

1.0 DEFINITIONS

- I. Minimum Critical Power Ratio - The minimum critical power ratio is defined as the ratio of that power in a fuel assembly which is calculated to cause some point in that assembly to experience boiling transition as calculated by application of the appropriate NRC-approved critical power correlation to the actual assembly operating power.
- J. Mode - The reactor mode is that which is established by the mode-selector-switch.
- K. Operable - A system, subsystem, train, component or device shall be operable or have operability when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal or emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).
- L. Operating - Operating means that a system or component is performing its intended functions in its required manner.
- M. Operating Cycle - Interval between the end of one refueling outage and the end of the next subsequent refueling outage.
- N. Primary Containment Integrity - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:
1. All manual containment isolation valves on lines connecting to the reactor coolant system or containment, which are not required to be open during accident conditions, are closed. Such valves may be opened intermittently under administrative controls.
  2. At least one door in each airlock is closed and sealed.
  3. All automatic containment isolation valves are operable or deactivated in the isolated position.
  4. All blind flanges and manways are closed.
- O. Protective Instrumentation Definitions
1. Instrument Channel - An instrument channel means an arrangement of a sensor and auxiliary equipment required to generate and transmit to a trip system a single trip signal related to the plant parameter monitored by that instrument channel.
  2. Trip System - A trip system means an arrangement of instrument channel trip signals and auxiliary equipment required to initiate action to accomplish a protective trip function. A trip system may require one or more instrument channel trip signals related to one

**3.5 LIMITING CONDITION FOR  
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2. From and after the date that one of the Core Spray Subsystems is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such subsystem is sooner made operable, provided that during such seven days, the other Core Spray Subsystem and the LPCI Subsystems shall be operable.
3. From and after the date that one of the LPCI pumps is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such pump is sooner made operable, provided that during such seven days, the LPCI and Containment Cooling Subsystem with the inoperable pump is not otherwise inoperable, and the other LPCI and Containment Cooling Subsystem and both Core Spray Subsystems shall be operable.

**4.5 SURVEILLANCE REQUIREMENT**

2. Deleted.

3. Deleted.

### 3.5 LIMITING CONDITION FOR OPERATION

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4. From and after the date that a LPCI Subsystem is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless it is sooner made operable, provided that during that time the other LPCI and the Containment Cooling Subsystem and the Core Spray Subsystems shall be operable.

### 4.5 SURVEILLANCE REQUIREMENT

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4. Deleted.

### 3.5 LIMITING CONDITION FOR OPERATION

#### C. Residual Heat Removal (RHR) Service Water System

1. Except as specified in Specifications 3.5.C.2, and 3.5.C.3 below, both RHR Service Water Subsystem loops shall be operable whenever irradiated fuel is in the reactor vessel and prior to reactor startup from a cold condition.
2. From and after the date that one of the RHR service water pumps is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding thirty days unless such pump is sooner made operable, provided that during such thirty days, the RHR Service Water Subsystem with the inoperable pump is not otherwise inoperable and the other RHR Service Water Subsystem is operable.
3. From and after the date that one RHR Service Water Subsystem is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such subsystem is sooner made operable, provided that during such seven days, the other RHR Service Water Subsystem and both Core Spray Subsystems shall be operable.

### 4.5 SURVEILLANCE REQUIREMENT

#### C. Residual Heat Removal (RHR) Service Water System

Surveillance of the RHR Service Water System shall be performed as follows:

1. RHR Service Water Subsystem testing:  
  
Operability testing of pumps and valves shall be in accordance with Specification 4.6.E.

2. Deleted.

3. Deleted.

### 3.5 LIMITING CONDITION FOR OPERATION

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4. If the requirements of Specification 3.5.C cannot be met, an orderly shutdown shall be initiated and the reactor shall be in a cold shutdown condition within 24 hours.
- D. Station Service Water and Alternate Cooling Tower Systems
1. Except as specified in Specifications 3.5.D.2 and 3.5.D.3, the Station Service Water System and both essential equipment cooling loops and the alternate cooling tower shall be operable whenever irradiated fuel is in the reactor vessel and reactor coolant temperature is greater than 212°F.
  2. From and after the date that the Station Service Water System is made or found to be unable to provide adequate cooling to one of the two essential equipment cooling loops, reactor operation is permissible only during the succeeding 15 days unless adequate cooling capability to both essential equipment cooling loops is restored sooner, provided that during such 15 days, the remaining essential equipment cooling loop and the Station Service Water and Alternate Cooling Tower Systems are operable.

### 4.5 SURVEILLANCE REQUIREMENT

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- D. Station Service Water and Alternate Cooling Tower Systems
- Surveillance of the Station Service Water and Alternate Cooling Tower Systems shall be performed as follows:
1. Operability testing of pumps and valves shall be in accordance with Specification 4.6.E.
  2. Deleted.

### 3.5 LIMITING CONDITION FOR OPERATION

3. From and after the date that the Alternate Cooling Tower System is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days, unless the Alternate Cooling Tower System is sooner made operable, provided that during such seven days, the Station Service Water System and both essential equipment cooling loops are operable.
4. If the requirements of Specification 3.5.D cannot be met, an orderly shutdown shall be initiated and the reactor shall be in a cold shutdown condition within 24 hours.

#### E. High Pressure Cooling Injection (HPCI) System

1. Except as specified in Specification 3.5.E.2, whenever irradiated fuel is in the reactor vessel and reactor steam pressure is greater than 150 psig:
  - a. The HPCI System shall be operable.
  - b. The condensate storage tank shall contain at least 75,000 gallons of condensate water.

### 4.5 SURVEILLANCE REQUIREMENT

3. Deleted.

#### E. High Pressure Coolant Injection (HPCI) System

Surveillance of HPCI System shall be performed as follows:

1. Testing
  - a. A simulated automatic actuation test of the HPCI System shall be performed during each refueling outage.
  - b. Operability testing of the pump and valves shall be in accordance with Specification 4.6.E.
  - c. Upon reactor startup, HPCI operability testing shall be performed as required by Specification 4.6.E within 24 hours after exceeding 150 psig reactor steam pressure.

### 3.5 LIMITING CONDITION FOR OPERATION

2. From and after the date that the HPCI System is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding 14 days unless such system is sooner made operable, provided that:
  - a. The RCIC System is immediately verified by administrative means to be operable, and
  - b. During such 14 days, the Automatic Depressurization System, the Core Spray Subsystems, the LPCI Subsystems, and the RCIC System are operable.
3. If the requirements of either Specification 3.5.E or Specification 4.5.E.1.c cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to  $\leq 150$  psig within 24 hours.

#### F. Automatic Depressurization System

1. Except as specified in Specification 3.5.F.2 below, the entire Automatic Depressurization Relief System shall be operable at any time the reactor steam pressure is above 150 psig and irradiated fuel is in the reactor vessel.
2. From and after the date that one of the four relief valves of the Automatic Depressurization Subsystem are made or found to be inoperable

### 4.5 SURVEILLANCE REQUIREMENT

- d. The HPCI System shall deliver at least 4250 gpm at normal reactor operating pressure when recirculating to the Condensate Storage Tank.

2. Deleted.

#### F. Automatic Depressurization System

Surveillance of the Automatic Depressurization System shall be performed as follows:

1. Operability testing of the relief valves shall be in accordance with Specification 4.6.E.
2. Deleted.

**3.5 LIMITING CONDITION FOR  
OPERATION**

b. During such 14 days, the HPCI System is operable.

3. If the requirements of either Specification 3.5.G or Specification 4.5.G.1.c cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to  $\leq 150$  psig within 24 hours.

**H. Minimum Core and Containment Cooling System Availability**

1. Deleted.
2. Any combination of inoperable components in the Core and Containment Cooling Systems shall not defeat the capability of the remaining operable components to fulfill the core and containment cooling functions.
3. When irradiated fuel is in the reactor vessel and the reactor is in either a refueling or cold shutdown condition, all Core and Containment Cooling Subsystems may be inoperable provided no work is permitted which has the potential for draining the reactor vessel.

**4.5 SURVEILLANCE REQUIREMENT**

d. The RCIC System shall deliver at least 400 gpm at normal reactor operating pressure when recirculating to the Condensate Storage Tank.

**H. Minimum Core and Containment Cooling System Availability**

1. Deleted.

### 3.7 LIMITING CONDITIONS FOR OPERATION

3. a. From and after the date that one train of the Standby Gas Treatment System is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such train is sooner made operable, provided that during such seven days, the other standby gas treatment train shall be operable.

If this condition cannot be met during reactor operation, or the inoperable train is not restored to operable status within seven days, the actions and completion times of Specification 3.7.B.4.a shall apply.

3. b. From and after the date that one train of the Standby Gas Treatment System is made or found to be inoperable for any reason, operations requiring secondary containment are permissible during the succeeding seven days unless such train is sooner made operable, provided that during such seven days, the other standby gas treatment train and associated Emergency Diesel Generator shall be operable.

If this condition cannot be met during a refueling or cold

### 4.7 SURVEILLANCE REQUIREMENTS

once per operating cycle not to exceed 18 months. If the ultrasonic test indicates the presence of a leak, the condition will be evaluated and the gasket repaired or replaced as necessary.

- f. DOP and halogenated hydrocarbon test shall be performed following any design modification to the Standby Gas Treatment System housing that could have an effect on the filter efficiency.

- g. An air distribution test demonstrating uniformity within  $\pm 20\%$  across the HEPA filters and charcoal adsorbers shall be performed if the SGTs housing is modified such that air distribution could be affected.

3. a. At least once per operating cycle automatic initiation of each train of the Standby Gas Treatment System shall be demonstrated.

- b. Operability testing of valves shall be in accordance with Specification 4.6.E.

- c. Deleted.

### 3.10 LIMITING CONDITIONS FOR OPERATION

#### B. Operation With Inoperable Components

Whenever the reactor is in Run Mode or Startup Mode with the reactor not in the Cold Condition, the requirements of 3.10.A shall be met except:

##### 1. Diesel Generators

From and after the date that one of the diesel generators is made or found to be inoperable for any reason and the remaining diesel generator is operable, continued operation is permissible only during the succeeding 7 days, provided that either:

- a. all required systems, subsystems, trains, components and devices (i.e., required features) supported by the operable diesel generator are operable, or
- b. if required feature(s) supported by the operable diesel generator are inoperable, the redundant required feature(s) supported by the inoperable diesel generator are immediately declared inoperable and the applicable Technical Specification action(s) taken.

Otherwise, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.

### 4.10 SURVEILLANCE REQUIREMENTS

#### B. Operation With Inoperable Components

##### 1. Diesel Generator

When one of the diesel generators is made or found to be inoperable:

- a. Within 24 hours determine that the remaining diesel generator is not inoperable due to common cause failure; or
- b. The remaining diesel generator shall have been or shall be demonstrated to be operable within 24 hours.

### 3.10 LIMITING CONDITIONS FOR OPERATION

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#### 2. Batteries

- a. From and after the date that ventilation is lost in the Battery Room portable ventilation equipment shall be provided.
- b. From and after the date that one of the two 125 volt Station Battery Systems is made or found to be inoperable for any reasons, continued reactor operation is permissible only during the succeeding three days provided that during such three days, all required systems, subsystems, trains, components and devices supported by the operable 125 volt Station Battery System are operable, unless such Battery System is sooner made operable. If this requirement cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.
- c. Deleted.
- d. From and after the date that the AS-2 125 Volt battery system is made or found to be inoperable for any reason, continued reactor operation is permissible provided Diesel Generator DG-1-1A control power is transferred to Station Battery B1.

### 4.10 SURVEILLANCE REQUIREMENTS

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#### 2. Batteries

Samples of the Battery Room atmosphere shall be taken daily for hydrogen concentration determination.

### 3.10 LIMITING CONDITIONS FOR OPERATION

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- e. From and after the date that one of the two 24 Volt Neutron Monitoring and Process Radiation Monitoring battery systems is found or made to be inoperable for any reason, continued reactor operation is permissible providing the minimum channel requirements of Sections 3.1 and 3.2 for the Neutron Monitoring and Process Radiation Monitoring systems are met.
- f. From and after the date that one of the two 125 volt Switchyard battery systems is found or made to be inoperable for any reason, continued reactor operation is permissible provided that the other 125 volt Switchyard battery system is operable.

#### 3. Off-Site Power

- a. From and after the date one off-site power source is made or found to be inoperable for any reason, reactor operation may continue for seven days provided the remaining off-site power source and both diesel generators are operable, and either:

### 4.10 SURVEILLANCE REQUIREMENTS

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#### 3. Off-Site Power

- a. When one off-site power source is unavailable, the remaining power source shall be verified operable within one hour and once per eight hours thereafter.

### 3.10 LIMITING CONDITIONS FOR OPERATION

1. all required systems, subsystems, trains, components and devices (i.e., required features) supported by the operable off-site power source are operable, or
2. if required feature(s) supported by the operable off-site power source are inoperable, the redundant required feature(s) with no off-site power are immediately declared inoperable and the applicable Technical Specification action(s) taken.

Otherwise, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours unless the conditions of Specification 3.10.B.3.b are applicable.

- b. From and after the date that either off-site power source and one diesel generator are made or found to be inoperable for any reason, continued operation is permitted for 24 hours as long as the remaining

### 4.10 SURVEILLANCE REQUIREMENTS

- b. When either off-site power source and one diesel are unavailable:
  1. The other off-site power source shall be verified operable within one hour and once per eight hours thereafter.

### 3.10 LIMITING CONDITIONS FOR OPERATION

off-site power source and the remaining diesel generator are operable, and either:

1. all required systems, subsystems, trains, components and devices (i.e., required features) supported by the operable off-site power source are operable and all required features supported by the operable diesel generator are operable, or
2. if required feature(s) supported by the operable off-site power source are inoperable or if required feature(s) supported by the operable diesel generator are inoperable, the redundant required feature(s) with no off-site power and the redundant required feature(s) supported by the inoperable diesel generator are immediately declared inoperable and the applicable Technical Specification action(s) taken.

Otherwise, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.

### 4.10 SURVEILLANCE REQUIREMENTS

2. The requirements of Specification 4.10.B.1 shall be met within 24 hours.

BASES:3.10 AUXILIARY ELECTRIC POWER SYSTEMS

- A. The objective of this Specification is to assure that adequate power will be available to operate the emergency safeguards equipment. Adequate power can be provided by any one of the following sources: an immediate access source through both startup transformers, backfeed through the main transformer, or either of the two diesel generators. The backfeed through the main transformer is a delayed access off-site power source. The delayed access source is made available by opening the generator no load disconnect switch and establishing a feed from the 345 kV switchyard through the main generator step up transformer and unit auxiliary transformer to the 4.16 kV buses. The delayed access source is available within an hour of loss of main generator capability to assure that fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded.

Electric power can be supplied from the off-site transmission network to the on-site Emergency Safeguards Electric Power Distribution System by two independent sources, one immediate access and one delayed access, designed and located so as to minimize to the extent practicable the likelihood of their simultaneous failure under operating and postulated accident and environmental conditions. An additional off-site source, a 4160 V tie line to Vernon Hydroelectric Station, can supply either 4160 V emergency bus. It is used to meet station blackout and Appendix R licensing requirements.

Off-site power is supplied to the 345 kV switchyard from the transmission network by three transmission lines. A 400 MVA autotransformer is connected between the 345 kV north bus and the 115 kV bus. The autotransformer is the normal source for the 115 kV bus and the station startup transformers. The autotransformer also feeds the 115 kV transmission line to Keene.

The immediate access source is supplied from the 345 kV Transmission System through the 345 kV/115 kV autotransformer. It feeds the on-site Electric Power Distribution System through the two 115 kV to 4.16 kV startup transformers and is available within seconds following a design basis accident to assure that core cooling, containment integrity and other vital functions are maintained. An alternate immediate access source through the Keene line may be made available. Its availability is dependent on its preloading which must be limited by system dispatchers prior to it being declared an immediate access source.

A qualified source consists of all breakers, transformers, switches, interrupting devices, cabling, controls and circuit paths (including feeder breakers to both 4160 V emergency buses) required to transmit adequate power from the off-site transmission network to the on-site Emergency Safeguards Buses 3 and 4.

Two 480 V Uninterruptible Power Systems supply power to the LPCIS valves via designated Motor Control Centers. The 480 V Uninterruptible Power Systems are redundant and independent of any on-site ac power sources. A 480 V Uninterruptible Power System consists of a battery, associated battery charger and a motor generator unit.

This Specification assures that at least two off-site and two on-site power sources, and both 480 V Uninterruptible Power Systems will be available before the reactor is made critical. In addition to assuring power source availability, all of the associated switchgear must be operable as specified to assure that the emergency cooling equipment can be operated, if required, from the power sources.

BASES: 3.10 (Cont'd)

Station service power is supplied to the station through either the unit auxiliary transformer or the startup transformers. In order to start up the station, the startup transformers are required to supply the station auxiliary load. After the unit is synchronized to the system, the unit auxiliary transformer carries the station auxiliary load, except for the station cooling tower loads which are always supplied by one of the startup transformers. The station cooling tower loads are not required to perform an engineered safety feature function in the event of an accident; therefore, an alternate source of power is not essential. Normally one startup transformer supplies 4160 volt Buses 1 and 3, and the other supplies Buses 2 and 4.

A battery charger is supplied for each battery. In addition, the two 125 volt main station battery systems have two chargers available for each system. Either charger is capable of supplying its respective 125 VDC bus.

Power for the Reactor Protection System is supplied by 120 V ac motor generators with an alternate supply from MCC-8B. Two redundant, Class 1E, seismically qualified power protection panels are connected in series with each ac power source. These panels provide overvoltage, undervoltage, and underfrequency protection for the system. Setpoints are chosen to be consistent with the input power requirements of the equipment connected to the bus.

- B. Adequate power is available to operate the emergency safeguards equipment from the immediate access source or for minimum engineered safety features from either of the emergency diesel generators. Therefore, reactor operation is permitted for up to seven days with the delayed-access off-site power source unavailable provided all required systems, subsystems, trains, components and devices (i.e., required features) supported by the operable off-site power source are operable. Provided at least one off-site power source is available to each 4160 V Emergency Safeguards Bus, no additional action requirements exist due to a required feature being inoperable. However, if both off-site power sources are lost to one or both 4160 V Emergency Safeguards Buses and a required feature is inoperable, then redundant required features with no off-site power are required to be immediately declared inoperable and the applicable Technical Specification action(s) taken. These provisional requirements ensure that, during the seven day allowed outage time, a loss of off-site power with a coincident single failure of a diesel generator does not result in a loss of safety function of critical systems. Required features are systems, subsystems, trains, components and devices supported by the off-site power sources and diesel generators and are required to be operable by the Technical Specifications in the existing plant mode or condition.

Each of the diesel generator units is capable of supplying 100 percent of the minimum emergency loads required under postulated design basis accident conditions. Each unit is physically and electrically independent of the other and of any off-site power source. Adequate power is also available to operate the emergency safeguards equipment from the immediate access source or from the delayed access source of off-site power. Therefore, one diesel generator can be allowed out of service for a period of seven days without jeopardizing the safety of the station provided all required systems, subsystems, trains, components and devices (i.e., required features) supported by the

BASES: 3.10 (Cont'd)

operable diesel generator are operable. If required feature(s) supported by the operable diesel generator are inoperable, the redundant required feature(s) supported by the inoperable diesel generator are required to be immediately declared inoperable and the applicable Technical Specification action(s) taken. These provisional requirements ensure that, during the seven day allowed outage time, a loss of off-site power does not result in a loss of safety function of critical systems. Required features are systems, subsystems, trains, components and devices supported by the off-site power sources and diesel generators and are required to be operable by the Technical Specifications in the existing plant mode or condition.

In the event that the immediate access source is unavailable, adequate power is available to operate the emergency safeguards equipment from the emergency diesel generators or from the delayed-access off-site power source. Therefore, reactor operation is permitted for up to 7 days with the immediate access source unavailable provided all required systems, subsystems, trains, components and devices (i.e., required features) supported by the operable off-site power source are operable. Provided at least one off-site power source is available to each 4160 V Emergency Safeguards Bus, no additional action requirements exist due to a required feature being inoperable. However, if both off-site power sources are lost to one or both 4160 V Emergency Safeguards Buses and a required feature is inoperable, then redundant required features with no off-site power are required to be immediately declared inoperable and the applicable Technical Specification action(s) taken. These provisional requirements ensure that, during the seven day allowed outage time, a loss of off-site power with a coincident single failure of a diesel generator does not result in a loss of safety function of critical systems. Required features are systems, subsystems, trains, components and devices supported by the off-site power sources and diesel generators and are required to be operable by the Technical Specifications in the existing plant mode or condition.

In the event that both emergency diesel generators are lost, adequate power is available to operate the emergency safeguards equipment from the immediate access source or from the delayed-access off-site power source within one hour.

The plant is designed to accept one hundred percent load rejection without adverse effects to the plant or the transmission system. Network stability analysis studies indicate that the loss of the Vermont Yankee unit will not cause instability and consequent tripping of the connecting 345 kV and 115 kV lines. Thus, the availability of the off-site power sources is assured in the event of a turbine trip.

In the event that one off-site power source and one emergency diesel generator are unavailable, adequate power is available to operate both emergency safeguards buses from the operable off-site power source and to operate 100% of the minimum emergency safeguards loads from the operable diesel generator. In addition, the station blackout alternate ac source of power is capable of supplying power to the bus with the inoperable diesel generator. Therefore, continued operation is permitted for up to 24 hours with one off-site power source and one emergency diesel generator unavailable provided all required systems, subsystems, trains, components and devices (i.e., required features) supported by the operable off-site power source are operable and all required features supported by the operable diesel generator are operable. If required feature(s) supported by the operable off-site power source are inoperable or if the required feature(s) supported by

BASES: 3.10 (Cont'd)

the operable diesel generator are inoperable, the redundant required feature(s) with no off-site power available and the redundant required feature(s) supported by the inoperable diesel generator are required to be immediately declared inoperable and the applicable Technical Specification action(s) taken. These provisional requirements ensure that, during the 24 hour allowed outage time, a loss of off-site power does not result in a loss of safety function of critical systems. Required features are systems, subsystems, trains, components and devices supported by the off-site power sources and diesel generators and are required to be operable by the Technical Specifications in the existing plant mode or condition.

Either of the two main station batteries is sized to supply its assigned emergency load for 8 hours without recharging, which provides margin relative to design requirements.

The main station battery duty cycle is defined as 2 hours based upon plant design which postulates the time required to restore AC power to the auxiliary systems, including the battery chargers.

Due to the high reliability of battery systems, one of the two batteries may be out of service for up to three days provided all required systems, subsystems, trains, components and devices supported by the operable 125 volt Station Battery System are operable. The provisional requirement ensures that, during the three day allowed outage time, a loss of safety function of critical systems does not exist. Required systems, subsystems, trains, components and devices are those supported by 125 volt Station Battery System and are required to be operable by the Technical Specifications in the existing plant mode or condition. This minimizes the probability of unwarranted shutdown by providing adequate time for reasonable repairs. A station battery or an Uninterruptible Power System battery is considered inoperable if one cell is out of service. A cell will be considered out of service if its float voltage is below 2.13 volts and the specific gravity is below 1.190 at 77°F.

The Battery Room is ventilated to prevent accumulation of hydrogen gas. With a complete loss of the ventilation system, the accumulation of hydrogen would not exceed 4 percent concentration in 2 1/2 days. Therefore, on loss of Battery Room ventilation, the use of portable ventilation equipment and daily sampling provide assurance that potentially hazardous quantities of hydrogen gas will not accumulate.

- C. The minimum diesel fuel supply of 36,000 gallons will supply one diesel generator for a minimum of seven days of operation at its continuous duty rating of 2750kW. Additional fuel can be obtained and delivered to the site from nearby sources within the seven-day period.

**BASES:** 4.10 (Cont'd)

for the associated batteries. The results of these tests will be logged and compared with the manufacturer's recommendations of acceptability.

The Service Discharge Test (4.10.A.2.c) is a test of the batteries ability to satisfy the design requirements of the associated dc system. This test will be performed using simulated or actual loads at the rates and for the durations specified in the design load profile (battery duty cycle).

Assurance that the diesels will meet their intended function is obtained by periodic surveillance testing and the results obtained from the pump and valve testing performed in accordance with the requirements of ASME Section XI and Specification 4.6.E. Specification 4.10.B.1.a provides an allowance to avoid unnecessary testing of the operable emergency diesel generator (EDG). If it can be determined that the cause of the inoperable EDG (e.g., removal from service to perform routine maintenance or testing) does not exist on the operable EDG, demonstration of operability of the remaining EDG does not have to be performed. If the cause of inoperability exists on the remaining EDG, it is declared inoperable upon discovery, and Limiting Condition for Operation 3.10.B.1 requires reactor shutdown within 24 hours. Once the failure is repaired, and the common cause failure no longer exists, Specification 4.10.B.1.a is satisfied. If the cause of the initial inoperable EDG cannot be confirmed not to exist on the remaining EDG, performance of Surveillance Requirement (SR) 4.10.B.1.b suffices to provide assurance of continued operability of that EDG.

In the event the inoperable EDG is restored to operable status prior to completing either SR 4.10.B.1.a or SR 4.10.B.1.b, the plant corrective action program will continue to evaluate the common cause possibility. This continued evaluation, however, is no longer under the 24 hour constraint imposed while in the condition of SR 4.10.B.1 or SR 4.10.B.3.b.2.

According to NRC Generic Letter 84-15, 24 hours is a reasonable time to confirm that the operable EDG is not affected by the same problem as the inoperable EDG.

Verification of operability of an off-site power source within one hour and once per eight hours thereafter as required by 4.10.B.3.b.1 may be performed as an administrative check by examining logs and other information to determine that required equipment is available and not out of service for maintenance or other reasons. It does not require performing the surveillance needed to demonstrate the operability of the equipment.

- C. Logging the diesel fuel supply weekly and after each operation assures that the minimum fuel supply requirements will be maintained. During the monthly test for quality of the diesel fuel oil, a viscosity test and water and sediment test will be performed as described in ASTM D975-68. The quality of the diesel fuel oil will be acceptable if the results of the tests are within the limiting requirements for diesel fuel oils shown on Table 1 of ASTM D975-68.