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SUBJECT: Summarizes capability to mitigate station blackout event & implement emergency procedures/training programs. Revised emergency operating instructions re loss of offsite electrical power provided. Review to be completed by 810901.

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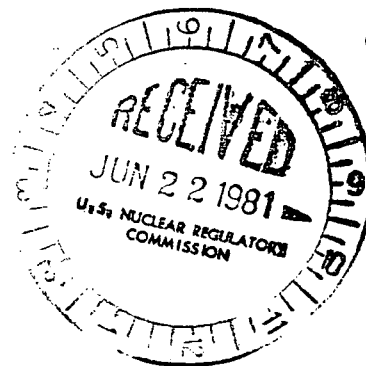


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June 17, 1981

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Director, Office of Nuclear Reactor Regulation
Attention: Mr. Frank Miraglia, Branch Chief
Licensing Branch No. 3
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Subject: Docket Nos. 50-361 and 50-362
San Onofre Nuclear Generating Station
Units 2 and 3

The NRC's letter dated February 25, 1981 (Generic Letter 81-04), requested a review of current plant capabilities to mitigate a station blackout event and to implement as necessary, emergency procedures and training programs for coping with station blackout events. Consistent with the guidance provided by the February 25, 1981 request, the operating instructions for San Onofre Units 2 and 3 have been reviewed and a summary of plant capabilities and procedures are discussed below.

The San Onofre Nuclear Generating Station switchyard is a high reliability design, in that it is a double bus arrangement, supplied by both the Southern California Edison Company (SCE) and San Diego Gas and Electric Co. (SDG&E) grids. The breaker control DC power for the SCE side of the switchyard is separate from the SDG&E side, and the breakers can be remotely operated from the San Onofre Units 2 and 3 Control Room. There are six tie lines (four SCE and two SDG&E) connecting the switchyard to the SCE and SDG&E grids. The SCE and SDG&E rights-of-way are separate and preclude any interaction between the rights-of-way. SCE has over 35 years of continuous system operation without a blackout and the Western Grid System is very stable and capable of handling large faults. Additionally, San Onofre Units 2 and 3 has four Diesel Generator Trains, two trains per unit, one train of which is capable of supplying the power necessary to safely shutdown each unit.

The San Onofre Units 2 and 3 operating instructions have incorporated two hours as the criterion for restoration of AC power. The vital bus batteries that supply IE instrument and required equipment power are sufficiently sized to operate for at least two hours. SCE is presently verifying that other plant design features are capable of supporting the two

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hour criterion. During the two hours allowed by procedures for restoration of AC power, the plant is maintained subcritical in a condition as close to hot standby as possible. It is considered that the two hour criterion is more than adequate for restoration of AC power (either offsite or onsite) based on the highly reliable switchyard design, highly stable grid system, and two redundant Diesel Generator Trains per unit.

The San Onofre Units 2 and 3 Emergency Operating Instruction (EOI), Complete Loss of Offsite Electrical Power, (S023-3-5.4) is being revised consistent with the guidance provided in Generic Letter 81-04, to address simultaneous failure of all four onsite Diesel Generator Trains (two trains per unit) concurrent with the loss of all four preferred offsite power reserve transformers (two per unit), in order to adequately mitigate station blackout events. The revised procedure will include the following provisions:

1. Supply auxiliary feedwater using the turbine driven auxiliary feedwater pump and DC motor operated valves.
2. Operate the atmospheric steam dump valves which are DC operated with nitrogen air supply, to control steam generator pressure.
3. Verify diesel generator start. If neither of the two redundant diesel generators are operating, restart at least one of the diesel generators manually from the Control Room or locally. If at least one diesel generator is operating, shut the plant down in accordance with EOI, Emergency Plant Shutdown, (S023-3-5.1).
4. Conserve Reactor Coolant System (RCS) inventory by isolating the letdown, sample and RCP controlled bleedoff lines. Preliminary analyses of the RCS heat loss under natural circulation conditions with reasonable leakage assumption conditions indicate that pressurizer level will be maintained for at least two hours.
5. Maintain RCS in hot standby in accordance with operating instruction, Natural Circulation Guidelines (S023-3-2.31). Component Coolant Water to the RCP seals under the above conditions would not be required for at least two hours during which offsite power will be restored.
6. Contact SCE and SDG&E System Operating Supervisors and request restoration of offsite power from the grid system in accordance with the System Operations Bulletins for routing AC power to the San Onofre Nuclear Generating Station.

Operator training will be performed consistent with the revised procedure prior to fuel load. The planned annual requalification program for San Onofre Units 2 and 3 operators includes training on all emergency procedures and also includes simulator training to the extent possible on natural circulation with decay heat being removed by the steam driven auxiliary feedwater pumps concurrent with loss of all AC power.

Mr. Frank Miraglia, Branch Chief

-3-

June 17, 1981

SCE is continuing to review the San Onofre Units 2 and 3 capability to sustain and mitigate a station blackout for periods in excess of the two hour criteria. This review is expected to be completed by approximately September 1, 1981 and required modifications to the procedures and training program will be initiated as soon as practicable. The results of the review and planned procedural and training modifications will be transmitted to the NRC as soon as the review results are available.

If you have any questions or comments concerning this matter, please contact me.

Very truly yours,

KP Barken

Enclosures