

LIST OF AFFECTED PAGES AND MARKED-UP TECHNICAL SPECIFICATIONS

<u>Page</u>	<u>Specification</u>	<u>Description of Change</u>
3/4 8-17	4.8.4.1.a.3	Delete fuses used as penetration overcurrent protection devices from the Surveillance Requirements.
B 3/4 8-3	3/4.8.4	Delete fuses used as penetration overcurrent protection devices from the Bases.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- (c) For each circuit breaker found inoperable during these functional tests, an additional representative sample of at least 10% of all the circuit breakers of the inoperable type shall also be functionally tested until no more failures are found or all circuit breakers of that type have been functionally tested.
2. By selecting and functionally testing a representative sample of at least 10% of each type of lower voltage circuit breakers. Circuit breakers selected for functional testing shall be selected on a rotating basis. Testing of these circuit breakers shall consist of injecting a current in excess of the breakers nominal setpoint and measuring the response time. The measured response time will be compared to the manufacturer's data to insure that it is less than or equal to a value specified by the manufacturer. Circuit breakers found inoperable during functional testing shall be restored to OPERABLE status prior to resuming operation. For each circuit breaker found inoperable during these functional tests, an additional representative sample of at least 10% of all the circuit breakers of the inoperable type shall also be functionally tested until no more failures are found or all circuit breakers of that type have been functionally tested.
- DELETE* 3. ~~By selecting and functionally testing a representative sample of each type of fuse on a rotating basis. Each representative sample of fuses shall include at least 10% of all fuses of that type. The functional test shall consist of a non-destructive resistance measurement test which demonstrates that the fuse meets its manufacturer's design criteria. Fuses found inoperable during these functional tests shall be replaced with OPERABLE fuses prior to resuming operation. For each fuse found inoperable during these functional tests, an additional representative sample of at least 10% of all fuses of that type shall be functionally tested until no more failures are found or all fuses of that type have been functionally tested.~~
- b. At least once per 60 months by subjecting each circuit breaker to an inspection and preventive maintenance in accordance with procedures prepared in conjunction with its manufacturer's recommendations.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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## ELECTRICAL POWER SYSTEMS

### BASES

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#### 3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

Containment electrical penetrations and penetration conductors are protected by either deenergizing circuits not required during reactor operation or by demonstrating the OPERABILITY of primary and backup overcurrent protection circuit breakers during periodic surveillance.

The surveillance requirements applicable to lower voltage circuit breakers ~~and fuses~~ provide assurance of breaker ~~and fuse~~ reliability by testing at least one representative sample of each manufacturer's brand of circuit breaker ~~and/or fuse~~. Each manufacturer's molded case and metal case circuit breakers ~~and/or fuses~~ are grouped into representative samples which are then tested on a rotating basis to ensure that all breakers ~~and/or fuses~~ are tested. If a wide variety exists within any manufacturer's brand of circuit breakers ~~and/or fuses~~, it is necessary to divide that manufacturer's breakers ~~and/or fuses~~ into groups and treat each group as a separate type of breaker ~~or fuses~~ for surveillance purposes.

The OPERABILITY of the motor operated valves thermal overload protection and/or bypass devices ensures that these devices will not prevent safety-related valves from performing their function. The Surveillance Requirements for demonstrating the OPERABILITY of these devices are in accordance with Regulatory Guide 1.106, "Thermal Overload Protection for Electric Motors on Motor Operated Valves," Revision 1, March 1977.

The surveillance requirements of the circuit breakers for non-Class 1E cables located in trays which do not have cable tray covers and which provide protection for cables that, if faulted, could cause failure in both adjacent, redundant Class 1E cables ensures that the integrity of Class 1E cables is not compromised by the failure of protection devices to operate in the non-Class 1E cables.

## ELECTRICAL POWER SYSTEMS

### BASES

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#### 3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

Containment electrical penetrations and penetration conductors are protected by either deenergizing circuits not required during reactor operation or by demonstrating the OPERABILITY of primary and backup overcurrent protection circuit breakers during periodic surveillance.

The surveillance requirements applicable to lower voltage circuit breakers provide assurance of breaker reliability by testing at least one representative sample of each manufacturer's brand of circuit breaker. Each manufacturer's molded case and metal case circuit breakers are grouped into representative samples which are then tested on a rotating basis to ensure that all breakers are tested. If a wide variety exists within any manufacturer's brand of circuit breakers, it is necessary to divide that manufacturer's breakers into groups and treat each group as a separate type of breaker for surveillance purposes.

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SAFETY EVALUATION  
FOR DELETING THE PENETRATION OVERCURRENT  
PROTECTION FUSE SURVEILLANCE FROM THE  
VIRGIL C. SUMMER NUCLEAR STATION  
TECHNICAL SPECIFICATIONS

Description of Amendment Request

SCE&G proposes to modify the VCSNS TS to delete surveillance requirement 4.8.4.1.a.3 which requires periodic retesting of penetration protection fuses. The associated Bases 3/4.8.4 is revised accordingly. This is a functional test which involves removing the fuse and performing a resistance measurement to determine operability. Deletion of this TS Surveillance Requirement will not eliminate the intent of the TS nor will it decrease the effectiveness of the penetration protection scheme. Deletion of this TS Surveillance Requirement will eliminate the potential for equipment damage (the fuse and/or fuse clips).

Safety Evaluation

The proposed TS change will delete TS Surveillance Requirement 4.8.4.1.a.3. This periodic retesting is used to assure the operability of the fuses by comparing resistance measurements against the manufacturer's design parameters. VCSNS does not agree that this requirement is necessary for the following reasons:

1. Fuses have a simple design, simple construction, and passive operation and are therefore reliable overcurrent protection devices. Operational experience does not indicate that current limiting fuses become less effective with time.
2. The resistance of a fuse will not decrease with age. Any indication to the contrary is due to variation of test methodology or equipment. Manufacturer's documentation and testing provide verification of this. The resistance of a fuse may increase slightly with age. This is due to continuous or intermittent heavy loads near their melting point. This change is in the conservative direction and provides additional overcurrent protection.
3. Due to the construction of a fuse, its performance can only be accurately determined by destructive testing. The measurement of gross external resistance only assures consistency to the characteristics within one lot of fuses and will only detect major abnormalities (the wrong element).
4. Plant system reliability is reduced by repeated handling, i.e., potential for damage to the fuse and/or the fuse clips due to the fuse having to be removed to be tested. There is no need to remove a fuse for cleaning as the materials of construction preclude corrosion problems.

Periodic retesting of penetration protection fuses does not provide any added assurance of TS operability. Retesting does, however, increase the risk of equipment damage in the handling of these fuses during the performance of the surveillance test. The level of safety is not decreased by this change, TS operability is assured by the remainder of the surveillance requirement.

NO SIGNIFICANT HAZARDS EVALUATION  
FOR DELETING THE PENETRATION OVERCURRENT  
PROTECTION FUSE SURVEILLANCE FROM  
THE VIRGIL C. SUMMER NUCLEAR STATION  
TECHNICAL SPECIFICATIONS

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Basis For No Significant Hazards Consideration Determination

SCE&G has evaluated the proposed changes to the VCSNS Technical Specifications described above against the Significant Hazards Criteria of 10CFR50.92 and has determined that the changes do not involve any Significant Hazards for the following reasons:

1. The probability or consequences of an accident previously evaluated is not significantly increased.

Fuses are simple protection devices and can only degrade by being more resistive which is in the conservative direction. The proper type and size fuse is assured as part of design, procurement, and initial installation. The testing provides no additional assurance of operability. Therefore, the deletion of periodic retesting of these fuses will not increase the probability or consequences of an accident previously evaluated.

2. Create the possibility of a new or different kind of accident from any previously analyzed.

The design of the penetration protection and the installation of the fuses has not changed in any way. Any undetected failure of a fuse would fall under single failure criteria. A current limiting fuse must have high electrical current in order to perform its intended function. Any fuse which has opened the circuit through the penetration would be detected. (This is not a concern of the Technical Specifications.) Therefore, this change does not create the possibility of a new or different kind of accident from any previously analyzed.

3. Involve a significant reduction in a margin of safety.

Deletion of this surveillance requirement will not minimize the intent of this Technical Specification. This TS is to assure continued operability of the containment penetration conductor overcurrent protection which helps to insure containment integrity. Testing, however, may introduce the potential for damage to the fuses and fuse clips. Therefore, the deletion of this TS requirement will not involve a significant reduction in a margin of safety.