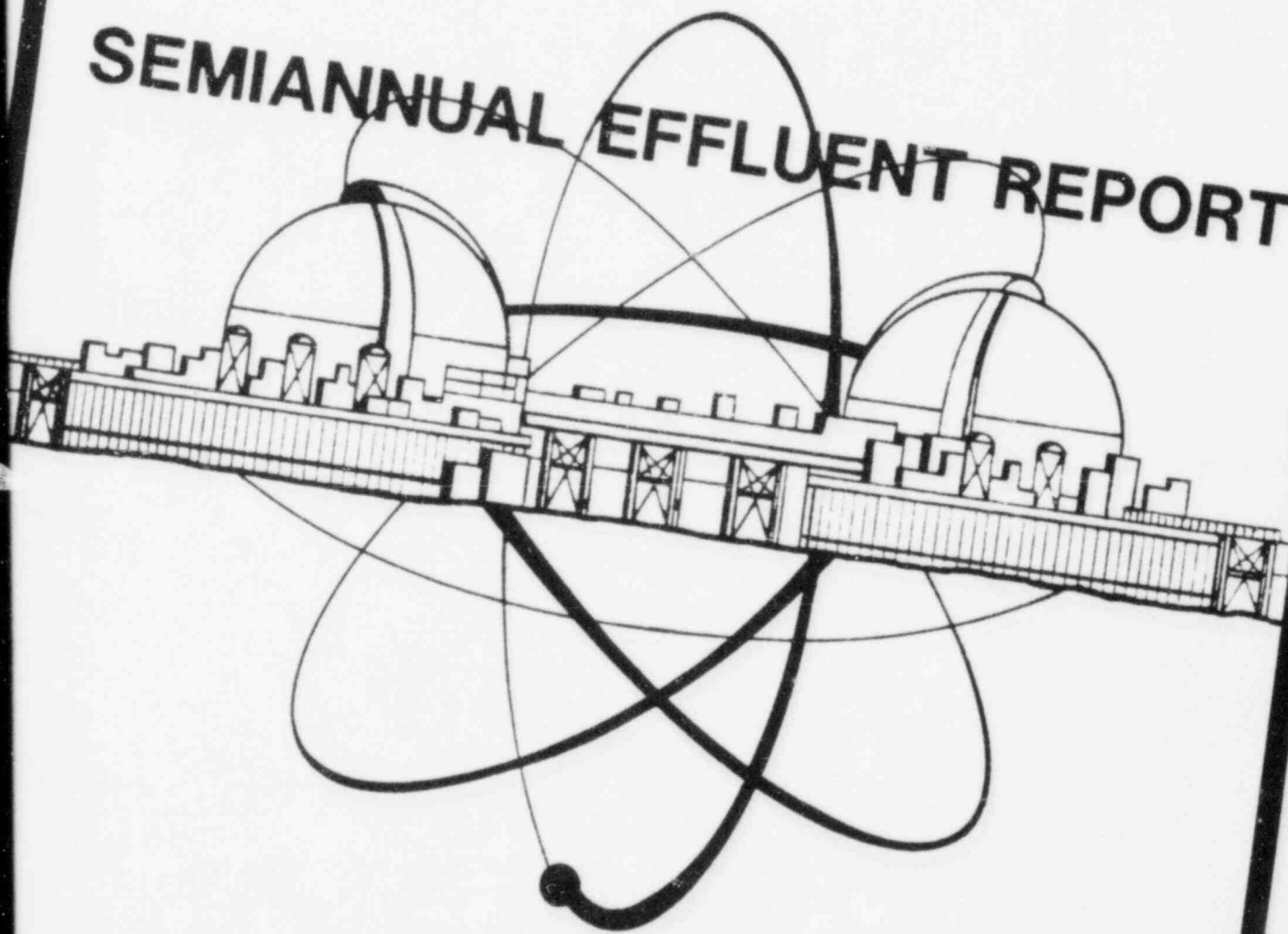


**SAN ONOFRE
NUCLEAR GENERATING STATION
UNITS 2 & 3**

SEMIANNUAL EFFLUENT REPORT



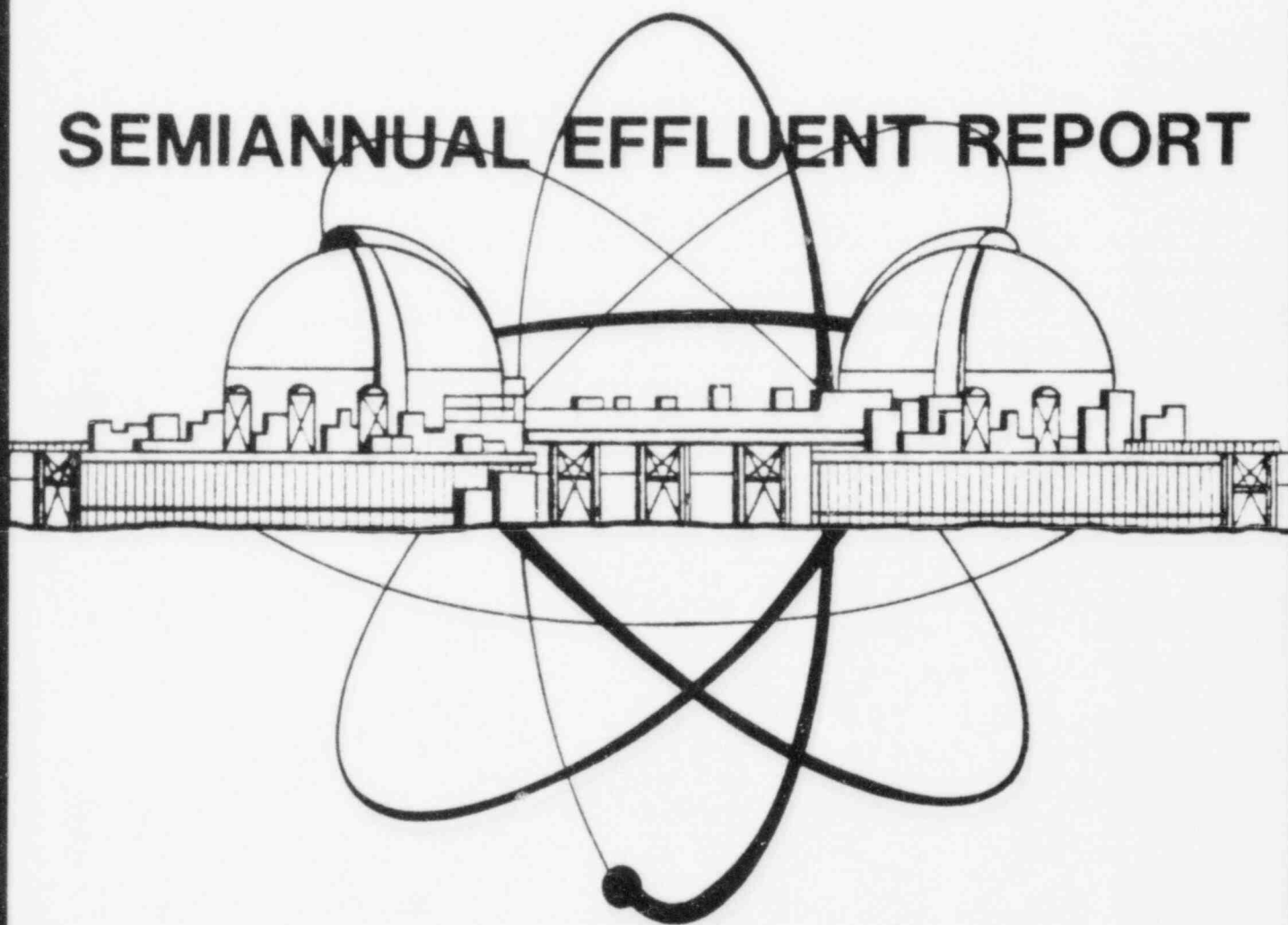
**SONGS - 2 & 3
JANUARY - JUNE 1983**

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**SAN ONOFRE
NUCLEAR GENERATING STATION
UNITS 2 & 3**

SEMIANNUAL EFFLUENT REPORT



**SONGS - 2 & 3
JANUARY - JUNE 1983**

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SEMIANNUAL EFFLUENT REPORT

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SEMIANNUAL EFFLUENT REPORT

January - June 1983

SECTION A. INTRODUCTION

This Semiannual Report summarizes the gaseous and liquid radioactive effluent releases and solid waste shipments made from the San Onofre Nuclear Generating Station, Units 2 and 3. This report is prepared in the general format of USNRC Regulatory Guide 1.21 and includes:

1. Quarterly summaries of liquid and gaseous effluents for "batch" and "continuous" modes of release;
2. Percent of Technical Specification Limits;
3. Estimated total percent error;
4. Lower limit of detection concentrations;
5. Meteorological data;
6. 40 CFR 190 Considerations;
7. Miscellaneous;
8. Radwaste shipments;
9. 50 Mile Radius Population Doses.

SECTION B. GASEOUS EFFLUENTS

Table 1A, "Gaseous Effluents - Summation of All Releases," and Table 1B, "Gaseous Effluents," provide a detailed listing of the quantity of gaseous effluent releases in four categories: Fission and Activation Gases, Iodines, Particulates, and Tritium. Table 1B provides the systematic listing by isotope of the quantity of radioactivity released in each category. The total activity of each isotope released is listed for the quarterly period and also is separated into "continuous" and "batch" modes of releases.

Table 1A, "Gaseous Effluents - Summation of All Releases," provides a summary of all gaseous effluent releases for the quarter. Listed are the total releases of each category, the average release rate for the quarter, and the percent of Technical Specification Limit (TSL).

Table 1C, "Gaseous Effluents - Lower Limit of Detection," provides a listing of lower limit of detection concentrations for isotopes not detected in Table 1B.

The percent estimated total error is listed in Table 1A for each of the four gaseous effluent categories. The methodology used for error analysis is described in Section F of this report.

Table 1D, "Gaseous Effluents - Radiation Doses at Site Boundary," provides a summary of doses at the site boundary for this reporting period, by quarter.

The July-December 1982 Semiannual Report values for composite gross alpha, Sr-89 and Sr-90, (Tables 1A and 1B gaseous effluents) were incomplete due to data not available prior to reporting time. The values not reported were for the fourth quarter. The values are as follows:

	<u>Unit</u>	
Gross Alpha	Ci	7.30 E-12
Sr-89	Ci	LLD
Sr-90	Ci	LLD

LLD = $3.50 \text{ E-3 } \mu\text{Ci/ml}$

TABLE 1A

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)
GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	Unit	First Quarter	Second Quarter	
A. Fission and Activation Gases				
1. Total release	Ci	1.08 E+1	2.80 E+2	25% Estimated Total Error
2. Average release rate for period	μCi/sec	1.39 E+0	3.56 E+1	
3. Percent of Technical Specification Limit	%	1.05 E+0	2.21 E+1	
B. Iodines				
1. Total Iodine	Ci	1.17 E-4	1.13 E-1	16% Estimated Total Error
2. Average release rate for period	μCi/sec	1.50 E-5	1.44 E-2	
3. Percent of Technical Specification Limit	%	7.46 E-3	1.81 E+1	
C. Particulates				
1. Particulates with half-lives > 8 days	Ci	2.21 E-3	1.21 E-4	19% Estimated Total Error
2. Average release rate for period	μCi/sec	2.84 E-4	1.54 E-5	
3. Percent of Technical Specification Limit	%	2.42 E-1	8.02 E-1	
4. Gross alpha radioactivity	Ci	9.20 E-12	**	
D. Tritium				
1. Total release	Ci	8.68 E-3	7.45 E-1	25% Estimated Total Error
2. Average release rate for period	μCi/sec	1.12 E-3	9.48 E-2	
3. Percent of Technical Specification Limit	%	8.94 E-4	1.77 E-1	

**Incomplete data. Values reported are calculated using only first-quarter data.
The following Semiannual Report will include second-quarter analysis.

TABLE 1B

EFFLUENT AND WASTE DISPOSAL REPORT
GASEOUS EFFLUENTS

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		First Quarter	Second Quarter	First Quarter	Second Quarter
1. Fission Gases					
krypton-85	Ci	LLD	LLD	6.83 E-3	8.63 E-2
krypton-85m	Ci	2.04 E-3	2.37 E-1	3.65 E-4	1.11 E-5
krypton-87	Ci	LLD	LLD	LLD	LLD
krypton-88	Ci	LLD	LLD	LLD	LLD
xenon-131m	Ci	1.79 E-1	LLD	2.89 E-2	4.78 E-3
xenon-133	Ci	7.10 E+0	2.74 E+2	2.56 E+0	5.61 E-1
xenon-133m	Ci	5.75 E-3	2.07 E-2	8.39 E-3	5.59 E-3
xenon-135	Ci	8.81 E-2	4.13 E+0	9.60 E-3	4.77 E-3
xenon-135m	Ci	LLD	LLD	LLD	LLD
xenon-138	Ci	LLD	LLD	LLD	LLD
argon-41	Ci	8.46 E-1	1.06 E+0	LLD	2.35 E-5
Total	Ci	8.22 E+0	2.74 E+2	2.61 E+0	8.40 E-2
2. Iodines					
iodine-131	Ci	9.13 E-5	6.29 E-2	LLD	LLD
iodine-133	Ci	2.36 E-5	4.73 E-2	LLD	LLD
iodine-135	Ci	1.76 E-6	3.26 E-3	LLD	LLD
iodine-132	Ci	LLD	8.73 E-6	LLD	LLD
Total	Ci	1.17 E-4	1.13 E-1	LLD	LLD
3. Particulates					
bromine-82	Ci	3.16 E-5	3.95 E-5	LLD	LLD
cobalt-58	Ci	3.10 E-9	8.50 E-6	LLD	2.47 E-5
strontium-89	Ci	LLD	**	*	*
strontium-90	Ci	LLD	**	*	*
cesium-134	Ci	LLD	LLD	LLD	LLD
cesium-137	Ci	LLD	9.40 E-9	LLD	LLD
barium-lanthanum-140	Ci	LLD	LLD	LLD	LLD
neodymium-147	Ci	4.38 E-7	LLD	LLD	LLD
sodium-24	Ci	3.76 E-7	1.11 E-5	LLD	LLD
cadmium-109	Ci	4.91 E-8	LLD	LLD	LLD
niobium-95m	Ci	2.11 E-3	LLD	LLD	LLD
scandium-47	Ci	LLD	LLD	6.66 E-5	LLD
technetium-101	Ci	LLD	2.01 E-8	LLD	LLD
molybdenum-99	Ci	LLD	1.62 E-7	LLD	LLD
yttrium-88	Ci	LLD	9.94 E-7	LLD	LLD
technetium-99m	Ci	LLD	4.91 E-6	LLD	LLD
rubidium-88	Ci	LLD	6.77 E-6	LLD	LLD
manganese-54	Ci	LLD	6.77 E-8	LLD	LLD
cerium-139	Ci	LLD	LLD	LLD	5.25 E-6
TOTAL	Ci	2.14 E-3	9.65 E-5	6.66 E-5	3.00 E-5
4. Tritium	Ci	8.68 E-3	7.45 E-1	***	***

* Sr 89, 90 not sampled for on batch gaseous releases. All batch releases exhaust through the Plant Vent Stack (PVS) and are sampled for Sr 89, 90 on PVS filter paper, which is classified a continuous release.

**Incomplete data. Values reported are calculated using only first-quarter data. The following Semiannual Report will include second-quarter analysis.

***Tritium analysis required only on continuous releases.

TABLE 1C

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)
GASEOUS EFFLUENTS - LOWER LIMIT OF DETECTION

<u>ISOTOPES</u>	<u>BATCH MODE LLD ($\mu\text{Ci/cc}$)</u>
Argon-41	3.97 E-7
Barium-140	5.91 E-7
Bromine-82	1.71 E-7
Cadmium-109	1.11 E-6
Cerium-139	5.31 E-8
Cesium-134	2.44 E-7
Cesium-137	2.71 E-7
Cobalt-58	3.99 E-7
Iodine-131	2.02 E-7
Iodine-132	1.87 E-7
Iodine-133	7.72 E-8
Iodine-135	5.37 E-7
Krypton-87	5.32 E-7
Krypton-88	6.30 E-7
Lanthanum-140	2.79 E-7
Manganese-54	3.32 E-8
Molybdenum-99	2.65 E-8
Neodymium-147	1.57 E-7
Niobium-95m	5.26 E-7
Rubidium-88	2.08 E-5
Scandium-47	2.46 E-7
Sodium-24	2.37 E-7
Technetium-99m	1.75 E-7
Technetium-101	9.21 E-8
Xenon-135m	2.82 E-6
Xenon-138	6.34 E-6
Yttrium-88	7.54 E-8

NOTE: Batch mode implies gas grab sample analysis.

TABLE 1C (CONTINUED)

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)
GASEOUS EFFLUENTS - LOWER LIMIT OF DETECTION

<u>ISOTOPES</u>	<u>CONTINUOUS MODE LLD ($\mu\text{Ci/cc}$)</u>
Barium-140	2.52 E-12
Cadmium-109	8.22 E-12
Cerium-139	4.87 E-13
Cesium-134	1.02 E-12
Cesium-137	8.82 E-13
Krypton-85	3.69 E-4
Krypton-87	3.13 E-6
Krypton-88	5.59 E-6
Lanthanum-140	1.08 E-12
Manganese-54	9.37 E-13
Molybdenum-99	3.68 E-13
Neodymium-147	1.42 E-12
Niobium-95m	1.97 E-12
Rubidium-88	2.16 E-10
Scandium-47	1.48 E-12
Strontium-89, 90	3.10 E-8
Technetium-99m	3.90 E-13
Technetium-101	4.00 E-11
Xenon-131m	5.30 E-5
Yttrium-88	1.22 E-11

NOTE: Continuous mode implies charcoal-cartridge or paper-filter sample analysis.

TABLE 1D

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)
GASEOUS EFFLUENTS - RADIATION DOSES AT THE SITE BOUNDARY

	Unit	First Quarter	Second Quarter
A. <u>Noble Gas</u>			
1. <u>Gamma dose</u>	mrad	8.97 E-3	8.72 E-2
2. <u>Percent Technical Specification Limit</u>	%	1.79 E-1	1.74 E+0
3. <u>Beta dose</u>	mrad	1.02 E-2	2.28 E-1
4. <u>Percent Technical Specification Limit</u>	%	1.02 E-1	2.28 E+0
B. <u>Tritium, Iodine, Particulate</u>			
1. <u>Organ dose</u>	mrem	1.70 E-3	1.24 E+0
2. <u>Percent Technical Specification Limit</u>	%	2.27 E-2	1.65 E+1

SECTION C. LIQUID EFFLUENTS

Table 2A, "Liquid Effluents-Summation of All Releases," and Table 2B, "Liquid Effluents," provide a detailed listing of liquid effluent releases in four categories: Particulates, Tritium, Iodines and Gases. Table 2B provides the systematic listing by isotope of the quantity of radioactivity released in each category. The total activity of each isotope released is listed for each quarterly period and also is separated into "continuous" and "batch" modes of release.

Table 2A, "Liquid Effluents-Summation of All Releases," provides a summary of all liquid effluents for each quarter. Listed are (1) the total release of each category, (2) the average diluted concentration at the point of discharge during each quarterly period, and (3) the percent of Technical Specification Limit. Also listed are the gross alpha radioactivity, the volume of actual waste released (prior to dilution by the circulating water), and the volume of dilution water (i.e., the volume of circulating water) used to dilute the batch releases.

The methodology used in calculating the percent of Technical Specification Limit (TSL) is presented in Section E of this report. The methodology used for error analysis is presented in Section F of this report.

Table 2C, "Liquid Effluents - Lower Limit of Detection," provides a listing of lower limit of detection concentrations for isotopes not detected in Table 2B.

Table 2D, "Liquid Effluents - Radiation Doses at Site Boundary," provides a summary of doses at the site boundary for this reporting period, by quarter.

The July-December 1982 Semiannual Report values for composite gross alpha, Sr-89 and Sr-90 in Table 2A and Table 2B Liquid Effluents, were incomplete due to data not available at the time of report. The values not reported were for the fourth quarter, November and December 1982. The values are as follows:

	<u>Unit</u>	
Gross Alpha	Ci	LLD
Sr-89	Ci	LLD
Sr-90	Ci	LLD

Gross alpha LLD = $4.60 \text{ E-8 } \mu\text{Ci/ml}$

Sr-89, 90 LLD = $6.50 \text{ E-8 } \mu\text{Ci/ml}$

TABLE 2A

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT (1983)
LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

	Unit	First Quarter	Second Quarter	
A. Particulates				
1. Total release	Ci	6.59 E-1	3.93 E-1	19% Estimated Total Error
2. Average diluted concentration during release	µCi/ml	2.63 E-8	1.37 E-8	
3. Percent of Technical Specification Limit	%	3.21 E-1	7.14 E-2	
B. Tritium				
1. Total release	Ci	1.14 E+1	1.77 E+1	19% Estimated Total Error
2. Average diluted concentration during release	µCi/ml	4.54 E-7	6.19 E-7	
3. Percent of Technical Specification Limit	%	1.51 E-2	2.11 E-1	
C. Iodines				
1. Total release	Ci	1.53 E-2	1.44 E-1	19% Estimated Total Error
2. Average diluted concentration during release	µCi/ml	6.10 E-10	5.03 E-9	
3. Percent of Technical Specification Limit	%	4.10 E+0	1.41 E+1	

TABLE 2A (Continued)

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)
LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

	Unit	First Quarter	Second Quarter	
D. Gases (Dissolved and entrained)				
1. Total release	Ci	3.63 E-1	5.10 E-1	19% Estimated Total Error
2. Average diluted concentration during release	µCi/ml	1.45 E-8	1.78 E-8	
3. Percent of Technical Specification Limit	%	3.35 E-1	7.30 E-1	
E. Gross Alpha Radioactivity	Ci	1.16 E-4	8.32 E-5**	19% Estimated Total Error
F. Volume of waste released (prior to dilution)	liters	3.86 E+7	4.38 E+6	
G. Volume of dilution water used during period	liters	2.51 E+10	2.86 E+10	

**Incomplete data. Value reported is calculated using only April data.
The following Semiannual Report will include May and June analysis.

TABLE 2B
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)
LIQUID EFFLUENTS

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		First Quarter	Second Quarter	First Quarter	Second Quarter
A. Particulates					
antimony-124	Ci	LLD	LLD	9.28 E-4	1.34 E-4
barium-140	Ci	LLD	LLD	LLD	LLD
beryllium-7	Ci	LLD	LLD	2.80 E-3	1.25 E-4
cerium-141	Ci	LLD	LLD	LLD	LLD
cerium-144	Ci	LLD	LLD	4.22 E-3	1.31 E-3
cesium-134	Ci	LLD	LLD	LLD	LLD
cesium-136	Ci	LLD	LLD	LLD	3.86 E-5
cesium-137	Ci	LLD	LLD	3.77 E-5	5.22 E-4
chromium-51	Ci	LLD	LLD	2.38 E-1	1.11 E-1
cobalt-57	Ci	LLD	LLD	5.66 E-5	7.31 E-5
cobalt-58	Ci	6.13 E-5	LLD	3.01 E-1	1.68 E-1
cobalt-60	Ci	LLD	LLD	1.96 E-2	2.24 E-2
indium-113m	Ci	LLD	LLD	2.40 E-5	6.39 E-4
iron-59	Ci	LLD	LLD	1.30 E-2	1.21 E-2
lanthanum-140	Ci	LLD	LLD	LLD	LLD
manganese-54	Ci	LLD	LLD	2.05 E-2	2.30 E-2
manganese-56	Ci	LLD	LLD	LLD	LLD
molybdenum-99	Ci	LLD	LLD	2.71 E-5	4.79 E-3
neptunium-239	Ci	LLD	LLD	LLD	LLD
niobium-95	Ci	LLD	LLD	1.40 E-2	1.75 E-2
niobium-97	Ci	LLD	LLD	6.81 E-5	LLD
rubidium-88	Ci	LLD	LLD	LLD	LLD
ruthenium-103	Ci	LLD	LLD	7.17 E-5	LLD
scandium-46	Ci	LLD	LLD	1.80 E-5	1.31 E-4
sodium-24	Ci	LLD	LLD	2.10 E-2	6.04 E-3
strontium-89	Ci	LLD	LLD	4.94 E-3	**
strontium-90	Ci	LLD	LLD	LLD	**
technetium-99m	Ci	LLD	LLD	4.78 E-4	5.89 E-3
tellurium-132	Ci	LLD	LLD	LLD	5.98 E-4
tin-113	Ci	LLD	LLD	3.95 E-5	4.27 E-4
tungsten-187	Ci	LLD	LLD	5.20 E-3	9.56 E-4
yttrium-88	Ci	LLD	LLD	LLD	LLD
zinc-65	Ci	LLD	LLD	8.92 E-5	8.91 E-4
zirconium-95	Ci	LLD	LLD	1.76 E-2	1.20 E-2
zirconium-97	Ci	LLD	LLD	6.97 E-5	LLD
Totals	Ci	6.13 E-5		6.59 E-1	3.89 E-1

**Incomplete data. Values reported are calculated using only first-quarter data.
The following Semiannual Report will include second-quarter analysis.

TABLE 2B
(Continued)

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)
LIQUID EFFLUENTS

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		First Quarter	Second Quarter	First Quarter	Second Quarter
B. Tritium	Ci	LLD	LLD	1.14 E+1	1.77 E+1
Totals	Ci	LLD	LLD	1.14 E+1	1.77 E+1
C. Iodines					
iodine-131	Ci	LLD	LLD	1.23 E-2	1.14 E-1
iodine-133	Ci	LLD	LLD	2.97 E-3	2.97 E-2
iodine-135	Ci	LLD	LLD	LLD	4.65 E-4
Totals	Ci			1.53 E-2	1.44 E-1
D. Dissolved and Entrained Gases					
argon-41	Ci	LLD	LLD	1.08 E-4	1.57 E-4
krypton-85m	Ci	LLD	LLD	3.84 E-7	LLD
xenon-131m	Ci	LLD	LLD	3.14 E-3	3.20 E-3
xenon-133m	Ci	LLD	LLD	5.90 E-3	5.59 E-3
xenon-133	Ci	LLD	LLD	3.53 E-1	4.86 E-1
xenon-135	Ci	LLD	LLD	8.25 E-4	4.60 E-3
xenon-135m	Ci	LLD	LLD	LLD	LLD
Totals	Ci			3.63 E-1	5.00 E-1

TABLE 2C

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)
LIQUID EFFLUENTS - LOWER LIMIT OF DETECTION

<u>ISOTOPES</u>	<u>LLD ($\mu\text{Ci/ml}$)</u>
Antimony-124	7.22 E-7
Barium-140	3.65 E-6
Beryllium-7	7.99 E-6
Cerium-141	1.00 E-6
Cerium-144	4.42 E-6
Cesium-134	8.72 E-7
Cesium-136	7.98 E-7
Cesium-137	1.02 E-6
Chromium-51	3.20 E-6
Cobalt-57	5.58 E-7
Cobalt-58	1.18 E-6
Cobalt-60	5.16 E-7
Indium-113m	5.61 E-6
Iron-59	6.21 E-7
Lanthanum-140	4.91 E-7
Manganese-54	4.54 E-7
Manganese-56	6.48 E-7
Molybdenum-99	5.39 E-7
Neptunium-239	2.29 E-6
Niobium-95	4.15 E-7
Niobium-97	1.85 E-6
Rubidium-88	2.10 E-4
Ruthenium-103	3.81 E-7
Scandium-46	5.38 E-7

TABLE 2C

<u>ISOTOPES</u>	<u>LLD ($\mu\text{Ci/ml}$)</u>
Sodium-24	7.80 E-7
Strontium-89	2.40 E-8
Strontium-90	2.40 E-8
Technetium-99m	5.41 E-7
Tellurium-132	6.73 E-7
Tin-113	1.11 E-6
Tungsten-187	3.61 E-6
Yttrium-88	5.77 E-7
Zinc-65	1.43 E-6
Zirconium-95	5.59 E-7
Zirconium-97	7.49 E-7
Tritium	2.00 E-5
Iodine-131	8.19 E-7
Iodine-133	1.04 E-6
Iodine-135	1.75 E-6
Argon-41	1.49 E-6
Krypton-85m	6.74 E-7
Xenon-131m	2.54 E-5
Xenon-133m	5.74 E-6
Xenon-133	2.40 E-6
Xenon-135m	1.35 E-4
Xenon-135	6.72 E-7

TABLE 2D

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1983)
LIQUID EFFLUENT-RADIATION DOSES AT THE SITE BOUNDARY

	Unit	First Quarter	Second Quarter
A. 1. Total body dose	mrem	2.86 E-2	1.09 E-2
2. Percent Technical Specification Limit	%	1.91 E+0	1.27 E-1
B. 1. Limiting organ dose	mrem	6.73 E-1	2.74 E-1
2. Percent Technical Specification Limit	%	1.35 E+1	5.48 E+0

NOTE: The limiting organ for this reporting period is GI-LLI.

SECTION D. RADWASTE SHIPMENTS

Table 3

Effluent and Waste Disposal Semiannual Report (1983)

Solid Waste and Irradiated Fuel Shipments

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not irradiated fuel)

1. <u>Type of Waste</u>	<u>Unit</u>	<u>Six-Month Period</u>	<u>Estimated Total Error, %</u>
a. Spent resins	m ³ Ci	0.00 E + 0 0.00 E + 0	3.00 E + 1
b. Dry compressible waste, contaminated equipment, etc.	m ³ Ci	3.63 E + 1 * 4.67 E - 1	3.00 E + 1
c. Irradiated components, control rods, etc.	m ³ Ci	0.00 E + 0 0.00 E + 0	3.00 E + 1
d. Other (biological wastes, filters)	m ³ Ci	2.40 E + 1 ** 3.20 E - 2	3.00 E + 1

*Material shipped in 55 gal. D.O.T. 7A Type A Drums (7.5 ft³ ea.) and steel boxes (strong tight containers - 98 ft³ ea.)

**Material shipped in 55 gal. D.O.T. 7A Type A Drums (7.5 ft³ ea.)

SECTION D. RADWASTE SHIPMENTS (Continued)

2. Estimate of major nuclide composition (by type of waste)

a. Not Applicable	%	0.00 E + 0
b. chromium - 51	%	4.60 E + 1
manganese - 54	%	2.00 E + 0
cobalt - 58	%	4.80 E + 1
cobalt - 60	%	4.00 E + 0
c. Not Applicable	%	0.00 E + 0
d. chromium - 51	%	4.60 E + 1
cobalt - 58	%	4.80 E + 1
cobalt - 60	%	4.00 E + 0
manganese - 54	%	2.00 E + 0

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
2	Truck	Richland, Wash.

B. IRRADIATED FUEL SHIPMENTS (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
None	N/A	N/A

SECTION E. TECHNICAL SPECIFICATION LIMITS

The intent of Units 2/3 Technical Specifications limits concentrations in unrestricted areas such that the following condition is met on both gaseous and liquid effluents:

$$\sum_i C_i / MPC_i \leq 1 \text{ for concentrations}$$

averaged over a year.

Liquid Effluents

Averaged over a year, a radioactivity release shall not result in concentrations at the point of discharge such that the following condition is exceeded.

$$\sum_i C_i / MPC_i \leq 1$$

Where: C_i = Concentration of radionuclide i in the circulating water discharge at the point of release to unrestricted areas; in $\mu\text{Ci/ml}$.

MPC_i = Maximum Permissible Concentration of radionuclide i , as defined in 10 CFR 20, Appendix B, Table II, Column 2; in $\mu\text{Ci/ml}$.

The percent of Technical Specification Limit averaged over a year shall be determined by calculation of the following parameter:

$$\frac{1 \text{ E}+6}{V_T} \sum_i \frac{A_i}{MPC_i} \times 100\%$$

Where: A_i = Activity of radionuclide i released over a year; in Ci.

V_T = Total volume of liquid effluent released to the unrestricted area during the year; in ml.

V_T = $V_{DW} + V_{LW}$

V_{DW} = Total volume of dilution water used to dilute liquid waste during the year; in ml.

V_{LW} = Total volume of liquid waste released prior to dilution; in ml.

MPC_i = As defined above.

SECTION E. TECHNICAL SPECIFICATION LIMITS
(Continued)

Gaseous Effluents

Averaged over a year, radioactivity released shall not result in concentrations of radioactivity in unrestricted areas such that the following condition is exceeded:

$$\sum_i C_i / MPC_i \leq 1$$

Where: C_i = Concentration of radionuclide i at the unrestricted area.
 MPC_i = Maximum permissible concentrations of radionuclide i as defined in 10 CFR 20, Appendix B, Table II, Column 1, in $\mu\text{Ci/cc}$.

The percent of Technical Specification Limit averaged over a year shall be determined by calculation of the following parameter:

$$(2.40\text{E-}5 \sum_i Q_i / MPC_i) \times 100\%$$

Where: $2.40\text{E-}5$ = Atmospheric dispersion factor, in $\frac{\text{sec}}{\text{m}^3}$
 Q_i = Release rate of nuclide i averaged over a year; in Ci/sec .
 MPC_i = As defined above.

SECTION F. ESTIMATION OF ERROR

Estimation of the error in reported values of gaseous and liquid effluent releases have been determined. Sources of error considered for gaseous effluents-batch releases are: (1) tank volumes, (2) sampling errors, (3) counting errors, and (4) calibration errors. Sources of error for gaseous effluents - continuous release are: (1) fan flow rate error, (2) sampling error, (3) counting errors, (4) calibration errors, and (5) differential pressure drop error.

Sources of error for liquid effluents - batch releases are: (1) tank volumes, (2) dilution water flow rate, (3) sampling errors, (4) counting error, and (5) calibration errors. These sources of error are independent; and, thus, the total error is calculated according to the following formula:

$$\text{Total Error} = \sqrt{\sigma_1^2 + \sigma_2^2 + \sigma_3^2 + \dots + \sigma_i^2}$$

Where: σ_i = Error associated with each component.

SECTION G. METEOROLOGY

The meteorology of the SONGS-2/3 site for January-June 1983, is described in this section. Meteorological measurements have been made according to the guidance set forth in USNRC Regulatory Guide 1.23, "Onsite Meteorological Programs." A summary report of the meteorological measurements taken during each calendar quarter are presented in Tables 3A and 3B as joint frequency distribution (JFD) of wind direction and wind speed by atmospheric stability class.

Hourly meteorological data for batch releases have been recorded for the periods of actual release. This data is available, as well as the hourly data for this reporting period, but are not included here because of the bulk of data recorded.

Tables 3A and 3B list the joint frequency distribution for the first half of the year of 1983. Each page of tables represents the data that is classified as stability class A, B, C, D, E, F, and G; and the last page of each table is the JFD with all stability classes combined. Each page is divided into two parts; the upper part lists the number of hourly periods when each meteorology condition occurred, and the lower part of each page lists the frequency of each classification by percent. The wind speeds have been measured at the 10 meter level, and the stability classes are defined by the temperature differential between the 10 and 40 meter levels.

Stability Class A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
181 QUARTER, 1983
CAMEL AND MOORE JOB NO - 00377-082-09
DATA PERIOD- 01/01/83 TO 03/31/83
STABILITY CLASS BAA (10-40 METERS)
WINDS AT 10 METER LEVEL

[illegible][illegible]

Table 3A JFD's First Quarter 1983

Stability Class B

23-JUL-83

SOUTHERN CALIFORNIA EDISON COMPANY
 SAN DIEGO NUCLEAR GENERATING STATION
 1ST QUARTER, 1983
 DABE AND MOORE JOB NO - 00377-002-09
 DATA PERIOD - 01/83 TO 03/31/83
 STABILITY CLASS B (10-40 METER B)
 WINDS AT 10 METER LEVEL

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN NUMBER OF OCCURRENCES)											MEAN SPEED	
	UPPER CLASS INTERVALS OF WIND SPEED (MPH)												
	1	2	3	4	5	6	7	8	9	10	11		TOTAL
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
E	0	0	0	0	0	0	0	0	0	0	0	0	0.00
ESE	0	0	0	0	0	0	0	0	0	0	0	1	17.70
ESE	0	0	0	0	0	0	0	0	0	0	0	1	17.70
SE	0	0	0	0	0	0	0	0	0	0	0	1	8.84
SSE	0	0	0	0	0	0	1	2	0	1	1	2	8.84
S	0	0	0	1	0	0	1	0	0	0	0	2	5.30
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0.00
SW	0	0	0	0	0	0	0	0	0	0	0	0	0.00
WSW	0	0	1	1	0	0	0	0	0	0	0	2	3.05
W	0	0	0	0	2	0	0	0	0	0	0	2	4.10
WNW	0	0	0	0	1	0	0	0	0	0	0	1	4.80
WNW	0	0	0	0	0	1	0	2	0	0	0	3	7.13
N	0	0	0	0	0	0	0	0	0	0	0	0	0.00
N	0	0	0	0	0	0	0	0	0	0	0	0	0.00
N	0	0	0	0	0	0	0	0	0	0	0	0	0.00
N	0	0	0	0	0	0	0	0	0	0	0	0	0.00
VARIABLE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
CALM	0	0	1	2	3	0	3	4	0	1	2	14	7.07
TOTAL	0	0	1	2	3	0	3	4	0	1	2	14	7.07

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN PERCENT OF TOTAL)											MEAN SPEED
	UPPER CLASS INTERVALS OF WIND SPEED (MPH)											
	1	2	3	4	5	6	7	8	9	10	11	
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ENE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
W	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VARIABLE												
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
 TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 1947

Table 3A JFD's First Quarter 1983

Stability Class C

29-JUL-83

SOUTHERN CALIFORNIA EDISON COMPANY
 SAN GABRIEL NUCLEAR GENERATING STATION
 1ST QUARTER, 1983
 DATES AND MOORE JOB NO. - 00377-082-04
 DATA PERIOD - 01/01/83 TO 03/31/83
 STABILITY CLASS #C# (10-40 METERS)
 WINDG AT 10 METER LEVEL

WIND DIRECTION		WIND FREQUENCY DISTRIBUTION (FREQUENCY IN NUMBER OF OCCURRENCES)											TOTAL	MEAN SPEED
		1	2	3	4	5	6	7	8	9	10	11	>11	
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	11.80
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	16.95
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	12.37
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	9.81
S	0	0	0	0	0	0	0	0	0	0	0	0	0	6.09
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	3.40
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	2.03
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	7.03
W	0	0	0	0	0	0	0	0	0	0	0	0	0	3.72
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	9.80
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	7.44
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	3.70
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
VARIABLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	6.17

WIND DIRECTION		WIND FREQUENCY DISTRIBUTION (FREQUENCY IN PERCENT OF TOTAL)											TOTAL	MEAN SPEED
		1	2	3	4	5	6	7	8	9	10	11	>11	
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.80
ENE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.95
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.37
SSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.81
S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.09
SSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.40
SW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
WSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.03
W	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.72
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.80
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
NNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.70
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VARIABLE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.17

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
 TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 1947

Table 3A JFD's First Quarter 1983

Stability Class D

25-JAN-83

SOUTHERN CALIFORNIA EDISON COMPANY
 SAN DIEGO NUCLEAR GENERATING STATION
 1ST QUARTER, 1983
 DATA AND MOORE JOB NO - 00377-082-09
 DATA PERIOD- 01/01/83 TO 03/31/83
 STABILITY CLASS D& (10-40 METERS)
 WINDS AT 10 METER LEVEL

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH)											TOTAL	MEAN SPEED
	1	2	3	4	5	6	7	8	9	10	11	>11	
NNE	0	1	2	1	5	1	0	0	0	0	0	0	3 83
NNE	0	1	0	0	0	0	0	0	0	0	0	2	9 60
ENE	0	0	0	0	0	0	0	0	0	0	0	0	7 80
E	0	0	0	0	1	1	0	0	0	0	0	0	6 63
ESE	0	1	1	0	0	4	4	0	2	2	1	12	27 10 87
ESE	0	0	1	0	2	3	8	7	7	9	4	22	61 10 85
ESE	0	0	1	0	2	2	10	1	1	1	2	26	31 10 95
SSE	0	0	1	5	2	2	10	1	1	0	0	27	40 12 13
S	0	0	1	4	3	2	4	2	2	0	0	15	31 11 17
SSW	0	0	0	4	1	1	4	2	1	1	0	13	10 20
SSW	0	0	3	3	3	2	3	1	1	1	2	13	34 8 70
WSW	0	2	0	2	3	7	3	3	2	2	19	30	50 9 88
W	0	0	4	11	2	5	2	1	1	3	2	3	28 7 78
WNW	0	0	1	3	4	3	1	2	5	2	0	6	36 7 41
WNW	0	1	0	2	3	7	4	3	4	3	0	2	12 7 63
NNW	0	0	0	3	2	1	2	0	0	1	0	0	4 77
N	0	0	1	1	1	2	0	0	0	0	0	0	0 00
VARIABLE	0	0	1	1	1	1	2	0	0	0	0	0	0 00
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0 00
TOTAL	0	4	15	41	37	44	47	26	26	21	16	162	441

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH)											TOTAL	MEAN SPEED
	1	2	3	4	5	6	7	8	9	10	11	>11	
NNE	0.00	0.03	0.10	0.03	0.26	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71
NNE	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.13
ENE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
E	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.13
ESE	0.00	0.03	0.03	0.00	0.00	0.21	0.21	0.00	0.10	0.10	0.03	0.62	1.39
ESE	0.00	0.03	0.03	0.00	0.10	0.26	0.41	0.36	0.26	0.26	0.21	1.13	3.13
ESE	0.00	0.03	0.03	0.00	0.10	0.26	0.10	0.31	0.03	0.03	0.10	1.34	2.62
SSE	0.00	0.00	0.03	0.26	0.10	0.10	0.10	0.21	0.10	0.13	0.00	1.39	2.31
S	0.00	0.00	0.03	0.26	0.10	0.10	0.21	0.10	0.13	0.03	0.00	0.77	1.59
SSW	0.00	0.00	0.03	0.31	0.03	0.15	0.10	0.03	0.03	0.03	0.10	0.67	1.75
SSW	0.00	0.00	0.15	0.26	0.13	0.13	0.10	0.03	0.03	0.10	0.03	0.67	1.75
WSW	0.00	0.10	0.00	0.10	0.26	0.36	0.26	0.26	0.10	0.03	0.10	0.98	2.21
W	0.00	0.00	0.21	0.26	0.10	0.26	0.10	0.03	0.03	0.13	0.10	0.26	1.44
WNW	0.00	0.00	0.03	0.13	0.21	0.13	0.03	0.10	0.26	0.10	0.10	0.31	1.93
WNW	0.00	0.03	0.00	0.10	0.26	0.36	0.21	0.10	0.21	0.26	0.00	0.10	0.62
NNW	0.00	0.00	0.00	0.03	0.15	0.10	0.03	0.10	0.00	0.03	0.00	0.10	0.31
N	0.00	0.00	0.03	0.03	0.03	0.03	0.10	0.00	0.00	0.00	0.00	0.00	0.00
VARIABLE	0.00	0.00	0.03	0.03	0.03	0.03	0.10	0.00	0.00	0.00	0.00	0.00	0.00
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	0.00	0.31	0.77	2.11	1.90	2.26	2.41	1.34	1.34	1.08	0.82	8.32	22.63

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
 TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 1947

Table 3A JFD's First Quarter 1983

Stability Class E

23-JUL-83

SOUTHERN CALIFORNIA Edison COMPANY
 SAN DIEGO NUCLEAR GENERATING STATION
 1ST QUARTER, 1983
 DATES AND HOURS: J08 NO - 00377-082-09
 DATA PERIOD: 01/01/83 TO 03/31/83
 STABILITY CLASS: #68 (10-40 METERS)
 WINDS AT 10 METER LEVEL

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0	3	4	11	8	7	15	4	2	0	0	0	54	3.10
NNE	0	0	2	2	3	0	0	0	0	0	0	0	8	3.00
NNE	0	1	1	2	2	3	0	0	0	0	0	0	12	6.82
E	0	0	3	5	0	1	0	2	0	0	0	0	11	4.35
ESE	0	0	1	2	2	2	0	1	0	0	0	0	9	6.81
ESE	0	0	1	5	3	5	2	1	2	0	1	17	37	10.36
ESE	0	1	3	2	2	3	0	1	0	0	0	10	23	13.19
SSE	0	0	1	2	2	0	0	1	0	0	0	0	9	10.24
SSE	0	0	1	2	2	0	0	1	0	0	0	0	4	4.60
SSE	0	0	1	2	2	0	1	1	0	0	0	0	15	8.52
SSE	0	1	3	3	2	0	1	1	0	0	0	0	15	4.84
SSE	0	0	0	3	2	0	1	1	0	0	0	0	5	4.84
SSE	0	0	0	4	2	2	1	4	2	0	2	11	30	8.94
SSE	0	0	0	4	1	1	3	5	3	3	1	8	30	8.48
SSE	0	0	0	2	4	0	1	3	3	0	0	2	18	7.16
SSE	0	0	0	0	0	2	3	3	0	0	0	0	12	4.18
SSE	0	0	0	3	3	0	1	1	0	0	0	0	32	4.52
SSE	0	0	0	4	8	4	4	3	1	0	0	0	0	0.00
VARIABLE	0	2	4	8	4	4	4	3	1	0	0	0	0	0.00
CALM	0	8	36	34	38	35	32	27	15	4	4	59	312	7.56
TOTAL	0	8	36	34	38	35	32	27	15	4	4	59	312	7.56

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.15	0.21	0.56	0.41	0.36	0.77	0.21	0.10	0.00	0.00	0.00	2.77	3.10
NNE	0.00	0.00	0.10	0.10	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	3.00
NNE	0.00	0.03	0.03	0.10	0.10	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.62	6.82
E	0.00	0.00	0.13	0.26	0.00	0.03	0.00	0.10	0.00	0.00	0.00	0.00	0.56	4.35
ESE	0.00	0.00	0.03	0.10	0.10	0.10	0.00	0.03	0.10	0.00	0.00	0.00	0.46	6.81
ESE	0.00	0.00	0.03	0.26	0.15	0.26	0.10	0.03	0.10	0.00	0.00	0.00	1.90	10.36
ESE	0.00	0.03	0.15	0.10	0.10	0.15	0.00	0.03	0.03	0.00	0.00	0.00	1.18	13.19
SSE	0.00	0.00	0.03	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	10.24
SSE	0.00	0.00	0.03	0.10	0.10	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.31	4.40
SSE	0.00	0.00	0.10	0.03	0.03	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.77	8.52
SSE	0.00	0.03	0.15	0.15	0.10	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.50	4.84
SSE	0.00	0.00	0.00	0.00	0.15	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.26	8.94
SSE	0.00	0.00	0.21	0.03	0.10	0.15	0.03	0.21	0.10	0.00	0.10	0.00	1.34	8.48
SSE	0.00	0.00	0.10	0.21	0.00	0.03	0.15	0.26	0.15	0.00	0.00	0.00	0.41	7.16
SSE	0.00	0.00	0.00	0.00	0.10	0.10	0.26	0.15	0.15	0.00	0.00	0.00	0.92	4.18
SSE	0.00	0.00	0.15	0.15	0.26	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.67	4.52
SSE	0.00	0.00	0.31	0.41	0.21	0.21	0.21	0.15	0.03	0.00	0.00	0.00	1.64	4.52
VARIABLE	0.00	0.10	0.31	0.41	0.21	0.21	0.21	0.15	0.03	0.00	0.00	0.00	0.00	0.00
CALM	0.00	0.41	1.85	2.77	1.93	1.80	1.64	1.39	0.77	0.21	0.21	3.03	16.02	7.56
TOTAL	0.00	0.41	1.85	2.77	1.93	1.80	1.64	1.39	0.77	0.21	0.21	3.03	16.02	7.56

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
 TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 1947

Table 3A JFD's First Quarter 1983

Stability Class F

25-JUL-83

SOUTHERN CALIFORNIA Edison COMPANY
 SAN ONOFRE NUCLEAR GENERATING STATION
 1ST QUARTER, 1983
 DAVIS AND MOORE JOB NO. - 00377-282-09
 DATA PERIOD- 01/01/83 TO 03/31/83
 STABILITY CLASS #8 (10-40 METERS)
 WINDS AT 10 METER LEVEL

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN NUMBER OF OCCURRENCES)											MEAN SPEED
	1	2	3	4	5	6	7	8	9	10	11	TOTAL
NNE	0	1	4	14	25	39	19	13	6	7	1	130
NNE	0	0	3	10	10	2	0	1	1	0	0	35
ENE	0	2	3	1	4	0	0	0	1	0	1	12
E	0	0	3	1	0	1	0	0	0	0	0	5
ESE	0	0	1	0	0	0	0	0	0	0	0	1
SE	0	0	2	2	5	4	5	1	0	1	0	21
SSE	0	0	4	4	3	2	0	0	0	0	0	13
S	0	0	0	3	2	1	0	0	0	0	0	6
SSW	0	0	0	0	3	0	1	1	1	0	0	6
SW	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	1	0	2	0	0	0	0	0	0	3
WNW	0	0	2	2	2	0	0	0	0	0	0	6
NW	0	0	0	1	1	0	0	0	0	0	0	2
NNW	0	0	1	2	0	0	1	2	0	0	0	6
N	0	0	0	4	5	6	3	4	1	1	0	24
VARIABLE	0	0	0	0	0	0	0	0	0	0	0	0
CALM	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	3	26	52	62	56	29	21	13	9	3	275

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN PERCENT OF TOTAL)											MEAN SPEED
	1	2	3	4	5	6	7	8	9	10	11	TOTAL
NNE	0.00	0.03	0.21	0.72	1.28	2.00	0.98	0.67	0.31	0.36	0.03	6.68
NNE	0.00	0.00	0.26	0.82	0.31	0.10	0.00	0.03	0.03	0.00	0.00	4.13
ENE	0.00	0.10	0.15	0.03	0.21	0.00	0.00	0.00	0.03	0.00	0.03	1.80
E	0.00	0.00	0.15	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.62
ESE	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
SE	0.00	0.00	0.10	0.10	0.24	0.21	0.26	0.03	0.00	0.03	0.00	2.60
SSE	0.00	0.00	0.21	0.13	0.13	0.10	0.00	0.00	0.00	0.03	0.00	1.08
S	0.00	0.00	0.00	0.26	0.13	0.00	0.03	0.03	0.00	0.00	0.00	0.41
SSW	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.31
SW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
WSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
W	0.00	0.00	0.03	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.13
WNW	0.00	0.00	0.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.31
NW	0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.13
NNW	0.00	0.00	0.03	0.10	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.27
N	0.00	0.00	0.00	0.10	0.00	0.03	0.15	0.21	0.03	0.03	0.00	1.23
VARIABLE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	0.00	0.13	1.34	2.67	3.18	2.88	1.49	1.08	0.67	0.46	0.13	14.12

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
 TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 1947

Table 3A JFD's First Quarter 1983

Stability Class G

25-JUL-83

SOUTHERN CALIFORNIA EDISON COMPANY
 SAN ONOFRE NUCLEAR GENERATING STATION
 1ST QUARTER, 1983
 DAMES AND MOORE JOB NO - 00377-002-09
 DATA PERIOD- 01/01/83 TO 03/31/83
 STABILITY CLASS #00 (10-40 METERS)
 WINDS AT 10 METER LEVEL

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN NUMBER OF OCCURRENCES)											MEAN SPEED
	1	2	3	4	5	6	7	8	9	10	11	TOTAL
NNE	0	0	1	5	8	18	39	44	34	52	34	282
NNE	0	0	1	4	3	3	4	1	1	1	0	19
ENE	0	0	0	1	0	2	0	0	0	0	0	3
E	0	0	0	1	0	0	0	0	0	0	0	1
ESE	0	2	2	1	0	0	0	0	0	0	0	5
SE	1	0	0	1	3	4	16	18	13	4	1	61
SSE	0	1	0	1	2	1	0	3	4	1	1	12
S	0	0	1	0	0	0	1	0	4	0	2	8
SSW	0	0	0	0	0	1	1	3	3	7	4	24
SW	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	1	0	2	0	0	0	3
WNW	0	1	0	1	2	2	1	0	2	0	0	8
NW	0	0	0	0	0	1	1	0	0	0	0	2
NNW	0	0	0	0	1	0	1	0	1	0	0	3
N	0	0	0	0	1	0	1	7	1	4	2	24
VARIABLE	0	0	0	0	1	1	5	1	1	1	1	0
CALM	1	4	5	15	23	34	68	82	79	71	46	457
TOTAL	1	4	5	15	23	34	68	82	79	71	46	457

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN PERCENT OF TOTAL)											MEAN SPEED
	1	2	3	4	5	6	7	8	9	10	11	TOTAL
NNE	0.00	0.00	0.03	0.26	0.41	0.92	2.00	2.34	2.77	2.67	1.75	14.48
NNE	0.00	0.00	0.03	0.21	0.15	0.15	0.21	0.03	0.03	0.03	0.00	3.83
ENE	0.00	0.00	0.00	0.03	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.03
E	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
ESE	0.00	0.10	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.52
SE	0.03	0.00	0.00	0.03	0.15	0.21	0.82	0.92	0.67	0.21	0.03	7.32
SSE	0.00	0.03	0.03	0.03	0.10	0.05	0.00	0.13	0.00	0.03	0.03	6.42
S	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.21	0.00	0.10	9.09
SSW	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.26	0.15	0.36	0.31	8.88
SW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.43
W	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.87
WNW	0.00	0.03	0.00	0.03	0.10	0.10	0.00	0.00	0.10	0.00	0.00	4.13
NW	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.00	3.93
NNW	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	6.67
N	0.00	0.00	0.00	0.00	0.03	0.05	0.26	0.36	0.03	0.31	0.10	12.3
VARIABLE	0.00	0.00	0.00	0.00	0.03	0.05	0.03	0.00	0.03	0.03	0.03	0.00
CALM	0.03	0.21	0.26	0.77	1.18	1.75	3.49	4.21	4.06	3.63	2.36	23.47
TOTAL	0.03	0.21	0.26	0.77	1.18	1.75	3.49	4.21	4.06	3.63	2.36	23.47

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
 TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 1947

Table 3A JFD's First Quarter 1983

Stability Class A11

23-JUL-83

SOUTHERN CALIFORNIA EDISON COMPANY
 SAN ONOFRE NUCLEAR GENERATING STATION
 1ST QUARTER, 1983
 DATES AND HOURS: J01 - 00377-082-09
 DATA PERIOD: 01/01/83 TO 03/31/83
 STABILITY CLASS ALL (10-40 METERS)
 WINDS AT 10 METER LEVEL

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN NUMBER OF OCCURRENCES)											MEAN SPEED	
	1	2	3	4	5	6	7	8	9	10	11		>11
NNE	0	5	11	32	49	64	73	63	62	59	35	26	481
NE	0	1	8	22	17	5	3	2	2	1	0	5	67
ENE	0	3	4	4	7	5	0	1	1	0	1	3	29
E	0	0	4	7	1	3	0	2	0	0	1	0	20
ESE	0	3	5	3	2	6	6	1	2	2	1	13	46
SE	1	0	4	10	13	21	32	28	23	12	7	43	194
SSE	0	2	9	13	10	12	12	11	4	4	7	42	126
S	0	0	3	17	11	10	8	10	13	2	2	32	108
SSW	0	0	2	12	8	17	16	14	11	9	6	18	113
WSW	0	1	11	16	19	17	20	13	5	2	5	18	127
W	0	2	11	26	24	24	12	6	0	2	14	44	240
WNW	0	0	10	14	21	41	23	31	18	10	14	44	240
W	0	0	11	10	11	12	13	22	9	7	4	21	121
WNW	0	1	3	11	10	14	10	6	7	8	1	8	63
NW	0	1	0	3	8	14	10	4	3	1	0	2	34
NNW	0	0	4	6	9	2	3	4	3	1	0	2	34
N	0	2	7	13	11	12	14	14	3	7	2	1	86
VARIABLE													0
CALM													0
TOTAL	1	22	91	194	222	266	269	225	182	123	90	292	1979

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN PERCENT OF TOTAL)											MEAN SPEED	
	UPPER CLASS INTERVALS OF WIND SPEED (MPH)												
	1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL
NNE	0.00	0.23	0.56	1.62	2.48	3.34	3.69	3.18	3.13	2.98	1.77	1.31	24.31
NE	0.00	0.03	0.40	1.11	0.86	0.23	0.20	0.10	0.10	0.03	0.00	0.25	3.39
ENE	0.00	0.13	0.20	0.20	0.33	0.23	0.00	0.03	0.03	0.00	0.03	0.15	1.47
E	0.00	0.00	0.30	0.35	0.03	0.13	0.00	0.10	0.00	0.00	0.03	0.00	1.01
ESE	0.00	0.13	0.23	0.15	0.10	0.30	0.30	0.03	0.10	0.10	0.03	0.76	2.32
SE	0.03	0.00	0.20	0.51	0.66	1.06	1.62	1.41	1.16	0.61	0.35	2.17	9.80
SSE	0.00	0.10	0.43	0.66	0.51	0.61	0.61	0.56	0.20	0.20	0.35	2.12	6.37
S	0.00	0.00	0.13	0.86	0.56	0.31	0.40	0.31	0.66	0.10	0.10	1.62	5.46
SSW	0.00	0.00	0.10	0.61	0.40	0.86	0.81	0.71	0.56	0.43	0.30	0.91	5.71
WSW	0.00	0.03	0.36	0.81	0.96	0.86	1.01	0.66	0.23	0.10	0.25	0.91	6.42
W	0.00	0.13	0.10	0.36	1.31	1.21	1.21	0.61	0.30	0.00	0.10	0.71	6.27
WNW	0.00	0.00	0.31	0.81	1.06	2.07	1.77	1.37	0.91	0.51	0.71	2.22	12.13
W	0.00	0.03	0.23	0.56	0.51	0.56	0.61	0.44	1.11	0.43	0.30	1.06	6.11
WNW	0.00	0.03	0.00	0.13	0.40	0.71	0.51	0.30	0.33	0.23	0.03	0.40	3.18
NW	0.00	0.00	0.00	0.13	0.13	0.40	0.13	0.20	0.13	0.03	0.00	0.10	1.72
N	0.00	0.10	0.33	0.66	0.56	0.61	0.71	0.71	0.13	0.35	0.10	0.03	4.35
VARIABLE													0.00
CALM													0.00
TOTAL	0.03	1.11	4.60	9.90	11.22	13.44	13.59	11.37	9.20	6.22	4.35	14.75	100.00

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
 TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 1947

Stability Class A

SOUTHERN CALIFORNIA Edison COMPANY
SAN DIEGO NUCLEAR GENERATING STATION
FOURTH QUARTER, 1983
DAMES AND MOORE JOB NO. 00377-082-04
DATA PERIOD- 04/01/83 TO 06/30/83
STABILITY CLASS BAR 110-40 METERS)
WINDS AT 10 METER

WIND FREQUENCY DISTRIBUTION (FREQUENCY IN PERCENT OF TOTAL)													
WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH)										TOTAL	MEAN SPEED	
	1	2	3	4	5	6	7	8	9	10			11
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ENE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.00	0.09
SE	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03	11.25
SSE	0.00	0.00	0.00	0.00	0.00	0.03	0.09	0.14	0.18	0.18	0.23	0.35	9.98
S	0.00	0.00	0.00	0.03	0.14	0.14	0.31	0.60	0.32	0.33	0.32	0.32	8.35
SSW	0.00	0.00	0.03	0.18	0.33	0.40	0.78	1.11	0.97	0.53	0.37	0.09	5.25
WSW	0.00	0.00	0.00	0.09	0.74	1.01	1.37	1.34	1.01	0.32	0.14	0.09	6.31
W	0.00	0.00	0.00	0.03	0.28	0.83	1.32	2.21	1.61	0.74	0.18	0.32	7.74
WNW	0.05	0.00	0.00	0.00	0.37	1.06	1.38	1.71	2.24	1.34	0.09	0.63	8.89
NW	0.00	0.00	0.00	0.00	0.04	0.14	0.46	0.41	0.41	0.23	0.18	0.09	2.03
NNW	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.09
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VARIABLE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	0.05	0.03	0.05	0.37	2.21	3.87	6.31	7.31	6.87	4.01	1.37	2.17	35.02

TOTAL NUMBER OF POSSIBLE OBSERVATIONS -	2184
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY -	2170

Table 3B JFD's Second Quarter 1983

Stability Class B

29-JUL-83

SOUTHERN CALIFORNIA Edison COMPANY
 SAN JOAQUIN NUCLEAR GENERATING STATION
 2ND QUARTER, 1983
 DATES AND MOORE JOB NO - 00377-082-09
 DATA PERIOD- 04/01/83 TO 06/30/83
 STABILITY CLASS B (10-40 METERS)
 WINDS AT 10 METER LEVEL

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN NUMBER OF OCCURRENCES)											MEAN SPEED	
	UPPER CLASS INTERVALS OF WIND SPEED (MPH)												
	1	2	3	4	5	6	7	8	9	10	11		TOTAL
NNE	0	0	0	0	0	1	0	0	0	0	0	1	3.40
NE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
E	0	0	0	0	0	0	0	0	0	0	0	0	0.00
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
SE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
SSE	0	0	0	0	0	0	0	0	0	0	1	2	11.35
S	0	0	0	0	0	1	0	0	3	1	2	7	8.87
SSW	0	0	0	0	0	0	1	2	1	0	0	3	8.96
SW	0	0	0	1	0	0	0	0	1	0	0	3	3.60
WSW	0	0	1	1	0	0	0	0	0	1	0	3	4.57
W	0	0	0	2	2	2	0	0	0	0	0	6	3.03
WNW	0	0	0	2	3	1	0	2	0	1	2	11	6.91
W	0	0	0	2	3	1	0	2	1	0	0	7	3.87
WNW	0	0	0	0	0	2	0	0	0	0	0	1	4.90
W	0	0	0	0	1	2	0	0	1	0	0	1	5.20
WNW	0	0	0	0	0	1	0	0	0	0	0	0	0.00
N	0	0	0	0	0	0	0	0	0	0	0	0	0.00
VARIABLE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
CALM	0	0	1	7	10	9	3	5	5	2	4	4	52
TOTAL	0	0	1	7	10	9	3	5	5	2	4	4	52

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN PERCENT OF TOTAL)											MEAN SPEED		
	UPPER CLASS INTERVALS OF WIND SPEED (MPH)													
	1	2	3	4	5	6	7	8	9	10	11		>11	TOTAL
NNE	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.03	5.40
NE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ENE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.09	11.35
SSE	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.14	0.03	0.09	0.00	0.32	8.87
S	0.00	0.00	0.00	0.00	0.09	0.03	0.00	0.09	0.05	0.00	0.00	0.14	0.41	8.96
SSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.14	5.60
SW	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	4.37	4.37
WSW	0.00	0.00	0.00	0.09	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.18	3.03	3.03
W	0.00	0.00	0.00	0.09	0.00	0.03	0.00	0.03	0.00	0.00	0.03	0.09	0.51	6.91
WNW	0.00	0.00	0.00	0.09	0.14	0.03	0.00	0.09	0.00	0.00	0.00	0.32	3.87	3.87
W	0.00	0.00	0.00	0.00	0.09	0.09	0.09	0.00	0.03	0.00	0.00	0.03	4.90	4.90
WNW	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.03	5.20	5.20
NW	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VARIABLE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CALM	0.00	0.00	0.00	0.32	0.46	0.41	0.14	0.23	0.23	0.09	0.18	0.98	2.40	6.97

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
 TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2170

Table 3B JFD's Second Quarter 1983

Stability Class C

25-JUL-83

SOUTHERN CALIFORNIA Edison COMPANY
 SAN ONOFRE NUCLEAR GENERATING STATION
 2ND QUARTER, 1983
 DAVIS AND MOORE JOB NO - 00377-082-04
 DATA PERIOD- 04/01/83 TO 06/30/83
 STABILITY CLASS C8 (10-40 METERS)
 WINDS AT 10 METER LEVEL

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN NUMBER OF OCCURRENCES)											MEAN SPEED
	1	2	3	4	5	6	7	8	9	10	11	TOTAL
NNE	0	0	0	0	0	0	0	0	0	0	0	0.00
NE	0	0	0	0	0	0	0	0	0	0	0	0.00
ENE	0	0	0	0	0	0	0	0	0	0	0	0.00
E	0	0	0	0	0	0	0	0	0	0	0	0.00
ESE	0	0	0	0	0	0	0	0	0	0	0	0.00
SE	0	0	0	0	0	0	0	0	0	0	0	0.00
SSE	0	0	0	0	0	0	0	0	0	0	0	0.00
S	0	0	0	0	0	0	0	0	0	0	0	0.00
SSW	0	0	0	0	0	0	0	0	0	0	0	0.00
SW	0	0	0	0	0	0	0	0	0	0	0	0.00
WSW	0	0	0	0	0	0	0	0	0	0	0	0.00
W	0	0	0	0	0	0	0	0	0	0	0	0.00
WNW	0	0	0	0	0	0	0	0	0	0	0	0.00
NW	0	0	0	0	0	0	0	0	0	0	0	0.00
NNW	0	0	0	0	0	0	0	0	0	0	0	0.00
N	0	0	0	0	0	0	0	0	0	0	0	0.00
VARIABLE	0	0	0	0	0	0	0	0	0	0	0	0.00
CALM	0	0	0	0	0	0	0	0	0	0	0	0.00
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0.00

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN PERCENT OF TOTAL)											MEAN SPEED
	1	2	3	4	5	6	7	8	9	10	11	TOTAL
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ENE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
W	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VARIABLE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
 TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2170

Table 3B JFD's Second Quarter 1983

Stability Class D

25-JUL-83

SOUTHERN CALIFORNIA Edison COMPANY
 SAN JOHNS NUCLEAR GENERATING STATION
 2ND QUARTER, 1983
 DAVIS AND MOORE, JOE MD - 00377-082-09
 DATA PERIOD- 04/01/83 TO 06/30/83
 STABILITY CLASS SD8 (10-40 METERS)
 WINDS AT 10 METER LEVEL

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN NUMBER OF OCCURRENCES)													TOTAL	MEAN SPEED
	UPPER CLASS INTERVALS OF WIND SPEED (MPH)														
	1	2	3	4	5	6	7	8	9	10	11	>11			
NNE	0	0	7	14	15	11	5	3	0	0	0	0	57	4.72	
N	0	0	2	1	3	4	0	0	0	0	0	0	10	4.43	
NNE	0	0	2	4	3	2	0	0	0	0	0	0	11	4.03	
E	0	0	1	2	3	7	8	0	0	0	0	0	21	5.49	
ESE	0	0	0	3	11	9	7	8	0	0	1	3	42	6.38	
E	0	0	0	0	2	16	18	10	12	4	6	102	7.23		
ESE	0	0	0	2	11	14	23	15	11	5	7	16	111	7.39	
E	0	0	4	10	21	13	13	7	3	2	2	6	84	6.04	
ESE	0	1	2	5	8	9	13	7	3	2	2	4	58	6.90	
S	0	0	4	3	6	6	10	4	3	1	2	4	43	6.15	
SSE	0	0	0	3	4	5	5	6	2	0	2	4	43	6.07	
SSW	0	0	1	5	10	2	3	3	1	1	0	7	50	5.62	
WSW	0	0	0	9	17	4	3	3	1	1	0	2	54	5.68	
W	0	0	0	3	14	10	4	3	1	3	3	1	42	5.58	
WSW	0	0	0	4	11	5	4	6	2	1	0	0	34	4.66	
W	0	0	0	1	7	4	4	3	0	0	0	0	24	3.93	
W	0	0	4	12	4	2	2	0	0	0	0	0	0	0.00	
VARIABLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	
CALM	0	3	54	124	130	124	108	79	40	29	23	53	771	6.15	
TOTAL	0	3	54	124	130	124	108	79	40	29	23	53	771	6.15	

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN PERCENT OF TOTAL)											TOTAL	MEAN SPEED	
	UPPER CLASS INTERVALS OF WIND SPEED (MPH)													
	1	2	3	4	5	6	7	8	9	10	11	>11		
NNE	0.00	0.00	0.32	0.65	0.69	0.51	0.23	0.23	0.00	0.00	0.00	0.00	2.63	4.72
N	0.00	0.00	0.09	0.03	0.14	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.46	4.43
NNE	0.00	0.00	0.09	0.18	0.14	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.51	4.03
E	0.00	0.00	0.05	0.09	0.14	0.32	0.37	0.00	0.00	0.00	0.00	0.00	0.97	5.49
ESE	0.00	0.00	0.00	0.14	0.31	0.41	0.32	0.37	0.00	0.00	0.00	0.14	1.94	6.38
E	0.00	0.00	0.00	0.00	0.74	0.83	0.74	0.83	0.46	0.35	0.18	0.28	4.70	7.23
ESE	0.00	0.00	0.09	0.31	0.65	1.06	0.69	0.51	0.23	0.32	0.28	0.74	5.12	7.39
E	0.00	0.00	0.09	0.31	0.65	1.06	0.69	0.51	0.23	0.32	0.28	0.74	5.12	7.39
ESE	0.00	0.00	0.09	0.31	0.65	1.06	0.69	0.51	0.23	0.32	0.28	0.74	5.12	7.39
S	0.00	0.00	0.18	0.46	0.97	0.60	0.60	0.32	0.14	0.09	0.09	0.28	2.67	6.90
SSE	0.00	0.00	0.09	0.23	0.37	0.41	0.60	0.32	0.14	0.05	0.09	0.18	1.98	6.15
SSW	0.00	0.00	0.28	0.14	0.28	0.28	0.46	0.18	0.14	0.05	0.09	0.18	1.98	6.15
WSW	0.00	0.00	0.23	0.46	0.14	0.23	0.23	0.28	0.09	0.00	0.00	0.32	2.30	5.62
W	0.00	0.00	0.41	0.78	0.18	0.14	0.23	0.08	0.41	0.14	0.05	0.09	2.44	5.58
WSW	0.00	0.00	0.23	0.65	0.46	0.18	0.23	0.08	0.41	0.14	0.05	0.09	2.44	5.58
W	0.00	0.00	0.28	0.51	0.23	0.18	0.28	0.09	0.05	0.00	0.00	0.00	0.88	4.66
W	0.00	0.00	0.03	0.32	0.18	0.18	0.00	0.14	0.00	0.00	0.00	0.00	1.11	3.93
VARIABLE	0.00	0.00	0.18	0.35	0.18	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	0.00	0.14	2.58	5.81	5.99	5.71	4.98	3.64	1.84	1.34	1.06	2.44	35.53	6.15

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
 TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2170

Table 3B JFD's Second Quarter 1983

Stability Class E

25-JUL-83

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
2ND QUARTER, 1983
DAMES AND MOORE JOB NO. - 00377-082-09
DATA PERIOD- 04/01/83 TO 06/30/83
STABILITY CLASS #6 (10-40 METERS)
WINDS AT 10 METER LEVEL

WIND FREQUENCY DISTRIBUTION (FREQUENCY IN NUMBER OF OCCURRENCES)														
WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH)										TOTAL	MEAN SPEED		
	1	2	3	4	5	6	7	8	9	10			11	12
NNE	0	0	7	20	7	13	10	4	3	1	0	0	67	5.10
NNE	0	0	0	1	1	1	0	0	0	0	0	0	3	4.30
ENE	0	0	1	3	2	0	0	0	0	0	0	0	6	3.70
E	0	0	2	3	1	1	2	0	0	0	0	0	9	4.32
ENE	0	0	1	0	2	4	2	1	0	0	0	0	10	3.04
ESE	0	0	0	3	1	5	2	1	0	0	0	1	13	3.32
SSE	0	0	2	0	1	0	0	1	0	0	0	0	5	3.72
S	0	0	2	1	0	1	0	0	0	0	0	0	4	0.00
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
SSW	0	1	2	3	0	0	0	0	1	1	0	0	7	3.63
WSW	0	0	0	0	1	0	0	1	0	0	0	1	2	8.75
W	0	0	0	0	0	1	0	0	0	0	1	0	2	7.60
WNW	0	0	0	0	1	0	2	1	0	1	1	1	6	6.45
NW	0	2	0	1	1	1	3	1	1	1	1	1	13	5.62
NNW	0	1	0	1	0	2	4	0	0	1	0	0	9	5.75
N	0	0	4	7	5	9	2	3	0	0	0	0	30	0.00
VARIABLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
TOTAL	0	4	22	43	24	36	27	14	6	5	2	2	188	5.22

[illegible]

TOTAL NUMBER OF POSSIBLE OBSERVATIONS -	2184
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY -	2170

Table 3B JFD's Second Quarter 1983

Stability Class F

25-JUL-83

SOUTHERN CALIFORNIA EDISON COMPANY
 SAN ONOFRE NUCLEAR GENERATING STATION
 2ND QUARTER, 1983
 DATES AND MOORE JOB NO - 00377-002-04
 DATA PERIOD- 04/01/83 TO 06/30/83
 STABILITY CLASS #F (10-40 METERS)
 WINDS AT 10 METER LEVEL

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN NUMBER OF OCCURRENCE)											MEAN SPEED
	1	2	3	4	5	6	7	8	9	10	11	TOTAL
NNE	0	0	2	12	20	24	22	11	5	0	0	98
NE	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	2	0	0	0	0	0	0	0	2
E	0	0	1	0	0	0	0	0	0	0	0	1
ESE	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	1	1	3	3	1	3	0	0	11
SSE	0	0	2	2	1	3	1	0	0	0	0	13
S	0	0	0	1	0	2	0	0	0	0	0	4
SSW	0	0	0	0	0	1	0	0	0	0	0	1
SW	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0
VARIABLE	0	0	0	0	0	0	0	0	0	0	0	0
CALM	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	5	20	24	36	29	14	8	1	0	137

WIND DIRECTION	WIND FREQUENCY DISTRIBUTION (FREQUENCY IN PERCENT OF TOTAL)											MEAN SPEED
	1	2	3	4	5	6	7	8	9	10	11	TOTAL
NNE	0.00	0.00	0.04	0.23	0.24	0.20	0.10	0.31	0.23	0.00	0.00	4.52
NE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ENE	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
E	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
ESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SE	0.00	0.00	0.00	0.03	0.03	0.14	0.14	0.00	0.00	0.00	0.00	0.31
SSE	0.00	0.00	0.04	0.04	0.03	0.14	0.03	0.14	0.00	0.00	0.00	0.60
S	0.00	0.00	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.18
SSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
SW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
W	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
W	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VARIABLE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CALM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	0.00	0.00	0.23	0.92	1.11	1.66	1.34	0.63	0.37	0.05	0.00	6.31

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
 TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2170

Table 3B JFD's Second Quarter 1983

Stability Class 6

29-AUG-83

SOUTHERN CALIFORNIA EDISON COMPANY
SAN DIEGO NUCLEAR GENERATING STATION
2ND QUARTER, 1983
DAMES AND MOORE JOB NO. - 00277-082-09
DATA PERIOD- 04/01/83 TO 06/30/83
STABILITY CLASS 808 (10-40 METERS)
WINDS AT 10 METER LEVEL

WIND FREQUENCY DISTRIBUTION (FREQUENCY IN NUMBER OF OCCURRENCES)													
WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH)										TOTAL	MEAN SPEED	
	1	2	3	4	5	6	7	8	9	10			11
N	0	0	0	0	3	7	31	42	30	23	7	1	144
NE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
E	0	0	0	1	0	0	0	0	0	0	0	0	3.00
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
SE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
SSE	0	0	1	2	1	1	1	1	3	4	0	2	8.93
S	0	0	1	0	0	0	1	0	1	0	0	1	7.37
SSW	0	0	0	0	0	0	1	0	0	0	0	0	6.13
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0.00
W	0	0	0	0	0	0	0	0	0	0	0	0	0.00
WNW	0	0	0	0	1	0	0	0	0	0	0	0	1.470
NW	0	0	0	1	0	1	0	0	0	0	0	0	4.79
NNW	0	0	0	0	0	0	1	0	0	0	0	0	6.70
N	0	0	0	0	0	0	0	0	0	0	0	0	1.400
NE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
N	0	0	0	0	0	0	2	1	2	3	0	0	8.39
VARIOUS	0	0	0	0	0	0	0	0	0	0	0	0	0.00
TOTAL	0	0	3	5	5	9	38	44	38	31	7	4	184

[illegible]

	2170	2184	2170
TOTAL NUMBER OF POSSIBLE OBSERVATIONS -			
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY -			

Table 3B JFD's Second Quarter 1983

Stability Class A11

25-JUL-83

SOUTHERN CALIFORNIA EDISON COMPANY
 SAN ONOFRE NUCLEAR GENERATING STATION
 2ND QUARTER, 1983
 DATES AND MOORE JOB NO - 00377-062-09
 DATA PERIOD- 04/01/83 TO 06/30/83
 STABILITY CLASS ALL (10-40 METERS)
 WINDS AT 10 METER LEVEL

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH)										TOTAL	MEAN SPEED
	1	2	3	4	5	6	7	8	9	10		
N	0	0	16	46	42	58	68	64	38	24	7	1
NNE	0	0	2	2	4	5	0	0	0	0	0	0
NNE	0	0	3	10	5	2	0	0	0	0	0	0
E	0	0	4	5	4	8	10	0	0	0	0	0
ESE	0	0	1	3	14	14	9	8	1	0	3	24
SE	0	0	1	6	18	28	24	20	13	15	5	10
SSE	0	0	7	13	18	27	22	19	20	16	13	32
S	0	1	8	14	26	21	28	24	16	14	8	18
SSW	0	1	4	11	21	26	31	33	25	14	11	9
SW	0	1	8	14	27	31	46	34	24	8	5	4
WSW	0	1	5	13	12	24	38	37	41	19	6	12
W	1	0	9	22	19	32	34	46	50	30	3	23
WNW	0	0	5	17	19	10	22	13	20	9	4	125
NNW	0	2	4	12	10	5	9	4	2	5	2	63
N	0	1	1	8	5	7	5	3	0	1	0	31
VARIABLE	0	0	8	20	10	12	6	4	2	3	0	65
CALM	1	7	86	221	237	310	352	309	254	138	72	120
TOTAL	1	7	86	221	237	310	352	309	254	138	72	120

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH)										TOTAL	MEAN SPEED
	1	2	3	4	5	6	7	8	9	10		
N	0.00	0.00	0.74	2.12	2.07	2.67	3.13	2.95	1.75	1.11	0.32	0.05
NNE	0.00	0.00	0.09	0.09	0.18	0.23	0.00	0.00	0.00	0.00	0.00	0.00
NNE	0.00	0.00	0.14	0.46	0.23	0.09	0.00	0.00	0.00	0.00	0.00	0.00
E	0.00	0.00	0.18	0.23	0.18	0.37	0.46	0.00	0.00	0.00	0.00	0.00
ESE	0.00	0.00	0.05	0.14	0.65	0.63	0.41	0.37	0.03	0.00	0.03	0.00
SE	0.00	0.00	0.32	0.69	0.83	1.24	1.01	0.88	0.92	0.74	0.64	1.47
SSE	0.00	0.00	0.37	0.65	1.20	0.97	1.29	1.11	0.74	0.65	0.37	0.83
S	0.00	0.03	0.18	0.31	0.97	1.20	1.43	1.32	1.13	0.65	0.51	0.41
SSW	0.00	0.03	0.37	0.65	1.24	1.43	2.12	1.97	1.20	0.37	0.23	0.18
SW	0.00	0.03	0.37	0.65	1.24	1.43	2.12	2.63	1.89	0.88	0.28	0.35
WSW	0.00	0.03	0.23	0.69	0.53	1.11	1.75	2.63	2.30	1.38	0.14	1.13
W	0.03	0.00	0.41	1.01	0.88	1.47	1.57	2.12	2.30	1.38	0.18	0.18
WNW	0.00	0.00	0.23	0.78	0.88	0.46	1.01	0.60	0.92	0.28	0.09	0.09
NNW	0.00	0.05	0.28	0.60	0.46	0.23	0.41	0.18	0.09	0.23	0.00	0.00
N	0.00	0.03	0.05	0.37	0.23	0.32	0.23	0.14	0.00	0.05	0.00	0.00
VARIABLE	0.00	0.00	0.37	0.92	0.46	0.55	0.28	0.18	0.09	0.14	0.00	0.00
CALM	0.05	0.32	4.06	10.18	11.84	14.29	16.20	15.16	11.71	7.28	3.32	5.53
TOTAL	0.05	0.32	4.06	10.18	11.84	14.29	16.20	15.16	11.71	7.28	3.32	5.53

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
 TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2170

SECTION H. 40 CFR 190 CONSIDERATIONS

Total dose is a yearly calculation. The calculations presented below are based on the first six months of this year as a projection for the full year. The total dose allowed in this calculation is 1/2 that of the legal yearly limit.

The following equation is used to calculate total dose:

$$D_T = (D_A + D_D) T_0 + D_L$$

Where: D_T = total dose (mrem/1/2 yr)
 D_A = Total air dose (mrem/1/2 yr)
 D_D = Direct dose (mrem/1/2 yr)
 D_L = Total body liquid dose (mrem/1/2 yr)
 T_0 = Beach occupancy time (1/2 yr)

Total air dose (D_A) is taken from Table 1D of this report. Using the noble gas contribution for the reporting period, $D_A = 3.34 \text{ E-1 mrem}$.

Direct dose (D_D) is calculated from TLD readings obtained from as far away as 50 miles. The average reading of the TLDs from distances between 5-50 miles forms the background. Subtracted from the highest reading beach TLD results in direct radiation dose. $D_D = 32.9 \text{ mrem}$

Total body liquid dose (D_L) is obtained from Table 2D of this report.
 $D_L = 3.95 \text{ E-2 mrem}$.

Beach occupancy time (T_0) is 150 hours for 1/2 year for the beach surfer, the likely most exposed member of the public to receive radiation doses from reactor releases. Reference: Final Environmental Report, San Onofre Nuclear Generating Station, Units 2 and 3. $T_0 = 1.71 \text{ E-2 year}$.

$$D_T = (3.34 \text{ E-1 mrem.} + 32.9 \text{ mrem.})(1.71 \text{ E-2 year}) + 3.95 \text{ E-2 mrem.}$$
$$D_T = 0.61$$

The Technical Specification Limit = 12.5 mrem/1/2 yr

$$\% \text{ TSL} = 4.86$$

SECTION H. 40 CFR 190 CONSIDERATIONS (Continued)

The total thyroid dose is calculated by merely adding the contributing doses of gas and liquid.

From Table 1D of this report, the thyroid dose from gaseous effluents is $D_{TG} = 1.24 \text{ E}+0 \text{ mrem}$. From the Station's release permits, the thyroid dose from liquid effluents can be calculated: $D_{TL} = 1.59 \text{ E} - 1 \text{ mrem}$.

The total thyroid dose, then, from SONGS 2/3 is:

$$\begin{aligned} D_{TD} &= D_{TG} + D_{TL} \\ &= 1.24 \text{ E}+0 + 1.59 \text{ E}-1 \\ &= 1.40 \text{ E}+0 \text{ mrem} \end{aligned}$$

The Technical Specifications Limit (TSL) is 75 mrem/yr to the thyroid, or 37.5 mrem/1/2 yr.

The percent of TSL reached this reporting period is

$$\% \text{ TSL} = 3.73 \text{ E}+0 \%$$

The total site-wide dose to the likely most exposed member of the public is shown to be below TSL by use of the numbers presented here for Units 2 and 3 and data presented in Unit 1 Semiannual Report, Section H, in comparison with the October 7, 1976 submittal to the NRC.

SECTION I. 50 MILE RADIUS POPULATION DOSES

Total population dose and average individual dose were assessed to a radius of 50 miles for both liquids and airborne releases. All applicable pathways were addressed in calculations based on the Unit 2 O.D.C.M. and all applicable Regulatory Guides. The doses assessed show minimal impact to the general public.

REPORT CATEGORY : CALCULATED POPULATION-INTEGRATED DOSES TO MAN(MREM)
 : IN 80KM RADIUS AREA AROUND PLANT FROM ALL
 : AIRBORNE RELEASES
 TYPE OF ACTIVITY : TOTAL-BODY AND THYROID
 AGE GROUP : ADULT, TEEN, AND CHILD
 REPORT START TIME : JANUARY 1, 1983
 REPORT END TIME : MARCH 31, 1983

Quarter - 1st

	: POPULATION TOTAL DOSE:		: INDIVIDUAL AVE. DOSE :	
	: TOT - BODY	: THYROID:	: TOT - BODY	: THYROID:
NOBLE GAS				
ADULT	: 1.96E 03	: 0.00E-01	: 4.75E-04	: 0.00E-01
TEEN	: 3.04E 02	: 0.00E-01	: 4.75E-04	: 0.00E-01
CHILD	: 4.98E 02	: 0.00E-01	: 4.75E-04	: 0.00E-01

	: POPULATION TOTAL DOSE:		: INDIVIDUAL AVE. DOSE :	
	: TOT - BODY	: THYROID:	: TOT - BODY	: THYROID:
INHALATION				
ADULT	: 5.38E 00	: 3.54E 02	: 1.30E-06	: 8.59E-05
TEEN	: 8.64E-01	: 6.74E 01	: 1.35E-06	: 1.05E-04
CHILD	: 1.28E 00	: 1.22E 02	: 1.23E-06	: 1.17E-04

	: POPULATION TOTAL DOSE:		: INDIVIDUAL AVE. DOSE :	
	: TOT - BODY	: THYROID:	: TOT - BODY	: THYROID:
COWS MILK				
ADULT	: 5.66E-01	: 5.80E-01	: 1.37E-07	: 1.40E-07
TEEN	: 1.61E-01	: 1.65E-01	: 2.52E-07	: 2.60E-07
CHILD	: 4.29E-01	: 4.45E-01	: 4.10E-07	: 4.26E-7

REPORT CATEGORY : CALCULATED POPULATION-INTEGRATED DOSES TO MAN(MREM)
 : IN 80KM RADIUS AREA AROUND PLANT FROM ALL
 : AIRBORNE RELEASES
 TYPE OF ACTIVITY : TOTAL-BODY AND THYROID
 AGE GROUP : ADULT, TEEN, AND CHILD
 REPORT START TIME : JANUARY 1, 1983
 REPORT END TIME : MARCH 31, 1983

Quarter 1st

	: POPULATION TOTAL DOSE:		: INDIVIDUAL AVE. DOSE :	
	: TOT - BODY	: THYROID:	: TOT - BODY	: THYROID:
GOATS MILK				
ADULT	: 0.00E-01	: 0.00E-01	: 0.00E-01	0.00E-01
TEEN	: 0.00E-01	: 0.00E-01	: 0.00E-01	0.00E-01
CHILD	: 0.00E-01	: 0.00E-01	: 0.00E-01	0.00E-01

	: POPULATION TOTAL DOSE:		: INDIVIDUAL AVE. DOSE :	
	: TOT - BODY	: THYROID:	: TOT - BODY	: THYROID:
MEAT				
ADULT	: 5.47E-01	: 5.52E-01	: 1.32E-07	1.34E-07
TEEN	: 5.32E-02	: 5.38E-02	: 8.32E-08	8.41E-08
CHILD	: 1.04E-01	: 1.06E-01	: 9.99E-08	1.01E-07

	: POPULATION TOTAL DOSE:		: INDIVIDUAL AVE. DOSE :	
	: TOT - BODY	: THYROID:	: TOT - BODY	: THYROID:
VEGETABLES				
ADULT	: 2.71E 01	: 2.76E 01	: 6.58E-06	6.69E-06
TEEN	: 5.37E 00	: 5.47E 00	: 8.39E-06	8.56E-06
CHILD	: 1.40E 01	: 1.44E 01	: 1.34E-05	1.37E-05

REPORT CATEGORY : CALCULATED POPULATION-INTEGRATED DOSES TO MAN(MREM)
 : IN 80KM RADIUS AREA AROUND PLANT FROM ALL
 : AIRBORNE RELEASES
 TYPE OF ACTIVITY : TOTAL-BODY AND THYROID
 AGE GROUP : ADULT, TEEN, AND CHILD
 REPORT START TIME : JANUARY 1, 1983
 REPORT END TIME : MARCH 31, 1983

Quarter - 1st

	POPULATION TOTAL DOSE:		INDIVIDUAL AVE. DOSE :	
	TOT - BODY	THYROID:	TOT - BODY	THYROID:
PRODUCE				
ADULT	1.53E 01	1.56E 01	3.71E-06	3.78E-06
TEEN	3.03E 00	3.08E 00	4.74E-06	4.82E-06
CHILD	7.90E 00	8.10E 00	7.56E-06	7.75E-06

	POPULATION TOTAL DOSE:		INDIVIDUAL AVE. DOSE :	
	TOT - BODY	THYROID:	TOT - BODY	THYROID:
GROUND PLANE				
ADULT	5.16E-01	5.16E-01	1.24E-07	1.24E-07
TEEN	7.99E-02	7.99E-02	1.24E-07	1.24E-07
CHILD	1.31E-01	1.31E-01	1.24E-07	1.24E-07

REPORT CATEGORY	: CALCULATED POPULATION-INTEGRATED DOSES TO MAN(MREM)	
	: FROM LIQUID RELEASES	
TYPE OF ACTIVITY	: POTABLE WATER, AQUATIC FOODS, CONTAMINATED IRRIGATED	
	: FOODS, AND SHORELINE DEPOSITS PATHWAYS	
AGE GROUP	: ADULT, TEEN, AND CHILD	
REPORT START TIME	: JANUARY 1, 1983	
REPORT END TIME	: MARCH 31, 1983	Quarter 1st

SHORELINE DEPOSITS	: TOT - BODY : THYROID :
ADULT	: 1.29E 04 : 1.29E 04:
TEEN	: 1.13E 04 : 1.13E 04:
CHILD	: 3.67E 03 : 3.67E 03:

POTABLE WATER	: TOT - BODY : THYROID :
ADULT	: 0.00E-01 : 0.00E-01:
TEEN	: 0.00E-01 : 0.00E-01:
CHILD	: 0.00E-01 : 0.00E-01:

AQUATIC FOODS	: TOT - BODY : THYROID :
ADULT	: 6.72E 02 : 3.98E 02:
TEEN	: 1.06E 02 : 5.67E 01:
CHILD	: 1.82E 02 : 9.39E 01:

IRRIGATED FOODS	: TOT - BODY : THYROID :
ADULT	: 0.00E-01 : 0.00E-01:
TEEN	: 0.00E-01 : 0.00E-01:
CHILD	: 0.00E-01 : 0.00E-01:

TOTALS	: 2.89E 04 : 2.85E 04:
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REPORT CATEGORY : CALCULATED POPULATION-INTEGRATED DOSES TO MAN(MREM)
 : IN 80KM RADIUS AREA AROUND PLANT FROM ALL LIQUID
 : RELEASES
 TYPE OF ACTIVITY : TOTAL BODY AND THYROID
 AGE GROUP : ADULT, TEEN, AND CHILD
 REPORT START TIME : JANUARY 1, 1983
 REPORT END TIME : MARCH 31, 1983

Quarter 1 st

TOTAL DOSE TO POPULATION

	: TOT - BODY : THYROID :	
ADULT	: 1.36E 04	: 1.33E 04:
TEEN	: 1.14E 04	: 1.14E 04:
CHILD	: 3.86E 03	: 3.77E 03:

AVERAGE DOSE TO AN INDIVIDUAL

	: TOT - BODY : THYROID :	
ADULT	: 3.31E-03	: 3.24E-03:
TEEN	: 1.79E-02	: 1.78E-02:
CHILD	: 3.70E-03	: 3.61E-03:

REPORT CATEGORY : CALCULATED POPULATION-INTEGRATED DOSES TO MAN(MREM)
 : IN 80KM RADIUS AREA AROUND PLANT FROM ALL
 : AIRBORNE RELEASES
 TYPE OF ACTIVITY : TOTAL-BODY AND THYROID
 AGE GROUP : ADULT, TEEN, AND CHILD
 REPORT START TIME : APRIL 1, 1983
 REPORT END TIME : JUNE 30, 1983

Quarter - 2nd

	POPULATION TOTAL DOSE:		INDIVIDUAL AVE. DOSE :	
	TOT - BODY	THYROID:	TOT - BODY	THYROID:
NOBLE GAS				
ADULT	5.50E 04	0.00E-01	1.29E-02	0.00E-01
TEEN	8.51E 03	0.00E-01	1.29E-02	0.00E-01
CHILD	1.39E 04	0.00E-01	1.29E-02	0.00E-01

	POPULATION TOTAL DOSE:		INDIVIDUAL AVE. DOSE :	
	TOT - BODY	THYROID:	TOT - BODY	THYROID:
INHALATION				
ADULT	1.77E 03	9.31E 05	4.30E-04	2.25E-01
TEEN	3.53E 02	1.80E 05	5.53E-04	2.80E-01
CHILD	6.14E 02	3.37E 05	5.87E-04	3.21E-01

	POPULATION TOTAL DOSE:		INDIVIDUAL AVE. DOSE :	
	TOT - BODY	THYROID:	TOT - BODY	THYROID:
COWS MILK				
ADULT	6.57E 01	8.36E 01	1.59E-05	2.03E-05
TEEN	1.87E 01	2.49E 01	2.92E-05	3.89E-05
CHILD	4.98E 01	7.04E 01	4.76E-05	6.73E-05

REPORT CATEGORY : CALCULATED POPULATION-INTEGRATED DOSES TO MAN(MREM)
 : IN 80KM RADIUS AREA AROUND PLANT FROM ALL
 : AIRBORNE RELEASES
 TYPE OF ACTIVITY : TOTAL-BODY AND THYROID
 AGE GROUP : ADULT, TEEN, AND CHILD
 REPORT START TIME : APRIL 1, 1983
 REPORT END TIME : JUNE 30, 1983

			Quarter	2nd
	: POPULATION TOTAL DOSE:		: INDIVIDUAL AVE. DOSE :	
GOATS MILK	: TOT - BODY : THYROID:		: TOT - BODY : THYROID:	
ADULT	: 0.00E-01 : 0.00E-01		: 0.00E-01 0.00E-01	
TEEN	: 0.00E-01 : 0.00E-01		: 0.00E-01 0.00E-01	
CHILD	: 0.00E-01 : 0.00E-01		: 0.00E-01 0.00E-01	

	: POPULATION TOTAL DOSE:		: INDIVIDUAL AVE. DOSE :	
MEAT	: TOT - BODY : THYROID:		: TOT - BODY : THYROID:	
ADULT	: 4.95E 01 : 5.44E 01		: 1.20E-05 1.32E-05	
TEEN	: 4.81E 00 : 5.39E 00		: 7.53E-06 8.43E-06	
CHILD	: 9.46E 00 : 1.09E 01		: 9.03E-06 1.04E-05	

	: POPULATION TOTAL DOSE:		: INDIVIDUAL AVE. DOSE :	
VEGETABLES	: TOT - BODY : THYROID:		: TOT - BODY : THYROID:	
ADULT	: 2.87E 03 : 3.30E 03		: 6.96E-04 8.02E-04	
TEEN	: 5.67E 02 : 6.72E 02		: 8.87E-04 1.05E-03	
CHILD	: 1.48E 03 : 1.82E 03		: 1.42E-03 1.74E-03	

REPORT CATEGORY : CALCULATED POPULATION-INTEGRATED DOSES TO MAN(MREM)
 : IN 80KM RADIUS AREA AROUND PLANT FROM ALL
 TYPE OF ACTIVITY : AIRBORNE RELEASES
 AGE GROUP : TOTAL-BODY AND THYROID
 REPORT START TIME : ADULT, TEEN, AND CHILD
 REPORT END TIME : APRIL 1, 1983
 : JUNE 30, 1983

Quarter - 2nd

	POPULATION TOTAL DOSE:		INDIVIDUAL AVE. DOSE :	
	TOT - BODY	THYROID:	TOT - BODY	THYROID:
PRODUCE				
ADULT	: 1.52E 03	:1.76E 03	:3.68E-04	4.26E-04
TEEN	: 3.00E 02	:3.58E 02	:4.70E-04	5.59E-04
CHILD	: 7.84E 02	:9.71E 02	:7.49E-04	9.29E-04

	POPULATION TOTAL DOSE:		INDIVIDUAL AVE. DOSE :	
	TOT - BODY	THYROID:	TOT - BODY	THYROID:
GROUND PLANE				
ADULT	: 4.29E 02	:4.29E 02	:1.04E-04	1.04E-04
TEEN	: 6.64E 01	:6.64E 01	:1.04E-04	1.04E-04
CHILD	: 1.09E 02	:1.09E 02	:1.04E-04	1.04E-04

REPORT CATEGORY : CALCULATED POPULATION-INTEGRATED DOSES TO MAN(MREM)
 TYPE OF ACTIVITY : FROM LIQUID RELEASES
 AGE GROUP : POTABLE WATER, AQUATIC FOODS, CONTAMINATED IRRIGATED
 REPORT START TIME : FOODS, AND SHORELINE DEPOSITS PATHWAYS
 REPORT END TIME : ADULT, TEEN, AND CHILD
 : APRIL 1,1983
 : JUNE 30,1983

Quarter 2nd

SHORELINE DEPOSITS	TOT - BODY	THYROID
ADULT	1.05E 04	1.05E 04:
TEEN	9.14E 03	9.14E 03:
CHILD	2.97E 03	2.97E 03:

POTABLE WATER	TOT - BODY	THYROID
ADULT	0.00E-01	0.00E-01:
TEEN	0.00E-01	0.00E-01:
CHILD	0.00E-01	0.00E-01:

AQUATIC FOODS	TOT - BODY	THYROID
ADULT	5.13E 02	3.34E 03:
TEEN	7.99E 01	4.77E 02:
CHILD	1.37E 02	7.92E 02:

IRRIGATED FOODS	TOT - BODY	THYROID
ADULT	0.00E-01	0.00E-01:
TEEN	0.00E-01	0.00E-01:
CHILD	0.00E-01	0.00E-01:

TOTALS	2.33E 04	2.72E 04:
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REPORT CATEGORY : CALCULATED POPULATION-INTEGRATED DOSES TO MAN(MREM)
 : IN 80KM RADIUS AREA AROUND PLANT FROM ALL LIQUID
 : RELEASES
 TYPE OF ACTIVITY : TOTAL-BODY AND THYROID
 AGE GROUP : ADULT, TEEN, AND CHILD
 REPORT START TIME : APRIL 1, 1983
 REPORT END TIME : JUNE 30, 1983

Quarter 2nd

TOTAL DOSE TO POPULATION

	: TOT - BODY : THYROID :	
ADULT	: 1.10E 04	: 1.38E 04 :
TEEN	: 9.23E 03	: 9.62E 03 :
CHILD	: 3.12E 03	: 3.77E 03 :

AVERAGE DOSE TO AN INDIVIDUAL

	: TOT - BODY : THYROID :	
ADULT	: 2.67E-03	: 3.35E-03 :
TEEN	: 1.45E-02	: 1.51E-02 :
CHILD	: 2.98E-03	: 3.61E-03 :

SECTION J. MISCELLANEOUS

1. Several unplanned but monitored gas releases accounted for 4.84 Curies being released to the unrestricted area. They were all assessed to be well within the Technical Specifications limits and have been accounted for in Section B of this report. The values reported were in Xe-133 equivalent since 96% of noble gas effluents are Xe-133. These releases were recorded on the wide range gas monitors monitoring the Plant Vent Stack (PVS). The PVS serves as the common exhaust for numerous ventilation systems.
2. An unplanned and unmonitored liquid release accounted for 7.66 E-5 Curies being released to the unrestricted area. It was assessed to be well within the Technical Specification limits and has been accounted for in Section C of this report. This release occurred on March 12, 1983. The source of the liquid was a leak in the temporary hose connection in the recirculation line of tank T-006, a refueling water storage tank. The liquid, after collecting on the roof of the tank farm building, found its way to the main circulating water outfall via drain lines. The spill was isolated and cleaned up. The lineup is no longer being used.
3. On March 24, 1983, a skid-mounted discharge isolation valve on 2/3R-7813, the liquid effluent monitor, was found in the closed position. This valve position effectively removed the monitor from service. See the Station letter dated April 8, 1983, Docket No. 50-361, 14-day Follow-up Report, License Event Report No. 83-036, San Onofre Nuclear Generating Station, Unit 2, to Region V for all details.
4. On February 18, 1983, 3R-7865, wide range gas monitor, was found to be installed improperly. See the Station letter dated March 3, 1983, Docket No. 50-361, 14-day Follow-up Report, License Event Report No. 83-018, San Onofre Nuclear Generating Station, Unit 2, to Region V for all details.
5. Unit 2 condenser air ejector monitor, 2R-7818, was out of service from December 16, 1982 to February 12, 1983; exceeding the 30 days allowed. The cause was from excessive moisture in the system rusting several internal components.
6. On May 15, 1983, radioactive noble gases were detected in the area of the Unit 2 Seal Weir Vent. Continuous charcoal and particulate samples have been taken since, checking for iodines and particulates. No radionuclides have been detected. It was assumed, though, that all noble gases in solution from all liquid radwaste releases became airborne. A separate gas release calculation was performed using data from liquid releases and the resulting doses and Curie totals were accounted for in Section B of this report.
7. The liquid radwaste flow indicator FI-7643 was out of service from April 18, 1983 to May 21, 1983; exceeding the 30 days allowed. Noise from a central computer which changed the loop circuitry signal of FI-7643 was located as the problem and corrected.
8. Unit 2/3 waste gas header discharge monitor 2/3 R-7814 A, B was out of service from May 8, 1983 to June 9, 1983; exceeding the 30 days allowed. The problem determined was ruptured mylar detector windows due to sudden pressurization of the system by a relief valve.

SECTION J. MISCELLANEOUS (Continued)

9. Unit 2/3 waste gas header discharge monitor 2/3 R-7814 A, B was out of service from February 8, 1983 to March 10, 1983; exceeding the 30 days allowed. The problem determined was ruptured mylar detector windows due to sudden pressurization of the system by a relief valve.
10. Recurrent problems have occurred at the Turbine Plant Sump (TPS). Radiation monitor 2R-7821 is an inline monitor to provide constant monitoring. During the plant startup and shutdown phases, often times the TPS became flooded. This especially occurred during periods of heavy rain, because all drains in the Turbine Building go to the TPS. To avoid flooding the TPS pumps, a temporary change was made which enabled the TPS to be pumped directly to the outfall by means of high volume submersible pumps. During this time period, the normal pathway was not used. The TPS was sampled once per 8 hours in accordance with Action Statement 30 of the Technical Specifications. The resolution to this problem has been the permanent addition of two more pumps and a widening of the flow restricting orifice in the line. Since March 1983, the temporary change was no longer used.

SECTION K. CONCLUSIONS

1. Radioactive releases totaled $2.92 \text{ E}+2$ curies for gaseous effluent releases and $3.12 \text{ E}+1$ curies for liquid releases. Gaseous releases were primarily noble gas ($2.91 \text{ E}+2$ curies total; composed primarily of $2.84 \text{ E}+2$ curies of Xe-133) and tritium ($1.78 \text{ E}-1$ curies).

Liquid effluents were primarily tritium ($2.91 \text{ E}+1$ curies) and particulates ($1.05 \text{ E}+0$ curies, composed primarily of $4.35 \text{ E}-2$ curies of Mn-54, $4.20 \text{ E}-2$ curies of Co-60 and $2.96 \text{ E}-2$ curies of Zr-95).

The operation of SONGS 2/3 resulted in radioactive releases, the maximum of which were: 22.1% for gaseous effluents (Fission and Activation Gases), and 14.1% for liquid effluents (Iodines), of Technical Specification Limits.

2. Radwaste Shipments from SONGS 2/3 totaled 2 shipments to Richland, Washington. There were 60 cubic meters of solid radwaste shipped containing 0.5 curie of radioactivity.
3. Meteorological conditions during the semiannual period were typical of the meteorology at SONGS 2/3. Meteorological dispersion was good 32% of the time, fair 41% of the time and poor 126% of the time.
4. 40 CFR 190 compliance has been demonstrated as per Section H of this report.
5. For liquid releases, marine sample analysis will indicate if any of the particulate activity has concentrated in marine life. Detection of any tritium in these samples is not expected because of the rapid turnover of water in marine life and because of the bulk of ocean water available for dilution.
6. 50 mile radius considerations for both gaseous and liquid dose pathways have shown minimal impact to the general public.
7. The net result of these effluent release analyses indicate that the operation of SONGS 2/3 should not have produced any detrimental effect on the environment.

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Southern California Edison Company

SCE

SAN ONOFRE NUCLEAR GENERATING STATION

P.O. BOX 128

SAN CLEMENTE, CALIFORNIA 92672

H. B. RAY
STATION MANAGER

TELEPHONE
(714) 492-7700

DEC 21, 1983

U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region V
1450 Maria Lane, Suite 210
Walnut Creek, California 94596-5368

Attention: Mr. J.B. Martin, Regional Administrator

Dear Sir:

Subject: Docket Nos. 50-361 and 50-362
Semiannual Radioactive Effluent Release Report
San Onofre Nuclear Generating Station, Units 2 and 3

Sections 6.9.1.8 and 6.9.1.9 of Appendix A to Technical Specifications for Facility Operating License Nos. NPF-10 and NPF-15 for San Onofre Nuclear Generating Station, Units 2 and 3, respectively, require a semiannual report of the radioactive content of effluents released to unrestricted areas and shipments of solid waste during the previous six months be submitted within sixty days after July 1, 1983. Pursuant to this requirement, the semiannual report for January 1, 1983, through June 30, 1983, is enclosed.

This report has been prepared in the general format of NRC Regulatory Guide 1.21, sections pertinent to SONGS 2 and 3. Included in this report are quarterly effluent summaries, percent of Technical Specification Limits, estimated total percent error, lower limit of detection concentrations, 40 CFR 190 considerations, meteorological data and 50 mile radius population doses.

Please contact us if we can be of further assistance.

Sincerely,

H. B. Ray

Enclosures: 2 copies

*IF25
1/1*

cc: A. E. Chaffee (USNRC Resident Inspector, Units 2 and 3)
J. P. Stewart (USNRC Resident Inspector, Units 2 and 3)

U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement

U.S. Nuclear Regulatory Commission
Division of Technical Information and Document Control

Institute of Nuclear Power Operations (INPO)

California Public Utilities Commission
Energy Branch
350 McAllister
San Francisco, California 94102

Los Angeles Public Utilities Commission
Electric Branch
107 South Broadway
Los Angeles, California 90012

Dr. L. Bernath
San Diego Gas & Electric Company
P.O. Box 1831
San Diego, California 92112

J. N. Sorenson
NUS Corporation
Four Research Place
Rockville, Maryland 20850

Bechtel Power Corporation
Attention: SFPD Library
P.O. Box 3965
San Francisco, California 94119

Director
Nuclear Eng. & Operations Department
Electric Power Research Institute
3412 Hillview Avenue
P.O. Box 10412
Palo Alto, California 94303

California Regional Water Quality Control Board
San Diego Region
Attn: Mr. Leonard Burtman, Executive Officer
6154 Mission Gorge Road, Suite 205
San Diego, California 92120

Units 2 and 3
San Onofre Nuclear Generating Station

bcc: D. J. Fogarty
M. Hertel
K. P. Baskin
D. F. Pilmer
E. De La Parra
J. M. Curran
C. R. Kocher/J. A. Beoletto
H. B. Ray
K. Hendersen
J. G. Haynes
W. G. Zintl
W. W. Strom
A. R. Strachan
P. J. Knapp
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G. T. Gibson
J. A. Pagliaro
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