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AUTH.NAME AUTHOR AFFILIATION
NANDY,F.R. Southern California Edison Co.
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SUBJECT: Forwards draft Section 1.0, "Use & Applications" of Tech Specs,prepared per guidelines of TS improvement project.

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September 25, 1990

F. R. NANDY
MANAGER, NUCLEAR LICENSING

TELEPHONE
(714) 587-5400

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
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Gentlemen:

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

Enclosed for your information and preliminary review, is draft Section 1.0, "Use and Applications," of the San Onofre Nuclear Generating Station (SONGS) Units 2 and 3 Technical Specifications. This draft amendment was prepared under the guidelines of the Technical Specifications Improvement Project (TSIP).

This submittal is made in agreement with a discussion between Mr. B. L. Woods of my staff, and Mr. J. A. Calvo (NRC), to enable NRC staff preliminary review of the SONGS Units 2 and 3 plant specific application of the Combustion Engineering Owners Group (CEOG) Restructured Standard Technical Specifications (RSTS). This will permit validation of the CEOG RSTS, and facilitate review of the Southern California Edison (SCE) Company TSIP effort, which will be submitted by formal amendment application at a later date.

This submittal is made, of course, with the understanding that it is for information only at this time. Formal review of the license amendment within SCE has not been performed, and changes are probable.

If you have any comments or questions regarding the enclosure to this letter, please do not hesitate to call.

Very truly yours,

Enclosure

cc: J. B. Martin, Regional Administrator, NRC Region V
C. Caldwell, NRC Senior Resident Inspector, San Onofre Units 1, 2 and 3
L. E. Kokajko, NRC Project Manager, San Onofre Units 2 and 3

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1.1 DEFINITIONS

---NOTE---
The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

Term	Definition
ACTIONS	ACTIONS shall be that part of a Technical Specification which prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
AXIAL SHAPE INDEX (ASI)	AXIAL SHAPE INDEX shall be the power generated in the lower half of the core less the power generated in the upper half of the core divided by the sum of the power generated in the lower half and upper halves of the core. $$ASI = \frac{lower - upper}{lower + upper}$$
AZIMUTHAL POWER TILT - T_q	AZIMUTHAL POWER TILT shall be the power asymmetry between azimuthally symmetric fuel assemblies.
CHANNEL CALIBRATION	A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter which the channel monitors. The CHANNEL CALIBRATION shall encompass the entire channel including the sensor, alarm and trip functions, and shall include the CHANNEL FUNCTIONAL TEST. The CHANNEL CALIBRATION may be performed by any series of sequential, overlapping or total channel steps such that the entire channel is calibrated.
CHANNEL CHECK	A CHANNEL CHECK shall be the qualitative assessment of channel behavior during operation by observation. This determination shall include, where possible, comparison of the channel indication and status with other indications and status derived from independent instrument channels measuring the same parameter.

(continued)

1.1 DEFINITIONS (continued)

Term	Definition
CHANNEL FUNCTIONAL TEST	A CHANNEL FUNCTIONAL TEST shall be: a. Analog channels - the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY including required alarms, interlocks, and trip functions. b. Bistable channels - the injection of a simulated or actual signal into the sensor to verify OPERABILITY including alarm and trip functions. c. Digital computer channels - the use of diagnostic programs to test digital computer hardware and injecting simulated process data into the channel to verify OPERABILITY, including alarm and trip functions. The CHANNEL FUNCTIONAL TEST may be performed by any series of sequentially overlapping or total channel steps such that the entire channel is tested.
CORE ALTERATION	A CORE ALTERATION shall be the addition, removal, relocation, or movement of any fuel, sources, reactivity control devices, or other 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 conservative position.
CORE OPERATING LIMITS REPORT (COLR)	The CORE OPERATING LIMITS REPORT is the unit specific document that provides operating limits for the current reload cycle. These cycle specific core operating limits shall be determined for each reload cycle in accordance with Specification 5.9.1.6. Plant operation within these core operating limits is addressed in individual specifications.

(continued)

1.1 DEFINITIONS (continued)

Term	Definition
DOSE EQUIVALENT I-131	DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries/gram) which alone would produce the same thyroid dose as the quantity and isotropic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table III of TID-14844, AEC, 1962, "Calculation of Distance Factors for Power and Test Reactor Sites."
$\bar{E}$ - AVERAGE DISINTEGRATION ENERGY	$\bar{E}$ shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives greater than 15 minutes, making up at least 95% of the total non-iodine activity in the coolant.
ENGINEERED SAFETY FEATURE (ESF) RESPONSE TIME	The ENGINEERED SAFETY FEATURE RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ESF actuation setpoint at the sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.) Times shall include diesel generator starting and sequence loading delays where applicable. The response time may be measured by any sequence of sequential, overlapping, or total steps such that the entire response time is measured.

(continued)

1.1 DEFINITIONS (continued)

Term	Definition
LEAKAGE	LEAKAGE shall be: a. Controlled LEAKAGE The seal water flow from the reactor coolant pump seals. b. Identified LEAKAGE 1. LEAKAGE into collection systems, such as pump seal or valve packing leaks, that is captured and conducted to collection systems, or a sump or collecting tank, or 2. LEAKAGE into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems, or not to be Pressure Boundary LEAKAGE, or 3. Reactor Coolant System LAKAGEE through a steam generator to the secondary system. c. Pressure Boundary LEAKAGE LEAKAGE, except steam generator LEAKAGE, through a non-isolable fault in a Reactor Coolant System component body, pipe wall, or vessel wall. d. Unidentified LEAKAGE All LEAKAGE which is not identified LEAKAGE, or Controlled LEAKAGE.
MODE	A MODE shall correspond to any one inclusive combination of core reactivity condition, power level, and reactor coolant temperature specified in Table 1.1-1 with fuel in the reactor vessel.

(continued)

1.1 DEFINITIONS (continued)

Term	Definition
OPERABLE - OPERABILITY	A system, subsystem, train, component, or device shall be OPERABLE, or have OPERABILITY, when it is capable of performing its specified function(s), and when all necessary attendant instrumentation, controls, electrical power, 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).
PHYSICS TESTS	PHYSICS TESTS shall be those tests performed to measure nuclear characteristics to validate the safety analyses; and which are: A. Described in Chapter 14 of the SONGS Units 2 and 3 UFSAR, B. Authorized under the provisions of 10 CFR 50.59, or C. Otherwise approved by the Commission.
PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)	The PRESSURE AND TEMPERATURE LIMITS REPORT is the unit-specific document that provides the reactor vessel pressure and temperature limits including heatup and cooldown rates for the current reactor vessel fluence period. These pressure and temperature limits shall be determined in accordance with Specification 5.9.1.7. Plant operation within theses limits is addressed in LCO 3.4.3, Reactor Coolant System Pressure and Temperature Limits.
RATED THERMAL POWER (RTP)	RATED THERMAL POWER shall be a total reactor core heat transfer rate to the reactor coolant of 3390 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The REACTOR PROTECTION SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until electrical power is interrupted to the CEA drive mechanism. The response time may be measured by any series of sequential, overlapping, or total steps such that the entire response time is measured.

(continued)

1.1 DEFINITIONS (continued)

Term	Definition
SHUTDOWN MARGIN	SHUTDOWN MARGIN shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming: A. No change in part length CEA position; B. All full length CEAs (shutdown and regulating) are fully inserted except for the single assembly of highest reactivity worth which is assumed to be fully withdrawn; and C. In Modes 1 and 2 the fuel and moderator temperature are changed to the nominal zero power design level.
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 specified surveillance frequency such 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.

(continued)

1.1 DEFINITIONS (continued)

Table 1.1-1

Modes

MODE	TITLE	REACTIVITY CONDITION, K_{eff}	% RATED THERMAL POWER**	AVERAGE REACTOR COOLANT TEMPERATURE, °F
1	Power Operation	$\geq$ 0.99	> 5	$\geq$ 350
2	Startup	$\geq$ 0.99	$\leq$ 5	$\geq$ 350
3	Hot Standby	< 0.99	NA	$\geq$ 350
4	Hot Shutdown	< 0.99	NA	350 > Tavg > 200
5	Cold Shutdown	< 0.99	NA	$\leq$ 200
6	Refueling*	NA	NA	< 140

* Fuel in the reactor vessel with one or more reactor vessel head closure studs less than fully tensioned or with the head removed.

** Excluding decay heat

1.2 LOGICAL CONNECTORS

PURPOSE

Logical connectors are used in Technical Specifications to discriminate between, and yet connect, discrete Conditions, Required Actions, Completion Times, Surveillances, and Frequencies. The only logical connectors which appear in technical specifications are AND and OR. The physical arrangement of these connectors constitute logical conventions with specific meaning.

The purpose of this section is to explain the intended meaning of logical connectors and provide specific examples.

EXAMPLE 1.2.1

This example, as illustrated below, demonstrates that for Condition A. both Required Actions must be completed. In this case, the logical connector AND is left justified and shows that both the Required Actions A.1 and A.2 are satisfied.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A.	A.1 Restore ...	
	AND	
	A.2 Be in ...	

(continued)

1.2 LOGICAL CONNECTORS (continued)

EXAMPLE 1.2.2

This example, as illustrated below, is a more complicated use of logical connectors. In this example, Required Actions A.1, A.2, and A.3.1, are alternate choices. Either may be chosen. If A.3.1 is chosen, an additional requirement, indicated by the indented logical connector AND, is imposed. This additional requirement is met by choosing A.3.2.1 or A.3.2.2. The indented position of the logical connector OR indicates that A.3.2.1 and A.3.2.2 are alternate and equal choices, only one of which shall be performed.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A.	A.1	Restore ...	
	OR		
	A.2	Align ...	
	OR		
	A.3.1	Verify ...	
	AND		
	A.3.2.1	Reduce ...	
	OR		
	A.3.2.2	Reduce ...	

1.3 COMPLETION TIME

On hold pending receipt of section from the CEOG

1.4 FREQUENCY

PURPOSE

Each Surveillance Requirement (SR) has a specified Frequency in which the Surveillance must be met to support meeting the associated Limiting condition for Operations (LCO). An understanding of the correct application of this Frequency is necessary for compliance with the Surveillance Requirements.

The purpose of this section is to discuss the proper use and application of the Frequency.

FREQUENCY

In Examples provided and discussed below, the Applicability of the LCO is given as MODES 1, 2, 3, and 4.

EXAMPLE SR 1.4.1

Example SR 1.4.1 contains the type of SR most often encountered throughout the Technical Specifications. It specifies an interval (12 hours) during which the associated Surveillance Requirements must be performed at least one time. Performance of this Surveillance initiates the subsequent interval. Although the Frequency is stated as 12 hours, an extension of the time interval to 1.25 times the stated Frequency is allowed by SR 3.0.2. The measurement of this interval continues at all times, even when the SR is not required by SR 3.0.1. In cases where the interval as specified by SR 3.0.2 is exceeded while in a MODE or other specified condition for which the performance of the Surveillance Requirement is required, SR 3.0.3 becomes applicable. In cases where the interval as specified by SR 3.0.2 is exceeded while not in a MODE or other specified Condition for which the Surveillance Requirement must be performed prior to entry into the MODE or other specified condition. Failure to do so would result in a violation of SR 3.0.4 and an invalid MODE change per LCO 3.0.4.

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 1.4.1	Perform a CHANNEL CHECK	12 hours

Sometimes special conditions dictate when a Surveillance is to be met. These conditions apply to the Surveillance or to the Frequency or both. They are the "otherwise stated" conditions allowed by SR 3.0.1. Furthermore, these conditions may be stated as clarifying notes or as part of the Surveillance Requirement itself. The following examples discuss these special conditions.

(continued)

1.4 FREQUENCY (continued)

EXAMPLE SR 1.4.2

Example SR 1.4.2 is a Surveillance with compound Frequency requirements which include a conditional event Frequency (Within 15 minutes prior to...) followed by a Frequency as described in SR 1.4.1 (12 hours). The logical connector "AND" requires both frequencies to be met. If no other guidance is given, "prior to" means "within the specified Frequency prior to," and only requires the surveillance be performed once during this period. Sufficient guidance is provided with this conditional event Frequency to determine the time interval within which the Surveillance must be performed. Since the conditional event Frequency in this example is performed only once ("prior to" the event) the Frequency extension allowance of SR 3.0.2 does not apply to the 15 minutes. Should the conditional event (initial control bank withdrawal...) not occur prior to the Frequency (15 minutes) elapsing, the Surveillance is performed within 15 minutes of the conditional event. The Surveillance Frequency of 12 hours is then applied thereafter as described in Example SR 1.4.1.

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 1.4.2	Verify each shutdown bank within limit.	Within 15 minutes prior to initial control bank withdrawal during an approach to criticality AND 12 hours

EXAMPLE SR 1.4.3

Example SR 1.4.3 allows the option of selecting one of two Frequencies linked by the logical connector OR, in which to satisfactorily perform the Surveillance. In this example, the choice of Frequency is dictated by existing conditions. The first Frequency (12 hours) is like that in Example SR 1.4.1. The second option is an example of a Frequency when the measurement of the 12 hour interval does not continue at all times. The second Frequency begins only if the PDIL Alarm is inoperable.

(continued)

1.4 FREQUENCY (continued)

EXAMPLE 1.4.3 (continued)

Upon restoring the PDIL alarm, 12 hours (plus 25% per SR 3.0.2) is allowed, within which the Surveillance must be complete. If not performed within this interval, it would then become a failure to perform a Surveillance Requirement within the specified Frequency, and only then would MODE changes be restricted per SR 3.0.4. Once performed the SR is met, and both Frequencies are reinitialized. Selection of either Frequency would again be allowed depending on whether the PDIL alarm is operable or not. However, in no case shall the performance of the Surveillance exceed the specified Frequency of 12 hours plus 25% per SR 3.0.2.

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 1.4.3	Verify regulating CEA group position.	12 hours OR 4 hours if PDIL alarm circuit is inoperable.

EXAMPLE SR 1.4.4

Example SR 1.4.4 requires that this Surveillance be performed only above 20% RTP. The phrase "Only required..." means this Surveillance may be performed in any MODE or other specified condition where unit status would allow successful completion, but is not required to be performed unless greater than or equal to 20% RTP.

The interval measurement for the Frequency of this Surveillance continues at all times, as described in Example 1.4.1. However, if this Surveillance did not meet SR 3.0.2 while operation continued at less than 20% RTP, even though the LCO per it's Applicability, may be required to be met. Prior to reaching 20% RTP, if the Surveillance were not performed within the interval as allowed by SR 3.0.2, it must still be performed prior to exceeding 20% RTP. IF it is not performed prior to exceeding 20% RTP, the provisions of SR 3.0.2 would apply.

(continued)

1.4 FREQUENCY (continued)

EXAMPLE SR 1.4.4
(continued)

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 1.4.4	----NOTE---------- Only required with THERMAL POWER greater than 20% RTP ----------	
	Verify linear heat rate within limits.	7 days

1.5 LEGAL CONSIDERATIONS

INTRODUCTION

The Atomic Energy Act of 1954 requires that technical specifications be a part of operating licenses. As such, they are enforceable under federal statute as well as Title 10 of the Code of Federal Regulations (CFR). When an applicant receives a license from the Nuclear Regulatory Commission to operate a commercial nuclear power plant, the technical specifications are included as Appendix A to the license. Consequently, whenever a change is made to a plant's technical specifications, an amendment to the operating license is required.

There are, however, certain sections and additional items included with these Technical Specifications that are for information or convenience and are not legally a part of the Technical Specifications or Operating License. This section identifies the legal parts (i.e., the items that require a license amendment to change) of these Technical Specifications, and those additional parts that do not require a license amendment.

LEGAL PARTS

10 CFR 50.36 delineates those items which are to be included in technical specifications. These items to be included are:

- o Safety Limits,
- o Limiting Safety System Settings,
- o Limiting Conditions for Operation,
- o Surveillance Requirements,
- o Design Features, and
- o Administrative Controls.

In addition, the Use and Applications Division, comprised of Definitions, Logical Connectors, Completion Times, Frequency, and Legal Considerations, is also a legal part of the technical specifications.

Since the technical specifications are issued as Appendix A to the Operating License, any change to the legal parts of the technical specifications constitutes a license amendment. As such, the requirements of 10 CFR 50.90, 50.91, and 50.92 apply.

(continued)

1.5 LEGAL CONSIDERATIONS (continued)

FRONT MATTER

Front Matter is all the material in the front of the technical specifications used to identify and locate specific information. It includes:

- o Preface
- o Title Page
- o Table of Contents
- o List of Tables
- o List of Figures
- o List of Effective Pages

None of this material is required by 10 CFR 50.36, and the Front Matter does not include any requirements on the safe operation of the plant. Therefore, the front matter is not a legal part of the technical specifications or operating license.

BASES

10 CFR 50.36 includes the following statement, "A summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall be included in the application, but shall not become part of the technical specifications." Therefore, the bases are not a legal part of the technical specifications nor the operating license. Changes to the bases shall be controlled in accordance with the requirements in Specification 5.8.4.f of the Administrative Controls.