SITE MANAGEMENT MANUAL CONTROLLED DOCUMENT TRANSMITTAL FORM - PROCEDURES

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1.0 USE AND APPLICATION

1.1 Definitions

----------NOTE----------

1. The defined terms of this section and the Improved Technical Specifications (ITS) appear in capitalized type and are applicable throughout these Technical Requirements and Bases. Some defined terms in the ITS are not found below because they are not used in the TRM.
2. Terms used in these Technical Requirements and Bases are as defined in the ITS or if not defined in the ITS they are as defined below.

Term	Definition
ACTIONS	ACTIONS shall be that part of a Technical Requirement that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
ACTUATION LOGIC TEST	An ACTUATION LOGIC TEST shall be the application of various simulated or actual input combinations in conjunction with each possible interlock logic state and the verification of the required logic output. The ACTUATION LOGIC TEST, as a minimum, shall include a continuity check of output devices.
AXIAL FLUX DIFFERENCE (AFD)	AFD shall be the difference in normalized flux signals between the top and bottom halves of a two section excore neutron detector.
CHANNEL CALIBRATION	A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel so that it responds within the required range and accuracy to known input. The CHANNEL CALIBRATION shall encompass the entire channel, including the required sensor, alarm, interlock, display, and trip functions. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. Whenever a sensing element is replaced, the next required CHANNEL CALIBRATION shall include an inplace cross calibration that compares the other sensing elements with the recently installed sensing element. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping calibrations or total channel steps so that the entire channel is calibrated.

1.1 Definitions

CHANNEL CHECK	A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status derived from independent instrument channels measuring the same parameter.
CHANNEL OPERATIONAL TEST (COT)	A COT shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify the OPERABILITY of required alarm, interlock, display, and trip functions. The COT shall include adjustments, as necessary, of the required alarm, interlock, and trip setpoints so that the setpoints are within the required range and accuracy.
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. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.
DEMONSTRATE	DEMONSTRATE means that the Surveillance shall be performed ensuring a system is OPERABLE.
MASTER RELAY TEST	A MASTER RELAY TEST shall consist of energizing each master relay and verifying the OPERABILITY of each relay. The MASTER RELAY TEST shall include a continuity check of each associated slave relay.
MODE	A MODE shall correspond to any one inclusive combination of core reactivity condition, power level, average reactor coolant loop temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.
OPERABLE - OPERABILITY	A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).

1.1 Definitions

QUADRANT POWER TILT RATIO (QPTR)	QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3067.4 MWt.
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming: a. All rod cluster control assemblies (RCCAs) are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM; and b. In MODES 1 and 2, the fuel and moderator temperatures are changed to the hot zero power level.
SLAVE RELAY TEST	A SLAVE RELAY TEST shall consist of energizing each slave relay and verifying the OPERABILITY of each slave relay. The SLAVE RELAY TEST shall include, as a minimum, a continuity check of associated testable actuation devices.
STAGGERED TEST BASIS	A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, channels, or other designated components in the associated function.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

1.1 Definitions

TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT)	A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of required alarm, interlock, display, and trip functions. The TADOT shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the required accuracy.
VERIFY	VERIFY means that verification of OPERABILITY is satisfied if the last surveillance test that was performed satisfactorily demonstrated system or component OPERABILITY. If any information is available that challenges OPERABILITY, then the OPERABILITY is questionable until it is demonstrated by performing another test. Information that can challenge OPERABILITY can be (but is not limited to) visual observation, or Problem Identification Discrepancy (PIDS), Condition Reports (CR), or work requests written against the system that indicate the system or component is degraded and this degradation prevents the system or component from performing its design function(s). The existence of a PID, or CR or work request on a system or component does not in and of itself render a system or component inoperable until it is evaluated.

Table 1.1-1 (page 1 of 1)

MODES

MODE (d)	TITLE	REACTIVITY CONDITION (K_{eff})	% RATED THERMAL POWER(a)	AVERAGE REACTOR COOLANT TEMPERATURE (^{o}F)
1	Power Operation	$\geq$ 0.99	> 5	NA
2	Startup	$\geq$ 0.99	$\leq$ 5	NA
3	Hot Standby	< 0.99	NA	$\geq$ 350
4	Hot Shutdown	< 0.99	NA	350 > Tavg > 200
5	Cold Shutdown(b)	< 0.99	NA	$\leq$ 200
6	Refueling(c)	NA	NA	NA

(a) Excluding decay heat

(b) All reactor vessel head closure bolts fully tensioned.

(c) One or more reactor vessel head closure bolts less than fully tensioned.

(d) Applicable with fuel in the reactor vessel.

3.7 PLANT SYSTEMS

3.7.A FIRE PROTECTION SYSTEMS

3.7.A.3 Fire Separation Devices

TRO 3.7.A.3 Fire Seals, Fire Doors, Fire Dampers in required Fire Barriers, Controlled Barriers, Fire Barrier Wraps, and Radiant Energy Shields shall be OPERABLE (Refer to AP-64.1 for listing).

APPLICABILITY: AT ALL TIMES, except as modified in Note 3 or 4 below.

----------NOTES----------

1. Separate Condition Entries are allowed for individual features.
2. TRO 3.0.C does not apply.
3. For Fire Separation Devices that are only Appendix R type features as identified in AP-64.1, entry into Actions below is not required in Modes 5, 6 or when de-fueled.
4. For Fire Separation Devices that are not required because the equipment they are protecting is not required to be OPERABLE, entry into Actions below is not required.
5. TRO 3.0.D is not applicable.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more of the following Fire Protection or Appendix R features inoperable. (i.e. Fire Seals, Fire Doors, Fire Dampers in required Fire Barriers, Controlled Barriers, Fire Barrier Wraps, and Radiant Energy Shields.)	A.1.1	Establish a continuous fire watch on at least one side of the inoperable feature,	1 hour
		OR	
	A.1.2.1	VERIFY the operability of fire detectors on at least one side of the inoperable feature.	1 hour
		AND	
	A.1.2.2	For inoperable features outside the Containment Building, establish an hourly fire watch patrol, except when Condition B applies.	1 hour
		AND	
	A.1.2.3	For Fire Barrier Wraps and Radiant Energy Shields inside the Containment Building establish a fire watch patrol once every 8 hours when not in MODE 1.	2 hours
	AND		
	A.2	For Fire Protection features, restore the inoperable to OPERABLE status.	7 days
	AND		
	A.3	For Appendix R features, restore the inoperable feature to OPERABLE status.	30 days

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One or more fire doors or fire seals in the barriers separating the diesel generator compartments from each other or from the Control Building, inoperable, AND CO2 fire suppression system of the diesel generator building, adjacent to the inoperable fire door or fire seal in the barrier(s), unavailable per TRO 3.7.A.7.	B.1 Establish a continuous fire watch with backup fire suppression equipment for the diesel generator compartments where the CO2 fire suppression system(s) is (are) unavailable per TRO 3.7.A.7, AND B.2 Restore the inoperable feature to OPERABLE status.	1 hour 7 days
C. Required Actions and Completion Times of A.2, A.3 and/or B.2 not met.	C.1 Submit a Special Report to the OSRC in accordance with TRM 5.4.B.	14 days

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
TRS 3.7.A.3.1	DEMONSTRATE each barrier, wrap, and shield to be OPERABLE by visual inspection. Refer to AP 64.1 for listing.	24 months
TRS 3.7.A.3.2	----------NOTE---------- The inspection sample shall be determined as described in BASES TRS 3.7.A.3.2. ---------- DEMONSTRATE 15% of fire seals located in fire barriers governed by this TRO (refer to AP 64.1 for listing) to be OPERABLE by visual inspection. (i) not readily accessible penetration seals as defined in the BASES TRS 3.7.A.3.2 (ii) inaccessible penetration seals as defined in the BASES TRS 3.7.A.3.2	24 months (i) when accessible but within 15 years (ii) not required AND Prior to declaring a fire seal OPERABLE following repairs or maintenance.
TRS 3.7.A.3.3	DEMONSTRATE each fire door to be OPERABLE by visual inspection and operation. (Refer to AP 64.1 for listing)	184 days
TRS 3.7.A.3.4	DEMONSTRATE each fire damper to be OPERABLE by visual inspection and operation (Refer to AP 64.1 for listing).	24 months

BASES

BACKGROUND
These specifications are established to assure the operability and provide surveillance requirements of fire protection and detection systems provided to protect equipment utilized for safe shutdown of the unit.

APPLICABLE SAFETY ANALYSIS
The fire protection and detection systems installed at IP3, conform to Appendix A of Branch Technical Position (BTP) APCSB 9.5-1 "Fire Protection for Nuclear Power Plants", as approved by the NRC Regulatory Staff on March 6, 1979 as Amendment No. 24 to facility operating license No. DPR-64, and supplements thereto, and IP3 Appendix R Analysis (latest revision). NSE 97-03-013-FBAR, revision 1, "Fire Barrier Penetration Seal Inspections," justifies a change in inspection method at a frequency of 24 months from 100% sample inspection to a 15% defined sample inspection. NSE 97-3-302-FP-CO2, Rev. 0, allows an hourly fire watch patrol in lieu of a continuous fire watch in the emergency diesel generator compartment(s) when its CO2 fire protection system is unavailable with its fire barriers, sprinkler system and detection system meeting certain requirements. If its sprinkler system, barriers or detection system becomes degraded below these requirements then TRO 3.7.A.2, 3.7.A.3, and 3.7.A.4, respectively, require establishing a continuous fire watch for the affected diesel compartment(s). NSE 96-3-395FP, combined Operational Specification 3.2.13 and 3.5.3 (converted to TRO 3.7.A.3 for inclusion in TRM) into one specification and adapted AP 64.1 for listings.

TRO
Fire Separation Devices are those which are required by the Fire Protection Program to separate redundant safety-related systems or isolate safety related systems and components from unacceptable hazards. Appendix R barriers are those barriers which have been credited in the Appendix R Safe Shutdown Analysis. Refer to AP-64.1 for a listing of fire barriers, fire wrap or radiant energy shields governed by this Technical Requirement.

APPLICABILITY
Fire Protection Barriers are those that are required by the Fire Protection Program to separate redundant safety-related systems or isolate safety related systems and components from unacceptable hazards. Appendix R barriers are those barriers which have been credited in the Appendix R Safe Shutdown Analysis. Refer to AP-64.1 for a listing of fire barriers, fire wrap or radiant energy shields governed by this Technical Requirement.

ACTIONS
Note 1 modifies the Actions to clarify the application of Completion Times for inoperable Fire Protection and Appendix R features. Separate condition entry is allowed for each inoperable features separation device. The Completion Time(s) for the inoperable Fire Protection and Appendix R feature will be tracked separately for each feature starting from the time the Condition was entered for that feature.

Note 2 provides an exception to TRO 3.0.C and precludes a plant shutdown if the required actions are not performed in their completion time. These notes are acceptable because it is judged reasonable and determined not to adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

Note 3 modifies the applicability statement for Fire Separation Devices that are only required for Appendix R compliance. Note 3 is an allowance not to enter Action statement(s) when in modes 5, 6 or when de-fueled for inoperable Appendix R fire separation devices, since Appendix R only applies above cold shutdown.

Note 4 provides an allowance not to enter Action statement(s) for those inoperable fire separation devices when the equipment they are protecting is not required to be operable.

Note 5 provides an allowance for changes in operating MODE while relying on Required Actions. Allowance of this exception to TRO 3.0.D is also based on the low probability of an event requiring the use of such instruments and reasoning that such instruments can generally be repaired during plant operation without a significant risk of a spurious plant trip.

A.1.1, A.1.2.1 & A.1.2.2
Verification of OPERABILITY of fire detectors is satisfied if the last surveillance test that was performed satisfactorily demonstrated system or component OPERABILITY. If any information is available that challenges OPERABILITY, then the OPERABILITY is questionable until it is demonstrated by performing another test. Information that can challenge OPERABILITY can be (but is not limited to) visual observation, or PIDs, CRs, or work requests written against the system.

The completion time of 1 hour was selected as a reasonable time in which a continuous fire watch could be posted or verification of the OPERABILITY of fire detectors could be done along with the posting of an hourly fire watch patrol

A.1.2.3
The completion time of 2 hours was selected as a reasonable time in which a fire watch patrol could be established inside the Containment Building considering confined space issues and existing radiological controls governing such an entry. The establishment of an 8-hour fire watch patrol for areas inside the Containment Building was selected to limit radiation exposure to fire watch personnel while still maintaining reasonable compensatory measure given the potential fire hazard. Access to the Containment Building during MODE 1 is limited, as such the presence of transient combustibles or activities that could affect redundant systems and components is also limited.

A.2, A.3
With any barrier inoperable, the barrier must be restored to OPERABLE status within 1 hour or take compensatory actions and restore the barrier to OPERABLE status within 7 days and for Appendix R barrier within 30 days.

The completion times were selected as a reasonable time to restore the barrier to OPERABLE status with compensatory measures in place.

B.1
The completion time of 1 hour was selected as a reasonable time in which a continuous fire watch could be posted.

B.2
The completion time of 7 days for restoring an inoperable fire protection feature to OPERABLE status was selected as a reasonable time to restore the barrier to OPERABLE status with compensatory measures in place.

SURVEILLANCE REQUIREMENTS

TRS 3.7.A.3.2
A minimum 15% sample of penetrations shall be visually inspected on a 24 month frequency. If a non-functional penetration seal is found during the initial inspection, a determination of the cause of unsatisfactory condition shall be performed and an additional 15% sample shall be generated based on that cause (i.e., penetrations most likely to experience the same problem) and inspected. This inspection process shall continue until a sample has rendered satisfactory inspection results.

The initial sample shall be determined based on environmental conditions to which the penetration seals are exposed (i.e., temperature, humidity and radiation). The sample selection shall also ensure that each type of seal is reasonably represented in the sample. In a effort to employ a systematic approach to the inspections thereby eliminating the potential of new penetrations being overlooked if only a few penetrations on any one wall are inspected, the initial sample shall also be determined based on fire barriers. That is, a group of fire barriers will be selected for each inspection period. The barriers will be selected based on environmental conditions. All penetrations in the selected barriers shall be inspected. The number of penetrations shall be reviewed to ensure that at least 15% of all penetrations is obtained. Further, the sample shall be reviewed to ensure that each type of seal is reasonably represented in the sample.

Should a penetration seal that is not readily accessible (as defined below) be selected as part of the sample, the inspection of that seal may be held in abeyance until such time that the several becomes accessible. This may be dependent on the preventive maintenance program (deenergized equipment), plant operating mode (radiation areas) or scaffolding program (physical accessibility, see note below). Another penetration shall be selected if required to fill the minimum 15% sample.

Penetration seals that are defined as not readily accessible include those that are located:
1) within energized electrical enclosures that are high voltage and have an exposed electrical connection or bus work
2) in locked or bolted panels and enclosures that are high voltage and have an exposed electrical connection or bus work, or have a significant trip risk
3) in locked high radiation areas, or high radiation areas where accessibility may be dependent on plant evolutions
4) in areas where physical access is significantly restricted and the use of remote mirrors, binoculars or scopes is significantly difficult
5) in the same fire zone where scaffolding has been erected and some of the inspection sample are readily accessible by use of the scaffolding

Note: Generally, the use of scaffolding does not provide the basis for relief from the above unless the erection of that scaffolding may cause a personnel hazard or potential plant transient.

Visual inspection of inaccessible penetration seals may be discontinued. Prior to discontinuing inspection of inaccessible penetration seals, an engineering evaluation in accordance with the guidance of Generic Letter (GL) 86-10 shall be performed for each seal. This evaluation should consider proximate combustible loading, hazards and consequences of seal failure as well as other mitigating features. Penetration seals that are defined as inaccessible include those which are located in areas where physical access is not possible or extreme measures are required to support inspection of the seal (i.e., where destructive measures are required or where removal of fixed equipment or building features is required).

REFERENCE FSAR 9.6.2

3.7 PLANT SYSTEMS

3.7.B Appendix R Alternate Safe Shutdown Equipment

TRO 3.7.B The Appendix R Safe Shutdown Functions in Table 3.7.B-1 shall be OPERABLE.

APPLICABILITY: MODE 1, 2, 3 and 4, except for TRO 3.7.B.9, which is MODES 1, 2, 3 and 4 when MSIVs are open.

NOTES

1. TRO 3.0.D is not applicable, except for Related Specifications in Table 3.7.B-1
2. Separate Condition Entry is allowed on each component and Function.
3. See TRM section 3.3.D for instrumentation associated with Appendix R safe shutdown equipment and TRM section 3.8.B for Appendix R Diesel and electrical power scheme.
4. TRO 3.0.C does not apply to Required Actions B.1, E.1 and G.1.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required Function(s) with one or more required component(s) in table 3.7.B-1 inoperable.	A.1 Enter the Condition(s) referenced in Table 3.7.B-1, AND A.2 Enter applicable Related Specification referenced in Table 3.7.B-1 as required by that Related Specification.	Immediately Immediately
B. Enter Condition B as required by Table 3.7.B-1.	B.1 Establish an hourly fire watch in the Fire Watch Area(s) designated in Table 3.7.B-1 for the inoperable Function.	1 hour
C. Enter Condition C as required by Table 3.7.B-1.	C.1 Restore required Function(s) to OPERABLE status.	30 days
D. Required Action and associated Completion Time of C not met.	D.1. Be in MODE 3, AND D.2 Be in MODE 5.	6 hours 36 hours
E. Enter Condition E as required by Table 3.7.B-1.	E.1 Verify the availability of at least 8 portable lights with eight-hour capacity, AND E.2 Restore required Function(s) to OPERABLE status.	1 hour 30 days
F. Enter Condition F as required by Table 3.7.B-1.	F.1 Restore required Function(s) to OPERABLE status.	30 days
G. Required Action and associated Completion Time of E.2 or F not met.	G.1 Submit a special report to PORC according to TRM 5.4.B.	14 days

(continued)

----------NOTE----------

Refer to Table 3.7.B-1 to determine which TRS(s) apply for each Appendix R Function.

SURVEILLANCE

	SURVEILLANCE	FREQUENCY
TRS 3.7.B.1	Press "test button" and assure lamps illuminate.	31 days
TRS 3.7.B.2	DEMONSTRATE pump performance is met by starting each pump and operating for 15 minutes or per IST requirements.	92 days OR Per IST require-ments
TRS 3.7.B.3	DEMONSTRATE backup supply of Nitrogen (bottles) is available to cycle ADVs.	92 days
TRS 3.7.B.4	DEMONSTRATE operability of each CR Supplemental A/C unit by running for 15 minutes.	92 days
TRS 3.7.B.5	DEMONSTRATE eight radios are available to support Appendix R safe shutdown activities.	92 days
TRS 3.7.B.6	Run Control Building Exhaust Fans 31, 32, 33, and 34 for a minimum of 15 minutes to DEMONSTRATE proper function.	92 days
TRS 3.7.B.7	Perform a visual inspection of each lighting unit, measure the battery float voltage, and press "test button" and assure lamps illuminate and are properly aimed.	184 days
TRS 3.7.B.8	Perform conductance measurement to meet criterion in Table 3.7.B-2, and perform an eight-hour discharge test or replace emergency battery lights not satisfying the No Discharge Test Criteria in Table 3.7.B-2, and perform an eight-hour discharge test when measurements are taken while the batteries are in an environment above 110 °F. Waiving the criterion for batteries tested while their environment is below 60 °F is allowed if the battery passed the No Discharge Test Criteria six months ago ±25%.	366 days
TRS 3.7.B.9	Perform an eight-hour discharge test on 10% of units that passed the No Discharge Test Criteria in Table 3.7.B-2. An additional sample of 10% of each type that failed shall be tested. Sampling process shall continue until no failures or type is exhausted.	366 days
TRS 3.7.B.10	Perform an eight-hour discharge test on emergency battery light units not subject to conductivity measurement (i.e., units with Ni-Cad batteries, etc.).	24 months
TRS 3.7.B.11	Cycle ADV valves utilizing nitrogen.	24 months

	SURVEILLANCE	FREQUENCY
TRS 3.7.B.12	DEMONSTRATE valve closure capability.	24 months
TRS 3.7.B.13	DEMONSTRATE valve opening capability.	24 months
TRS 3.7.B.14	Start each pump and run for 15 minutes powered from its alternate power supply (MCC 312A) and through any applicable transfer switch.	24 months
TRS 3.7.B.15	DEMONSTRATE communication capability between the various local control stations.	24 months
TRS 3.7.B.16	Disable AC power to emergency lighting panel 39 and DEMONSTRATE that emergency lighting in the control room is available.	24 months

Table 3.7.B-1 Appendix R Alternate Safe Shutdown Equipment

Function TRO	Required Component(s)	CONDITION	Fire Watch Area	Surveillance	Related Specification
TRO 3.7.B.1 Backup Service Water Pump	Backup SWP #38	C	NA	TRS 3.7.B.2	NA
TRO 3.7.B.2 Component Cooling Water Pumps	CCWP #31, CCWP #32, CCWP #33	C	NA	TRS 3.7.B.2 TRS 3.7.B.14 (TRS 3.7.B.14 applies to CCWP #32 only)	ITS 3.7.8
TRO 3.7.B.3 Charging Flow & Isolation Capability (function)	Pumps (flow) CP # 31, CP # 32	C	NA	Pumps TRS 3.7.B.2 TRS 3.7.B.14	TRM 3.1.C.1 TRM 3.1.C.2
	Valves (opening) CH-AOV-212 (CR), CH-227 (locally)			Valves (opening) TRS 3.7.B.13	
	Valve (isolation) CH-AOV-204A (CR), CH-AOV-204B (CR), CH-AOV-200B (CR), CH-LCV-459 (CR), CH-LCV-460 (CR), CH-228 (locally)			Valves (isolation) TRS 3.7.B.12	
TRO 3.7.B.4 Atmospheric Dump Valves (i.e., local control capability)	PCV-1137	C	NA	TRS 3.7.B.3 TRS 3.7.B.11	ITS 3.7.4
	PCV-1134	B & C	Turbine Bldg & Aux Feed Pump Bldg		
TRO 3.7.B.5 Control Room Supplemental A/C	COND/EVAP – - #31, - #32, - - #33, - #34, - #35.	C	NA	TRS 3.7.B.4	NA
TRO 3.7.B.6 Control Room Emergency Lighting	Control Room Emergency Lighting DC Power Feed	E	NA	TRS 3.7.B.16	NA

Table 3.7.B-1 Appendix R Alternate Safe Shutdown Equipment

Function TRO	Required Component(s)	CONDITION	Fire Watch Area	Surveillance	Related Specification
TRO 3.7.B.7 Emergency Lighting Units (Appendix R)	Refer to AP-64.1 for a listing.	E	NA	TRS 3.7.B.1 TRS 3.7.B.7 TRS 3.7.B.8 TRS 3.7.B.9 TRS 3.7.B.10	NA
TRO 3.7.B.8 Condenser Make-up Isolation Capability.	CT-7-2, CT-8, CT-12, CT-45, CT-400	C	NA	TRS 3.7.B.12	NA
TRO 3.7.B.9 Secondary Steam Isolation (from Control Room, except MS-9-2 and MS-11-2)	MS-HCV-127-1, MS-HCV-127-2, MS-HCV-127-3, MS-HCV-127-4, MS-MOV-6-1, MS-MOV-6-2, MS-MOV-6-3, MS-MOV-6-4, MS-9-2 (locally), MS-11-2 (locally), PCV-1120, PCV-1121, PCV-1122, PCV-1123, PCV-1124, PCV-1125, PCV-1126, PCV-1127, PCV-1128, PCV-1129, PCV-1130, PCV-1131.	B & C	MSIV(s) vicinity	TRS 3.7.B.12 (from Control room, except MS-9-2 and MS-11-2 locally)	NA
TRO 3.7.B.10 Control Building Ventilation	CB Fan #31 CB Fan #32 CB Fan #33 CB Fan #34 FD-DF-1 (damper) FP-DF-2 (damper) FP-DF-9 (damper) FP-DF-10 (damper) FP-DF-11 (damper) FP-DF-50 (damper) CBL-320 (louver) CBL-319 (louver)	C	NA	TRS 3.7.B.6	NA

Table 3.7.B-1 Appendix R Alternate Safe Shutdown Equipment

Function TRO	Required Component(s)	CONDITION	Fire Watch Area	Surveillance	Related Specification
TRO 3.7.B.11 Communication Capability	Eight Appendix R Radio Units	F	NA	TRS 3.7.B.5 TRS 3.7.B.15	NA

Table 3.7.B-2
No Discharge Test Criteria & Preventative Maintenance Replacement Criteria

Note 1: Criterion is not applicable to Ni-Cad Batteries.
Note 2: Criterion is not applicable when measurements are taken while batteries are in an environment below 60°F or above 110°F.
Note 3: *Criteria values must be adjusted up 1% of mhos for each 1.0°F above a 90°F environment.

Unit Type	Loading	Criteria for No Discharge Test (avg. of batteries)	Preventative Maintenance Replacement Criteria (min. each battery)
B-200	2 – 12 watt heads	150 mhos*	140 mhos*
	4 – 12 watt heads	180 mhos*	140 mhos*
	40 watt head	165 mhos*	140 mhos*
Big Beam in areas other than Electrical Tunnel & Intake Structure	All	350 mhos*	275 mhos*
Big Beam in areas of Electrical Tunnel & Intake Structure	All	480mhos*	275 mhos*

BASES

BACKGROUND

The equipment and systems listed in this Technical Requirement are credited in Appendix R Scenarios and are necessary to meet the requirements of 10CFR50.48 and 10CFR50, Appendix R, Section III.G.

10CFR50 Appendix R requires a licensee to demonstrate the ability to achieve MODE 3 from power operation conditions, bring the plant to MODE 5 conditions and maintain the plant in that condition. Additionally, Appendix R requires that one train of equipment necessary to achieve MODE 3 from either the control room or emergency control station(s) must be maintained free of fire damage by a single fire including an exposure fire.

To support the Appendix R Safe Shutdown Analysis, the plant was divided into distinct analysis zones/areas. These zones/areas are primarily based on Fire Area boundaries with consideration of approved exemptions. These zones/areas are as follows:

CNT-1	Containment Building
PAB-2(1)	Primary Auxiliary Building (15' elevation including RHR pump rooms and corridors)
PAB-2(2)	Primary Auxiliary Building (41' elevation CCW pump area)
PAB-2(3)	Primary Auxiliary Building (55' elevation Charging pump rooms)
PAB-2(4)	Primary Auxiliary Building (55' elevation MCC area)
PAB-2(5)	Primary Auxiliary Building (remaining areas not covered by other analysis areas)
CTL-3	Control Building and Diesel Generator Building (including Control Room, Cable Spreading Room, 480v Switchgear Room, Battery Rooms, Service Water Valve Room and Control Building Fan Room)
ETN-4(1)	Electrical Tunnel (entryway)
ETN-4(2)	Electrical Tunnel (upper electrical tunnel)
ETN-4(3)	Electrical Tunnel (upper electrical penetration area and fan room)
ETN-4(4)	Electrical Tunnel (lower electrical tunnel and lower electrical penetration area)
TBL-5	Turbine Building and Auxiliary Feedwater Pump Building (except Auxiliary Feedwater Pump room)
AFW-6	Auxiliary Feedwater Pump Building (Auxiliary Feedwater Pump room)
Yard-7	External yard areas including Intake Structure, Appendix R Diesel Generator Enclosure, Backup Service Water pump area, and the Condensate Storage Tank area.

APPLICABLE SAFETY ANALYSES

Appendix R Safe Shutdown Analysis for IP3, IP3-ANAL-FP –1503, Latest Revision
NSE 96-3-395FP, "Development of Administrative Procedure AP-64.1 and Evaluation of a Change to Operational Specification 3.2 and 3.5"
NSE-98-3-091EML, "Changes to Operational Specifications to Reflect a Change in Surveillance Testing of Emergency Lights"

TRO

This TRM ensures the OPERABILITY of a subset of the components that are necessary to address the Appendix R fire scenarios in the Appendix R Analysis. This TRM together with Technical Specifications and some other TRM specifications address the OPERABILITY of various components to meet the Appendix R Analysis. Some components credited by the analysis need not be specifically controlled because normal plant operation dictates that their credited function is maintained.

The components listed in Table 3.7.B-1 are credited in the IP3 Appendix R Analysis. These components are required to ensure the ability to achieve MODE 3 from MODE 1 conditions, bring the plant to MODE 5 conditions and maintain the plant in that condition either remotely or from the control room during an Appendix R fire scenario.

In addition, the allowed outage times established by the Technical Specifications or Technical Requirements do not bound the Appendix R requirements, and could result in a required component being out of service indefinitely or during MODEs where this component is required OPERABLE by the Appendix R Analysis.

This condition is outside the design of many of the systems and is not bounded by Technical Specifications or the TRM. Therefore, this TRO establishes actions necessary to ensure OPERABILITY of components credited in the Appendix R Analysis to maintain the components.

Separate condition entries are allowed to clarify the application of the completion time rules. The basis for this allowance is LCO 3.3.4, "Remote Shutdown System", of the Westinghouse Standard Technical Specifications (STS). This STS LCO allows separate entry for each function. The Appendix R Technical Requirements are modeled from the STS.

This Technical Requirement allows changes in operating MODE while relying on Required Actions. Allowance of this exception to TRO 3.0.D is also based on the low probability of an event requiring the use of such components and reasoning that such components can generally be repaired during plant operation without a significant risk of a spurious plant trip. Changes in operating MODE while relying on required actions is allowed, even though those actions may eventually require plant shutdown.

The below identified fire zones/areas are the zones/areas that have a limited set of equipment available and therefore require the controls as specified in this TRO. Other zones/areas not listed (e.g. Yard-7) for the components contained in this TRO and others, were credited but need not be controlled by this TRO.

TABLE 3.7.B-1 COMPONENTS

Backup Service Water Pump (TRO 3.7.B.1)

Backup Service Water Pump 38 must be OPERABLE to demonstrate the capability to achieve MODE 3 from MODE 1 and maintain the plant in that condition. This pump is powered directly from MCC 312A. Acceptable levels for performance of an OPERABLE Backup Service Water Pump shall be that the pump starts and reaches its required developed head for at least fifteen minutes.

The Backup Service Water Pump 38 provides cooling water to essential/non-essential equipment required to achieve and maintain MODE 5. The IP3 Appendix R compliance strategy credits the use of Backup Service Water Pump 38 for fires in the following zones/areas:

- CTL-3 Control Building and Diesel Generator Building (including Control Room, Cable Spreading Room, 480v Switchgear Room, Battery Rooms, Service Water Valve Room and Control Building Fan Room)
- Yard-7 External yard areas including Intake Structure, Appendix R Diesel Generator Enclosure, Backup Service Water pump area, and the Condensate Storage Tank area.

Component Cooling Water Pumps (TRO 3.7.B.2)

The CCW Pumps must be OPERABLE to provide cooling water to plant equipment necessary to achieve and maintain MODE 5. CCW pump 32 is powered from MCC-312A and is the only CCW pump powered from Appendix R power supplies. Acceptable levels of performance for the determination of an OPERABLE CCW Pump shall be that the pump starts, reaches its required developed head as dictated by IST requirements.

The CCW Pumps provide cooling water to essential/non-essential equipment required to achieve and maintain MODE 5.The IP3 Appendix R Compliance Strategy credits the use of CCW Pump 31 for fire in the following zones/areas:

- PAB-2(1) Primary Auxiliary Building (15' elevation including RHR pump rooms and corridors)
- PAB-2(2) Primary Auxiliary Building (41' elevation CCW pump area)(for a fire affecting 32 & 33 CCWP)

The IP3 Appendix R Compliance Strategy credits the sole use of CCW Pump 32 for fires in the following zones/areas:

- CTL-3 Control Building and Diesel Generator Building (including Control Room, Cable Spreading Room, 480v Switchgear Room, Battery Rooms, Service Water Valve Room and Control Building Fan Room)
- ETN-4(1) Electrical Tunnel (entryway)
- ETN-4(2) Electrical Tunnel (upper electrical tunnel)
- PAB-2(4) Primary Auxiliary Building (55' elevation MCC area)

The IP3 Appendix R compliance strategy credits the sole use of CCW Pump 33 for fires in the following area:

- PAB-2(2) Primary Auxiliary Building (41' elevation CCW pump area)(for a fire affecting 31 CCWP)

Charging Pump Flow & Isolation Capability (function)(TRO 3.7.B.3)

Charging pumps 31 and 32 and the listed valves must be OPERABLE to provide RCS makeup capability and RCP seal cooling whenever the plant is above MODE 5. Charging Pump 31 and 32 are powered from MCC-312A. Acceptable levels for the determination of OPERABLE Charging Pumps 31 and 32 shall be that the pump starts, reaches its required developed head and flow and operate for at least fifteen minutes.

The IP3 Appendix R Compliance Strategy credits the use of charging pumps 31 or 32 for fires in the following zones/areas:

1. Charging Pump 31:
   - ETN-4(4) Electrical Tunnel (lower electrical tunnel and lower electrical penetration area)
   - PAB-2(3) Primary Auxiliary Building (55' elevation Charging pump rooms) (when 32 is affected)
   - PAB-2(4) Primary Auxiliary Building (55' elevation MCC area)
   - ETN-4(1) Electrical Tunnel (entryway)

2. Charging Pump 32:
   - ETN-4(1) Electrical Tunnel (entryway)
   - ETN-4(2) Electrical Tunnel (upper electrical tunnel)
   - PAB-2(3) Primary Auxiliary Building (55' elevation Charging pump rooms) (when 31 is affected)
   - PAB-2(5) Primary Auxiliary Building (remaining areas not covered by other analysis areas)

This Technical Requirement requires the below listed valves to be OPERABLE. The functions necessary for these valves to be declared OPERABLE are as follows:

- CH-AOV-204A and 204B: Isolation function
- CH-228: Isolation function
- CH-227: Open function
- CH-AOV-212: Open function
- CH-AOV-200B: Isolation function
- CH-LCV 459 & 460: Isolation function

Atmospheric Dump Valves (TRO 3.7.B.4)

The Steam Generator Atmospheric Dump Valves PCV-1134 and PCV-1137 must be OPERABLE to allow transition to MODE 5 and to maintain steam generator integrity. An acceptable level of performance for the determination of OPERABILITY is the ability to cycle the Atmospheric Dump Valves (ADVs) utilizing the nitrogen backup to the accumulators.

Nitrogen backup for the ADVs consists of a manual pressure regulator feed by either of two sources of nitrogen. One nitrogen source is piped from bottles located on the 15' elevation of the Auxiliary Feedwater Pump Building. The other source is available by installing a jumper from a local nitrogen bottle supplied at the control panel on 43' elevation of the Auxiliary Feedwater Pump Building. Either nitrogen supply must be manually valved in on loss of instrument air.

The Appendix R analysis credits Steam Generator ADVs PCV-1134 and PCV-1137 in a fire scenario to maintain steam generator integrity and to provide a means of heat removal during transition to MODE 5.

The Appendix R Compliance strategy credits the use of PCV-1134 and PCV-1137 for fires in the following zones/areas:

1. Steam Generator Atmospheric Dump Valve PCV-1134:

   - CNT-1 Containment Building

- CTL-3 Control Building and Diesel Generator Building (including Control Room, Cable Spreading Room, 480v Switchgear Room, Battery Rooms, Service Water Valve Room and Control Building Fan Room)
- ETN-4(4) Electrical Tunnel (lower electrical tunnel and lower electrical penetration area)
- TBL-5 Turbine Building and Auxiliary Feedwater Pump Building (except Auxiliary Feedwater Pump room)

2. Steam Generator Atmospheric Dump Valve PCV-1137:

- CNT-1 Containment Building
- ETN-4(1) Electrical Tunnel (entryway)
- ETN-4(2) Electrical Tunnel (upper electrical tunnel)
- ETN-4(3) Electrical Tunnel (upper electrical penetration area and fan room)

In addition, either PCV-1134 or PCV-1137 must be operable for all other areas of the plant not mentioned above.

Control Room Supplemental A/C (TRO 3.7.B.5)

The Supplemental Control Room Air Conditioning (all five units) must be OPERABLE to maintain an acceptable and habitable environment in the control room during Appendix R scenarios. An OPERABLE Supplemental Control Room Air Conditioning System constitutes the ability to start and maintain Control Room temperatures at acceptable levels. This includes the power supply for the A/C units including BM6 480V ac/120 V ac transformer and 208V ac distribution panel DP-CCR/AC.

The Supplemental Control Room Air Conditioning System is credited in various Appendix R fire scenarios to maintain an acceptable and habitable environment in the control room.

The Appendix R Safe Shutdown Analysis credits the use of the Supplemental Control Room Air Conditioning System, during shutdown in the event of a fire in the following zones/areas:

- PAB-2(4) Primary Auxiliary Building (55' elevation MCC area)
- ETN-4(1) Electrical Tunnel (entryway)
- ETN-4(2) Electrical Tunnel (upper electrical tunnel)

Control Room Emergency Lighting (TRO 3.7.B.6)

The control room emergency lighting is required in the event that normal control room lighting is lost during an Appendix R fire scenario. The function of the control room emergency lighting is to ensure that the control room operators have sufficient lighting to monitor critical plant parameters from the control room. OPERABLE Control Room Emergency Lighting constitutes the functioning of emergency lights upon loss of AC power to emergency lighting panel 39.

The control room emergency lighting is credited for various Appendix R fire scenarios.

Emergency Lighting Units (Appendix R) (TRO 3.7.B.7)

The Appendix R compliance strategy requires the use of remote control stations for safe shutdown during a fire in the control room. 10CFR50 Appendix R requires emergency lighting units with at least an 8 hour battery supply to be provided in all areas needed for the operation of safe shutdown equipment and in access and egress routes thereto.

An OPERABLE emergency light constitutes the ability to provide sufficient lighting to accomplish the safe shutdown operations.

The availability of at least 8 portable lights that have an 8 hour capacity must be staged and available in the Safe Shutdown Locker to ensure each member of the shutdown crew will have lighting while performing required tasks in ONOP-FP-1A and ONOP-FP-1B, and access/egress to shutdown stations.

Condenser Makeup Isolation Capability (TRO 3.7.B.8)

Valves CT-7-2, CT-8, CT-12, CT-45, and CT-400 are required in the event that a fire renders valves LCV-1158-1 and LCV-1158-2 inoperable. These valves are required to isolate the Condensate Storage Tank (CST) flow to the condensers and to align CST flow to the suction of the Auxiliary Feedwater Pumps. An acceptable level of performance for the determination of OPERABLE valve status is the ability to isolate.

Valves CT-7-2, CT-8, CT-12, CT-45, and CT-400 are credited in one postulated fire scenario to isolate flow to the condensers from the CST. The Appendix R Safe Shutdown Analysis credits the use of valves CT-7-2 , CT-8, CT-12, CT-45, and CT-400 for a postulated fire in the Auxiliary Feedwater Pump Room, area AFW-6.

Secondary Steam Isolation (from control room, except MS-9-2 and MS-11-2)(TRO 3.7.B.9)

The secondary steam isolation valves that are normally aligned during 100% power operation (Appendix R Initiating condition) are credited in Appendix R scenarios where the ability to isolate the main steam lines by utilizing the Main Steam Isolation Valves (MSIVs) is not available. MCC-32 provides control power to reheat valves MS-MOV-6-3 and MS-MOV-6-4. MCC-33 provides control power to reheat valves MS-MOV-6-1 and MS-MOV-6-2.

The secondary steam isolation valves are required in the event that main steam isolation cannot be maintained through the use of MSIVs. This function is required to isolate main steam loss from the steam generators and therefore these valves must be OPERABLE. OPERABLE valves constitute the following:

1. Main Turbine Stop Valves MS-HCV-127-1, -2, -3, -4 able to isolate, AND
2. All steam valves PCV-1120 through PCV-1131 able to isolate, AND
3. All reheat valves MS-MOV-6-1 through MS-MOV-6-4 able to isolate, AND
4. Main Steam to Air Ejectors MS-PCV-1132 Inlet Isolation Valve MS-9-2 able to isolate, AND
5. Main Steam to Hoggers MS-PCV-1133 Inlet Isolation Valve MS-11-2 able to isolate.

If any of these valves are isolated, then OPERABILITY of the isolated valves is not required.

The secondary steam isolation valves covered by this TRO are credited in various Appendix R scenarios to maintain steam generator integrity during MODE 3 and transition to MODE 5 with the MSIVs being open. The Appendix R Compliance Strategy credits the use of secondary steam isolation during a fire in the MSIV area (TBL-5).

Control Building Ventilation (TRO 3.7.B.10)

The Control Building Ventilation System must be OPERABLE to maintain an acceptable environment In the Cable Spreading Room and 480V Switchgear during normal, abnormal, and incident conditions.

An OPERABLE Control Building Ventilation System constitutes the ability to start and maintain the Cable Spreading Room and the 480V Switchgear Room at acceptable temperature levels.

The Control Building Ventilation System covered by this TRO is credited in the Appendix R Safe Shutdown Analysis to maintain an acceptable environment in the Cable Spreading Room and the 480V Switchgear Room. The Appendix R Safe Shutdown Analysis credits the use of the Control Building Ventilation System for all areas except the Control Building and the Diesel Generator Building.
With few exceptions, both exhaust fans of the 480V Switchgear Room Ventilation System are unaffected by a postulated fire. Control Building Fan 34 is credited in the Appendix R Safe Shutdown Analysis to maintain an acceptable environment in the 480V switchgear room in the event Control Building Fan 33 is lost as a result of a postulated fire in the following zones/areas:

- PAB-2(4) Primary Auxiliary Building (55' elevation MCC area)
- ETN-4(1) Electrical Tunnel (entryway)
- ETN-4(2) Electrical Tunnel (upper electrical tunnel)

Control Building Fan 33 is credited in the Appendix R safe shutdown analysis to maintain an acceptable environment in the 480V switchgear room in the event the flowpath through FP-DF-9 is affected as a result of a postulated fire in the following zone/area:

- TBL-5 Turbine Building and Auxiliary Feedwater Pump Building (except Auxiliary Feedwater Pump room)(near the damper)

Cooling of the Cable Spreading Room is accomplished by either the Cable Spreading Room Ventilation System or the Electrical Tunnel Ventilation System. With few exceptions both systems are unaffected by a postulated fire. Control Building Fans 31 and 32 are credited in the Appendix R Safe Shutdown Analysis to maintain an acceptable and habitable environment in the event the Electrical Tunnel Ventilation System is lost as a result of a postulated fire in the following zones/areas:

- PAB-2(4) Primary Auxiliary Building (55' elevation MCC area)
- PAB-2(5)Primary Auxiliary Building (remaining areas not covered by other analysis areas)
- ETN-4(1) Electrical Tunnel (entryway)
- ETN-4(2) Electrical Tunnel (upper electrical tunnel)
- ETN-4(3) Electrical Tunnel (upper electrical penetration area and fan room)
- ETN-4(4) Electrical Tunnel (lower electrical tunnel and lower electrical penetration area)

Communication Capability (TRO 3.7.B.11)

The Appendix R compliance strategy at IP3 requires the use of remote control stations for safe shutdown during a fire in the control room. In the event that a fire prevents control of equipment required to achieve and maintain MODE 3, it would become necessary to perform a safe shutdown from outside of the Control Room. Portable radios would be relied upon to provide communications between various members of the operating crew during shutdown. An OPERABLE communication capability constitutes the following:

1. Eight portable radios, AND
2. Chargers for the eight radios.

ACTIONS

A. With any of the required functions listed in Table 3.7.B-1 inoperable, the conditions listed for the specific function must be entered and the related specification must also be entered without delay. This allows reasonable measures to be taken without jeopardizing plant safety. This Required Action ensures the appropriate Condition is entered and Required Actions taken as referenced in Table 3.7.B-1.

B. When components for a function listed in Table 3.7.B-1, become inoperable it is necessary to ensure that the equipment for which these components are credited to replace during an Appendix R scenario are guarded by a fire watch patrol. This helps to ensure that the failure of this equipment due to fire is minimized (e.g. fire watch in MSIV vicinity when Secondary Steam Isolation is inoperable).

A fire watch is not prescribed in this Technical Requirement for those areas that have fire detection or suppression systems governed by TRM 3.7.A. The fire detection or suppression equipment required by TRM 3.7.A provides the protection against fires that would be provided by a fire watch in its absence. Should this fire detection and suppression equipment become inoperable the applicable portion of TRM 3.7.A would prescribe the necessary compensatory measures.

The completion time of 1 hour was selected as a reasonable time in which to post a fire watch patrol. IP3 Administrative procedures control combustibles and ignition sources during power operations. Based on the existence of these controls, the addition of an hourly fire watch patrol is judged to be adequate to ensure the failure of the subject components due to fire is minimized.

C. This Required Action ensures that the OPERABILITY of the subject equipment is restored in a timely manner. For these components a 30 allowed outage time was established based on Technical Specification 3.3.4, Remote Shutdown. This allowed outage time of 30 days without other compensatory action is acceptable for these components because the plant meets TRM 3.7.A, Fire Protection Systems, or its required compensatory actions.

D. The functions listed in Table 3.7.B-1 are credited in the IP3 Appendix R Analysis. Appendix R requires that one train of equipment necessary to achieve MODE 3 from either the control room or emergency control station(s) must be maintained free of fire damage by a single fire including an exposure fire.

- When the credited equipment is not restored in a timely manner this Appendix R licensed condition cannot be met by the remaining equipment in table 3.7.B-1 for fires in the zones/areas credited for this equipment as listed in the bases discussion of Table 3.7.B-1.

Therefore, the plant must be placed in MODE 3 within 6 hours and in MODE 5 within 36 hours. The time requirements to place the plant in MODE3 and MODE 5 were chosen to be consistent with Technical Specification 3.0.3 and TRO 3.0.C.

E. The completion time of 1 hour was selected as a reasonable time frame in which to put compensatory measures in place. The use of portable lighting can support operations personnel to perform the required tasks until such time that the emergency lighting can be made OPERABLE.

The compensatory measures put in place (i.e. availability of at least 8 portable lights with 8-hour capacity) is adequate for extended periods of time. The allowed outage time of 30 days is based on Technical Specification 3.3.4, Remote Shutdown.

F. The allowed outage time of 30 days is based on Technical Specification 3.3.4, Safe Shutdown. The allowed outage time of 30days without other compensatory action is acceptable because the plant meets TRO 3.7.A or its required compensatory actions.

G. The failure of Appendix R Emergency Lighting Units, Control Room Emergency Lighting, or the Appendix R Communication Capability does not directly affect the OPERABILITY of safe shutdown equipment. The use of alternate equipment would provide the same function as the designated equipment. The purpose of this Required Action and associated Completion Time is to ensure that plant management is aware of the inoperable equipment and the subsequent delays in completing repairs to the system. After not restoring the proper equipment in a timely manner the 14 day report to PORC in accordance with TRM 5.4.B provides the appropriate assessment and review.

SURVEILLANCE REQUIREMENTS

TRS 3.7.B.1- (Appendix R Emergency Lighting Units) - This test is designed to verify proper operation of the emergency lighting unit by simulating a loss of power and to ensure that no major equipment failure has been induced. This test is consistent with manufacturer's recommendations and guidance identified in EPRI/NMAC Report TR-100249.

TRS 3.7.B.2 - (Backup Service Water Pump 38, CCW Pumps [31, 32, 33], and Charging Pumps [31,32]) – This test is designed to demonstrate that the subject pumps are capable of providing their rated head and where appropriate using the IST program criteria. The frequency of 92 days is based on similar judgements used in determining the surveillance frequency of other pumps. The test interval of 92 days or where appropriate the IST program frequency is based on the judgment that more frequent testing would not significantly increase the reliability, yet more frequent testing would result in increased wear over a longer period.

TRS 3.7.B.3 - (S/G ADVs) – This test is to ensure that the motive force utilized to operate the ADVs during an Appendix R event is available.

TRS 3.7.B.4 - (Control Room Supplemental A/C) – This test is used to ensure the availability and capability of the Control Room Supplemental Air Conditioning System to maintain the Control Room in a safe, habitable condition. The frequency check of 92 days is sufficient to ensure the availability of the system, if required.

TRS 3.7.B.5 - (Appendix R Radio Units) – The purpose of this test is to verify the availability of at least 8 radios to support Appendix R safe shutdown activities.

TRS 3.7.B.6 - (Control Building Ventilation) – This test ensures the availability and the capability of the Control Building Ventilation System to maintain the 480V Switchgear Room and Cable Spreading Room at an acceptable condition. The 92-day frequency check is sufficient to ensure the availability of the system, if required.

TRS 3.7.B.7 - (Appendix R Emergency Lighting Units) – This test is designed to ensure the batteries are maintaining a sufficient charge and through visual inspection of the electrolyte level that the structural integrity of the battery case has been maintained. In addition, this test ensures the lights are properly aimed to illuminate areas and equipment necessary for Appendix R safe shutdown activities. The 184-day frequency is sufficient to ensure OPERABILITY of the equipment. The test is consistent with manufacturer's recommendations and guidance identified in EPRI/NMAC Report TR-100249.

TRS 3.7.B.8 - (Appendix R Emergency Lighting Units) – This surveillance monitors battery conductance in accordance with Table 3.7.B-2 to determine which batteries are in a condition to exclude them from a discharge test program and which batteries should be scheduled for replacement under the preventative maintenance program. The conductance test method is not applicable to units with Ni-Cad batteries nor to batteries in environments above 110°F.

For temperatures below 60°F, the conductance values will be lower than the same battery at a warmer temperature. This may result in unnecessary action, hence it is allowed to wave the criterion if the last test performed 192 days ago ±25% passed the No Discharge Test criteria. If batteries are in environments above 90°F, the test and replacement criterion needs to be adjusted up 1% of mhos per each 1°F. Batteries governed under the conductance test program that do not satisfy the No Discharge Test Criteria in Table 3.7.B-2 will be either replaced or subjected to an 8 hour discharge test annually. Batteries in environments above 110°F require discharge testing.

TRS 3.7.B.9 - (Appendix R Emergency Lighting Units) – Annually, a 10% sample of batteries that pass the conductance No Discharge Test Criteria in Table 3.7.B-2 are subjected to an 8 hour discharge test to demonstrate the adequacy of the conductance test program. An additional 10% of each type that failed shall be tested. The sampling process shall continue until no failures are identified or the type is exhausted. Conductance testing methodology reviewed in NSE-98-3-091EML is based on EPRI/NMAC Report TR-106826.

TRS 3.7.B.10 - (Appendix R Emergency Lighting Units) – This test is designed to verify that the emergency lighting unit can operate for the design operating time. This test is consistent with the manufacturer's recommendations and guidance identified in EPRI/NMAC Report TR-100249. This test is applicable to EBLs with Ni-Cad or other types of batteries not within the scope of the conductance test program.

TRS 3.7.B.11 - (S/G ADVs) – This test is to ensure the capability of the subject valves to operate as required utilizing the nitrogen backup. The frequency of 24 months was selected to coincide with refueling outages so that normal plant operations would not be affected.

TRS 3.7.B.12 - (Charging Flow, Condenser Makeup, Secondary Steam Isolation) – The purpose of this test is to ensure the capability of the subject valves to operate as required. The frequency of 24 months is selected to coincide with refueling outages. The Condenser Makeup 24 month frequency is also based on Technical Specification 3.7.5, Auxiliary Feedwater, that requires other valves in the system to be tested every 24 months. These valves perform an isolation function and as such it is not practical to perform this surveillance during normal plant operations.

TRS 3.7.B.13 - (Charging flow) - The purpose of this test is to ensure the capability of the listed Charging System valves to operate as required. The frequency of once per 24 months is selected to coincide with refueling outages. As these valves are normally positioned to support overall CVCS system operation, it is not practical to perform this complete surveillance during normal plant operations.

TRS 3.7.B.14 - (CCW Pump 32, Charging Pumps [31, 32]) – The purpose of this test is to verify the ability to power the subject pumps from the electrical system lineup utilized in the Appendix R Compliance Strategy. The frequency of 24 months was selected to coincide with plant refueling outages in order not to interfere with normal plant operations. The frequency of 24 months is also consistent with testing requirements for auxiliary electrical equipment. Therefore it is judged that more frequent testing would not significantly increase the reliability of the system.
Note that operation via the local control station of the Charging Pumps is not credited during Appendix R fire scenarios but operation via this control station may be used for this surveillance.

TRS 3.7.B.15 - (Communication Capability) – The purpose of this test is to ensure that radio communications are achievable with the available equipment between the various local control stations. The 24 month frequency was selected to be consistent with refueling outages.

TRS 3.7.B.16 - (Control Room Lighting) – This test is designed to verify the proper operation of the emergency lighting unit by simulating a loss of power and to ensure that no major equipment failure has been induced. The frequency of 24 months was selected to coincide with refueling outages such that normal plant operations would not be affected.

REFERENCES:

1. FSAR 1.3.1
2. FSAR 7.2.1
3. FSAR 9.6.1
4. FSAR 9.6.2
5. FSAR 9.9.1
6. FSAR 10.2.6
7. NSE 96-3-395, Rev.1, "Development of AP-64.1 and Evaluation of Change to OS 3.2 and 3.5."

5.0 ADMINISTRATIVE CONTROLS

5.1 Responsibilities

5.1.A The plant manager shall be responsible for overall unit operation in accordance with Technical Requirements Manual.

5.1.B The shift supervisor shall be responsible for ensuring plant operations are in accordance with Technical Requirements Manual.

Example: Technical Requirements for Operation (TRO) are met or Required Actions are met within associated Completion Time.

5.1.C Department managers shall be responsible for ensuring work activities are performed in accordance with Technical Requirements Manual.

Example: Technical Requirement Surveillance (TRS) are met; Technical Requirements for Operations (TRO) are met.

5.1.D The Quality Assurance Manager shall be responsible for reviewing effectiveness of Technical Requirements Manual implementation at least once every three years.

5.0 ADMINISTRATIVE CONTROLS (continued)

5.2 Technical Requirements Manual Update & Basis Control

5.2.A Changes to the Technical Requirements Manual (TRM) and Basis shall be made in accordance with SMM-LI-113, "Technical Specification Bases, Technical Requirements Manual and Updated Final safety Analysis (UFSAR) Amendment Preparation and Control."

5.0 ADMINISTRATIVE CONTROLS

5.3 Procedures

5.3.A Written procedures shall be established, implemented, and maintained covering the Technical Requirements Manual activities.

5.3.B Each procedure of Specification 5.3.A, and changes thereto, shall be reviewed and approved in accordance with an approved procedure preparation, review, and approval process as set forth in administrative procedures.

5.0 ADMINISTRATIVE CONTROLS

5.4 Reporting Requirements

5.4.A The following reports shall be made in accordance with 10 CFR 50.72 and 10 CFR 50.73.

- AMSAC Actuation as per Technical Requirements Manual 3.1.A Condition D.
- AMSAC Inoperability as per Technical Requirements Manual 3.1.A Condition C.

5.4.B Submit a Special Report to the PORC outlining the cause of the inoperability of required fire protection equipment, the extent of condition, and the plans and schedule for restoring the inoperable equipment to OPERABLE status. The review of the inoperability must consider, in aggregate, the other fire equipment inoperability/TROs. The review must determine whether or not the condition would adversely affect the ability to achieve and maintain safe shutdown in the event of a fire. A copy of the report should be sent to the senior manager responsible for oversight of the Fire Protection.

5.0 ADMINISTRATIVE CONTROLS

5.5 Record Retention

In addition to the applicable record retention requirements of Title 10, Code of Federal Regulations, the following records shall be retained for at least the minimum period indicated.

5.5.A The following records shall be retained for at least 5 years:

a. Records of changes made to the procedures required by Technical Requirements Manual.

b. Records and logs of principal maintenance activities, inspections, repair, and replacement of principal items of equipment related to Technical Requirements Manual.

c. Records of surveillance activities, inspections, and calibrations required by the Technical Requirements Manual.

5.5.B The following records shall be retained for the duration of the unit Operating License:

a. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments required by Technical Requirements Manual and pursuant to 10 CFR 50.59;

b. Records of the reviews and audits required by Technical Requirements Manual.

c. Records of service lives of all safety-related snubbers including the date at which the service life commences and associated installation and maintenance records.

5.0 ADMINISTRATIVE CONTROLS

5.6 Audits

5.6.A Quality Assurance shall perform an effectiveness audit of Technical Requirements Manual implementation at least once every three years.

5.0 ADMINISTRATIVE CONTROLS

5.7 Training & Organization

5.7.A A training program for the Fire Brigade shall be maintained and shall meet or exceed the requirements of NFPA 27-1975 with the exception of the training program schedule.

5.7.B A Fire Brigade of at least five members shall be maintained on site. This excludes four members of the minimum shift crew necessary for safe shutdown of the plant and any personnel required for other essential functions during a fire emergency. During periods of cold shutdown the Fire Brigade will exclude two members of the minimum shift crew.