BEFORE THE UNITED STATES NUCLEAR REGULATORY COMMISSION

Application of SOUTHERN CALIFORNIA EDISON) COMPANY and SAN DIEGO GAS & ELECTRIC COMPANY) for a Class 104(b) License to Acquire,) DO Possess, and Use a Utilization Facility as) Part of Unit No. 1 of the San Onofre Nuclear) Am Generating Station)

DOCKET NO. 50-206 Amendment Application No. 134

SOUTHERN CALIFORNIA EDISON COMPANY and SAN DIEGO GAS & ELECTRIC COMPANY, pursuant to 10 CFR 50.90, hereby submit Amendment No. 134.

This amendment consists of Proposed Change No. 157 to Provisional Operating License No. DPR-13. Proposed Change No. 157 modifies the Technical Specifications incorporated into Provisional Operating License No. DPR-13 as Appendix A.

Proposed Change No. 157 is a request to revise Section 3.1.1, Maximum Reactor Coolant Activity, Section 6.9, Reporting Requirements, Section 1.0, Definitions, and Table 4.1.2, Minimum Equipment Check and Sampling Frequency of Appendix A.

In the event of conflict, the information in Amendment Application No. 134 supersedes the information previously submitted.

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Based on the safety analysis provided in the Description of Proposed Change and Safety Analysis, it is concluded that (1) this proposed change does not involve an unreviewed safety question as defined in 10 CFR 50.59, nor does it present significant hazards considerations not described or implicit in the Final Safety Analysis, and (2) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed change.

Pursuant to 10 CFR 170.12 as revised in 49 FR 21293 dated May 21, 1984, the fee of \$150.00 is herewith remitted.

DA:6139F

Subscribed on this 4th day of april. 1986.

Respectfully submitted, SOUTHERN CALIFORNIA EDISON COMPANY

By <u>Kenneth</u> P. Baski Vice President Bush

Subscribed and sworn to before me this _____ day of _____.



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Notary Public in and for the County of Los Angeles, State of California

> Charles R. Kocher James A. Beoletto Attorneys for Southern California Edison Company

By James A. Beoletto

Subscribed on this <u>13</u> day of <u>MARCH, 1986</u>.

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Respectfully submitted, SAN DIEGO GAS & ELECTRIC COMPANY

L By_ Holcombe Vice President

Subscribed and sworn to before me this

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13 th day of March, 1986.

Notary Public in and for the County of San Diego, State of California



David R. Pigott Samuel B. Casey Orrick, Herrington & Sutcliffe Attorneys for San Diego Gas & Electric Company

By David

David R. Pigott

DESCRIPTION OF PROPOSED CHANGE 157 AND SAFETY ANALYSIS

This is a request to revise Section 3.1.1, Maximum Reactor Coolant Activity, Section 6.9, Reporting Requirements, Section 1.0, Definitions, and Table 4.1.2, Minimum Equipment Check and Sampling Frequency of Appendix A, Technical Specifications for San Onofre Nuclear Generating Station, Unit 1.

DESCRIPTION

As a result of Generic Letter 85-19 dated September 27, 1985, the reporting requirement of Technical Specification 3.1.1 can be reduced. Currently, a short-term report (Special Report or Licensee Event Report) is required for exceeding primary coolant activity levels for San Onofre Unit 1. The NRC has determined that the reporting requirements for primary coolant activity can be reduced to an item to be included in the Annual Report of Technical Specification 6.9 and deleted from 3.1.1. Also, the NRC has determined that the existing requirements to shut down the plant if the coolant iodine activity limits are exceeded for 800 hours in a 12-month period can be eliminated. The NRC determined that since fuel quality has improved greatly, the normal coolant iodine activity is well below the limit. In addition, other regulations preclude plant operation from approaching the limit. Therefore, Technical Specification 3.1.1 and Section 6.9 should be changed appropriately and this limit deleted.

For clarification, the proposed change will delete the definition of E from Technical Specification 3.1.1 and add it to Section 1.0, Definitions. Also, Table 4.1.2 is being revised to reflect the above editorial change.

EXISTING SPECIFICATIONS

See Attachment 1

PROPOSED SPECIFICATIONS

See Attachment 2

SAFETY ANALYSIS

The proposed change discussed above shall be deemed to constitute a significant hazards consideration if there is a positive finding in any of the following areas.

1. Will operation of the facility in accordance with this proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The reduced reporting requirements for primary coolant activity will not impact safe operation or the consequences of an accident previously evaluated.

Technical Specification 3.1.1 requires the plant to shut down if coolant iodine activity limits are exceeded for 800 hours in a 12-month period. The basis for this requirement is to reduce the probability of high iodine levels being present in RCS coincident with a postulated steam generator tube rupture, thereby reducing the potential offsite dose consequences. Elimination of this requirement is acceptable because regular primary coolant activity monitoring and the improvement in the quality of fuel has reduced the potential for operation with high coolant iodine activity to the point where the 800 hour limit would not likely be approached. In addition, 10 CFR 50.72 requires immediate NRC notification of fuel cladding failures that exceed expected values or that are caused by unexpected factors. Therefore, this Technical Specification limit is no longer considered necessary on the basis that proper fuel management at San Onofre Unit 1 and existing reporting requirements should preclude ever approaching the limit.

2. Will operation of the facility in accordance with the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed change does not reduce surveillance of primary coolant iodine activity or preclude responsible actions to maintain low primary coolant iodine activity. In addition, appropriate actions would be initiated long before accumulating 800 hours above the iodine activity limit. Therefore, the primary coolant activity levels will not approach the accumulated time limit and result in a new or different kind of accident that has not been previously evaluated.

3. Will operation of the facility in accordance with the proposed change involve a significant reduction in a margin of safety?

Response: No

The margin of safety for Technical Specification 3.1.1 is established by the limits of primary coolant activity in 3.1.1 and the associated surveillance 4.1.1. The proposed change does not change the limits on primary coolant activity levels during operation. Also, through proper fuel management and regular primary coolant activity monitoring, the accumulative operating time with high iodine activity should not approach the 800 hours limit. Therefore, operation of the facility in accordance with the proposed change will not involve a significant reduction in the margin of safety.

SAFETY AND SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Based on the Safety Evaluation, it is concluded that: (1) the proposed change does not constitute a significant hazards consideration as defined by 10 CFR 50.92; and (2) there is a reasonable assurance that the health and safety of the public will not be endangered by the proposed change; and (3) this action will not result in a condition which significantly alters the impact of the station on the environment as described in the NRC Environmental Statement.

ATTACHMENT A

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Existing Technical Specifications

THERMAL POWER

1.27 THERMAL POWER shall be the total reactor core heat transfer rate 11/2/84 to the reactor coolant.

TRIP ACTUATING DEVICE OPERATIONAL TEST

1.28 A TRIP ACTUATING DEVICE OPERATIONAL TEST shall consist of 82 operating the Trip Actuating Device and verifying OPERABILITY of alarm, 11/7/84 interlock and/or trip functions. The TRIP ACTUATING DEVICE OPERATIONAL TEST shall include adjustment, as necessary, of the Trip Actuating Device such that it actuates at the required setpoint within the required accuracy.

UNRESTRICTED AREA

1.29 An UNRESTRICTED AREA shall be any area at or beyond the SITE BOUNDARY access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials or any area within the site boundary used for residential quarters or industrial, commercial, institutional and/or recreational purposes.

VENTILATION EXHAUST TREATMENT SYSTEM

1.30 A VENTILATION EXHAUST TREATMENT SYSTEM is any system designed and installed to reduce gaseous radioiodine or radioactive material in particulate form in effluents by passing ventilation or vent exhaust gases through charcoal absorbers and/or HEPA filters for the purpose of removing iodines or particulates from the gaseous exhaust stream prior to the release to the environment. Such a system is not considered to have any effect on noble gas effluents. Engineered Safety Feature (ESF) atomspheric cleanup systems are not considered to be VENTILATION EXHAUST TREATMENT SYSTEM components.

VENTING

1.31 VENTING is the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is not provided or required during VENTING. Vent, used in system names, does not imply a VENTING process. 83 11/2/84

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3.1 REACTOR COOLANT SYSTEM

3.1.1 MAXIMUM REACTOR COOLANT ACTIVITY

APPLICABILITY: Applies to measured maximum activity in the reactor coolant system at any time.

- OBJECTIVE: To limit the consequences of an accidental release of reactor coolant to the environment.
- SPECIFICATION: The specific activity of the reactor coolant shall be limited to:
 - 1. < < 1.0 μ Ci/gm DOSE EQUIVALENT I-131.
 - 2. ≤ 100/E u Ci/gm, where E is 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 and tritium with half lives greater than 15 minutes, making up at least 95% of the total non-iodine and non-tritium activity in the coolant.

ACTION:

- A. With the specific activity of the coolant determined to be >1.0 μ Ci/gm but <60 μ Ci/gm DOSE EQUIVALENT I-131, STARTUP or POWER OPERATION may continue for up to 48 hours provided that operation under these circumstances does not exceed 800 hours in any consecutive 12 month period. Should the total operating time at a reactor coolant specific activity >1.0 μ Ci/gram DOSE EQUIVALENT I-131 exceed 500 hours in any consecutive six month period, the licensee shall report the number of hours of operation above this limit to the NRC within 30 days.
- B. With the specific activity of the reactor coolant determined to be >1 µ Ci/gm DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or >60 µ Ci/gm DOSE EQUIVALENT I-131

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	or the (T _a	>100/E µ Ci/gm, be in at least HOT STANDBY with average temperature of the reactor coolant vg) less than 535°F within 6 hours.	
С.	Wit coo I-1 ana unt is occu Com con ana	h the specific activity of the reactor lant >1.0 μ _Ci/gm DOSE EQUIVALENT 31 or >100/E μ Ci/gm, perform the sampling and lysis requirements of item la.4.a of Table 4.1.2 il the specific activity of the reactor coolant restored to within its limits. A reportable urrence shall be prepared and submitted to the mission within 30 days. This report shall tain the results of the specific activity lysis together with the following information.	83 11/2/94
	a.	Reactor power history starting 48 hours prior to the first sample in which the limit was exceeded,	
	b.	Fuel burnup by core region,	
	c.	Clean—up flow history starting 48 hours prior to the first sample in which the limit was exceeded,	38 12/20/77
	đ.	History of de-gassing operation, if any, starting 48 hours prior to the first sample in which the limit was exceeded, and	
	e.	The time duration when the specific activity of the reactor coolant exceeded 1.0 µ Ci/gram DOSE EQUIVALENT I-131.	
D.	The app	provisions of Specification 3.0.4 are not licable.	83

Revised: 11/16/84

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Specific Activity

BASIS:

The limitations on the specific activity of the reactor coolant ensure that the resulting 2 hour doses at the site boundary will not exceed the guidelines of 10 CFR Part 100 following a steam generator tube rupture accident in conjunction with an assumed steady state primary-to-secondary steam generator leakage rate of 1.0 GPM.

The ACTION statement permitting POWER OPERATION to continue for limited time periods with the reactor coolant's specific activity > 1.0 μ Ci/gram DOSE EQUIVALENT I-131, but <60 μ Ci/gm DOSE EQUIVALENT I-131, accommodates possible iodine spiking phenomena which may occur following changes in THERMAL POWER. Operation with specific activity levels exceeding 1.0 μ Ci/gram DOSE EQUIVALENT I-131 but <60 μ Ci/gm DOSE EOUIVALENT I-131 must be restricted to no more than 800 hours in any consecutive 12 month period since the maximum allowable activity level increases the 2 hour thyroid dose at the site boundary significantly following a postulated steam generator tube rupture.

Reducing T to $< 535^{\circ}$ F prevents the release of activity should a steam generator tube rupture since the saturation pressure of the reactor coolant is below the lift pressure of the atmospheric steam relief valves. The surveillance requirements provide adequate assurance that excessive specific activity levels in the reactor coolant will be detected in sufficient time to take corrective action. Increased surveillance for performing isotopic analyses for iodine is required whenever the DOSE EQUIVALENT I-131 exceeds 1.0 μ Ci/gram and following a significant change in power level to monitor possible iodine spiking phenomena to assure the activity remains <60 μ Ci/gm DOSE EQUIVALENT I-131.

The assumptions and results of these calcuations are documented in "Safety Evaluation by the Office of Nuclear Reactor Regulation," Docket No. 50-206, dated April 1, 1977. 83 11/2/84

			Check	Frequency	
1a.	Reactor Coolant Samples	1.	Gross Activity Determination	At least once per 72 hours. Required during Modes 1, 2, 3, 4, 5 and 6.	
		2.	Isotopic Analysis for DOSE EQUIVALENT I-131 Concentration	l per 14 days. Required only during Mode 1.	
		3.	Spectrascopic for E (1) Determination	l per 6 months ⁽²⁾ . Required only during Mode l.	
		4.	Isotopic Analy- sis for Iodine Including I-131, I-133, and I-135.	 a) Once per 4 hours, (3) whenever the specific activity exceeds 1.0 μ Ci/gram DOSE EQUIVALENT I-131 or 100/ E (1) μ Ci/gram. 	74 12/6/83
				 b) One sample between 2 and 6 hours following a THERMAL POWER change exceeding 15 percent of the RATED THERMAL POWER within a one hour period. 	38 12/20/77
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TABLE 4.1.2 MINIMUM EQUIPMENT CHECK AND SAMPLING FREQUENCY

5. Boron concentration

Twice/Week

(1) \tilde{E} is defined in Section 3.1.1.A.2

(2) Sample to be taken after a minimum of 2 EFPD and 20 days of POWER OPERATION have elapsed since reactor was last subcritical for 48 hours or longer.

(3) Until the specific activity of the reactor coolant system is restored within its limits. 74

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6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the NRC Regional Administrator unless otherwise noted.

STARTUP REPORT

- 6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal or hydraulic performance of the plant.
- 6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall in general include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.
- 6.9.1.3 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (1.e., initial criticality, completion of startup test program, and resumption or commencement of commercial power operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

ANNUAL REPORTS*

- 6.9.1.4 Annual reports covering the activities of the unit as described below for the previous calendar year shall be submitted prior to March 1 of each year.
- 6.9.1.5 Reports required on an annual basis shall include a tabulation of the number of station, utility and other personnel (including contractors) receiving exposures greater than 100 mrem/yr and their associated man rem exposure according to work and job functions** (e.g., reactor operations and surveillance, inservice inspection,

A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

^{**} This tabulation supplements the requirements of 10 CFR 20.407.

routine maintenance, special maintenance (describe maintenance), waste processing, and refueling). The dose assignment to various duty functions may be estimates based on pocket dosimeter, TLD, or film badge measurements. Small exposures totalling less than _20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total whole body dose received from external sources shall be assigned to specific major work functions.

. ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT*

- 6.9.1.6 Routine radiological environmental operating reports covering the operation of the unit during the previous calendar year shall be submitted prior to May 1 of each year.
- 6.9.1.7 The annual radiological environmental operating reports shall include summaries, interpretations, and an analysis of trends of the results of the radiological environmental surveillance activities for the report period, including a comparison with preoperational studies, operational controls (as appropriate), and previous environmental surveillance reports and an assessment of the observed impacts of the plant operation on the environment. The reports shall also include the results of land use censuses required by Specification 3.18.2. If harmful effects or evidence of irreversible damage are detected by the monitoring, the report shall provide an analysis of the problem and a planned course of action to alleviate the problem.

The annual radiological environmental operating reports shall include summarized and tabulated results, in the format of Regulatory Guide 4.8, December 1975, of all radiological environmental samples taken during the report period. In the event that some results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

The reports shall also include the following: a summary description of the radiological environmental monitoring program; a map for all sampling locations keyed to a table giving distances and directions from the site reference point; and the results of licensee participation in the Interlaboratory Comparison Program, required by Specification 3.18.3.

(Note: Information which may be required by Specifications 3.18.1.8.1, 2, 3.18.3.8.1 and the Basis of 4.18.1 should be included.)

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Revised: 11/14/85

^{*} A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT*

- 6.9.1.8 Routine radioactive effluent release reports covering the operation of the unit during the previous 6 months of operation shall be submitted within 60 days after January 1 and July 1 of each year.
- 6.9.1.9 The radioactive effluent release reports shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit as outlined in Regulatory Guide 1.21, "Measuring Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," Revision 1, June 1974, with data summarized on a quarterly basis following the format of Appendix B thereof.

The radioactive effluent release report to be submitted 60 days after January 1 of each year shall include an annual summary of hourly meteorological data collected over the previous year. This annual summary may be either in the form of an hour-by-hour listing of wind speed, wind direction, and atmospheric stability, and precipitation (if measured) on magnetic tape, or in the form of joint frequency distributions of wind speed, wind direction, and atmospheric stability.** This same report shall include an assessment of the radiation doses due to the radioactive liquid and gaseous effluents released from the unit or station during the previous calendar year. This same report shall also include an assessment of the radiation doses from radioactive liquid and gaseous effluents to MEMBERS OF THE PUBLIC due to their activities inside the SITE BOUNDARY during the report period. All assumptions used in making these assessments (i.e., specific activity, exposure time and location) shall be included in these reports. The meteorological conditions concurrent with the time of release of radioactive materials in gaseous effluents (as determined by sampling frequency and measurement) shall be used for determining the gaseous pathway doses. The assessment of radiation doses shall be performed in accordance with the OFFSITE DOSE CALCULATION MANUAL (ODCM).

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^{*} A single submittal may be made for multiple unit station. The submittal should combine those sections that are common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

^{**} In lieu of submission with the first half year Radioactive Effluent Release Report, the licensee has the option of retaining this summary of required meteorological data on site in a file that shall be provided to the NRC upon request.

The radioactive effluent release report to be submitted 60 days after January 1 of each year shall also include an assessment of radiation doses to the likely most exposed MEMBER OF THE PUBLIC from reactor releases and other nearby uranium fuel cycle sources (including doses from primary effluent pathways and direct radiation) for the previous calendar year to show conformance with 40 CFR 190, Environmental Radiation Protection Standards for Nuclear Power Operation. Acceptable methods for calculating the dose contribution from liquid and gaseous effluents are given in the OFFSITE DOSE CALCULATION MANUAL (ODCM).

The radioactive effluent release reports shall include the following information for each type of solid waste shipped offsite during the report period:

- a. Container volume.
- b. Total curie quantity (specify whether determined by measurement or estimate),
- Principal radionuclides (specify whether determined by measurement or estimate),
- Type of waste (e.g., dewatered spent resin, compacted dry waste, evaporator bottom),
- e. Type of container (e.g., LSA, Type A, Type B, Large Quantity), and
- f. Solidification agent (e.g., cement, urea formaldehyde).

The radioactive release reports shall include unplanned releases from the site to UNRESTRICTED AREAS of radioactive material in gaseous and liquid effluents on a guarterly basis.

The Radioactive Effluent Release Reports shall include any changes made to the PROCESS CONTROL PROGRAM (PCP), to the OFFSITE DOSE CALCULATION MANUAL (ODCM), or major changes to radioactive waste treatment systems during the reporting period.

MONTHLY OPERATING REPORT

6.9.1.10 Routine reports of operating statistics and shutdown experience, including documentation of all challenges to pressurizer safety and relief valves, shall be submitted on a monthly basis to the Director, Office of Resource Management, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555, with a copy to the Regional Administrator of the Regional Office of the NRC, no later than the 15th of each month following the calendar month covered by the report.

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SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the NRC Regional Administrator, unless otherwise indicated, within the time period specified for each report.

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ATTACHMENT B

Proposed Technical Specifications