a time delay of ≤ 0.8 second. B. Degraded voltage Allowable Value ≥ 3683 V with a time delay of ≤ 20 seconds. Degraded voltage Nominal Trip Setpoint 3746 V with a time delay of ≤ 20 seconds.	18 months

(continued)

BASES

BACKGROUND (continued)

Trip Setpoints and Allowable Values

The Trip Setpoints used in the bistables are based on the analytical limits presented in FSAR, Chapter 15 (Ref. 2). These analytical limits have been incorporated into SR 3.3.5.2 as the Allowable Values. The selection of the Trip Setpoints is such that adequate protection is provided when all sensor and processing time delays are taken into account.

APPLICABLE SAFETY ANALYSES

The LOP DG start instrumentation is required for the ESF Systems to function in any accident with a loss of offsite power. Its design basis is that of the ESFAS.

(continued)

BASES

ACTIONS

E.1 (continued)

required to be entered immediately. The actions of this LCO provide for adequate compensatory actions to support unit safety.

SURVEILLANCE REQUIREMENTS

SR 3.3.5.1

SR 3.3.5.1 is the performance of a COT. This test is performed every 92 days. A COT is performed on each required channel to ensure the entire channel will perform the intended Function. Setpoints must be found within the specified Allowable Values. The Frequency is based on the known reliability of the equipment and controls and the multichannel redundancy available, and has been shown to be acceptable through operating experience.

SR 3.3.5.2

SR 3.3.5.2 is the performance of a CHANNEL CALIBRATION. The Nominal Trip Setpoint considers factors that may affect channel performance such as rack drift, etc. Therefore, the Nominal Trip Setpoint (within the calibration tolerance) is the expected value for the CHANNEL CALIBRATION. However, the Allowable Value is the value that was used for the loss of voltage and degraded grid studies. Therefore, a channel with an actual Trip Setpoint value that is conservative with respect to the Allowable Value is considered OPERABLE; but the channel should be reset to the Nominal Trip Setpoint value (within the calibration tolerance) to allow for factors which may affect channel performance (such as rack drift) prior to the next surveillance.

The setpoints, as well as the response to a loss of voltage and a degraded voltage test, shall include a single point verification that the trip occurs within the required time delay.

A CHANNEL CALIBRATION is performed every 18 months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy.

The Frequency of 18 months is based on operating experience and consistency with the typical industry refueling cycle and is justified by the assumption of an 18 month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

(continued)