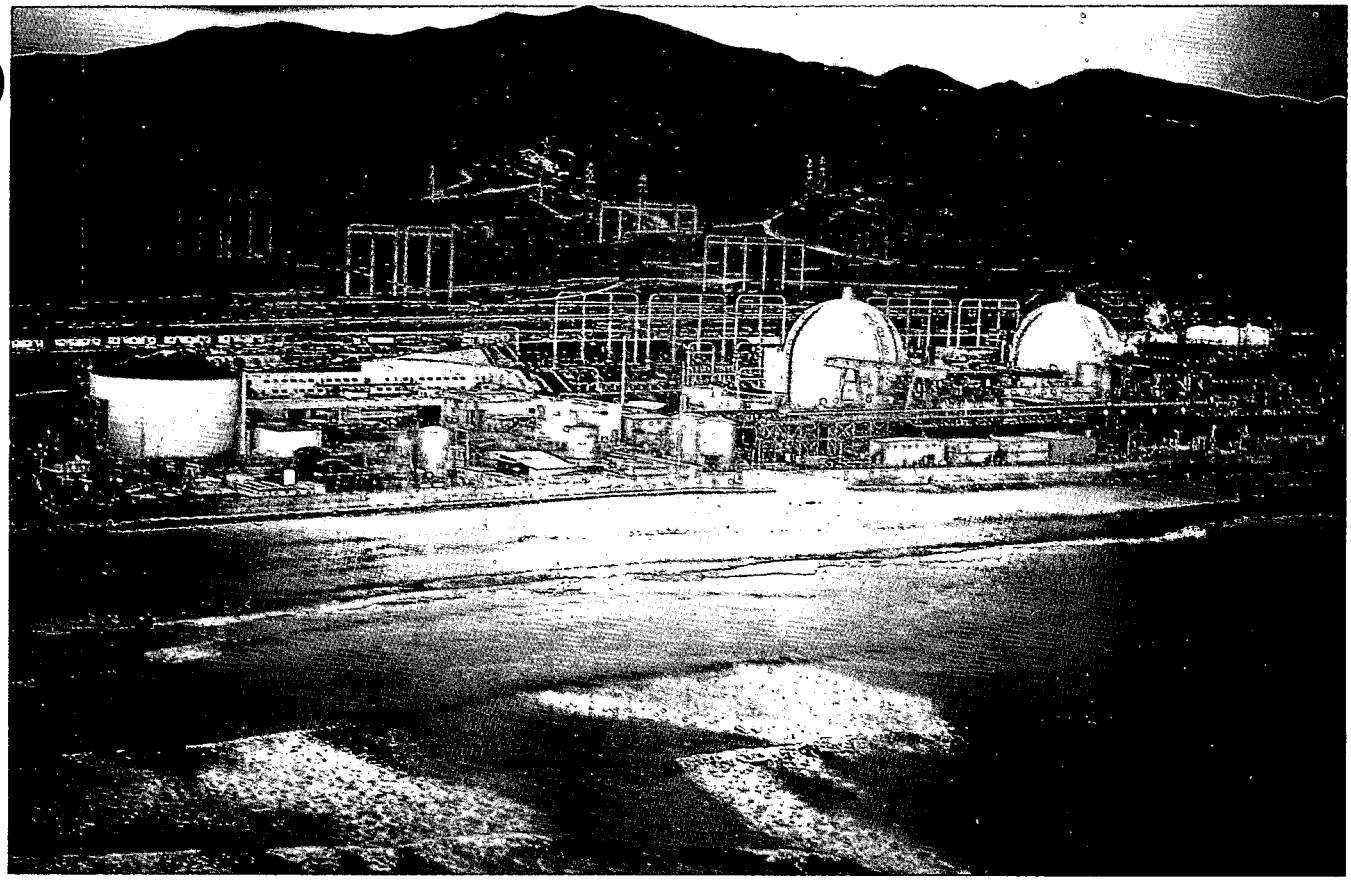

SAN ONOFRE
NUCLEAR GENERATING STATION

SEMIANNUAL EFFLUENT REPORT

JULY - DECEMBER 1987

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Southern California Edison Company

SAN ONOFRE NUCLEAR GENERATING STATION

P.O. BOX 128

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PREFACE

San Onofre Nuclear Generating Station is located next to San Onofre State Beach, adjoining Camp Pendleton Marine Corps Base, in San Diego County, 64 miles south of Los Angeles, California. There are three pressurized Water Reactors with a total rated capacity of 2664 net megawatts electrical.Unit 1 was supplied by Westinghouse Electric Company and began commercial operation on January 1, 1968. It is currently rated at 410 net megawatts electrical. It is owned by Southern California Edison (80%) and San Diego Gas and Electric (20%).

Unit 2 and Unit 3 were supplied by Combustion Engineering, Inc., with turbine generators supplied by G.E.C. Turbine Generators, Ltd., of England. The Units began commercial operation on August 18, 1983, and April 1, 1984, respectively and are rated at 1127 net megawatts electrical each. The twin Units are owned by Southern California Edison (75.05%), San Diego Gas and Electric (20%), City of Anaheim (3.16%), and the City of Riverside (1.79%).

TABLE OF CONTENTS

SEMIANNUAL EFFLUENT REPORT

July - December (1987)

SECTION A. INTRODUCTION

This Semiannual Report summarizes the gaseous and liquid radioactive effluent releases and radwaste shipments made from the San Onofre Nuclear Generating Station, Unit 1. This report is prepared in the general format of USNRC Regulatory Guide 1.21 and includes:

1. Quarterly Summaries of Gaseous and Liquid Effluents For "Continuous" and "Batch" Modes of Release;
2. Percent of Technical Specification Limits;
3. Percent of Applicable Limits;
4. Estimated Total Percent Error;
5. Lower Limit of Detection Concentrations;
6. Batch Release Summaries;
7. Previous Semiannual Report Addendum;
8. Radwaste Shipments;
9. 10CFR50 Appendix I Requirements;
10. Changes to Offsite Dose Calculation Manual.

SECTION B. GASEOUS EFFLUENTS

Table 1A, "Gaseous Effluents-Summation of All Releases," provides a detailed listing of gaseous effluents released quarterly in four categories: fission and activation gases, iodine-131, particulates with half-lives greater than eight days, and tritium. Listed for each of the four categories are: (1) the total curies released, (2) the average release rate, (3) the percent of Technical Specification Limit (TSL), and (4) the estimated total error. In addition, the particulate category lists the gross alpha radioactivity released for each quarter.

The methodology used in Table 1A to calculate the estimated total error is presented in Section G of this report.

Table 1B, "Gaseous Effluents-Elevated Release," has not been included in this report since San Onofre Nuclear Generating Station Unit 1 does not conduct elevated releases.

Table 1C, "Gaseous Effluents-Ground-Level Releases," provides the systematic listing by radionuclide for the quantity of radioactivity released in three categories: fission gases, iodines, and particulates. The total radioactivity for each radionuclide is listed for each quarterly period by both "continuous" and "batch" modes of release.

Waste gas decay tank and calibration releases are considered to be "batch" releases. Containment purges, and plant stack releases are considered to be "continuous" releases.

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

Table 1E, "Gaseous Effluents-Radiation Doses at the Site Boundary," provides a quarterly summary of doses at the site boundary for this report period.

Table 1F, "Gaseous Effluents-Batch Release Summary," provides summary information regarding batch releases conducted during this report period from San Onofre Nuclear Generating Station Unit 1.

TABLE 1A

S.O.N.G.S. 1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	Unit	Third Quarter	Fourth Quarter	Estimated Total Error, %
A. Fission and activation gases				
1. Total release	Ci	2.35E+2	3.49E+2	3.00E+1
2. Average release rate for period	uCi/sec	2.96E+1	4.39E+1	
3. Percent of technical specification limit	%	1.36E-1	2.12E-1	
B. Iodines				
1. Total iodine-131	Ci	1.67E-5	3.55E-5	1.90E+1
2. Average release rate for period	uCi/sec	2.10E-6	4.47E-6	
3. Percent of technical specification limit	%	2.73E-5	5.81E-5	
C. Particulates				
1. Particulates with half-lives > 8 days	Ci	1.18E-6	5.07E-9	1.60E+1
2. Average release rate for period	uCi/sec	1.48E-7	6.38E-10	
3. Percent of technical specification limit	%	2.67E-6	1.18E-9	
4. Gross alpha radioactivity	Ci	2.16E-7	*	5.00E+1
D. Tritium				
1. Total release	Ci	1.91E+0	2.28E+0	2.50E+1
2. Average release rate for period	uCi/sec	2.40E-7	2.87E-7	
3. Percent of technical specification limit	%	1.56E-3	1.86E-3	

LLD - Lower Limit of Detection; See Table 1D.

* - Fourth quarter analyses not available at report time; values will be included in the following Semiannual Report.

TABLE 1C

S.O.N.G.S. 1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
GASEOUS EFFLUENTS-GROUND LEVEL RELEASES

Nuclides Released	Unit	Continuous Mode		Batch Mode	
		Third Quarter	Fourth Quarter	Third Quarter	Fourth Quarter
1. Fission gases					
krypton-85	Ci	<LLD	<LLD	1.51E+0	2.62E+0
krypton-85m	Ci	9.86E-2	4.10E+0	5.66E-3	<LLD
krypton-87	Ci	<LLD	<LLD	<LLD	<LLD
krypton-88	Ci	<LLD	<LLD	3.70E-3	<LLD
xenon-131m	Ci	<LLD	<LLD	4.99E-1	1.11E+0
xenon-133	Ci	1.69E+2	2.65E+2	5.63E+1	5.99E+1
xenon-133m	Ci	<LLD	<LLD	2.51E-1	9.46E-2
xenon-135	Ci	7.19E+0	1.63E+1	1.31E-1	1.92E-2
xenon-135m	Ci	<LLD	<LLD	<LLD	<LLD
xenon-138	Ci	<LLD	<LLD	<LLD	<LLD
Total for period	Ci	1.76E+2	2.85E+2	5.87E+1	6.38E+1
2. Iodines					
iodine-131	Ci	1.67E-5	3.55E-5	NA	NA
iodine-133	Ci	4.87E-6	7.22E-6	NA	NA
iodine-135	Ci	<LLD	<LLD	NA	NA
Total for period	Ci	2.16E-5	4.28E-5	NA	NA
3. Particulates					
antimony-124	Ci	<LLD	5.07E-9	NA	NA
barium-140	Ci	<LLD	<LLD	NA	NA
bromine-82	Ci	8.12E-6	1.13E-5	NA	NA
cesium-134	Ci	<LLD	<LLD	NA	NA
cesium-137	Ci	4.03E-7	<LLD	NA	NA
cesium-138	Ci	2.81E-4	1.23E-3	NA	NA
cobalt-58	Ci	3.18E-7	<LLD	NA	NA
lanthanum-140	Ci	<LLD	<LLD	NA	NA
rubidium-88	Ci	1.14E-4	1.11E-3	NA	NA
strontium-89	Ci	<LLD	*	NA	NA
strontium-90	Ci	4.61E-7	*	NA	NA

LLD - Lower Limit of Detection; See Table 1D.

NA - Iodines and particulates are not analysed prior to release via batch mode.

* - Fourth quarter analyses not available at report time; values will be included in the following Semiannual Report.

TABLE 1D

S.O.N.G.S. 1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
GASEOUS EFFLUENTS-LOWER LIMIT OF DETECTION

RADIONUCLIDES	CONTINUOUS MODE LLD (uCi/cc)	BATCH MODE LLD (uCi/cc)
1. Fission and activation gases		
krypton-85	<1.50E-5	*
krypton-85m	*	<7.30E-6
krypton-87	<1.90E-7	<1.20E-5
krypton-88	<2.10E-7	<2.00E-5
xenon-131m	<2.20E-6	*
xenon-133m	<4.20E-7	*
xenon-135m	<9.30E-7	<1.40E-5
xenon-138	<3.70E-6	<3.00E-5
2. Iodines		
iodine-135	<6.00E-13	NA
3. Particulates		
antimony-124	<4.30E-14	NA
barium-140	<1.40E-13	NA
cesium-134	<4.70E-14	NA
cesium-137	<7.00E-14	NA
cobalt-58	<4.60E-14	NA
lanthanum-140	<6.00E-14	NA
strontium-89	<1.00E-14	NA

NA - Iodines and particulates are not analysed prior to release via batch mode.
* - Nuclide detected in Table 1C.

TABLE 1E

S.O.N.G.S. 1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
GASEOUS EFFLUENTS-RADIATION DOSES AT THE SITE BOUNDARY

		Unit	Third Quarter	Fourth Quarter
A.	Noble Gas			
1.	Gamma air dose	mrad	3.82E-2	6.28E-2
2.	Percent Technical Specification Limit	%	7.64E-1	1.26E+0
3.	Beta air dose	mrad	1.06E-1	1.65E-1
4.	Percent Technical Specification Limit	%	1.06E+0	1.65E+0
B.	Tritium, Iodine, Particulate (at the nearest receptor)			
1.	Organ dose	mrem	1.53E-4	1.96E-4*
2.	Percent Technical Specification Limit	%	2.04E-3	2.61E-3

NOTE: Calculations performed in accordance with the ODCM utilizing the historical X/Q.

* - Fourth quarter dose incomplete due to Sr-89, and Sr-90 analyses not available at report time; values will be reported in the following Semiannual Report.

TABLE 1F

S.O.N.G.S. 1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
GASEOUS EFFLUENTS-BATCH RELEASE SUMMARY

		6-MONTH PERIOD	
1.	Number of batch releases:	22	releases
2.	Total time period for batch releases:	6111.0	minutes
3.	Maximum time period for a batch release:	372.0	minutes
4.	Average time period for a batch release:	277.8	minutes
5.	Minimum time period for a batch release:	194.0	minutes

SECTION C. LIQUID EFFLUENTS

Table 2A, "Liquid Effluents-Summation of All Releases," provides a detailed summary of liquid effluents released quarterly in three categories: fission and activation products, tritium, and dissolved and entrained gases. Listed for each of the three categories are: (1) the total curies released, (2) the average diluted concentration, (3) the percent of applicable limit and (4) the estimated total error. In addition, Table 2A lists: (1) the gross alpha radioactivity, (2) the volume of waste released (prior to dilution), and (3) the volume of the dilution water.

The methodology used to calculate the percent of applicable limit is presented in Section F of this report. The methodology used to calculate the estimated total error in Table 2A is presented in Section G of this report.

Table 2B, "Liquid Effluents," provides the systematic listing by radionuclide for the quantity of radioactivity released in each category. The total radioactivity of each radionuclide released is listed for each quarterly period by both "continuous" and "batch" modes of release.

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

Table 2D, "Liquid Effluents-Radiation Doses at the Liquid Site Boundary," presents a quarterly summary of doses at the Liquid Site Boundary for this report period.

Table 2E, "Liquid Effluents-Batch Release Summary," provides summary information regarding batch releases conducted during this report period from San Onofre Nuclear Generating Station Unit 1.

TABLE 2A

S.O.N.G.S. 1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

	Unit	Third Quarter	Fourth Quarter	Estimated Total Error, %
A. Fission and activation products				
1. Total release (not including tritium, gases, alpha)	Ci	2.01E-1	3.58E-1	1.90E+1
2. Average diluted concentration during period	uCi/ml	1.31E-9	2.50E-9	
3. Percent of applicable limit	%	9.80E-2	4.16E-1	
B. Tritium				
1. Total release	Ci	2.55E+2	7.69E+2	1.90E+1
2. Average diluted concentration during period	uCi/ml	1.67E-6	5.38E-6	
3. Percent of applicable limit	%	5.57E-2	1.79E-1	
C. Dissolved and entrained gases				
1. Total release	Ci	1.93E-1	4.08E-1	1.90E+1
2. Average diluted concentration during period	uCi/ml	1.26E-9	2.85E-9	
3. Percent of applicable limit	%	6.30E-4	1.43E-3	
D. Gross alpha radioactivity				
1. Total release	Ci	<LLD	*	5.00E+1
E. Volume of waste released (prior to dilution)	liters	7.04E+5	7.76E+5	5.00E+0
F. Volume of dilution water used during period	liters	1.53E+11	1.43E+11	5.00E+0

* - Fourth quarter analyses not available at report time; values will be included in the following Semiannual Report.

TABLE 2B

S.O.N.G.S. 1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS

		Continuous Mode		Batch Mode	
Nuclides Released	Unit	Third Quarter	Fourth Quarter	Third Quarter	Fourth Quarter
antimony-124	Ci	<LLD	<LLD	2.62E-3	<LLD
barium-140	Ci	<LLD	9.11E-5	<LLD	<LLD
cerium-141	Ci	<LLD	<LLD	<LLD	<LLD
cesium-134	Ci	2.27E-2	5.69E-2	3.51E-3	2.33E-4
cesium-136	Ci	2.10E-3	2.58E-3	<LLD	<LLD
cesium-137	Ci	4.15E-2	6.22E-2	8.83E-3	6.95E-4
chromium-51	Ci	<LLD	<LLD	9.59E-3	<LLD
cobalt-57	Ci	<LLD	<LLD	2.67E-5	<LLD
cobalt-58	Ci	<LLD	<LLD	3.76E-2	2.11E-3
cobalt-60	Ci	2.99E-5	1.57E-4	1.16E-2	6.02E-3
iodine-131	Ci	4.11E-2	1.54E-1	<LLD	<LLD
iodine-133	Ci	6.47E-3	7.26E-2	<LLD	<LLD
iron-55	Ci	<LLD	*	1.09E-2	*
iron-59	Ci	<LLD	<LLD	5.96E-4	<LLD
lanthanum-140	Ci	<LLD	<LLD	<LLD	4.79E-5
manganese-54	Ci	<LLD	<LLD	5.75E-4	3.28E-5
molybdenum-99	Ci	<LLD	<LLD	<LLD	<LLD
niobium-95	Ci	<LLD	<LLD	<LLD	<LLD
niobium-97	Ci	4.42E-4	<LLD	<LLD	<LLD
ruthenium-103	Ci	<LLD	<LLD	2.28E-4	<LLD
silver-110m	Ci	<LLD	<LLD	2.06E-4	<LLD
strontium-89	Ci	<LLD	*	2.27E-5	*
strontium-90	Ci	<LLD	*	6.22E-5	*
technetium-99m	Ci	<LLD	<LLD	<LLD	<LLD
zinc-65	Ci	<LLD	<LLD	<LLD	<LLD
zirconium-95	Ci	<LLD	<LLD	<LLD	<LLD
Total for period (above)	Ci	1.14E-1	3.49E-1	8.64E-2	9.14E-3
krypton-85	Ci	2.85E-2	<LLD	<LLD	2.20E-2
xenon-131m	Ci	<LLD	<LLD	3.06E-1	1.47E-2
xenon-133	Ci	5.32E-3	1.77E-2	1.56E-1	3.31E-1
xenon-133m	Ci	<LLD	<LLD	<LLD	4.98E-4
xenon-135	Ci	4.57E-4	2.20E-2	6.68E-5	<LLD

LLD - Lower Limit of Detection; see Table 2C.

* - Fourth quarter analyses not available at report time; values will be included in the following Semiannual Report.

TABLE 2C

S.O.N.G.S. 1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS-LOWER LIMIT OF DETECTION

RADIONUCLIDES	CONTINUOUS MODE LLD (uCi/ml)	BATCH MODE LLD (uCi/ml)
(1) Fission and activation products		
antimony-124	<7.50E-8	<2.50E-7
barium-140	<1.90E-7	<6.00E-7
cerium-141	<8.10E-8	<1.90E-7
cesium-136	<6.10E-8	<3.00E-7
chromium-51	<4.40E-7	<1.20E-6
cobalt-57	<4.40E-8	<1.[illegible]7
cobalt-58	<5.30E-8	*
iodine-131	*	<1.60E-7
iodine-133	*	<1.80E-7
iron-55	<1.00E-6	*
iron-59	<1.30E-7	<5.00E-7
lanthanum-140	<1.10E-7	<1.00E-7
manganese-54	<5.80E-8	*
molybdenum-99	<6.40E-8	<1.00E-7
niobium-95	<3.80E-8	<1.90E-7
niobium-97	<2.10E-7	<2.20E-7
ruthenium-103	<5.40E-8	<1.70E-7

* - Nuclide detected in Table 2B.

TABLE 2C (Continued)

S.O.N.G.S. 1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS-LOWER LIMIT OF DETECTION

silver-110m	<4.90E-8	<2.20E-7
strontium-89	<5.00E-8	*
strontium-90	<1.00E-8	*
technetium-99m	<6.40E-8	<1.00E-7
zinc-65	<1.10E-7	<5.40E-7
zirconium-95	<5.80E-8	<3.30E-7
gross alpha	<1.00E-7	<1.00E-7

(2) Dissolved and entrained gases

krypton-85	<1.20E-5	<4.40E-5
xenon-131m	<2.00E-6	*
xenon-133m	<3.70E-7	<1.10E-6
xenon-135	*	<3.00E-7

* - Nuclide detected in Table 2B.

TABLE 2D

S.O.N.G.S. 1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS-RADIATION DOSES AT THE LIQUID SITE BOUNDARY

	Unit	Third Quarter	Fourth Quarter
A.			
1. Total body dose	mrem	1.56E-2	2.25E-2
2. Percent Technical Specification Limit	%	1.04E+0	1.50E+0
B.			
1. Limiting organ dose	mrem	6.44E-2	2.55E-1
2. Percent Technical Specification Limit	%	1.29E+0	5.10E+0

NOTE: The limiting organ for this report period is the Thyroid.

* - Fourth quarter dose incomplete due to Sr-89, Sr-90, and Fe-55 analyses not available at report time; values will be reported in the following Semiannual Report.

TABLE 2E

S.O.N.G.S. 1

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS-BATCH RELEASE SUMMARY

		6-MONTH PERIOD	
1.	Number of batch releases:	10	releases
2.	Total time period for a batch release:	15,790	minutes
3.	Maximum time period for a batch release:	2,430	minutes
4.	Average time period for a batch release:	1,579	minutes
5.	Minimum time period for a batch release:	101	minutes
6.	Average saltwater flow during batch releases:	300,000	gpm

SECTION D. PREVIOUS SEMIANNUAL REPORT ADDENDUM

S.O.N.G.S. 1

1. The January - June 1987 Semiannual Report values for composite Gross alpha, Sr-89, Sr-90, and Fe-55 (Tables 1A and 1C, Gaseous Effluents, Tables 2A and 2B, Liquid Effluents) were incomplete due to data not available at report time. The values not reported were for the second quarter of 1987. The values are as follows:

GASEOUS EFFLUENTS (2nd Quarter 1987)

		Second Quarter	
Nuclides Released	Unit	Continuous Mode	Batch Mode
strontium-89	Ci	<LLD	*
strontium-90	Ci	<LLD	*
Gross alpha	Ci	<LLD	

Sr-89 LLD = <1.00E-14 uCi/cc

Sr-90 LLD = <1.00E-15 uCi/cc

Gross alpha LLD = <1.00E-14 uCi/cc

LIQUID EFFLUENTS

		Second Quarter	
Nuclides Released	Unit	Continuous Mode	Batch Mode
iron-55	Ci	<LLD	1.43E-3
strontium-89	Ci	<LLD	<LLD
strontium-90	Ci	1.40E-4	<LLD
Gross alpha	Ci	<LLD	

Fe-55 LLD = <1.00E-6 uCi/ml

Sr-89 LLD = <5.00E-8 uCi/ml

Sr-90 LLD = <1.00E-8 uCi/ml

* - All gaseous releases made from S.O.N.G.S. 1 are vented through the Plant Stack, therefore, Sr-89, and Sr-90 are analyzed by "continuous" mode only.

** - Gross alpha is reported as total activity released per quarter. See Tables 1A & 2A.

S.O.N.G.S. 1

2. LIQUID EFFLUENT-RADIATION DOSES AT THE SITE BOUNDARY
For the second quarter of 1987 Semiannual Report, Sr-89, Sr-90, and Fe-55.

		Unit	Second Quarter
A.			
	1. Total body dose	mrem	2.34E-4
	2. Percent Applicable Limit	%	7.80E-3
B.			
	1. Limit organ dose	mrem	1.32E-3
	2. Percent Applicable Limit	%	2.65E-2

NOTE: The limiting organ is the Bone.

SECTION E. RADWASTE SHIPMENTS

S.O.N.G.S. 1

TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not Irradiated Fuel)

1. Type of waste	Unit	6-month Period	Est. Total Error, %
a. Spent resins, filter sludges, evaporator bottoms, etc.	m3 Ci	4.02E+0* 2.57E+1	3.00E+1
b. Dry compressible waste, contaminated equip. etc.	m3 Ci	2.68E+1** 1.20E+1	3.00E+1
c. Irradiated components, control rods, etc.	m^3 Ci	NA NA	NA
d. Other (absorbed liquids, sand, building rubble, biological waste.)	m^3 Ci	NA NA	NA

* Shipped in Type A Cask (C of C 9176), 3-142 ft^3 High Integrity Containers. (Reported volume is for the burial volume of the container).

** Material packaged in 55-gallon DOT 7A Type A drums (7.5 ft^3 ea.) and steel boxes (strong, tight containers 98.0 ft^3 ea).

SECTION E. RADWASTE SHIPMENTS (Continued)

S.O.N.G.S. 1

TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
SOLID WASTE AND IRRADIATED FUEL SHIPMENT

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not Irradiated Fuel) (Continued)

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

a.	carbon-14	%	2.03E-3
	cesium-134	%	9.22E+0
	cesium-137	%	2.54E+1
	cobalt-58	%	1.19E+0
	cobalt-60	%	3.70E+1
	iodine-129	%	8.05E-5
	iron-55	%	7.28E+0
	manganese-54	%	4.32E+0
	nickel-59	%	1.52E-1
	nickel-63	%	1.53E+1
	plutonium-241	%	3.57E-2
	strontium-90	%	1.64E-1
	technetium-99	%	1.61E-4
	tritium	%	1.51E-1

b.	carbon-14	%	1.10E-2
	cesium-134	%	3.22E+0
	cesium-137	%	1.30E+1
	cobalt-58	%	2.39E+0
	cobalt-60	%	5.79E+0
	iodine-129	%	3.11E-1
	iodine-133	%	1.47e+0
	iron-55	%	1.20E+1
	manganese-54	%	1.92E-1
	nickel-63	%	3.83E+0
	plutonium-241	%	8.66E-1
	strontium-90	%	8.83E-2
	technetium-99	%	4.51E-1
	tritium	%	5.65E+1

SECTION E. RADWASTE SHIPMENTS (Continued)

S.O.N.G.S. 1

TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
SOLID WASTE AND IRRADIATED FUEL SHIPMENT

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not Irradiated Fuel) (Continued)

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

c.	Not applicable	%	0.00E+0
d.	Not applicable	%	0.00E+0

3. Solid Waste Disposition

See COMMON section of this report

B. IRRADIATED FUEL SHIPMENTS (Disposition)

See COMMON section of this report

SECTION F. TECHNICAL SPECIFICATION LIMITS AND APPLICABLE LIMITS

Gaseous Effluents - Technical Specification Limits

The percent of Technical Specification Limit, tabulated in Table 1A, was determined by calculation of the following parameter:

$$\% \text{ TSL} = \frac{(\text{Rel Rate})\ (X/Q)\ (100)}{MPC_{eff}}$$

Where: Rel Rate = total curies released in each category and each quarter, divided by the seconds in a quarter; this is the value in Parts A.2, B.2, C.2 and D.2 of Table 1A, converted to microcuries.

X/Q = 1.30E-5 sec/m^3 and is the annual average atmospheric dispersion defined in the ODCM, Rev. 3.

The MPC_{eff} is defined as:

$$\frac{1}{\sum_{i=1}^{n} \frac{F_i}{MPC_i}}$$

Where: F_i = fractional abundance of the ith radionuclide obtained by dividing the activity in curies for each radionuclide, C_i, by the sum of all such activities, C_T.

n = total number of radionuclides identified

MPC_i = MPC of the ith radionuclide

The % TSL is placed in Parts A.3, B.3, C.3 and D.3 of Table 1A.

Liquid Effluents - Applicable Limits

The percent of applicable limit, tabulated in Table 2A, was determined by calculation of the following parameter:

$$\% \text{ Applicable Limit} = \frac{(\text{Dil Conc})\ (100)}{MPC_{eff}}$$

Where: Dil Conc = total curies released in each category and each quarter, converted to microcuries, divided by the total volume released (sum of PartsE and F in Table 2A) converted to milliliters. This number is the value in Part A.2, B.2 and C.2 of Table 2A.

The MPC_{eff} is defined as:

$$\frac{1}{\sum_{i=1}^{n} \frac{F_i}{MPC_i}}$$

Where: F_i = fractional abundance of the ith radionuclide obtained by dividing the activity in curies for each radionuclide, C_i, by the sum of all such activities, C_T.

n = total number of radionuclides identified

MPC_i = MPC of the ith radionuclide

The % Applicable Limit is placed in Parts A.3, B.3 and C.3 of Table 2A

SECTION G. ESTIMATION OF ERROR

S.O.N.G.S. 1

Estimations of the error in reported values of gaseous and liquid effluents releases have been made. 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 releases are: (1) fan flow rate, (2) sampling, (3) counting, (4) calibration and (5) differential pressure drop.

Sources of error for liquid effluents - batch releases are: (1) tank volumes, (2) sampling, (3) counting and (4) calibration. Sources of error for liquid effluents - continuous releases are: (1) dilution water flow rate, (2) sampling, (3) counting and (4) calibration.

These sources of error are independent, and thus, the total error is calculated according to the following formula:

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

Where: σ_i = Error associated with each component.

SECTION H. 10 CFR 50 APPENDIX I REQUIREMENTS

S.O.N.G.S. 1

Table 1 in Section H presents the quarterly maximum dose to an individual. Six different categories are presented: (1) Liquid Effluents - Whole Body, (2) Liquid Effluents - Organ, (3) Airborne Effluents - Tritium, Iodines and Particulates, (4) Noble Gases - Gamma, (5) Noble Gases - Beta, and (6) Direct Radiation.

The doses for categories 1 and 2 were calculated using the methodology of the ODCM, this data is also presented in Table 2D for the third and fourth quarters. Categories 3, 4, and 5 were calculated utilizing RRRGS (Radioactive Release Report Generating System) software, Regulatory Guide 1.109 methodology, and concurrent meteorology. Table 1E of gaseous effluents previously presented, however, lists data similar to categories 3, 4 and 5 using methods described in the ODCM and the historical meteorology (X/Q). Category 6 presents direct dose data measured by TLD dosimeters. Each portion of each category is footnoted to briefly describe each maximum individual dose presented.

Table 2 in Section H presents the percent of Technical Specification Limits for each dose presented in Table 1.

SECTION H. 10 CFR 50 APPENDIX I REQUIREMENTS (Continued)

S.O.N.G.S. 1

TABLE 1

	Dose* (millirems)				
SOURCE	1st Q	2nd Q	3rd Q	4th Q	Year
LIQUID EFFLUENTS	1)	2)	3)	4)	5)
Whole body	7.45E-3	6.54E-2	1.42E-2	2.25E-2	1.10E-1
	6)	7)	8)	9)	10)
Organ	1.44E-2	1.69E-1	6.44E-2	2.55E-1	3.19E-1
AIRBORNE EFFLUENTS	11)	12)	13)	14)	15)
Tritium, Iodines, and Particulates	1.18E-4	1.07E-2	1.29E-3	1.78E-3	1.39E-2
NOBLE GASES**	16)	17)	18)	19)	20)
Gamma	1.46E-2	3.38E-2	3.08E-2	3.48E-2	9.85E-2
	21)	22)	23)	24)	25)
Beta	4.35E-2	8.79E-2	8.37E-2	9.45E-2	2.99E-1
	26)	27)	28)	29)	30)
DIRECT RADIATION	2.60E-1	4.64E-1	1.12E+0	2.47E+0	4.31E+0

* - The numbered footnotes below briefly explain how each maximum dose was calculated, including the organ and the predominant pathway(s).

** - Noble gas doses due to airborne effluents are in units of mrad reflecting the air dose.

SECTION H. 10 CFR 50 APPENDIX I REQUIREMENTS (Continued)

S.O.N.G.S. 1

1. This data was calculated using the methodology of the ODCM.
2. This data was calculated using the methodology of the ODCM.
3. This data was calculated using the methodology of the ODCM.
4. This data was calculated using the methodology of the ODCM.
5. This data was calculated using the methodology os the ODCM.
6. This data was calculated using the methodology of the ODCM; the GI/LLI received the maximum dose primarily by the saltwater fish pathway.
7. This data was calculated using the methodology of the ODCM; the GI-LLI received the maximum dose primarily by the saltwater fish pathway.
8. This data was calculated using the methodology of the ODCM; the Thyroid received the maximum dose primarily by the saltwater fish pathway.
9. This data was calculated using the methodology of the ODC the Thyroid received the maximum dose primarily by the saltwater fish pathway.
10. This data was calculated using the methodology of the ODCM; the Thyroid received the maximum dose primarily by the saltwater fish pathway.
11. The maximum organ dose was to a child's thyroid and was located in the NW sector. This was calculated using the activity reported in the January - June 1987 Semiannual Report with the assumptions of USNRC Regulatory Guide 1.109.
12. The maximum organ dose was to a child's thyroid and was located in the NW sector. This was calculated using the activity reported in the January - June 1987 Semiannual Report with the assumptions of USNRC Regulatory Guide 1.109.
13. The maximum organ dose was to a child's thyroid and was located in the NW sector. This was calculated using the activity reported in the July - December 1987 Semiannual Report with the assumptions of USNRC Regulatory Guide 1.109.

SECTION H. 10 CFR 50 APPENDIX I REQUIREMENTS (Continued)

S.O.N.G.S. 1

14. The maximum organ dose was to a child's thyroid and was located in the NW sector. This was calculated using the activity reported in the July - December 1987 Semiannual Report with the assumptions of USNRC Regulatory Guide 1.109.

15. The maximum organ dose was to a child's thyroid and was located in the NW sector. This was calculated using the activity reported in the January - December 1987 Semiannual Report with the assumptions of USNRC Regulatory Guide 1.109.

16. A maximum air dose of 1.26E-1 mrad for gamma radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for gamma radiation was located in the NW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of the USNRC Regulatory Guide 1.109.

17. A maximum air dose of 6.27E-2 mrad for gamma radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for gamma radiation was located in the NNW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of the USNRC Regulatory Guide 1.109.

18. A maximum air dose of 1.01E-1 mrad for gamma radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for gamma radiation was located in the NW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of the USNRC Regulatory Guide 1.109.

19. A maximum air dose of 2.95E-1 mrad for gamma radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for gamma radiation was located in the NW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of the USNRC Regulatory Guide 1.109.

20. A maximum air dose of 5.85E-1 mrad for gamma radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for gamma radiation was located in the NNW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of the USNRC Regulatory Guide 1.109.

H. 10 CFR 50 APPENDIX I REQUIREMENTS (Continued)

S.O.N.G.S. 1

21. A maximum air dose of 3.75E-1 mrad for beta radiation was located in the SSW sector, a seaward direction. The SECTION reported maximum air dose for beta radiation was located in the NW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of the USNRC Regulatory Guide 1.109.

22. A maximum air dose of 1.67E-1 mrad for beta radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for beta radiation was located in the NNW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of the USNRC Regulatory Guide 1.109.

23. A maximum air dose of 2.82E-1 mrad for beta radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for beta radiation was located in the NW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of the USNRC Regulatory Guide 1.109.

24. A maximum air dose of 7.60E-1 mrad for beta radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for beta radiation was located in the NW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of the USNRC Regulatory Guide 1.109.

25. A maximum air dose of 1.58E+0 mrad for beta radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for beta radiation was located in the NW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of the USNRC Regulatory Guide 1.109.

26. Measurements were made using TLD dosimeters; values are presented as site wide dose and are prorated to 300 hours per year; highest dose was measured at the Site Boundary in the SE sector.

27. Measurements were made using TLD dosimeters; values are presented as site wide dose and are prorated to 300 hours per year; highest dose was measured at the Site Boundary in the SE sector.

SECTION H. 10 CFR 50 APPENDIX I REQUIREMENTS (Continued)

S.O.N.G.S. 1

28. Measurements were made using TLD dosimeters; values are presented as site wide dose and are prorated to 300 hours per year; highest dose was measured at the Site Boundary in the SE sector.

29. Measurements were made using TLD dosimeters; values are presented as site wide dose and are prorated to 300 hours per year; highest dose was measured at the Site Boundary in the SE sector.

30. Measurements were made using TLD dosimeters; values are presented as site wide dose and are prorated to 300 hours per year; highest dose was measured at the Site Boundary in the SE sector.

SECTION H. 10 CFR 50 APPENDIX I REQUIREMENTS (Continued)

S.O.N.G.S. 1

TABLE 2

SOURCE	PERCENT TECHNICAL SPECIFICATION LIMITS				
	1st Q	2nd Q	3rd Q	4th Q	Year
LIQUID EFFLUENTS					
Whole body	4.96E-1	4.36E+0	9.47E-1	1.50E+0	3.67E+0
Organ	2.88E-1	3.38E-2	1.29E+0	5.10E+0	3.19E+0
AIRBORNE EFFLUENTS					
Tritium, Iodines, and Particulates	1.57E-3	1.43E-1	1.72E-2	2.37E-2	9[redacted]-2
NOBLE GASES					
Gamma	2.92E-1	6.76E-1	6.16E-1	6.96E-1	9.85E-1
Beta	4.35E-1	8.79E-1	8.37E-1	9.45E-1	1.50E+0

Note: Direct Radiation is not specifically addressed in the Technical Specifications.

SECTION I. CHANGES TO OFFSITE DOSE CALCULATION MANUAL

S.O.N.G.S 1

- There were no changes to the Unit 1 Offsite Dose Calculation Manual during the reporting period, July 1, 1987 to December 31, 1987.

SECTION J. S.O.N.G.S. 1 MISCELLANEOUS

- There were no unplanned releases of radioactive gases or liquid from Unit 1 during the reporting period, July 1, 1987 to December 31, 1987.

July 1, 1987 - December 31, 1987

EFFLUENT RADIATION MONITORS OUT OF SERVICE FOR GREATER THAN 30 DAYS

S.O.N.G.S. 1

Monitor	Inoperability Period	Inoperability Cause	Explanation
Plant Vent Stack (WRGM) R-1254	4/14/87 to Present	Process Flow Monitor Out of Service	Project is evaluating a design flaw.

SECTION K. S.O.N.G.S. 1 CONCLUSIONS

- Gaseous effluent releases totaled 5.84E+2 curies with Xe-133 94.2% of the total.

- The radiation doses from gaseous releases are: (a) gamma air dose: 1.01E-1 mrad at the site boundary, (b) beta air dose: 2.71E-1 mrad at the site boundary, c) organ dose: 3.49E-4 mrem at the nearest receptor.

- Liquid releases totaled 1.02E+3 curies of which tritium was 1.02E+3 Ci, noble gases were 6.01E-1 Ci and particulates and iodines were 5.59E-1 Ci.

- The radiation doses from liquid releases are: (a) total body: 3.81E-2 mrem, (b) limiting organ: 3.19E-1 mrem.

- The radioactive releases and resulting doses generated from Unit 1 were below the Technical Specification Limits for both gaseous and liquid effluents.

TABLE OF CONTENTS

SEMIANNUAL EFFLUENT REPORT

July - December (1987)

SECTION A. INTRODUCTION

This Semiannual Report summarizes the gaseous and liquid radioactive effluent releases and radwaste 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 Gaseous and Liquid Effluents For "Continuous" and "Batch" Modes of Release;
2. Percent of Technical Specification Limits;
3. Percent of Applicable Limits;
4. Estimated Total Percent Error;
5. Lower Limit of Detection Concentrations;
6. Batch Release Summaries;
7. Previous Semiannual Report Addendum;
8. Radwaste Shipments;
9. 10CFR50 Appendix I Requirements.

SECTION B. GASEOUS EFFLUENTS

Table 1A, "Gaseous Effluents-Summation of All Releases," provides a detailed listing of gaseous effluents released quarterly in four categories: fission and activation gases, iodine-131, particulates with half-lives greater than eight days, and tritium. Listed for each of the four categories are: (1) the total curies released, (2) the average release rate, (3) the percent of Technical Specification Limit (TSL), and (4) the estimated total error. In addition, the particulate category lists the gross alpha radioactivity released for each quarter.

The methodology used in Table 1A to calculate the estimated total error is presented in Section G of this report.

Table 1B, "Gaseous Effluents-Elevated Release," has not been included in this report since San Onofre Nuclear Generating Station Units 2 and 3 do not conduct elevated releases.

Table 1C, "Gaseous Effluents-Ground-Level Releases," provides the systematic listing by radionuclide for the quantity of radioactivity released in three categories: fission gases, iodines, and particulates. The total radioactivity for each radionuclide is listed for each quarterly period by both "continuous" and "batch" modes of release.

Waste gas decay tank and calibration releases are considered to be "batch" releases. Containment purges, steam jet air ejector and plant stack releases are considered to be "continuous" releases.

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

Table 1E, "Gaseous Effluents-Radiation Doses at the Site Boundary," provides a quarterly summary of doses at the site boundary for this report period.

Table 1F, "Gaseous Effluents-Batch Release Summary," provides summary information regarding batch releases conducted during this report period from San Onofre Nuclear Generating Station Units 2-3.

TABLE 1A

S.O.N.G.S 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	Unit	Third Quarter	Fourth Quarter	Estimated Total Error
A. Fission and activation gases				
1. Total release	Ci	8.93E+3	1.62E+3	2.50E+1
2. Average release rate for period	uCi/sec	1.12E+3	2.04E+2	
3. Percent of technical specification limit	%	2.12E+0	3.77E-1	
B. Iodines				
1. Total iodine-131	Ci	2.88E-1	2.45E-2	1.90E+1
2. Average release rate for period	uCi/sec	3.62E-2	3.08E-3	
3. Percent of technical specification limit	%	1.74E-1	1.48E-2	
C. Particulates				
1. Particulates with half-lives > 8 days	Ci	3.47E-3	7.05E-3	1.60E+1
2. Average release rate for period	uCi/sec	4.37E-4	8.87E-4	
3. Percent of technical specification limit	%	2.19E-4	4.17E-4	
4. Gross alpha radioactivity	Ci	< LLD	*	5.00E+1
D. Tritium				
1. Total release	Ci	6.35E+0	6.49E+1	2.50E+1
2. Average release rate for period	uCi/sec	7.99E-1	8.16E+0	
3. Percent of technical specification limit	%	1.92E-3	1.96E-2	

LLD - Lower Limit of Detection; See Table 1D.
* - Fourth quarter analyses not available at report time; values will included in the following Semiannual Report.

TABLE 1C

S.O.N.G.S. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
GASEOUS EFFLUENTS - GROUND LEVEL RELEASES

		Continuous Mode		Batch Mode	
Nuclides Released	Unit	Third Quarter	Fourth Quarter	Third Quarter	Fourth Quarter
1. Fission gases					
argon-41	Ci	3.64E+1	1.17E+0	<LLD	<LLD
krypton-85	Ci	3.17E+0	<LLD	4.54E+1	2.59E+1
krypton-85m	Ci	2.74E+1	1.15E+1	<LLD	<LLD
krypton-87	Ci	4.37E+0	8.96E-1	<LLD	<LLD
krypton-88	Ci	1.49E+1	<LLD	<LLD	<LLD
xenon-131m	Ci	2.78E+1	3.11E-1	5.68E+0	1.37E+0
xenon-133	Ci	8.14E+3	1.46E+3	4.09E+1	1.16E+1
xenon-133m	Ci	6.05E+1	2.48E-1	2.76E-1	<LLD
xenon-135	Ci	5.19E+2	1.06E+2	2.58E-1	3[illegible]E-3
xenon-135m	Ci	1.27E+0	<LLD	<LLD	[illegible]
xenon-138	Ci	1.71E-1	<LLD	<LLD	<LLD
Total for period	Ci	8.84E+3	1.58E+3	9.26E+1	2.85E+1
2. Iodines					
iodine-131	Ci	2.88E-1	2.45E-2	NA	NA
iodine-132	Ci	4.86E-4	2.15E-5	NA	NA
iodine-133	Ci	1.13E-2	1.55E-3	NA	NA
iodine-134	Ci	4.00E-5	<LLD	NA	NA
iodine-135	Ci	9.64E-4	1.45E-4	NA	NA
Total for period	Ci	3.00E-1	2.63E-2	NA	NA

TABLE 1C (Continued)

S.O.N.G.S. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
GASEOUS EFFLUENTS - GROUND-LEVEL RELEASES

		Continuous Mode		Batch Mode	
Nuclides Released	Unit	Third Quarter	Fourth Quarter	Third Quarter	Fourth Quarter
3. Particulates					
antimony-124	Ci	<LLD	3.49E-7	NA	NA
barium-140	Ci	<LLD	<LLD	NA	NA
bromine-82	Ci	4.90E-5	1.47E-5	NA	NA
cesium-134	Ci	4.54E-4	1.98E-4	NA	NA
cesium-136	Ci	3.13E-5	<LLD	NA	NA
cesium-137	Ci	4.53E-4	3.03E-4	NA	NA
cesium-138	Ci	5.56E-4	1.32E-6	NA	NA
chromium-51	Ci	3.52E-4	7.93E-4	NA	NA
cobalt-57	Ci	<LLD	3.67E-7	NA	NA
cobalt-58	Ci	1.86E-3	3.99E-3	NA	NA
cobalt-60	Ci	1.67E-4	9.87E-4	NA	NA
iron-59	Ci	1.97E-5	8.44E-6	NA	NA
lanthanum-140	Ci	<LLD	<LLD	NA	NA
manganese-54	Ci	4.32E-5	2.35E-4	NA	NA
molybdenum-99	Ci	1.06E-4	6.72E-8	NA	NA
niobium-95	Ci	7.20E-5	3.80E-4	NA	NA
niobium-95m	Ci	7.89E-8	<LLD	NA	NA
rubidium-88	Ci	2.61E-2	1.45E-5	NA	NA
ruthenium-103	Ci	2.04E-5	7.91E-6	NA	NA
sodium-24	Ci	1.95E-7	<LLD	NA	NA
strontium-89	Ci	1.53E-8	*	NA	NA
strontium-90	Ci	<LLD	*	NA	NA
strontium-92	Ci	4.13E-6	<LLD	NA	NA
technetium-99m	Ci	1.08E-4	6.87E-8	NA	NA
tellurium-132	Ci	3.80E-8	<LLD	NA	NA
tin-113	Ci	<LLD	1.83E-5	NA	NA
yttrium-92	Ci	3.74E-8	<LLD	NA	NA
zirconium-95	Ci	<LLD	1.32E-4	NA	NA

LLD - Lower Limit of Detection; See Table 1D.

NA - Iodines and particulates are not analysed prior to release via batch mode.

* - Fourth quarter analyses not available at report time; values will be included in the following Semiannual Report.

TABLE 1D

S.O.N.G.S. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
GASEOUS EFFLUENTS - LOWER LIMIT OF DETECTION

RADIONUCLIDES	CONTINUOUS MODE LLD (uCi/cc)	BATCH MODE LLD (uCi/cc)
1. Fission and activation gases		
argon-41	*	<1.40E-5
krypton-85	<2.40E-5	*
krypton-85m	*	<7.30E-6
krypton-87	*	<1.20E-5
krypton-88	<2.80E-7	<2.00E-5
xenon-133m	*	<7.40E-5
xenon-135m	<4.60E-7	<1.40E-5
xenon-138	<9.70E-7	<3.00E-5
2. Iodines		
iodine-134	<5.00E-12	NA
3. Particulates		
antimony-124	<1.20E-13	NA
barium-140	<1.60E-12	NA
cesium-136	<4.50E-13	NA
cobalt-57	<4.80E-13	NA
lanthanum-140	<9.50E-12	NA
niobium-95m	<1.70E-12	NA

* - Nuclides were detected in Table 1C.

NA - Iodines and particulates are not analysed prior to release via batch mode.

TABLE 1D (Continued)

S.O.N.G.S. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
GASEOUS EFFLUENTS - LOWER LIMIT OF DETECTION

RADIONUCLIDES	CONTINUOUS MODE LLD (uCi/cc)	BATCH MODE LLD (uCi/cc)
3. Particulates (Continued)		
sodium-24	<8.30E-13	NA
strontium-89	<1.00E-13	NA
strontium-90	<1.00E-14	NA
strontium-92	<1.50E-12	NA
technetium-99m	<3.70E-13	NA
tellurium-132	<3.90E-13	NA
tin-113	<5.80E-13	NA
yttrium-92	<5.60E-12	NA
zirconium-95	<7.40E-13	NA
gross alpha	<1.00E-13	NA

* - Nuclides were detected in Table 1C.

NA - Iodines and particulates are not analysed prior to release via batch mode.

TABLE 1E

S.O.N.G.S. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
GASEOUS EFFLUENTS-RADIATION DOSES AT THE SITE BOUNDARY

		Unit	Third Quarter	Fourth Quarter
A.	Noble Gas			
	1. Gamma air dose	mrad	6.89E-1	1.19E-1
	2. Percent Technical Specification Limit	%	6.89E+0	1.19E+0
	3. Beta air dose	mrad	1.57E+0	2.99E-1
	4. Percent Technical Specification Limit	%	7.85E+0	1.50E+0
B.	Tritium, Iodine, Particulate (at the nearest receptor)			
	1. Organ dose	mrem	6.08E-1	[illegible]E-2
	2. PercentTechnicalSpecificationLimit	%	4.05E+0	4.31E-1

NOTE: Calculations performed in accordance with the ODCM utilizing the historical X/Q.

* Fourth quarter dose incomplete due to Sr-89, and Sr-90 analyses available at report time; values will be reported in the followi Semiannual Report.

TABLE 1F

S.O.N.G.S 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
GASEOUS EFFLUENTS-BATCH RELEASE SUMMARY

		6-MONTH PERIOD	
1.	Number of batch releases:	9.0	releases
2.	Total time period for batch releases:	2738.0	minutes
3.	Maximum time period for a batch:	394.0	minutes
4.	Average time period for a batch release:	304.2	minutes
5.	Minimum time period for a batch release:	216.0	minutes

SECTION C. LIQUID EFFLUENTS

Table 2A, "Liquid Effluents - Summation of All Releases," provides a detailed summary of liquid effluents released quarterly in three categories: fission and activation products, tritium, and dissolved and entrained gases. Listed for each of the three categories are: (1) the total curies released, (2) the average diluted concentration, (3) the percent of applicable limit and (4) the estimated total error. In addition, Table 2A lists: (1) the gross alpha radioactivity, (2) the volume of waste released (prior to dilution), and (3) the volume of the dilution water.

The methodology used to calculate the percent of applicable limit is presented in Section F of this report. The methodology used to calculate the estimated total error in Table 2A is presented in Section G of this report.

Table 2B, "Liquid Effluents," provides the systematic listing by radionuclide for the quantity of radioactivity released in each category. The total radioactivity of each radionuclide released is listed for each quarterly period by both "continuous" and "batch" modes of release.

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

Table 2D, "Liquid Effluents-Radiation Doses at the Liquid Site Boundary," presents a quarterly summary of doses at the Liquid Site Boundary for this report period.

Table 2E, "Liquid Effluents-Batch Release Summary," provides summary information regarding batch releases conducted during this report period from San Onofre Nuclear Generating Station Units 2-3.

TABLE 2A

S.O.N.G.S. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

	Unit	Third Quarter	Fourth Quarter	Estimated Total Error, %
A. Fission and activation products				
1. Total release (not including tritium, gases, alpha)	Ci	2.16E-2	2.15E-1	1.90E+1
2. Average diluted concentration during period	uCi/ml	6.63E-11	9.33E-10	
3. Percent of applicable limit	%	3.65E-3	1.20E-2	
B. Tritium				
1. Total release	Ci	2.60E+2	1.19E+2	1.90E+1
2. Average diluted concentration during period	uCi/ml	7.98E-7	4.42E-7	
3. Percent of applicable limit	%	2.66E-2	1.47E-2	
C. Dissolved and entrained gases				
1. Total release	Ci	3.78E+0	3.44E+0	1.90E+1
2. Average diluted concentration during period	uCi/ml	1.16E-8	1.28E-8	
3. Percent of applicable limit	%	5.80E-3	6.40E-3	
D. Gross alpha radioactivity				
1. Total release	Ci	<LLD	*	5.00E+1
E. Volume of waste released (prior to dilution)	liters	8.68E+6	6.09E+6	5.00E+0
F. Volume of dilution water used during period	liters	3.26E+11	2.69E+11	5.00E+0

* - Fourth quarter analyses not available at report time; values will be included in the following Semiannual Report.

LLD - Lower Limit of Detection; see Table 2C.

TABLE 2B

S.O.N.G.S. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS

		Continuous Mode		Batch Mode	
Nuclides Released	Unit	Third Quarter	Fourth Quarter	Third Quarter	Fourth Quarter
antimony-124	Ci	<LLD	<LLD	1.00E-4	1.92E-2
antimony-125	Ci	<LLD	<LLD	1.11E-2	3.62E-2
barium-139	Ci	<LLD	1.42E-5	<LLD	1.91E-5
barium-140	Ci	<LLD	<LLD	1.02E-4	<LLD
cerium-141	Ci	<LLD	<LLD	2.02E-4	1.89E-4
cerium-144	Ci	<LLD	<LLD	4.95E-4	6.49E-4
cesium-134	Ci	9.72E-4	2.05E-2	1.25E-2	1.89E-2
cesium-136	Ci	<LLD	<LLD	6.96E-4	<LLD
cesium-137	Ci	3.17E-3	2.53E-2	1.60E-2	2.29E-2
cesium-138	Ci	<LLD	<LLD	<LLD	3.19E-3
chromium-51	Ci	<LLD	<LLD	2.09E-2	1.67E-2
cobalt-57	Ci	<LLD	<LLD	8.44E-5	1.05E-4
cobalt-58	Ci	1.13E-3	6.00E-4	7.38E-2	4.81E-2
cobalt-60	Ci	<LLD	<LLD	5.61E-3	1.11E-2
iodine-131	Ci	1.12E-3	9.52E-5	3.28E-2	6.75E-3
iodine-133	Ci	<LLD	<LLD	6.07E-4	1.88E-0
iodine-135	Ci	<LLD	<LLD	3.37E-3	<LLD
iron-55	Ci	<LLD	*	<LLD	
iron-59	Ci	<LLD	<LLD	5.37E-4	E-3
lanthanum-140	Ci	<LLD	<LLD	2.25E-3	<LLD
manganese-54	Ci	<LLD	<LLD	1.68E-3	3.64E-4
molybdenum-99	Ci	<LLD	<LLD	2.46E-3	<LLD
neptunium-239	Ci	<LLD	<LLD	2.85E-4	<LLD
niobium-95	Ci	<LLD	<LLD	9.70E-3	9.28E-3
niobium-97	Ci	<LLD	<LLD	3.77E-5	8.51E-4
rubidium-88	Ci	<LLD	<LLD	1.84E-3	<LLD
ruthenium-103	Ci	<LLD	<LLD	7.83E-4	3.83E-3
silver-110m	Ci	<LLD	<LLD	1.47E-4	4.89E-4
sodium 24	Ci	<LLD	<LLD	<LLD	4.27E-3
strontium-89	Ci	<LLD	*	2.11E-4	*
strontium-90	Ci	<LLD	*	1.25E-5	*
strontium-92		<LLD	<LLD	<LLD	4.64E-3
technetium-99m	Ci	<LLD	<LLD	3.28E-3	<LLD
tellurium-132	Ci	<LLD	<LLD	1.87E-5	2.92E-4
tin-113	Ci	<LLD	<LLD	6.55E-4	3.96E-3
zinc-65	Ci	<LLD	<LLD	6.55E-5	7.99E-4
zirconium-95	Ci	<LLD	<LLD	7.09E-3	5.34E-3
Total for period (above)	Ci	6.39E-3	4.65E-2	2.09E-1	2.05E-1

* - Fourth quarter analyses not available at report time; value will be included in the following Semiannual Report.

LLD - Lower Limit of Detection; see Table 2C.

TABLE 2B (Continued)

S.O.N.G.S. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS

		Continuous Mode		Batch Mode	
Nuclides Released	Unit	Third Quarter	Fourth Quarter	Third Quarter	Fourth Quarter
aryon-41	Ci	<LLD	<LLD	<LLD	6.11E-6
krypton-85	Ci	<LLD	<LLD	1.82E-2	<LLD
krypton-85m	Ci	<LLD	<LLD	3.34E-4	8.49E-5
krypton-88	Ci	<LLD	<LLD	8.03E-5	<LLD
xenon-131m	Ci	<LLD	<LLD	1.66E-1	3.55E-2
xenon-133	Ci	3.11E-3	1.97E-3	3.48E+0	3.33E+0
xenon-133m	Ci	<LLD	<LLD	5.62E-2	4.48E-2
xenon-135	Ci	1.38E-3	1.55E-4	5.08E-2	3.14E-2

LLD - Lower Limit of Detection; see Table 2C.

TABLE 2C

S.O.N.G. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS - LOWER LIMIT OF DETECTION

RADIONUCLIDES	CONTINUOUS MODE LLD (uCi/ml)	BATCH MODE LLD (uCi/ml)
(1) Fission and activation products		
antimony-124	<4.10E-7	*
antimony-125	<2.50E-7	*
barium-139	<4.20E-5	<8.00E-7
barium-140	<3.20E-7	<5.00E-7
cerium-141	<1.10E-7	*
cerium-144	<5.00E-7	*
cesium-136	<1.70E-7	<2.10E-7
cesium-138	**	<2.00E-7
chromium-51	<5.50E-7	*
cobalt-57	<6.90E-7	*
cobalt-60	<1.60E-7	*
iodine-133	<1.40E-7	*
iodine-135	<7.60E-7	<4.40E-7
iron-55	<1.00E-6	<1.00E-6
iron-59	<2.40E-7	*

* - Nuclide detected in Table 2B.

** - Weekly composite analysis will not detect this isotope.

TABLE 2C (Continued)

S.O.N.G. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS - LOWER LIMIT OF DETECTION

RADIONUCLIDES	CONTINUOUS MODE LLD (uCi/ml)	BATCH MODE LLD (uCi/ml)
1) Fission and activation products (Continued)		
lanthanum-140	<3.20E-7	<6.40E-7
manganese-54	<1.10E-7	*
molybdenum-99	<8.20E-8	<1.00E-7
neptumium-239	<3.50E-7	<3.70E-7
niobium-95	<1.10E-7	*
niobium-97	**	*
rubidium-88	**	<2.40E-6
ruthenium-103	<9.00E-8	*
ruthenium-106	<1.40E-7	<1.40E-6
silver-110m	<1.60E-7	*
sodium-24	<2.50E-7	<1.40E-7
strontium-89	<5.00E-8	<5.00E-8
strontium-90	<1.00E-8	<1.00E-8
strontium-92	<7.90E-7	<1.90E-7
technetium-99m	<8.20E-8	<1.00E-7
tellurium-132	<7.10E-8	*
tin-113	<1.20E-7	*
zinc-65	<2.30E-7	<3.40E-7

* - Nuclide detected in Table 2B.

** - Weekly composite analysis will not detect this isotope.

TABLE 2C (Continued)

S.O.N.G.S. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS - LOWER LIMIT OF DETECTION

RADIONUCLIDES	CONTINUOUS MODE LLD (uCi/ml)	BATCH MODE LLD (uCi/ml)
zirconium-95	<1.90E-7	*
gross alpha	<1.00E-7	<1.00E-7

* - Nuclide detected in Table 2B.

RADIONUCLIDES	CONTINUOUS MODE LLD (uCi/ml)	BATCH MODE LLD (uCi/ml)
(2) Dissolved and entrained gases		
argon-41	<2.40E-7	<1.90E-7
krypton-85	<2.10E-5	<3.50E-5
krypton-85m	<9.00E-8	*
krypton-88	<4.10E-7	<4.50E-7
xenon-131m	<2.70E-6	*
xenon-133m	<5.40E-7	*

* - Nuclide detected in Table 2B.

TABLE 2D

S.O.N.G.S. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS-RADIATION DOSES AT THE LIQUID SITE BOUNDARY

	Unit	Third Quarter	Fourth Quarter
A.			
1. Total body dose	mrem	1.54E-2	3.68E-2
2. Percent Technical Specification Limit	%	5.13E-1	1.23E+0
B.			
1. Limiting organ dose	mrem	2.06E-2	4.84E-2
2. Percent Technical Specification Limit	%	2.06E-1	4.84E-1

NOTE: The limiting organ for the third quarter is the Thyroid, and for the fourth quarter is the Liver.

* Fourth quarter dose incomplete due to Sr-89,Sr-90, and Fe-55 analyses not available at repot time; values will be reported in the following Semiannual Report.

TABLE 2E

S.O.N.G.S. 2 - 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
LIQUID EFFLUENTS-BATCH RELEASE SUMMARY

		6-MONTH PERIOD	
1.	Number of batch releases:	119	releases
2.	Total time period for batch releases:	23,398	minutes
3.	Maximum time period for a batch release:	603	minutes
4.	Average time period for a batch release:	197	minutes
5.	Mimium time period for a batch release:	15	minutes
6.	Average saltwater flow during batch releases:	702,888	gpm

SECTION D. PREVIOUS SEMIANNUAL REPORT ADDENDUM

S.O.N.G.S. 2 - 3

1. The January - June 1987 Semiannual Report values for composite Gross alpha, Sr-89, Sr-90, and Fe-55 (Tables 1A and 1C, Gaseous Effluents, Tables 2A and 2B, Liquid Effluents) were incomplete due to data not available at report time. The values not reported for gases were for the fourth quarter of 1986; and the second quarter of 1987 for liquids. The values are as follows:

GASEOUS EFFLUENTS (4th Quarter 1986)

		Fourth Quarter	
Nuclides Released	Unit	Continuous Mode	Batch Mode
strontium-89	Ci	<LLD	*
strontium-90	Ci	<LLD	*
Gross alpha	Ci	3.67E-7	

Sr-89 LLD = <1.00E-13 uCi/cc

Sr-90 LLD = <1.00E-14 uCi/cc

GASEOUS EFFLUENTS (2nd Quarter 1987)

		Second Quarter	
Nuclides Released	Unit	Continuous Mode	Batch Mode
strontium-89	Ci	1.62E-7	*
strontium-90	Ci	<LLD	*
Gross alpha	Ci	<LLD **	

Sr-89 LLD = <1.00E-13 uCi/cc

Sr-90 LLD = <1.00E-14 uCi/cc

Gross alpha LLD =<1.00E-13 uCi/cc

* - All gaseous releases made from S.O.N.G.S. 2-3 are vented through continuous discharge pathways, therefore, Sr-89 and Sr-90 are analyzed by "continuous" mode only.

** - Gross alpha is reported as total activity released per quarter. See Table 1A.

SECTION D. PREVIOUS SEMIANNUAL REPORT ADDENDUM (Continued)

S.O.N.G.S. 2 - 3

LIQUID EFFLUENTS

2. In the January - June Semiannual Report curie values and resulting doses for composite Gross alpha, Sr-89, Sr-90, and Fe- 55 (Tables 2A and 2B) were incomplete due to data not available at report time. The values are as follows:

Second Quarter

Nuclides Released	Unit	Continuous Mode	Batch Mode
iron-55	Ci	<LLD	<LLD
strontium-89	Ci	<LLD	<LLD
strontium-90	Ci	<LLD	<LLD
Gross alpha	Ci	<LLD	

Fe-55 LLD = <1.00E-6 uCi/ml

Sr-89 LLD = <5.00E-8 uCi/ml

Sr-90 LLD = <1.00E-8 uCi/ml

Gross alpha LLD = <1.00E-7 uCi/ml

* - Gross alpha is reported as total activity released per quarter. See Table 2A.

SECTION E. RADWASTE SHIPMENTS

S.O.N.G.S. 2 - 3

TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

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

1. Type of waste	Unit	6-month Period	Est. Total Error, %
a. Spent resins, filter sludges, evaporator bottoms, etc.	m^3	8.04E+0*	
	Ci	1.34E+2	3.00E+1
b. Dry compressible waste, contaminated equip. etc.	m^3	1.51E+2**	
	Ci	5.52E+0	3.00E+1
c. Irradiated components, control rods, etc.	m^3	NA	
	Ci	NA	NA
d. Other (filters, sludge sand/rubble, wet trash)	m^3	5.10E+0**	
	Ci	4.39E-1	3.00E+1

* Shipped in Type A Cask (C of C 9176), 3 - 142 ft^3 High Integrity containers. (Reported volume is for burial volume of container).

** Material shipped in 55 gal. D.O.T. 7A Type A Drums (7.5 ft^3 each) and steel boxes (strong tight containers - 98.0 ft^3 each).

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

a. Not applicable.

SECTION E. RADWASTE SHIPMENTS (Continued)

S.O.N.G.S. 2 - 3

TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

a.	carbon-14	%	6.52E-6
	cerium-144	%	1.08E-2
	cesium-134	%	2.37E+1
	cesium-137	%	6.27E+1
	cobalt-57	%	1.57E-1
	cobalt-58	%	5.02E-1
	cobalt-60	%	2.81E+0
	iodine-129	%	3.42E-4
	iron-55	%	5.04E+0
	manganese-54	%	1.45E+0
	nickel-63	%	3.76E+0
	plutonium-241	%	2.85E-2
	strontium-90	%	1.11E-1
	technetium-99	%	8.73E
	tritium	%	1.38
b.	antimony-125	%	9.00E-2
	barium-140	%	9.08E-2
	carbon-14	%	7.88E-3
	cerium-144	%	2.12E+0
	cesium-134	%	1.01E+1
	cesium-137	%	1.67E+1
	cobalt-58	%	4.46E+0
	cobalt-60	%	4.39E+0
	chromium-51	%	3.73E+0
	curium-242	%	1.63E-1
	iodine-129	%	9.87E-2
	iodine-131	%	3.03E-1
	iron-55	%	3.99E+1
	manganese-54	%	1.27E+0
	nickel-63	%	1.70E+0
	niobium-94	%	7.95E-1
	niobium-95	%	5.40E+0
	plutonium-241	%	1.59E+0
	strontium-89	%	1.13E-1
	strontium-90	%	1.06E-1

S.O.N.G.S. 2 - 3

TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

	technetium-99	%	2.25E-1
	tritium	%	4.38E+0
	zinc-65	%	
	zirconium-95	%	0.00E+0
c.	Not applicable	%	0.00E+0
d.	barium-140	%	8.88E-1
	carbon-14	%	1.90E-1
	cerium-144	%	2.18E-1
	cesium-134	%	9.47E+0
	cesium-136	%	4.92E-1
	cesium-137	%	4.37E-1
	cobalt-58	%	3.48E+1
	cobalt-60	%	6.51E+0
	chromium-51	%	4.65E+0
	iodine-129	%	1.95E-1
	iodine-131	%	1.40E-1
	iron-55	%	2.23E+1
	iron-59	%	3.42E-1
	manganese-54	%	1.69E+0
	nickel-63	%	4.65E+0
	niobium-95	%	2.94E+0
	technetium-99	%	1.54E-2
	tritium	%	5.12E+0
	xenon-131	%	9.36E-1
	xenon-133	%	2.41E+0
	zinc-65	%	2.07E-1
	zirconium-95	%	1.30E+0

3. Solid Waste Disposition

See COMMON section of this report

B. IRRADIATED FUEL SHIPMENTS (Disposition)

See COMMON section of this report

Gaseous Effluents - Technical Specification Limits

The percent of Technical Specification Limit, tabulated in Table 1A, was determined by calculation of the following parameter:

$$\% \text{ TSL} = \frac{(\text{Rel Rate})\ (X/Q)\ (100)}{MPC_{eff}}$$

Where: Rel Rate = total curies released in each category and each quarter, divided by the seconds in a quarter; this is the value in Parts A.2, B.2, C.2 and D.2 of converted to microcuries.

X/Q = 4.80E-6 sec/m^3 and is the annual average atmospheric dispersion defined in the ODCM, Rev. 17.

The MPC_{eff} is defined as:

$$\frac{1}{\sum_{i=1}^{n} \frac{F_i}{MPC_i}}$$

Where: F_i = fractional abundance of the ith radionuclide obtained by dividing the activity in curies for each radionuclide, C_i, by the sum of all such activities, C_T.

n = total number of radionuclides identified

MPC_i = MPC of the ith radionuclide

The % TSL is placed in Parts A.3, B.3, C.3 and D.3 of Table 1A.

SECTION F. TECHNICAL SPECIFICATION LIMITS AND APPLICABLE LIMITS

Liquid Effluents - Applicable Limits

The percent of applicable limit, tabulated in Table 2A, was determined by calculation of the following parameter:

$$\% \text{ Applicable Limit} = \frac{(\text{Dil Conc})\ (100)}{MPC_{eff}}$$

Where: Dil Conc = total curies released in each category and each quarter, converted to microcuries, divided by the total volume released (sum of Parts E and F in Table 2A) converted to milliliters. This number is the value in Part A.2, B.2 and C.2 of Table 2A.

The MPC_{eff} is defined as:

$$\frac{1}{\sum_{i=1}^{n} \frac{F_i}{MPC_i}}$$

Where: F_i = fractional abundance of the ith radionuclide obtained by dividing the activity in curies for each radionuclide, C_i, by the sum of all such activities, C_T.

n = total number of radionuclides identified

MPC_i = MPC of the ith radionuclide

The % Applicable Limit is placed in Parts A.3, B.3 and C.3 of Table 2A.

SECTION G. ESTIMATION OF ERROR

S.O.N.G.S. 2 - 3

Estimations of the error in reported values of gaseous and liquid effluents releases have been made. 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 releases are: (1) fan flow rate, (2) sampling, (3) counting, (4) calibration and (5) differential pressure drop.

Sources of error for liquid effluents - batch releases are: (1) tank volumes, (2) sampling, (3) counting and (4) calibration. Sources of error for liquid effluents - continuous releases are: (1) dilution water flow rate, (2) sampling, (3) counting and (4) calibration.

These sources of error are independent, and thus, the total error is calculated according to the following formula:

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

Where: σ_i = Error associated with each component.

SECTION H. 10 CFR 50 APPENDIX I REQUIREMENTS

S.O.N.G.S. 2 - 3

Table 1 in Section H presents the quarterly maximum dose to an individual. Six different categories are presented: (1) Liquid Effluents - Whole Body, (2) LiquidEffluents - Organ, (3) Airborne Effluents - Tritium, Iodines and Particulates, (4) Noble Gases - Gamma, (5) Noble Gases - Beta, and (6) Direct Radiation.

The doses for categories 1 and 2 were calculated using the methodology of the ODCM, this data is also presented in Table 2D for the third and fourth quarters. Categories 3, 4, and 5 were calculated utilizing RRRGS (Radioactive Release Report Generating System) software, Regulatory Guide 1.109 methodology, and concurrent meteorology. Table 1E of gaseous effluents previously presented, however, lists data similar to categories 3, 4 and 5 using methods described in the ODCM and the historical meteorology (X/Q). Category 6 presents direct dose data measured by TLD dosimeters. Each portion of each category is footnoted to briefly describe each maximum individual dose presented.

Table 2 in Section H presents the percent of Technical Specification Limits for each dose presented in Table 1.

SECTION H. 10 CFR 50 APPENDIX I REQUIREMENTS (Continued)

S.O.N.G.S. 2 - 3

TABLE 1

SOURCE	Dose* (millirems) 1st Q	2nd Q	3rd Q	4th Q	Year
LIQUID EFFLUENTS	1)	2)	3)	4)	5)
Whole Body	1.82E-3	6.83E-3	1.54E-2	3.68E-2	6.09E-2
	6)	7)	8)	9)	10)
Organ	9.93E-3	2.75E-2	2.06E-2	4.84E-2	6.87E-2
AIRBORNE EFFLUENTS	11)	12)	13)	14)	15)
Tritium Iodines and Particulates	4.43E-2	4.36E-2	3.52E-1	4.92E-2	4.89E-1
NOBLE GASES**	16)	17)	18)	19)	20)
Gamma	2.93E-1	1.95E-1	1.58E-1	2.59E-2	7.72E-1
	21)	22)	23)	24)	25)
Beta	7.09E-1	3.75E-1	3.44E-1	5.40E-2	1.77E+0
DIRECT RADIATION	26)	27)	28)	29)	30)
	2.60E-1	4.64E-1	1.12E+0	2.47E+0	4.31E+0

* - The numbered footnotes below briefly explain how each maximun dose was calculated, including the organ and the predominant pathway(s).

** - Noble gas doses due to airborne effluents are in units of mrad reflecting the air dose.

1. This data was calculated using the methodology of the ODCM.

2. This data was calculated using the methodology of the ODCM.

3. This data was calculated using the methodology of the ODCM.

4. This data was calculated using the methodology of the ODCM.

5. This data was calculated using the methodology of the ODCM.

6. This data was calculated using the methodology of the ODCM; the GI-LLI received the maximum dose primarily by the saltwater fish pathway.

7. This data was calculated using the methodology of the ODCM; the GI-LLI received the maximum dose primarily by the saltwater fish pathway.

8. This data was calculated using the methodology of the ODCM; the Thyroid received the maximum dose primarily by the saltwater fish pathway.

9. This data was calculated using the methodology of the ODCM; the Liver received the maximum dose primarily by the saltwater fish pathway.

10. This data was calculated using the methodology of the ODCM; the Liver received the maximum dose preimarily by the saltwater fish pathway.

11. The maximum organ dose was to a child's thyroid and was located in the NNW sector. This was calculated using the activity reported in the January - June Semiannual Report with the assumptions of USNRC Regulatory Guide 1.109.

12. The maximum organ dose was to a child's thyroid and was located in the NNW sector. This was calculated using the activity reported in the January - June Semiannual Report with the assumptions of USNRC Regulatory Guide 1.109.

13. The maximum organ dose was to a child's thyroid and was located in the NNW sector. This was calculated using the activity reported in the July - December Semiannual Report with the assumptions of USNRC Regulatory Guide 1.109.

14. The maximum organ dose was to a child's thyroid and was located in the NNW sector. This was calculated using the activity reported in the July - December Semiannual Report with the assumptions of USNRC Regulatory Guide 1.109.

15. The maximum organ dose was to a child's thyroid and was located in the NNW sector. This was calculated using the activity reported in the January - December Semiannual Report with the assumptions of USNRC Regulatory Guide 1.109.

16. A maximum air dose of 6.74E-1 mrad for gamma radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for gamma radiation was located in the E sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of USNRC Regulatory Guide 1.109.

17. A maximum air dose of 3.32E-1 mrad for gamma radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for gamma radiation was located in the NW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of USNRC Regulatory Guide 1.109.

18. A maximum air dose of 4.50E-1 mrad for gamma radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for gamma radiation was located in the NNW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of USNRC Regulatory Guide 1.109.

19. A maximum air dose of 1.91E-1 mrad for gamma radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for gamma radiation was located in the NW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of USNRC Regulatory Guide 1.109.

20. A maximum air dose of 1.65E+0 mrad for gamma radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for gamma radiation was located in the E sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of USNRC Regulatory Guide 1.109.

SECTION H. 10 CFR 50 APPENDIX I REQUIREMENTS (Continued)

S.O.N.G.S. 2 - 3

21. A maximum air dose of 1.67E+0 mrad for beta radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for beta radiation was located in the E sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of USNRC Regulatory Guide 1.109.

22. A maximum air dose of 5.15E-1 mrad for beta radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for beta radiation was located in the E sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of USNRC Regulatory Guide 1.109.

23. A maximum air dose of 8.43E-1 mrad for beta radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for beta radiation was located in the NNW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of USNRC Regulatory Guide 1.109.

24. A maximum air dose of 4.71E-1 mrad for beta radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for beta radiation was located in the NW sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of USNRC Regulatory Guide 1.109.

25. A maximum air dose of 3.50E+0 mrad for beta radiation was located in the SSW sector, a seaward direction. The reported maximum air dose for beta radiation was located in the E sector, a landward sector, at the exclusion area boundary and calculated with the assumptions of USNRC Regulatory Guide 1.109.

26. Measurements were made using TLD dosimeters; values are presented as site wide dose and are prorated to 300 hours per year; highest dose was measured at the Site Boundary in the SE sector.

27. Measurements were made using TLD dosimeters; values are presented as site wide dose and are prorated to 300 hours per year; highest dose was measured at the Site Boundary in the SE sector.

28. Measurements were made using TLD dosimeters; values are presented as site wide dose and are prorated to 300 hours per year; highest dose was measured at the Site Boundary in the SE sector.

29. Measurements were made using TLD dosimeters; values are presented as site wide dose and are prorated to 300 hours per year; highest dose was measured at the Site Boundary in the SE sector.

30. Measurements were made using TLD dosimeters; values are presented as site wide dose and are prorated to 300 hours per year; highest dose was measured at the Site Boundary in the SE sector.

SECTION H. 10 CFR 50 APPENDIX I REQUIREMENTS (Continued)

S.O.N.G.S. 2 - 3

TABLE 2

SOURCE	PERCENT TECHNICAL SPECIFICATION LIMITS				
	1st Q	2nd Q	3rd Q	4th Q	Year
LIQUID EFFLUENTS					
Whole Body	6.06E-2	2.28E-1	5.13E-1	1.23E+0	1.02E+0
Organ	9.93E-2	2.75E-1	2.06E-1	4.84E-1	3.44E-1
AIRBORNE EFFLUENTS					
Tritium, Iodines and Particulates	2.95E-1	2.91E-1	2.35E+0	3.28E-1	1.63E+0
NOBLE GASES					
Gamma	2.93E+0	1.95E+0	1.58E+0	2.59E-1	3.86E+0
Beta	3.54E+0	1.88E+0	1.72E+0	2.70E-1	4.43E+0

Note: Direct Radiation is not specifically addressed in the Technical Specifications.

SECTION I. CHANGES TO OFFSITE DOSE CALCUATION MANUAL

S.O.N.G.S. 2 - 3

- There were no changes to Units 2/3 Offsite Dose Calculation Manual during the reporting period, July 1, 1987 to December 31, 1987.

SECTION J. S.O.N.G.S. 2-3 MISCELLANEOUS

- There were no unplanned releases of radioactive gases or liquids from Units 2/3 during the reporting period, July 1, 1987 to December 31, 1987.

July 1, 1987 - December 31, 1987

EFFLUENT RADIATION MONITORS OUT OF SERVICE FOR GREATER THAN 30 DAY

S.O.N.G.S. 2

Monitor	Inoperability Period	Inoperability Cause	Explanation
Unit 2			
2-7865 Plant Vent Stack-WRGM	9/1-10/13	18 Month Surveillance	Unit 2 Outage
2-7870 Condenser Air Ejector-WRGM	9/5-11/14	18 Month Surveillance	Unit 2 Outage (Not required when in Modes 5 & 6 or when all main steam isolation valves and main steam isolating bypass valves are fully closed)
	11/14 to Present	Simulating Process Flow Install	SPR CU871277 evaluated by Station Technical
2-7818A Condenser Air Ejector	5/14-12/13 9/3-12/31	Design Problem on "B" Channel 18 Month Surveillance	Unit 2 Outage (Not required with MSIV's closed)
2-7818B Condenser Air Ejector	5/14-12/13 9/3 to Present	Design Problem 18 Month Surveillance	SPR-CU871273 evaluated by Station Technical. Unit 2 Outage (not required with MSIV's closed)
2-6753 (E-089) Steam Generator Blowdown Bypass	9/21-11/13	No Sample Flow	Unit 2 Outage (Steam Generators in dry layup)

July 1, 1987 - December 31, 1987

EFFLUENT RADIATION MONITORS OUT OF SERVICE FOR GREATER THAN [redacted] DA

S.O.N.G.S. 2

Monitor	Inoperability Period	Inoperability Cause	Explanation
Unit 2			
2-7817 Blowdown Processing System Neutralization Sump	8/31-10/21	92 Day Surveillance (Neutralization Sump Out of Service)	Unit 2 Outage

S.O.N.G.S. 3

Unit 3			
3-7865 Plant Vent Stack-WRGM	11/23 to Present	Simulated Process Flow Installed	Low Indicated Flow
3-7870 Condenser Air Ejector-WRGM	8/25-9/3 9/3 to Present	Simulated Process Flow Installed	SPR-CU87[redacted]4 Evaluated by Station Technical
3-7818A Condenser Air Ejector	7/15 to Present 10/28-12/7	Blower Fan Tripping Repair Tripping Blower	Operations he out of servic for review of SPR-CU871273 Awaiting part
3-7818B Condenser Air Ejector	6/18 to Present 7/15 to Present 10/28-12/7	Does not agree with 3-7870 and 3-7818A Blower Tripping Repair Tripping Blower	SPR-CU871273 Design proble being studied by Station Technical
3-7828 Containment Purge-WRGM	1/5-10/25 10/24-12/14	Mini Purge Flow Monitor Inop 18 Month Surveillance Main Purge Flow Monitor Inop	Awaiting Part

SECTION K. S.O.N.G.S. 2 - 3 CONCLUSIONS

- Gaseous effluent releases totaled 1.06E+4 curies with Xe-133 90.9% of the total.

- The radiation doses from gaseous releases are: (a) gamma air dose: 8.08E-1 mrad at the site boundary, (b) beta air dose: 1.87E+0 mrad at the site boundary, (c) organ dose: 6.73E-1 mrem at the nearest receptor.

- Liquid releases totaled 3.86E+2 curies of which tritium was 3.79E+2 Ci, noble gases were 7.22E+0 Ci and particulates and iodines were 2.37E-1 Ci.

- The radiation doses from liquid releases are: (a) total body: 5.22E-2 mrem, (b) limiting organ: 6.90E-2 mrem.

- The radioactive releases and resulting doses generated from Units 2 and 3 were below the Technical Specification Limits for both gaseous and liquid effluents.

COMMON RADWASTE SHIPMENTS

TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
SOLID WASTE AND IRRADIATED FUEL SHIPMENT

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

1. Type of waste	Unit	6-month Period	Est. Total Error, %
a. Spent resins, filter sludges, evaporate bottoms, etc.	m^3	NA	
	Ci	NA	3.00E+1
b. Dry compressible waste, contaminated equip, etc.	m^3	NA	
	Ci	NA	3.00E+1
c. Irradiated components, control rods, etc.	m^3	NA	
	Ci	NA	3.00E+1
d. Other (filters, sludge, sand/rubble, wet trash	m^3	1.49E+0**	
	Ci	3.07E-3	3.00E+1

** - Material packaged in 55-gallon Dot 7A Type A drums (7.5 ft^3 ea.) and steel boxes (strong, tight containers 98.0 ft^3 ea).

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

a. Not Applicable	%	0.00E+0	
b. Not Applicable	%	0.00E+0	
c. Not Applicable	%	0.00E+0	

TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)

SOLID WASTE AND IRRADIATED FUEL SHIPMENT

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

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

d.	carbon-14	%	3.26E-2
	cesium-137	%	1.58E+1
	cobalt-58	%	1.32E+1
	cobalt-60	%	1.14E+1
	iodine-129	%	6.51E-2
	iron-55	%	1.18E+1
	iron-59	%	4.76E+1
	strontium-90	%	6.51E-2
	technetium-99	%	6.51
	tritium	%	3.26

3. Solid Waste Disposition (S.O.N.G.S. 1, 2, and 3)*

Number of Shipments	Mode of Transportation	Destination
3	Tri-State Motor Transit Truck/Cask	Richland, WA
1	Tri-State Motor Transit Truck/Trailer	Richland, WA
8	Tri-State Motor Transit Truck/Trailer	Beatty, NV

* - All waste packages at SONGS is staged at one location. There are no independent shipments of dry active waste made for Unit 1 or Units 2/3, and are not reported separately. Therefore, the same number of shipments are reported in the Unit 1 Semiannual Report.

COMMON RADWASTE SHIPMENTS (Continued)

TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (1987)
SOLID WASTE AND IRRADIATED FUEL SHIPMENT

B. IRRADIATED FUEL SHIPMENTS (Disposition)

Number of Shipments	Mode of Transportation	Destination
None	N/A	N/A

C. DEWATERING

Number of Containers	Solidification Agent
3	N/A

D. CHANGES TO THE PROCESS CONTROL PROGRAM AT SAN ONOFRE UNITS 1, 2 & 3

1. During the reporting period from July to December 1987, a TCN was issued to Station Procedure SO123-VII-8.5.1, "Process Control Program for San Onofre Units 1, 2 & 3." TCN 0-3 was issued to improve clarity of a Technical Specification requirement regarding Process Control Program (PCP) samples.

   a. Rational for Change: The procedure previously required, "vendors . . . to provide actions to be taken if a sample fails to verify solidification." A QA audit identified this as inadequate. This TCN specifically adds the requirement to pass "at least three consecutive test specimens", if the initial test specimen fails.

   b. Conformance with Existing Criteria: This sample requirement was originally approved by the NRC in SO1-VII-8.5.0. This change only includes and clarifies the existing requirement and does not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes.

   c. Review and Acceptability: This change was reviewed by the qualified individual/organization, the Health Physics Manager, as per Technical Specification 6.5.2.9. By copy of this report, documentation is provided to the Vice President and Site Manager, Nuclear Generation Site, and to the NSG.

E. Correction to Semi-Annual Effluent Report January to June 1987

The SAERR for the period January to June 1987 was not sufficien clear regarding an administrative change to the PCP relative to the impact on the solidified waste product and to the review and acceptability of the change. Accordingly, Table 3 Section D of the SAERR is corrected to read as follows:

a. Rationale For Change: TCN 0-2 was issued to Station Procedure SO123-VII-8.5.1. This TCN changed the review of implementing supplemental procedures for the PCP to the Health Physics Manager (HPM). The HPM is the qualified individual/organization referenced in Technical Specification 6.5.2.9. Previously, these changes required review by the Onsite Review Committee.

b. Conformance with Existing Criteria: This change does not reduce the overall conformance of the solidified waste product to existing criteria for solid waste.

c. Review and Acceptability: This change was reviewed by the qualified individual/organization, the HPM, as per Technical Specification 6.5.2.9. By copy of this report, documentation is provided to the Vice President and Site Manager, Nuclear Generation Site, and the NSG.

REFERENCES:

1. Unit 2 & 3 Technical Specifications, Section 6.13.2

2. Unit 1 Technical Specifications, Section 3.19

COMMON 40 CFR 190 REQUIREMENTS

Table 1 presents the yearly site-wide doses and percent of Technical Specification limits to members of the public. These values are calculated utilizing doses resulting from all effluent pathways and direct radiation. The different categories presented are: (1) Total Body, (2) Limiting Organ, and (3) Thyroid.

Table 1

	Units	Year
1. Total Body		
a. Total Body dose	mrem	2.79E+0
b. Percent of Technical Specification Limits	%	1.12E+1
2. Limiting Organ		
a. Organ dose (GI-LLI)	mrem	2.55E-1
b. Percent of Technical Specification Limits	%	1.02E+0
3. Thyroid		
a. Thyroid dose	mrem	1.27E+0
b. Percent of Technical Specification Limits	%	1.69E+0

Errata: A typo occured in the previous presentation of 40CFR190 data (July-December 1986 Report). The total body dose was reported as 2.01E+1 mrem and should have been 2.01E+0. The percentage of Technical Specification was correctly reported as 8.05E+0%.

In addition to the dose calculated in the table above, one additional pathway exists for radiation exposure to a member of the public. Southern California Edison collects marine benthic material from the screens of its circulating water intake structure. Because of the potential for this benthic material to contain radioactive substances previously discharged to the environment as liquid waste, Southern California Edison performs a survey to confirm that no plant-related radioactive materials are detectable. The lower limit of detection (LLD) of the survey is established so that, with due consideration of the potential future use of the land disposal site, the maximum annual dose to an individual after 40 years of continued disposal is within the limits specified by 40CFR190. In that LLD determination, the disposal site, 20 miles distant from San Onofre, is considered to be outside the sphere of influence of gaseous and liquid pathways.

COMMON CONCLUSIONS

- Radioactive releases from S.O.N.G.S. 1, 2 and 3 totaled 1.12E+4 curies for gaseous effluents, 91.0 % of which was Xe-133. Curies discharged for liquid effluents were: tritium, 1.40E+3 curies; noble gases, 7.82E+0 curies; particulates and iodines, 7.96E-1 curies.

- Radioactive releases and resulting doses generated from S.O.N.G.S. 1, 2 and 3 were below the Technical Specification Limits for both gaseous and liquid effluents.

- S.O.N.G.S. 1, 2 and 3 made 4 radwaste shipments; to Richland, Washington, and 8 to Beatty, Nevada. Total volume was 1.96E+2 cubic meters containing 1.78E+2 curies of radioactivity.

- Meteorological conditions during the year were typical of the meteorology at S.O.N.G.S. Meteorological dispersion was good 36% of the time, fair 44% of the time and poor 20% of the time.

- The net result from the analysis of these effluent releases indicates that the operation of S.O.N.G.S. 1, 2 and 3 has met all the requirements of the Technical Specifications and other applicable regulatory requirements and therefore has not produced any detrimental effect on the environment.

APPENDIX

GASEOUS EFFLUENTS - TECHNICAL SPECIFICATION LIMITS

A. The dose rate due to radioactive materials released in gaseous effluents from the site to areas at and beyond the site boundary shall be limited to the following values:

1. The dose rate limit for noble gases shall be $\leq$ 500 mrem/year to the total body and $\leq$ 3000 mrem/year to the skin.

2. The dose rate limit for iodines, tritium, and all radionuclides in particulate form with half lives greater than eight days shall be $\leq$ 1500 mrem/year to any organ.

B. The air dose due to noble gases released in gaseous effluents from S.O.N.G.S. (per reactor) to areas at and beyond the site boundary shall be limited to the following values:

1. During any calendar quarter: $\leq$ 5 mrad for gamma radiation and $\leq$ 10 mrad for beta radiation.

2. During any calendar year: $\leq$ 10 mrad for gamma radiation and $\leq$ 20 mrad for beta radiation.

C. The dose to a Member of the Public from iodines, tritium, and all radionuclides in particulate form with half-lives greater than eight days in gaseous effluents released from S.O.N.G.S. (per reactor) to areas at and beyond the site boundary shall be limited to the following values:

1. During any calendar quarter: $\leq$ 7.5 mrem to any organ.

2. During any calendar year: $\leq$ 15 mrem to any organ.

LIQUID EFFLUENTS - TECHNICAL SPECIFICATION LIMITS

A. The concentration of radioactive material released in liquid effluents to Unrestricted Areas shall be limited to the concentrations specified in 10CFR20, Appendix B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall be limited to 2.00E-4 uCi/ml.

B. The dose commitment to a Member of the Public from radioactive materials in liquid effluents released from S.O.N.G.S. (per reactor) to Unrestricted Areas shall be limited to the following values:

1. During any calendar quarter: $\leq$ 1.5 mrem to the total body and $\leq$ 5 mrem to any organ.

2. During any calendar year: $\leq$ 3 mrem to the total body and 10 mrem to any organ.

METEOROLOGY

The meteorology of the San Onofre Nuclear Generating Station for each of the four quarters of 1987 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 Table 4A 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 the Semiannual Report, but has not been included in this report because of the bulk of data records.

Table 4A lists the joint frequency distribution for each fourth quarter, 1987. Each page of Table 4A represents the data for the stability Classes: A, B, C, D, E, F, and G; the last page of each table is the JFD with the combined stability classes. Each page is also divided into two parts; the upper part lists the number of hourly periods when each meteorology condition occurred, and the lower part 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.

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 26-JAN-88
SAN ONOFRE NUCLEAR GENERATING STATION
4TH QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 10/01/87 TO 12/31/87
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) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	5.	32.	54.	54.	81.	100.	106.	105.	74.	69.	129.	829.	8.04
NE	0.	1.	16.	14.	15.	5.	8.	3.	2.	0.	2.	20.	86.	6.80
ENE	0.	1.	5.	3.	2.	2.	4.	2.	1.	3.	2.	4.	29.	6.89
E	0.	1.	5.	1.	9.	5.	6.	3.	4.	2.	1.	23.	60.	10.87
ESE	0.	1.	2.	4.	6.	8.	10.	5.	3.	5.	1.	11.	56.	8.01
SE	0.	0.	4.	10.	9.	14.	14.	13.	8.	12.	12.	23.	119.	8.35
SSE	0.	1.	5.	10.	11.	9.	13.	15.	7.	7.	6.	19.	103.	8.18
S	0.	1.	5.	10.	15.	13.	11.	3.	6.	5.	0.	5.	74.	6.03
SSW	0.	1.	6.	10.	5.	6.	5.	5.	4.	1.	2.	0.	45.	5.50
SW	0.	0.	4.	11.	13.	11.	9.	5.	1.	1.	1.	4.	60.	5.78
WSW	0.	0.	8.	17.	19.	16.	19.	3.	3.	3.	0.	7.	95.	5.74
W	0.	2.	10.	21.	28.	40.	37.	29.	11.	4.	1.	5.	188.	6.10
WNW	0.	2.	9.	12.	19.	29.	25.	13.	19.	15.	8.	7.	158.	6.78
NW	0.	3.	3.	8.	16.	11.	12.	8.	5.	3.	1.	8.	78.	6.42
NNW	0.	2.	8.	20.	12.	7.	3.	1.	3.	0.	1.	15.	72.	6.82
N	0.	4.	12.	32.	20.	20.	11.	11.	6.	5.	6.	26.	153.	7.32
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	25.	134.	237.	253.	277.	287.	225.	188.	160.	113.	306.	2205.	7.39

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.23	1.45	2.45	2.45	3.67	4.54	4.81	4.76	4.26	3.13	5.85	37.60	8.04
NE	0.00	0.05	0.73	0.63	0.68	0.23	0.36	0.14	0.09	0.00	0.09	0.91	3.90	6.80
ENE	0.00	0.05	0.23	0.14	0.09	0.09	0.18	0.09	0.05	0.14	0.09	0.18	1.32	6.89
E	0.00	0.05	0.23	0.05	0.41	0.23	0.27	0.14	0.18	0.09	0.05	1.04	2.72	10.87
ESE	0.00	0.05	0.09	0.18	0.27	0.36	0.45	0.23	0.14	0.23	0.05	0.50	2.54	8.01
SE	0.00	0.00	0.18	0.45	0.41	0.63	0.63	0.59	0.36	0.54	0.54	1.04	5.40	8.35
SSE	0.00	0.05	0.23	0.45	0.50	0.41	0.59	0.68	0.32	0.32	0.27	0.86	4.67	8.18
S	0.00	0.05	0.23	0.45	0.68	0.59	0.50	0.14	0.27	0.23	0.00	0.23	3.36	6.03
SSW	0.00	0.05	0.27	0.45	0.23	0.27	0.23	0.23	0.18	0.05	0.09	0.00	2.04	5.50
SW	0.00	0.00	0.18	0.50	0.59	0.50	0.41	0.23	0.05	0.05	0.05	0.18	2.72	5.78
WSW	0.00	0.00	0.36	0.77	0.86	0.73	0.86	0.14	0.14	0.14	0.00	0.32	4.31	5.74
W	0.00	0.09	0.45	0.95	1.27	1.81	1.68	1.32	0.50	0.18	0.05	0.23	8.53	6.10
WNW	0.00	0.09	0.41	0.54	0.86	1.32	1.13	0.59	0.86	0.68	0.36	0.32	7.17	6.78
NW	0.00	0.14	0.14	0.36	0.73	0.50	0.54	0.36	0.23	0.14	0.05	0.36	3.54	6.42
NNW	0.00	0.09	0.36	0.91	0.54	0.32	0.14	0.05	0.14	0.00	0.05	0.68	3.27	6.82
N	0.00	0.18	0.54	1.45	0.91	0.91	0.50	0.50	0.27	0.23	0.27	1.18	6.94	7.32
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	1.13	6.08	10.75	11.47	12.56	13.02	10.20	8.53	7.26	5.12	13.88	100.00	7.39

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2205

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 26-JAN-88
SAN ONOFRE NUCLEAR GENERATING STATION
4TH QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 10/01/87 TO 12/31/87
STABILITY CLASS #G# (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) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	1.	1.	1.	12.	16.	53.	76.	87.	88.	69.	103.	507.	9.21
NE	0.	0.	1.	3.	4.	1.	2.	1.	0.	0.	0.	0.	12.	4.83
ENE	0.	0.	1.	1.	1.	0.	1.	0.	0.	0.	0.	0.	4.	4.53
E	0.	1.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.	2.23
ESE	0.	1.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	2.	2.65
SE	0.	0.	1.	2.	0.	0.	0.	0.	0.	0.	0.	0.	3.	3.17
SSE	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.	3.10
S	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	2.70
SSW	0.	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.	0.00
WSW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
W	0.	1.	2.	0.	1.	0.	0.	0.	0.	0.	0.	0.	4.	2.83
WNW	0.	0.	0.	0.	2.	2.	2.	1.	0.	0.	0.	0.	7.	5.83
NW	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	1.	5.00
NNW	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	1.	4.60
N	0.	0.	0.	1.	0.	0.	3.	2.	4.	1.	1.	1.	13.	7.95
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	4.	9.	10.	22.	19.	61.	80.	91.	89.	70.	104.	559.	8.84

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.05	0.05	0.05	0.54	0.73	2.40	3.45	3.95	3.99	3.13	4.67	22.99	9.21
NE	0.00	0.00	0.05	0.14	0.18	0.05	0.09	0.05	0.00	0.00	0.00	0.00	0.54	4.83
ENE	0.00	0.00	0.05	0.05	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.18	4.53
E	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	2.23
ESE	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	2.65
SE	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	3.17
SSE	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	3.10
S	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	2.70
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	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	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	0.00	0.00
W	0.00	0.05	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	2.83
WNW	0.00	0.00	0.00	0.00	0.09	0.09	0.09	0.05	0.00	0.00	0.00	0.00	0.32	5.83
NW	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	5.00
NNW	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	4.60
N	0.00	0.00	0.00	0.05	0.00	0.00	0.14	0.09	0.18	0.05	0.05	0.05	0.59	7.95
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.18	0.41	0.45	1.00	0.86	2.77	3.63	4.13	4.04	3.17	4.72	25.35	8.84

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2205

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
4TH QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 10/01/87 TO 12/31/87
STABILITY CLASS #F# (10-40 METERS)
WINDS AT 10 METER LEVEL

26-JAN-88

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	2.	6.	21.	21.	51.	34.	22.	14.	5.	0.	5.	181.	6.01
NE	0.	1.	13.	6.	8.	2.	3.	0.	0.	0.	0.	3.	36.	4.57
ENE	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	1.	6.50
E	0.	0.	0.	1.	0.	0.	1.	0.	0.	0.	0.	0.	2.	5.10
ESE	0.	0.	0.	0.	0.	1.	1.	0.	0.	0.	0.	0.	2.	5.90
SE	0.	0.	1.	1.	1.	1.	1.	0.	0.	0.	0.	1.	6.	5.70
SSE	0.	0.	0.	2.	0.	1.	0.	0.	0.	0.	0.	0.	3.	3.93
S	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.90
SSW	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	2.70
SW	0.	0.	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.	0.	0.00
W	0.	0.	1.	0.	1.	1.	0.	0.	0.	0.	0.	0.	3.	4.30
WNW	0.	0.	0.	0.	2.	1.	4.	0.	0.	0.	0.	0.	7.	5.80
NW	0.	0.	0.	1.	1.	1.	1.	0.	1.	0.	1.	0.	6.	6.55
NNW	0.	0.	0.	1.	0.	0.	1.	1.	0.	0.	0.	0.	3.	5.87
N	0.	2.	0.	7.	4.	8.	7.	4.	0.	2.	2.	0.	36.	5.75
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	6.	22.	40.	38.	67.	54.	27.	15.	7.	3.	9.	288.	5.72

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.09	0.27	0.95	0.95	2.31	1.54	1.00	0.63	0.23	0.00	0.23	8.21	6.01
NE	0.00	0.05	0.59	0.27	0.36	0.09	0.14	0.00	0.00	0.00	0.00	0.14	1.63	4.57
ENE	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	6.50
E	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.09	5.10
ESE	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.09	5.90
SE	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.05	0.27	5.70
SSE	0.00	0.00	0.00	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.14	3.93
S	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	1.90
SSW	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	2.70
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	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	0.00	0.00
W	0.00	0.00	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.14	4.30
WNW	0.00	0.00	0.00	0.00	0.09	0.05	0.18	0.00	0.00	0.00	0.00	0.00	0.32	5.80
NW	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.05	0.00	0.05	0.00	0.27	6.55
NNW	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.14	5.87
N	0.00	0.09	0.00	0.32	0.18	0.36	0.32	0.18	0.00	0.09	0.09	0.00	1.63	5.75
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.27	1.00	1.81	1.72	3.04	2.45	1.22	0.68	0.32	0.14	0.41	13.06	5.72

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2205

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
4TH QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 10/01/87 TO 12/31/87
STABILITY CLASS #E# (10-40 METERS)
WINDS AT 10 METER LEVEL

26-JAN-88

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	1.	21.	24.	15.	11.	9.	7.	3.	1.	0.	11.	103.	5.76
NE	0.	0.	1.	3.	2.	2.	2.	1.	1.	0.	2.	14.	28.	10.10
ENE	0.	1.	4.	2.	1.	1.	2.	2.	0.	1.	2.	2.	18.	6.51
E	0.	0.	3.	0.	4.	2.	4.	2.	2.	1.	1.	8.	27.	9.89
ESE	0.	0.	2.	3.	3.	3.	1.	1.	0.	0.	0.	1.	14.	5.31
SE	0.	0.	0.	3.	3.	4.	2.	2.	1.	0.	1.	0.	16.	5.98
SSE	0.	0.	2.	0.	1.	1.	0.	2.	1.	2.	1.	2.	12.	10.18
S	0.	0.	1.	1.	1.	1.	0.	0.	0.	0.	0.	1.	5.	5.92
SSW	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.90
SW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
WSW	0.	0.	1.	0.	0.	1.	0.	0.	0.	0.	0.	1.	3.	6.73
W	0.	0.	0.	2.	6.	1.	0.	0.	0.	0.	0.	0.	9.	4.46
WNW	0.	0.	1.	3.	3.	5.	4.	1.	0.	0.	1.	3.	21.	6.66
NW	0.	1.	0.	1.	5.	1.	1.	2.	2.	0.	0.	4.	17.	7.53
NNW	0.	1.	3.	4.	6.	4.	1.	0.	2.	0.	0.	8.	29.	7.13
N	0.	0.	8.	9.	8.	10.	1.	5.	1.	2.	3.	9.	56.	6.84
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	5.	47.	55.	58.	47.	27.	25.	13.	7.	11.	64.	359.	6.97

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.05	0.95	1.09	0.68	0.50	0.41	0.32	0.14	0.05	0.00	0.50	4.67	5.76
NE	0.00	0.00	0.05	0.14	0.09	0.09	0.09	0.05	0.05	0.00	0.09	0.63	1.27	10.10
ENE	0.00	0.05	0.18	0.09	0.05	0.05	0.09	0.09	0.00	0.05	0.09	0.09	0.82	6.51
E	0.00	0.00	0.14	0.00	0.18	0.09	0.18	0.09	0.09	0.05	0.05	0.36	1.22	9.89
ESE	0.00	0.00	0.09	0.14	0.14	0.14	0.05	0.05	0.00	0.00	0.00	0.05	0.63	5.31
SE	0.00	0.00	0.00	0.14	0.14	0.18	0.09	0.09	0.05	0.00	0.05	0.00	0.73	5.98
SSE	0.00	0.00	0.09	0.00	0.05	0.05	0.00	0.09	0.05	0.09	0.05	0.09	0.54	10.18
S	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.23	5.92
SSW	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	1.90
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	0.00
WSW	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.14	6.73
W	0.00	0.00	0.00	0.09	0.27	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.41	4.46
WNW	0.00	0.00	0.05	0.14	0.14	0.23	0.18	0.05	0.00	0.00	0.05	0.14	0.95	6.66
NW	0.00	0.05	0.00	0.05	0.23	0.05	0.05	0.09	0.09	0.00	0.00	0.18	0.77	7.53
NNW	0.00	0.05	0.14	0.18	0.27	0.18	0.05	0.00	0.09	0.00	0.00	0.36	1.32	7.13
N	0.00	0.00	0.36	0.41	0.36	0.45	0.05	0.23	0.05	0.09	0.14	0.41	2.54	6.84
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.23	2.13	2.49	2.63	2.13	1.22	1.13	0.59	0.32	0.50	2.90	16.29	6.97

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2205

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
4TH QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 10/01/87 TO 12/31/87
STABILITY CLASS #D# (10-40 METERS)
WINDS AT 10 METER LEVEL

26-JAN-88

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	1.	4.	8.	6.	3.	4.	1.	0.	0.	0.	6.	33.	7.28
NE	0.	0.	1.	1.	1.	0.	0.	0.	1.	0.	0.	1.	5.	7.02
ENE	0.	0.	0.	0.	0.	1.	0.	0.	1.	1.	0.	2.	5.	9.80
E	0.	0.	0.	0.	5.	3.	1.	1.	2.	1.	0.	15.	28.	13.15
ESE	0.	0.	0.	0.	3.	4.	8.	4.	3.	3.	1.	10.	36.	9.37
SE	0.	0.	2.	3.	5.	9.	11.	10.	6.	9.	10.	22.	87.	9.14
SSE	0.	1.	3.	5.	6.	3.	5.	7.	3.	0.	4.	10.	47.	8.29
S	0.	0.	1.	7.	2.	2.	4.	0.	3.	2.	0.	2.	23.	6.13
SSW	0.	0.	3.	1.	3.	3.	1.	0.	0.	0.	0.	0.	11.	4.46
SW	0.	0.	1.	4.	2.	0.	2.	1.	1.	1.	1.	1.	14.	6.61
WSW	0.	0.	3.	2.	0.	1.	0.	1.	0.	2.	0.	6.	15.	8.16
W	0.	0.	5.	5.	1.	2.	0.	0.	1.	0.	0.	5.	19.	7.21
WNW	0.	2.	8.	6.	6.	9.	5.	1.	1.	1.	1.	1.	41.	5.10
NW	0.	2.	3.	6.	8.	7.	9.	4.	2.	1.	0.	3.	45.	5.72
NNW	0.	1.	5.	15.	5.	3.	1.	0.	1.	0.	0.	2.	33.	4.71
N	0.	2.	4.	15.	8.	2.	0.	0.	1.	0.	0.	9.	41.	6.80
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	9.	43.	78.	61.	52.	51.	30.	26.	21.	17.	95.	483.	7.57

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.05	0.18	0.36	0.27	0.14	0.18	0.05	0.00	0.00	0.00	0.27	1.50	7.28
NE	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.23	7.02
ENE	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.00	0.09	0.23	9.80
E	0.00	0.00	0.00	0.00	0.23	0.14	0.05	0.05	0.09	0.05	0.00	0.68	1.27	13.15
ESE	0.00	0.00	0.00	0.00	0.14	0.18	0.36	0.18	0.14	0.14	0.05	0.45	1.63	9.37
SE	0.00	0.00	0.09	0.14	0.23	0.41	0.50	0.45	0.27	0.41	0.45	1.00	3.95	9.14
SSE	0.00	0.05	0.14	0.23	0.27	0.14	0.23	0.32	0.14	0.00	0.18	0.45	2.13	8.29
S	0.00	0.00	0.05	0.32	0.09	0.09	0.18	0.00	0.14	0.09	0.00	0.09	1.04	6.13
SSW	0.00	0.00	0.14	0.05	0.14	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.50	4.46
SW	0.00	0.00	0.05	0.18	0.09	0.00	0.09	0.05	0.05	0.05	0.05	0.05	0.63	6.61
WSW	0.00	0.00	0.14	0.09	0.00	0.05	0.00	0.05	0.00	0.09	0.00	0.27	0.68	8.16
W	0.00	0.00	0.23	0.23	0.05	0.09	0.00	0.00	0.05	0.00	0.00	0.23	0.86	7.21
WNW	0.00	0.09	0.36	0.27	0.27	0.41	0.23	0.05	0.05	0.05	0.05	0.05	1.86	5.10
NW	0.00	0.09	0.14	0.27	0.36	0.32	0.41	0.18	0.09	0.05	0.00	0.14	2.04	5.72
NNW	0.00	0.05	0.23	0.68	0.23	0.14	0.05	0.00	0.05	0.00	0.00	0.09	1.50	4.71
N	0.00	0.09	0.18	0.68	0.36	0.09	0.00	0.00	0.05	0.00	0.00	0.41	1.86	6.80
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.41	1.95	3.54	2.77	2.36	2.31	1.36	1.18	0.95	0.77	4.31	21.90	7.57

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2205

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
4TH QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 10/01/87 TO 12/31/87
STABILITY CLASS #C# (10-40 METERS)
WINDS AT 10 METER LEVEL

26-JAN-88

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
NE	0.	0.	0.	1.	0.	0.	1.	1.	0.	0.	0.	2.	5.	9.02
ENE	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	1.	9.10
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.	2.	0.	0.	2.	9.80
SE	0.	0.	0.	0.	0.	0.	0.	1.	0.	1.	1.	0.	3.	9.27
SSE	0.	0.	0.	0.	1.	0.	3.	1.	0.	1.	1.	1.	8.	7.91
S	0.	0.	1.	0.	0.	0.	0.	1.	0.	0.	0.	0.	2.	5.30
SSW	0.	0.	0.	0.	0.	1.	0.	1.	0.	0.	0.	0.	2.	6.50
SW	0.	0.	1.	2.	0.	0.	0.	0.	0.	0.	0.	0.	3.	3.27
WSW	0.	0.	1.	1.	3.	0.	0.	0.	2.	0.	0.	0.	7.	5.37
W	0.	1.	1.	3.	1.	1.	0.	0.	0.	0.	0.	0.	7.	3.67
WNW	0.	0.	0.	2.	4.	4.	2.	0.	1.	0.	0.	1.	14.	5.85
NW	0.	0.	0.	0.	1.	1.	1.	1.	0.	1.	0.	1.	6.	8.15
NNW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.	2.	21.35
N	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.	2.	18.05
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	1.	4.	9.	10.	7.	7.	6.	3.	6.	2.	9.	64.	7.36

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
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
NE	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.09	0.23	9.02
ENE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	9.10
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	0.09	0.00	0.00	0.09	9.80
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.05	0.00	0.14	9.27
SSE	0.00	0.00	0.00	0.00	0.05	0.00	0.14	0.05	0.00	0.05	0.05	0.05	0.36	7.91
S	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.09	5.30
SSW	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.09	6.50
SW	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	3.27
WSW	0.00	0.00	0.05	0.05	0.14	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.32	5.37
W	0.00	0.05	0.05	0.14	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.32	3.67
WNW	0.00	0.00	0.00	0.09	0.18	0.18	0.09	0.00	0.05	0.00	0.00	0.05	0.63	5.85
NW	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.05	0.00	0.05	0.27	8.15
NNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	21.35
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	18.05
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.05	0.18	0.41	0.45	0.32	0.32	0.27	0.14	0.27	0.09	0.41	2.90	7.36

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2205

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 26-JAN-88
SAN ONOFRE NUCLEAR GENERATING STATION
4TH QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 10/01/87 TO 12/31/87
STABILITY CLASS #B# (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) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	2.	3.	13.90
NE	0.	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.	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.	0.00
SE	0.	0.	0.	1.	0.	0.	0.	0.	0.	1.	0.	0.	2.	6.35
SSE	0.	0.	0.	0.	1.	0.	1.	2.	1.	0.	0.	2.	7.	9.03
S	0.	0.	0.	0.	1.	1.	0.	1.	0.	1.	0.	1.	5.	7.98
SSW	0.	0.	0.	3.	0.	0.	0.	1.	0.	0.	0.	0.	4.	4.60
SW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
WSW	0.	0.	1.	0.	1.	0.	0.	0.	0.	0.	0.	0.	2.	3.95
W	0.	0.	1.	2.	0.	1.	1.	0.	0.	0.	0.	0.	5.	4.32
WNW	0.	0.	0.	1.	1.	1.	1.	1.	1.	1.	0.	1.	8.	8.31
NW	0.	0.	0.	0.	0.	1.	0.	0.	0.	1.	0.	0.	2.	7.30
NNW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.	2.	14.90
N	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.	16.90
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	0.	2.	7.	4.	4.	3.	5.	3.	4.	0.	9.	41.	8.11

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.09	0.14	13.90
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	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.09	6.35
SSE	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.09	0.05	0.00	0.00	0.09	0.32	9.03
S	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.05	0.00	0.05	0.00	0.05	0.23	7.98
SSW	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.18	4.60
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	0.00
WSW	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	3.95
W	0.00	0.00	0.05	0.09	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.23	4.32
WNW	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.05	0.36	8.31
NW	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.09	7.30
NNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	14.90
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	16.90
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.00	0.09	0.32	0.18	0.18	0.14	0.23	0.14	0.18	0.00	0.41	1.86	8.11

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2205

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
4TH QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 10/01/87 TO 12/31/87
STABILITY CLASS #A# (10-40 METERS)
WINDS AT 10 METER LEVEL

26-JAN-88

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.	2.	17.05
NE	0.	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.	0.00
E	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
EGE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
SE	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.	0.	0.	2.	9.30
SGE	0.	0.	0.	2.	2.	4.	4.	3.	2.	4.	0.	4.	25.	7.56
S	0.	0.	1.	2.	11.	9.	7.	1.	3.	2.	0.	1.	37.	5.95
SGW	0.	0.	2.	6.	2.	2.	4.	3.	4.	1.	2.	0.	26.	6.24
SW	0.	0.	2.	5.	11.	11.	7.	4.	0.	0.	0.	3.	43.	5.68
WSW	0.	0.	2.	14.	15.	14.	19.	2.	1.	1.	0.	0.	68.	5.26
W	0.	0.	0.	9.	18.	34.	36.	29.	10.	4.	1.	0.	141.	6.37
WNW	0.	0.	0.	0.	1.	7.	7.	9.	16.	13.	6.	1.	60.	8.20
NW	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	1.	7.40
NNW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.	2.	17.40
N	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	4.	4.	23.45
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	0.	7.	38.	60.	81.	84.	52.	37.	26.	10.	16.	411.	6.70

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	17.05
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
EGE	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	0.05	0.05	0.00	0.00	0.09	9.30
SGE	0.00	0.00	0.00	0.09	0.09	0.18	0.18	0.14	0.09	0.18	0.00	0.18	1.13	7.56
S	0.00	0.00	0.05	0.09	0.50	0.41	0.32	0.05	0.14	0.09	0.00	0.05	1.68	5.95
SGW	0.00	0.00	0.09	0.27	0.09	0.09	0.18	0.14	0.18	0.05	0.09	0.00	1.18	6.24
SW	0.00	0.00	0.09	0.23	0.50	0.50	0.32	0.18	0.00	0.00	0.00	0.14	1.95	5.68
WSW	0.00	0.00	0.09	0.63	0.68	0.63	0.86	0.09	0.05	0.05	0.00	0.00	3.08	5.26
W	0.00	0.00	0.00	0.41	0.82	1.54	1.63	1.32	0.45	0.18	0.05	0.00	6.39	6.37
WNW	0.00	0.00	0.00	0.00	0.05	0.32	0.32	0.41	0.73	0.59	0.27	0.05	2.72	8.20
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	7.40
NNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.09	17.40
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18	23.45
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.00	0.32	1.72	2.72	3.67	3.81	2.36	1.68	1.18	0.45	0.73	18.64	6.70

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2205

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
3RD QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 07/01/87 TO 09/30/87
STABILITY CLASS ALL (10-40 METERS)
WINDS AT 10 METER LEVEL

26-JAN-88

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	6.	37.	55.	50.	58.	66.	56.	34.	15.	7.	1.	385.	5.76
NE	1.	3.	9.	6.	8.	9.	5.	2.	0.	0.	0.	0.	43.	4.27
ENE	0.	0.	3.	6.	4.	4.	0.	0.	0.	0.	1.	0.	18.	4.40
E	0.	1.	6.	3.	6.	4.	1.	1.	0.	0.	0.	0.	22.	4.14
ESE	0.	0.	4.	5.	8.	3.	4.	2.	5.	1.	0.	1.	33.	5.67
SE	0.	2.	7.	15.	22.	25.	20.	16.	12.	10.	4.	6.	139.	6.39
SSE	0.	2.	17.	20.	22.	28.	30.	24.	19.	12.	5.	30.	209.	7.30
S	1.	1.	10.	21.	22.	19.	24.	21.	15.	10.	16.	11.	171.	6.78
SSW	0.	4.	8.	21.	23.	25.	32.	19.	9.	2.	3.	3.	149.	5.79
SW	0.	2.	15.	23.	35.	36.	31.	17.	6.	4.	0.	1.	170.	5.40
WSW	0.	3.	7.	19.	40.	41.	43.	37.	15.	3.	0.	4.	212.	6.01
W	0.	6.	13.	19.	21.	32.	53.	92.	63.	17.	2.	0.	318.	6.75
WNW	0.	3.	13.	13.	9.	23.	18.	17.	24.	18.	7.	5.	150.	6.78
NW	0.	3.	9.	11.	8.	15.	8.	2.	9.	5.	3.	4.	77.	5.97
NNW	1.	3.	9.	13.	8.	3.	2.	0.	0.	0.	0.	0.	39.	3.70
N	0.	6.	15.	11.	19.	7.	9.	3.	1.	0.	1.	0.	72.	4.35
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	3.	45.	192.	261.	305.	332.	346.	309.	212.	97.	49.	66.	2207.	6.10

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.27	1.68	2.49	2.27	2.63	2.99	2.54	1.54	0.68	0.32	0.05	17.44	5.76
NE	0.05	0.14	0.41	0.27	0.36	0.41	0.23	0.09	0.00	0.00	0.00	0.00	1.95	4.27
ENE	0.00	0.00	0.14	0.27	0.18	0.18	0.00	0.00	0.00	0.00	0.05	0.00	0.82	4.40
E	0.00	0.05	0.27	0.14	0.27	0.18	0.05	0.05	0.00	0.00	0.00	0.00	1.00	4.14
ESE	0.00	0.00	0.18	0.23	0.36	0.14	0.18	0.09	0.23	0.05	0.00	0.05	1.50	5.67
SE	0.00	0.09	0.32	0.68	1.00	1.13	0.91	0.72	0.54	0.45	0.18	0.27	6.30	6.39
SSE	0.00	0.09	0.77	0.91	1.00	1.27	1.36	1.09	0.86	0.54	0.23	1.36	9.47	7.30
S	0.05	0.05	0.45	0.95	1.00	0.86	1.09	0.95	0.68	0.45	0.72	0.50	7.75	6.78
SSW	0.00	0.18	0.36	0.95	1.04	1.13	1.45	0.86	0.41	0.09	0.14	0.14	6.75	5.79
SW	0.00	0.09	0.68	1.04	1.59	1.63	1.40	0.77	0.27	0.18	0.00	0.05	7.70	5.40
WSW	0.00	0.14	0.32	0.86	1.81	1.86	1.95	1.68	0.68	0.14	0.00	0.18	9.61	6.01
W	0.00	0.27	0.59	0.86	0.95	1.45	2.40	4.17	2.85	0.77	0.09	0.00	14.41	6.75
WNW	0.00	0.14	0.59	0.59	0.41	1.04	0.82	0.77	1.09	0.82	0.32	0.23	6.80	6.78
NW	0.00	0.14	0.41	0.50	0.36	0.68	0.36	0.09	0.41	0.23	0.14	0.18	3.49	5.97
NNW	0.05	0.14	0.41	0.59	0.36	0.14	0.09	0.00	0.00	0.00	0.00	0.00	1.77	3.70
N	0.00	0.27	0.68	0.50	0.86	0.32	0.41	0.14	0.05	0.00	0.05	0.00	3.25	4.35
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.14	2.04	8.25	11.83	13.82	15.04	15.68	14.00	9.61	4.40	2.22	2.99	100.00	6.10

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2207

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
3RD QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 07/01/87 TO 09/30/87
STABILITY CLASS #G# (10-40 METERS)
WINDS AT 10 METER LEVEL

26-JAN-89

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	0.	0.	1.	8.	12.	34.	31.	11.	7.	0.	104.	7.90
NE	0.	0.	0.	0.	1.	1.	0.	0.	0.	0.	0.	0.	2.	4.75
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.	1.	0.	0.	0.	0.	0.	0.	0.	1.	4.20
SE	0.	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.	0.	0.	0.	0.00
S	0.	0.	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.	0.	0.00
SW	0.	0.	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.	0.	0.00
W	0.	0.	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.	0.	0.00
NW	0.	0.	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.	0.	0.00
N	0.	0.	0.	0.	0.	0.	3.	1.	1.	0.	0.	0.	5.	7.04
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	0.	0.	0.	3.	9.	15.	35.	32.	11.	7.	0.	112.	7.77

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.00	0.00	0.05	0.36	0.54	1.54	1.40	0.50	0.32	0.00	4.71	7.90
NE	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.09	4.75
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	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	4.20
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	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	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	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	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	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	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	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	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	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	0.00	0.00
N	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.05	0.00	0.00	0.00	0.23	7.04
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.00	0.00	0.00	0.14	0.41	0.68	1.59	1.45	0.50	0.32	0.00	5.07	7.77

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2207

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 26-JAN-88
SAN ONOFRE NUCLEAR GENERATING STATION
3RD QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 07/01/87 TO 09/30/87
STABILITY CLASS #F# (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) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	5.	16.	19.	22.	29.	13.	0.	3.	0.	1.	108.	5.65
NE	0.	1.	3.	1.	0.	1.	1.	1.	0.	0.	0.	0.	8.	4.00
ENE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.	1.	10.60
E	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	1.	5.10
ESE	0.	0.	1.	0.	0.	0.	0.	1.	0.	0.	0.	0.	2.	5.10
SE	0.	0.	0.	1.	1.	1.	0.	0.	0.	0.	0.	0.	3.	4.13
SSE	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	1.	9.90
S	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.	3.50
SSW	0.	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.	0.00
WSW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
W	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.	3.40
WNW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
NW	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	1.	5.10
NNW	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	1.	4.40
N	0.	0.	1.	0.	4.	4.	3.	1.	0.	0.	0.	0.	13.	5.47
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	1.	10.	20.	25.	30.	33.	16.	0.	4.	1.	1.	141.	5.52

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.23	0.72	0.86	1.00	1.31	0.59	0.00	0.14	0.00	0.05	4.89	5.65
NE	0.00	0.05	0.14	0.05	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.36	4.00
ENE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	10.60
E	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	5.10
ESE	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.09	5.10
SE	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.14	4.13
SSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	9.90
S	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	3.50
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	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	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	0.00	0.00
W	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	3.40
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	0.00
NW	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	5.10
NNW	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	4.40
N	0.00	0.00	0.05	0.00	0.18	0.18	0.14	0.05	0.00	0.00	0.00	0.00	0.59	5.47
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.05	0.45	0.91	1.13	1.36	1.50	0.72	0.00	0.18	0.05	0.05	6.39	5.52

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2207

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
3RD QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 07/01/87 TO 09/30/87
STABILITY CLASS #E# (10-40 METERS)
WINDS AT 10 METER LEVEL

26-JAN-88

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	2.	22.	24.	19.	16.	14.	4.	2.	0.	0.	0.	103.	4.43
NE	1.	2.	5.	1.	3.	0.	2.	0.	0.	0.	0.	0.	14.	3.29
ENE	0.	0.	1.	3.	1.	2.	0.	0.	0.	0.	0.	0.	7.	4.01
E	0.	0.	3.	0.	2.	0.	0.	0.	0.	0.	0.	0.	5.	3.34
ESE	0.	0.	1.	1.	2.	0.	0.	0.	0.	0.	0.	0.	4.	3.75
SE	0.	0.	2.	2.	1.	1.	2.	0.	0.	2.	0.	0.	10.	5.55
SSE	0.	1.	2.	2.	2.	1.	0.	0.	1.	0.	0.	0.	9.	4.24
S	1.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.	1.75
SSW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
SW	0.	0.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	2.	2.95
WSW	0.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.	2.50
W	0.	1.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	2.	4.30
WNW	0.	1.	1.	1.	0.	0.	0.	0.	0.	1.	0.	0.	4.	4.38
NW	0.	0.	1.	2.	0.	0.	0.	0.	1.	0.	0.	0.	4.	4.78
NNW	1.	1.	0.	2.	2.	0.	0.	0.	0.	0.	0.	0.	6.	3.20
N	0.	3.	4.	6.	10.	3.	1.	1.	0.	0.	0.	0.	28.	4.05
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	3.	12.	45.	45.	42.	23.	20.	5.	4.	3.	0.	0.	202.	4.20

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.09	1.00	1.09	0.86	0.72	0.63	0.18	0.09	0.00	0.00	0.00	4.67	4.43
NE	0.05	0.09	0.23	0.05	0.14	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.63	3.29
ENE	0.00	0.00	0.05	0.14	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.32	4.01
E	0.00	0.00	0.14	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	3.34
ESE	0.00	0.00	0.05	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	3.75
SE	0.00	0.00	0.09	0.09	0.05	0.05	0.09	0.00	0.00	0.09	0.00	0.00	0.45	5.55
SSE	0.00	0.05	0.09	0.09	0.09	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.41	4.24
S	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	1.75
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	0.00
SW	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	2.95
WSW	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	2.50
W	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.09	4.30
WNW	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.18	4.38
NW	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.18	4.78
NNW	0.05	0.05	0.00	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	3.20
N	0.00	0.14	0.18	0.27	0.45	0.14	0.05	0.05	0.00	0.00	0.00	0.00	1.27	4.05
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.14	0.54	2.04	2.04	1.90	1.04	0.91	0.23	0.18	0.14	0.00	0.00	9.15	4.20

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2207

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 26-JAN-88
SAN ONOFRE NUCLEAR GENERATING STATION
3RD QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 07/01/87 TO 09/30/87
STABILITY CLASS #D# (10-40 METERS)
WINDS AT 10 METER LEVEL

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND	UPPER CLASS INTERVALS OF WIND SPEED (MPH)												MEAN
DIRECTION	1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	SPEED
NNE	0.	4.	10.	13.	10.	12.	11.	5.	1.	1.	0.	0.	67.	4.71
NE	0.	0.	1.	4.	3.	6.	2.	1.	0.	0.	0.	0.	17.	5.00
ENE	0.	0.	2.	3.	3.	2.	0.	0.	0.	0.	0.	0.	10.	4.05
E	0.	1.	3.	3.	4.	3.	1.	1.	0.	0.	0.	0.	16.	4.33
ESE	0.	0.	2.	4.	5.	3.	4.	1.	5.	1.	0.	1.	26.	6.06
SE	0.	2.	5.	11.	19.	23.	18.	16.	12.	8.	3.	3.	120.	6.32
SSE	0.	1.	14.	17.	16.	21.	25.	21.	15.	6.	3.	16.	155.	6.84
S	0.	1.	7.	12.	11.	10.	13.	9.	3.	3.	4.	3.	76.	5.99
SSW	0.	4.	7.	8.	7.	2.	2.	3.	1.	0.	0.	1.	35.	4.36
SW	0.	2.	10.	5.	5.	0.	1.	0.	0.	1.	0.	1.	25.	3.87
WSW	0.	2.	3.	3.	3.	0.	1.	4.	1.	1.	0.	4.	22.	6.50
W	0.	5.	12.	5.	5.	0.	0.	0.	0.	0.	0.	0.	27.	2.99
WNW	0.	1.	12.	6.	1.	3.	4.	1.	0.	1.	0.	0.	29.	4.03
NW	0.	3.	8.	7.	7.	8.	6.	2.	2.	2.	1.	0.	46.	4.94
NNW	0.	2.	9.	9.	5.	3.	2.	0.	0.	0.	0.	0.	30.	3.78
N	0.	3.	10.	5.	5.	0.	1.	0.	0.	0.	1.	0.	25.	3.48
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	31.	115.	115.	109.	96.	91.	64.	40.	24.	12.	29.	726.	5.45

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND	UPPER CLASS INTERVALS OF WIND SPEED (MPH)												MEAN
DIRECTION	1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	SPEED
NNE	0.00	0.18	0.45	0.59	0.45	0.54	0.50	0.23	0.05	0.05	0.00	0.00	3.04	4.71
NE	0.00	0.00	0.05	0.18	0.14	0.27	0.09	0.05	0.00	0.00	0.00	0.00	0.77	5.00
ENE	0.00	0.00	0.09	0.14	0.14	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.45	4.05
E	0.00	0.05	0.14	0.14	0.18	0.14	0.05	0.05	0.00	0.00	0.00	0.00	0.72	4.33
ESE	0.00	0.00	0.09	0.18	0.23	0.14	0.18	0.05	0.23	0.05	0.00	0.05	1.18	6.06
SE	0.00	0.09	0.23	0.50	0.86	1.04	0.82	0.72	0.54	0.36	0.14	0.14	5.44	6.32
SSE	0.00	0.05	0.63	0.77	0.72	0.95	1.13	0.95	0.68	0.27	0.14	0.72	7.02	6.84
S	0.00	0.05	0.32	0.54	0.50	0.45	0.59	0.41	0.14	0.14	0.18	0.14	3.44	5.99
SSW	0.00	0.18	0.32	0.36	0.32	0.09	0.09	0.14	0.05	0.00	0.00	0.05	1.59	4.36
SW	0.00	0.09	0.45	0.23	0.23	0.00	0.05	0.00	0.00	0.05	0.00	0.05	1.13	3.87
WSW	0.00	0.09	0.14	0.14	0.14	0.00	0.05	0.18	0.05	0.05	0.00	0.18	1.00	6.50
W	0.00	0.23	0.54	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22	2.99
WNW	0.00	0.05	0.54	0.27	0.05	0.14	0.18	0.05	0.00	0.05	0.00	0.00	1.31	4.03
NW	0.00	0.14	0.36	0.32	0.32	0.36	0.27	0.09	0.09	0.09	0.05	0.00	2.08	4.94
NNW	0.00	0.09	0.41	0.41	0.23	0.14	0.09	0.00	0.00	0.00	0.00	0.00	1.36	3.78
N	0.00	0.14	0.45	0.23	0.23	0.00	0.05	0.00	0.00	0.00	0 05	0 00	1.13	3.48
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	1.40	5.21	5.21	4.94	4.35	4.12	2.90	1.81	1.09	0.54	1 31	32.90	5.45

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2207

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
3RD QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 07/01/87 TO 09/30/87
STABILITY CLASS #C# (10-40 METERS)
WINDS AT 10 METER LEVEL

26-JAN-88

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	0.	2.	1.	0.	0.	0.	0.	0.	0.	0.	3.	4.23
NE	0.	0.	0.	0.	1.	1.	0.	0.	0.	0.	0.	0.	2.	5.45
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.	0.00
SE	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	1.	2.	4.	10.73
SSE	0.	0.	0.	1.	4.	2.	5.	2.	2.	2.	0.	6.	24.	8.86
S	0.	0.	1.	0.	5.	1.	2.	0.	1.	3.	0.	0.	13.	6.22
SSW	0.	0.	1.	1.	3.	3.	2.	0.	1.	0.	1.	0.	12.	5.73
SW	0.	0.	1.	5.	1.	0.	0.	0.	0.	1.	0.	0.	8.	4.36
WSW	0.	0.	2.	3.	1.	0.	0.	1.	0.	0.	0.	0.	7.	4.16
W	0.	0.	1.	9.	0.	2.	0.	0.	0.	0.	0.	0.	12.	3.89
WNW	0.	1.	0.	4.	2.	3.	0.	1.	5.	0.	0.	0.	16.	5.75
NW	0.	0.	0.	2.	0.	4.	2.	0.	4.	2.	1.	2.	17.	7.70
NNW	0.	0.	0.	2.	0.	0.	0.	0.	0.	0.	0.	0.	2.	3.65
N	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	1.	6.20
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	1.	6.	29.	19.	16.	12.	4.	13.	8.	3.	10.	121.	6.41

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.00	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	4.23
NE	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.09	5.45
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	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.18	10.73
SSE	0.00	0.00	0.00	0.05	0.18	0.09	0.23	0.09	0.09	0.09	0.00	0.27	1.09	8.86
S	0.00	0.00	0.05	0.00	0.23	0.05	0.09	0.00	0.05	0.14	0.00	0.00	0.59	6.22
SSW	0.00	0.00	0.05	0.05	0.14	0.14	0.09	0.00	0.05	0.00	0.05	0.00	0.54	5.73
SW	0.00	0.00	0.05	0.23	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.36	4.36
WSW	0.00	0.00	0.09	0.14	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.32	4.16
W	0.00	0.00	0.05	0.41	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.54	3.89
WNW	0.00	0.05	0.00	0.18	0.09	0.14	0.00	0.05	0.23	0.00	0.00	0.00	0.72	5.75
NW	0.00	0.00	0.00	0.09	0.00	0.18	0.09	0.00	0.18	0.09	0.05	0.09	0.77	7.70
NNW	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	3.65
N	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	6.20
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.05	0.27	1.31	0.86	0.72	0.54	0.18	0.59	0.36	0.14	0.45	5.48	6.41

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2207

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
3RD QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 07/01/87 TO 09/30/87
STABILITY CLASS #B# (10-40 METERS)
WINDS AT 10 METER LEVEL

26-JAN-88

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	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.	0.	0.00
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.	0.00
SE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.	15.40
SSE	0.	0.	0.	0.	0.	1.	0.	0.	1.	1.	0.	3.	6.	11.35
S	0.	0.	0.	5.	1.	1.	0.	2.	2.	1.	2.	2.	16.	7.52
SSW	0.	0.	0.	2.	0.	3.	2.	0.	1.	1.	1.	0.	10.	6.56
SW	0.	0.	0.	3.	0.	2.	0.	0.	0.	0.	0.	0.	5.	4.36
WSW	0.	0.	0.	2.	3.	1.	0.	0.	0.	0.	0.	0.	6.	4.30
W	0.	0.	0.	1.	2.	2.	0.	0.	0.	0.	0.	0.	5.	4.54
WNW	0.	0.	0.	0.	2.	5.	0.	1.	1.	1.	0.	0.	10.	6.18
NW	0.	0.	0.	0.	1.	1.	0.	0.	1.	1.	0.	1.	5.	8.14
NNW	0.	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.	0.00
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	0.	0.	13.	9.	16.	2.	3.	6.	5.	3.	7.	64.	6.91

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
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
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	0.00	0.00	0.05	0.05	15.40
SSE	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.00	0.14	0.27	11.35
S	0.00	0.00	0.00	0.23	0.05	0.05	0.00	0.09	0.09	0.05	0.09	0.09	0.72	7.52
SSW	0.00	0.00	0.00	0.09	0.00	0.14	0.09	0.00	0.05	0.05	0.05	0.00	0.45	6.56
SW	0.00	0.00	0.00	0.14	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.23	4.36
WSW	0.00	0.00	0.00	0.09	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.27	4.30
W	0.00	0.00	0.00	0.05	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.23	4.54
WNW	0.00	0.00	0.00	0.00	0.09	0.23	0.00	0.05	0.05	0.05	0.00	0.00	0.45	6.18
NW	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.05	0.00	0.05	0.23	8.14
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	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
CALM													0.00	0.00
TOTAL	0.00	0.00	0.00	0.59	0.41	0.72	0.09	0.14	0.27	0.23	0.14	0.32	2.90	6.91

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2207

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
3RD QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 07/01/87 TO 09/30/87
STABILITY CLASS #A# (10-40 METERS)
WINDS AT 10 METER LEVEL

26-JAN-88

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	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.	0.	0.00
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.	0.00
SE	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.	3.90
SSE	0.	0.	1.	0.	0.	3.	0.	1.	0.	2.	2.	5.	14.	9.72
S	0.	0.	1.	3.	5.	7.	9.	10.	9.	3.	10.	6.	63.	7.89
SSW	0.	0.	0.	10.	13.	17.	26.	16.	6.	1.	1.	2.	92.	6.27
SW	0.	0.	3.	9.	29.	34.	30.	17.	6.	2.	0.	0.	130.	5.84
WSW	0.	0.	1.	11.	33.	40.	42.	32.	14.	2.	0.	0.	175.	6.12
W	0.	0.	0.	3.	14.	28.	52.	72.	63.	17.	2.	0.	271.	7.32
WNW	0.	0.	0.	2.	4.	12.	14.	14.	18.	15.	7.	5.	91.	8.02
NW	0.	0.	0.	0.	0.	1.	0.	0.	1.	0.	1.	1.	4.	9.15
NNW	0.	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.	0.00
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	0.	6.	39.	98.	142.	173.	182.	117.	42.	23.	19.	841.	6.89

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
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
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	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	3.90
SSE	0.00	0.00	0.05	0.00	0.00	0.14	0.00	0.05	0.00	0.09	0.09	0.23	0.63	9.72
S	0.00	0.00	0.05	0.14	0.23	0.32	0.41	0.45	0.41	0.14	0.45	0.27	2.85	7.89
SSW	0.00	0.00	0.00	0.45	0.59	0.77	1.18	0.72	0.27	0.05	0.05	0.09	4.17	6.27
SW	0.00	0.00	0.14	0.41	1.31	1.54	1.36	0.77	0.27	0.09	0.00	0.00	5.89	5.84
WSW	0.00	0.00	0.05	0.50	1.50	1.81	1.90	1.45	0.63	0.09	0.00	0.00	7.93	6.12
W	0.00	0.00	0.00	0.14	0.63	1.27	2.36	4.17	2.85	0.77	0.09	0.00	12.28	7.32
WNW	0.00	0.00	0.00	0.09	0.18	0.54	0.63	0.63	0.82	0.68	0.32	0.23	4.12	8.02
NW	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.05	0.05	0.18	9.15
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	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
CALM													0.00	0.00
TOTAL	0.00	0.00	0.27	1.77	4.44	6.43	7.84	8.25	5.30	1.90	1.04	0.86	38.11	6.89

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2208
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2207

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 21-JUL-87
SAN ONOFRE NUCLEAR GENERATING STATION
2ND QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 04/01/97 TO 06/30/97
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) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	11.	35.	51.	35.	44.	53.	26.	29.	10.	7.	9.	310.	5.66
NE	0.	6.	8.	9.	10.	1.	1.	0.	1.	0.	0.	0.	36.	3.57
ENE	0.	0.	4.	7.	4.	1.	0.	0.	0.	0.	0.	0.	16.	3.51
E	1.	0.	3.	12.	5.	4.	2.	0.	0.	0.	0.	0.	27.	4.05
ESE	0.	0.	2.	14.	7.	6.	7.	1.	0.	1.	0.	0.	38.	4.89
SE	0.	2.	9.	16.	23.	21.	23.	11.	13.	4.	6.	5.	133.	6.13
SSE	0.	0.	19.	19.	20.	23.	24.	16.	24.	11.	7.	14.	177.	6.63
S	0.	2.	11.	22.	30.	24.	28.	17.	14.	20.	11.	4.	183.	6.37
SSW	0.	1.	9.	33.	25.	31.	22.	21.	25.	14.	6.	2.	189.	6.17
SW	0.	4.	16.	28.	25.	50.	37.	34.	20.	4.	1.	5.	224.	5.90
WSW	0.	0.	9.	24.	33.	38.	32.	33.	29.	16.	5.	13.	232.	6.77
W	0.	2.	11.	24.	17.	28.	51.	38.	46.	28.	2.	10.	257.	6.99
WNW	0.	3.	10.	11.	13.	25.	24.	19.	21.	12.	8.	8.	154.	6.91
NW	0.	4.	9.	11.	6.	9.	14.	11.	3.	7.	2.	7.	83.	6.30
NNW	0.	0.	8.	10.	5.	7.	1.	2.	1.	0.	0.	0.	34.	4.36
N	0.	6.	14.	13.	32.	8.	3.	4.	1.	0.	1.	4.	86.	4.66
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	1.	41.	177.	304.	290.	320.	322.	233.	227.	127.	56.	91.	2179.	6.12

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.50	1.61	2.34	1.61	2.02	2.43	1.19	1.33	0.46	0.32	0.41	14.23	5.66
NE	0.00	0.28	0.37	0.41	0.46	0.05	0.05	0.00	0.05	0.00	0.00	0.00	1.65	3.57
ENE	0.00	0.00	0.18	0.32	0.18	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.73	3.51
E	0.05	0.00	0.14	0.55	0.23	0.18	0.09	0.00	0.00	0.00	0.00	0.00	1.24	4.05
ESE	0.00	0.00	0.09	0.64	0.32	0.28	0.32	0.05	0.00	0.05	0.00	0.00	1.74	4.99
SE	0.00	0.09	0.41	0.73	1.06	0.96	1.06	0.50	0.60	0.18	0.28	0.23	6.10	6.13
SSE	0.00	0.00	0.87	0.87	0.92	1.06	1.10	0.73	1.10	0.50	0.32	0.64	9.12	6.63
S	0.00	0.09	0.50	1.01	1.38	1.10	1.28	0.78	0.64	0.92	0.50	0.18	8.40	6.37
SSW	0.00	0.05	0.41	1.51	1.15	1.42	1.01	0.96	1.15	0.64	0.28	0.09	8.67	6.17
SW	0.00	0.18	0.73	1.28	1.15	2.29	1.70	1.56	0.92	0.18	0.05	0.23	10.29	5.90
WSW	0.00	0.00	0.41	1.10	1.51	1.74	1.47	1.51	1.33	0.73	0.23	0.60	10.65	6.77
W	0.00	0.09	0.50	1.10	0.78	1.28	2.34	1.74	2.11	1.28	0.09	0.46	11.79	6.99
WNW	0.00	0.14	0.46	0.50	0.60	1.15	1.10	0.87	0.96	0.55	0.37	0.37	7.07	6.91
NW	0.00	0.18	0.41	0.50	0.28	0.41	0.64	0.50	0.14	0.32	0.09	0.32	3.81	6.30
NNW	0.00	0.00	0.37	0.46	0.23	0.32	0.05	0.09	0.05	0.00	0.00	0.00	1.56	4.36
N	0.00	0.28	0.64	0.60	1.47	0.37	0.14	0.18	0.05	0.00	0.05	0.18	3.95	4.56
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.05	1.86	8.12	13.95	13.31	14.69	14.78	10.69	10.42	5.83	2.57	3.72	100.00	6.12

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2171

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 21-JUL-87
SAN ONOFRE NUCLEAR GENERATING STATION
2ND QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 04/01/87 TO 06/30/87
STABILITY CLASS #0# (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) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	1.	4.	2.	6.	20.	15.	22.	8.	7.	7.	92.	7.88
NE	0.	0.	0.	0.	0.	0.	1.	0.	1.	0.	0.	0.	2.	7.70
ENE	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.	3.50
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.	0.00
SE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
SSE	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	3.00
S	0.	0.	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.	0.	0.00
SW	0.	0.	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.	0.	0.00
W	0.	0.	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.	0.	0.00
NW	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	1.	7.00
NNW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
N	0.	0.	0.	0.	0.	1.	0.	2.	0.	0.	0.	3.	6.	9.75
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	0.	2.	5.	2.	7.	22.	17.	23.	8.	7.	10.	103.	7.89

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.05	0.18	0.09	0.28	0.92	0.69	1.01	0.37	0.32	0.32	4.24	7.88
NE	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.09	7.70
ENE	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	3.50
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	0.00	0.00	0.00	0.00	0.00
SSE	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	3.00
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	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	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	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	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	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	0.00	0.00
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	7.00
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	0.00	0.00
N	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.09	0.00	0.00	0.00	0.14	0.28	9.75
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.00	0.09	0.23	0.09	0.32	1.01	0.78	1.06	0.37	0.32	0.46	4.74	7.89

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2171

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
2ND QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 04/01/87 TO 06/30/87
STABILITY CLASS #F# (10-40 METERS)
WINDS AT 10 METER LEVEL

21-JUL-87

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	1.	6.	23.	14.	28.	18.	9.	5.	1.	0.	0.	105.	5.25
NE	0.	3.	2.	3.	1.	1.	0.	0.	0.	0.	0.	0.	10.	3.13
ENE	0.	0.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	4.	3.10
E	0.	0.	2.	0.	0.	1.	0.	0.	0.	0.	0.	0.	3.	3.70
ESE	0.	0.	0.	3.	0.	0.	0.	0.	0.	0.	0.	0.	3.	3.47
SE	0.	0.	0.	0.	1.	0.	1.	0.	0.	0.	0.	0.	2.	5.35
SSE	0.	0.	1.	0.	1.	0.	0.	1.	0.	0.	0.	0.	3.	4.87
S	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	2.40
SSW	0.	0.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	2.	2.90
SW	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.	3.30
WSW	0.	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.	0.00
WNW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
NW	0.	0.	0.	0.	0.	0.	1.	1.	1.	0.	0.	0.	3.	7.60
NNW	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	2.80
N	0.	1.	5.	0.	5.	3.	1.	1.	1.	0.	0.	0.	17.	4.65
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	5.	21.	32.	23.	33.	21.	12.	7.	1.	0.	0.	155.	4.89

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.05	0.28	1.06	0.64	1.29	0.83	0.41	0.23	0.05	0.00	0.00	4.84	5.25
NE	0.00	0.14	0.09	0.14	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.46	3.13
ENE	0.00	0.00	0.09	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	3.10
E	0.00	0.00	0.09	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.14	3.70
ESE	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	3.47
SE	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.09	5.35
SSE	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.14	4.87
S	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	2.40
SSW	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	2.90
SW	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	3.30
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	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	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	0.00	0.00
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.14	7.60
NNW	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	2.80
N	0.00	0.05	0.23	0.00	0.23	0.14	0.05	0.05	0.05	0.00	0.00	0.00	0.78	4.65
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.23	0.97	1.47	1.06	1.52	0.97	0.55	0.32	0.05	0.00	0.00	7.14	4.89

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2171

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
2ND QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 04/01/87 TO 06/30/87
STABILITY CLASS #E# (10-40 METERS)
WINDS AT 10 METER LEVEL

21-JUL-87

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	6.	19.	13.	5.	7.	5.	1.	2.	0.	0.	0.	58.	3.83
NE	0.	1.	1.	1.	3.	0.	0.	0.	0.	0.	0.	0.	6.	3.47
ENE	0.	0.	1.	0.	1.	0.	0.	0.	0.	0.	0.	0.	2.	3.75
E	1.	0.	0.	5.	1.	2.	0.	0.	0.	0.	0.	0.	9.	3.79
ESE	0.	0.	1.	5.	0.	0.	0.	0.	0.	0.	0.	0.	6.	3.42
SE	0.	1.	3.	3.	3.	0.	1.	1.	0.	0.	0.	0.	12.	4.12
SSE	0.	0.	4.	3.	0.	1.	0.	0.	0.	0.	1.	0.	9.	4.04
S	0.	0.	0.	1.	0.	0.	1.	0.	0.	0.	0.	0.	2.	5.05
SSW	0.	0.	2.	1.	0.	0.	0.	0.	0.	0.	0.	0.	3.	2.83
SW	0.	0.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	2.	2.80
WSW	0.	0.	0.	1.	1.	0.	0.	0.	0.	0.	0.	1.	3.	7.80
W	0.	0.	0.	0.	1.	0.	1.	0.	0.	0.	0.	0.	2.	5.45
WNW	0.	0.	0.	0.	0.	1.	1.	1.	1.	0.	0.	0.	4.	6.92
NW	0.	1.	0.	1.	0.	1.	0.	0.	1.	4.	0.	1.	9.	7.51
NNW	0.	0.	1.	2.	1.	0.	0.	0.	0.	0.	0.	0.	4.	3.55
N	0.	3.	1.	4.	12.	1.	1.	1.	0.	0.	0.	0.	23.	4.17
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	1.	12.	34.	41.	28.	13.	10.	4.	4.	4.	1.	2.	154.	4.25

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.28	0.88	0.60	0.23	0.32	0.23	0.05	0.09	0.00	0.00	0.00	2.67	3.83
NE	0.00	0.05	0.05	0.05	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	3.47
ENE	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	3.75
E	0.05	0.00	0.00	0.23	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.41	3.79
ESE	0.00	0.00	0.05	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	3.42
SE	0.00	0.05	0.14	0.14	0.14	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.55	4.12
SSE	0.00	0.00	0.18	0.14	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.41	4.04
S	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.09	5.05
SSW	0.00	0.00	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	2.83
SW	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	2.80
WSW	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.14	7.80
W	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.09	5.45
WNW	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.18	6.92
NW	0.00	0.05	0.00	0.05	0.00	0.05	0.00	0.00	0.05	0.18	0.00	0.05	0.41	7.51
NNW	0.00	0.00	0.05	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	3.55
N	0.00	0.14	0.05	0.18	0.55	0.05	0.05	0.05	0.00	0.00	0.00	0.00	1.06	4.17
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.05	0.55	1.57	1.89	1.29	0.60	0.46	0.18	0.18	0.18	0.05	0.09	7.09	4.25

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
TOTAL NUMBER OC OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2171

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 21-JUL-87
SAN ONOFRE NUCLEAR GENERATING STATION
2ND QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 04/01/97 TO 06/30/97
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) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	4.	9.	11.	14.	2.	9.	1.	0.	1.	0.	0.	51.	4.29
NE	0.	2.	5.	5.	6.	0.	0.	0.	0.	0.	0.	0.	18.	3.39
ENE	0.	0.	1.	5.	2.	1.	0.	0.	0.	0.	0.	0.	9.	3.64
E	0.	0.	1.	7.	4.	1.	2.	0.	0.	0.	0.	0.	15.	4.28
ESE	0.	0.	1.	6.	7.	6.	7.	1.	0.	1.	0.	0.	29.	5.34
SE	0.	1.	6.	13.	19.	21.	19.	8.	11.	3.	4.	5.	110.	6.17
SSE	0.	0.	12.	14.	16.	18.	19.	8.	15.	7.	5.	8.	122.	6.44
S	0.	2.	7.	16.	20.	13.	13.	4.	3.	4.	2.	1.	85.	5.33
SSW	0.	1.	5.	15.	10.	10.	5.	8.	6.	6.	2.	1.	69.	5.96
SW	0.	4.	9.	11.	5.	6.	3.	2.	3.	3.	1.	5.	52.	5.57
WSW	0.	0.	7.	8.	6.	1.	2.	4.	2.	2.	2.	6.	40.	6.51
W	0.	2.	9.	15.	7.	5.	3.	0.	0.	0.	0.	1.	42.	4.00
WNW	0.	3.	8.	9.	9.	8.	6.	3.	2.	1.	0.	1.	50.	4.97
NW	0.	3.	9.	10.	5.	7.	11.	6.	0.	1.	2.	1.	55.	5.20
NNW	0.	0.	6.	8.	4.	7.	1.	2.	1.	0.	0.	0.	29.	4.53
N	0.	2.	8.	9.	15.	2.	1.	0.	0.	0.	1.	1.	39.	4.16
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	24.	103.	152.	149.	108.	101.	47.	43.	29.	19.	30.	915.	5.39

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.18	0.41	0.51	0.64	0.09	0.41	0.05	0.00	0.05	0.00	0.00	2.35	4.29
NE	0.00	0.09	0.23	0.23	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83	3.39
ENE	0.00	0.00	0.05	0.23	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.41	3.64
E	0.00	0.00	0.05	0.32	0.18	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.69	4.28
ESE	0.00	0.00	0.05	0.28	0.32	0.28	0.32	0.05	0.00	0.05	0.00	0.00	1.34	5.34
SE	0.00	0.05	0.28	0.60	0.88	0.97	0.88	0.37	0.51	0.14	0.18	0.23	5.07	6.17
SSE	0.00	0.00	0.55	0.64	0.74	0.83	0.88	0.37	0.69	0.32	0.23	0.37	5.62	6.44
S	0.00	0.09	0.32	0.74	0.92	0.60	0.60	0.18	0.14	0.18	0.09	0.05	3.92	5.33
SSW	0.00	0.05	0.23	0.69	0.46	0.46	0.23	0.37	0.28	0.28	0.09	0.05	3.19	5.96
SW	0.00	0.18	0.41	0.51	0.23	0.28	0.14	0.09	0.14	0.14	0.05	0.23	2.40	5.57
WSW	0.00	0.00	0.32	0.37	0.28	0.05	0.09	0.18	0.09	0.09	0.09	0.28	1.84	6.51
W	0.00	0.09	0.41	0.69	0.32	0.23	0.14	0.00	0.00	0.00	0.00	0.05	1.93	4.00
WNW	0.00	0.14	0.37	0.41	0.41	0.37	0.28	0.14	0.09	0.05	0.00	0.05	2.30	4.97
NW	0.00	0.14	0.41	0.46	0.23	0.32	0.51	0.28	0.00	0.05	0.09	0.05	2.53	5.20
NNW	0.00	0.00	0.28	0.37	0.18	0.32	0.05	0.09	0.05	0.00	0.00	0.00	1.34	4.53
N	0.00	0.09	0.37	0.41	0.69	0.09	0.05	0.00	0.00	0.00	0.05	0.05	1.80	4.16
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	1.11	4.74	7.46	6.86	4.97	4.65	2.16	1.98	1.34	0.88	1.38	37.54	5.39

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
TOTAL NUMBER OC OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2171

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
2ND QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 04/01/87 TO 06/30/87
STABILITY CLASS #C# (10-40 METERS)
WINDS AT 10 METER LEVEL

21-JUL-87

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	0.	0.	0.	1.	1.	0.	0.	0.	0.	1.	3.	7.77
NE	0.	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.	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.	0.00
SE	0.	0.	0.	0.	0.	0.	1.	0.	2.	1.	2.	0.	6.	9.02
SSE	0.	0.	0.	1.	2.	1.	2.	3.	5.	1.	1.	2.	18.	7.72
S	0.	0.	2.	0.	2.	2.	4.	6.	1.	3.	0.	2.	22.	7.12
SSW	0.	0.	0.	3.	2.	2.	2.	0.	2.	0.	0.	1.	12.	6.03
SW	0.	0.	2.	0.	5.	0.	2.	1.	2.	0.	0.	0.	12.	5.53
WSW	0.	0.	2.	1.	3.	2.	2.	0.	0.	0.	0.	0.	10.	4.60
W	0.	0.	2.	3.	2.	2.	0.	0.	0.	0.	0.	0.	9.	3.70
WNW	0.	0.	0.	1.	4.	7.	3.	3.	0.	1.	1.	0.	20.	6.11
NW	0.	0.	0.	0.	1.	0.	0.	3.	0.	2.	0.	1.	7.	8.43
NNW	0.	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.	0.00
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	0.	8.	9.	21.	17.	17.	16.	12.	8.	4.	7.	119.	6.51

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.05	0.14	7.77
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	0.05	0.00	0.09	0.05	0.09	0.00	0.28	9.02
SSE	0.00	0.00	0.00	0.05	0.09	0.05	0.09	0.14	0.23	0.05	0.05	0.09	0.83	7.72
S	0.00	0.00	0.09	0.00	0.09	0.09	0.18	0.28	0.05	0.14	0.00	0.09	1.01	7.12
SSW	0.00	0.00	0.00	0.14	0.09	0.09	0.09	0.00	0.09	0.00	0.00	0.05	0.55	6.03
SW	0.00	0.00	0.09	0.00	0.23	0.00	0.09	0.05	0.09	0.00	0.00	0.00	0.55	5.53
WSW	0.00	0.00	0.09	0.05	0.14	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.46	4.60
W	0.00	0.00	0.09	0.14	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.41	3.70
WNW	0.00	0.00	0.00	0.05	0.18	0.32	0.14	0.14	0.00	0.05	0.05	0.00	0.92	6.11
NW	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.14	0.00	0.09	0.00	0.05	0.32	8.43
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	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
CALM													0.00	0.00
TOTAL	0.00	0.00	0.37	0.41	0.97	0.78	0.78	0.74	0.55	0.37	0.18	0.32	5.40	6.51

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2171

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 21-JUL-87
SAN ONOFRE NUCLEAR GENERATING STATION
2ND QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 04/01/87 TO 06/30/87
STABILITY CLASS #B# (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) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.	13.90
NE	0.	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.	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.	0.00
SE	0.	0.	0.	0.	0.	0.	0.	2.	0.	0.	0.	0.	2.	7.60
SSE	0.	0.	1.	0.	0.	1.	1.	1.	1.	2.	0.	0.	7.	7.11
S	0.	0.	1.	2.	2.	3.	0.	1.	1.	2.	1.	0.	13.	6.25
SSW	0.	0.	1.	0.	1.	0.	3.	1.	1.	0.	0.	0.	7.	6.19
SW	0.	0.	1.	2.	1.	1.	0.	1.	0.	0.	0.	0.	6.	4.58
WSW	0.	0.	0.	5.	4.	2.	0.	0.	1.	0.	0.	0.	12.	4.58
W	0.	0.	0.	3.	2.	0.	0.	0.	0.	0.	0.	0.	5.	3.90
WNW	0.	0.	2.	0.	0.	1.	1.	1.	0.	3.	0.	0.	8.	6.85
NW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.	12.90
NNW	0.	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.	0.00
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	0.	6.	12.	10.	8.	5.	7.	4.	7.	1.	2.	62.	6.02

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	13.90
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	0.09	0.00	0.00	0.00	0.00	0.09	7.60
SSE	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.09	0.00	0.00	0.32	7.11
S	0.00	0.00	0.05	0.09	0.09	0.14	0.00	0.05	0.05	0.09	0.05	0.00	0.60	6.25
SSW	0.00	0.00	0.05	0.00	0.05	0.00	0.14	0.05	0.05	0.00	0.00	0.00	0.32	6.19
SW	0.00	0.00	0.05	0.09	0.05	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.28	4.58
WSW	0.00	0.00	0.00	0.23	0.18	0.09	0.00	0.00	0.05	0.00	0.00	0.00	0.55	4.58
W	0.00	0.00	0.00	0.14	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	3.90
WNW	0.00	0.00	0.09	0.00	0.00	0.05	0.05	0.05	0.00	0.14	0.00	0.00	0.37	6.85
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	12.90
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	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
CALM													0.00	0.00
TOTAL	0.00	0.00	0.28	0.55	0.46	0.37	0.23	0.32	0.18	0.32	0.05	0.09	2.86	6.02

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2171

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
2ND QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 04/01/87 TO 06/30/87
STABILITY CLASS #A# (10-40 METERS)
WINDS AT 10 METER LEVEL

21-JUL-87

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	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.	0.	0.00
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.	0.00
SE	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	1.	6.50
SSE	0.	0.	0.	1.	1.	2.	2.	3.	3.	1.	0.	4.	17.	8.55
S	0.	0.	0.	3.	6.	6.	10.	6.	9.	11.	8.	1.	60.	7.69
SSW	0.	0.	0.	13.	12.	19.	12.	12.	16.	8.	4.	0.	96.	6.57
SW	0.	0.	3.	13.	14.	43.	32.	30.	15.	1.	0.	0.	151.	6.15
WSW	0.	0.	0.	7.	19.	32.	28.	29.	26.	14.	3.	6.	164.	7.15
W	0.	0.	0.	3.	5.	21.	45.	38.	46.	27.	1.	9.	195.	7.71
WNW	0.	0.	0.	1.	0.	8.	13.	11.	18.	7.	7.	7.	72.	8.33
NW	0.	0.	0.	0.	0.	1.	1.	1.	1.	0.	0.	3.	7.	9.64
NNW	0.	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.	0.00
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	0.	3.	41.	57.	132.	144.	130.	134.	69.	23.	30.	763.	7.23

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
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
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	0.05	0.00	0.00	0.00	0.00	0.00	0.05	6.50
SSE	0.00	0.00	0.00	0.05	0.05	0.09	0.09	0.14	0.14	0.05	0.00	0.18	0.78	8.55
S	0.00	0.00	0.00	0.14	0.28	0.28	0.46	0.28	0.41	0.51	0.37	0.05	2.76	7.69
SSW	0.00	0.00	0.00	0.60	0.55	0.88	0.55	0.55	0.74	0.37	0.18	0.00	4.42	6.57
SW	0.00	0.00	0.14	0.60	0.64	1.98	1.47	1.38	0.69	0.05	0.00	0.00	6.96	6.15
WSW	0.00	0.00	0.00	0.32	0.88	1.47	1.29	1.34	1.20	0.64	0.14	0.28	7.55	7.15
W	0.00	0.00	0.00	0.14	0.23	0.97	2.07	1.75	2.12	1.24	0.05	0.41	8.98	7.71
WNW	0.00	0.00	0.00	0.05	0.00	0.37	0.60	0.51	0.83	0.32	0.32	0.32	3.32	8.33
NW	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00	0.14	0.32	9.64
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	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
CALM													0 00	0.00
TOTAL	0.00	0.00	0.14	1.89	2.63	6.08	6.63	5.99	6.17	3.18	1.06	1.38	35.15	7.23

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2184
TOTAL NUMBER OC OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2171

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 21-JUL-87
SAN ONOFRE NUCLEAR GENERATING STATION
1ST QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 01/01/87 TO 03/31/87
STABILITY CLASS ALL (10-40 METERS)
WINDS AT 10 METER LEVEL

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND	UPPER CLASS INTERVALS OF WIND SPEED (MPH)													MEAN
DIRECTION	1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	SPEED
NNE	0.	1.	18.	54.	77.	75.	90.	104.	102.	75.	61.	100.	777.	7.79
NE	0.	3.	13.	15.	21.	17.	15.	7.	6.	2.	4.	14.	117.	6.40
ENE	0.	1.	6.	10.	5.	7.	4.	1.	9.	9.	1.	6.	59.	6.81
E	0.	1.	5.	5.	6.	4.	2.	6.	4.	1.	3.	4.	41.	6.50
ESE	0.	0.	1.	6.	2.	7.	6.	1.	8.	8.	0.	1.	40.	6.70
SE	0.	2.	3.	9.	7.	5.	10.	7.	10.	8.	5.	11.	77.	7.81
SSE	0.	2.	4.	9.	10.	8.	12.	11.	10.	6.	4.	13.	89.	7.68
S	0.	0.	10.	8.	11.	12.	14.	10.	13.	13.	2.	9.	102.	7.31
SSW	0.	0.	6.	10.	12.	10.	14.	13.	6.	2.	2.	4.	79.	6.48
SW	0.	0.	12.	12.	17.	10.	10.	6.	0.	1.	0.	7.	75.	5.65
WSW	0.	0.	10.	17.	21.	11.	14.	9.	4.	2.	2.	16.	106.	7.22
W	0.	0.	4.	13.	13.	27.	37.	24.	18.	5.	2.	13.	156.	7.07
WNW	0.	0.	2.	10.	13.	18.	22.	14.	16.	17.	6.	58.	176.	9.65
NW	0.	0.	1.	11.	10.	11.	9.	12.	6.	5.	2.	7.	74.	6.94
NNW	0.	3.	5.	7.	14.	11.	11.	6.	1.	1.	2.	3.	64.	5.69
N	0.	1.	12.	16.	17.	20.	17.	19.	10.	1.	6.	9.	128.	6.41
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	14.	112.	212.	256.	273.	287.	250.	223.	156.	102.	275.	2160.	7.40

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND	UPPER CLASS INTERVALS OF WIND SPEED (MPH)													MEAN
DIRECTION	1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	SPEED
NNE	0.00	0.05	0.83	2.50	3.56	4.40	4.17	4.81	4.72	3.47	2.82	4.63	35.97	7.79
NE	0.00	0.14	0.60	0.69	0.97	0.79	0.69	0.32	0.28	0.09	0.19	0.65	5.42	6.40
ENE	0.00	0.05	0.28	0.46	0.23	0.32	0.19	0.05	0.42	0.42	0.05	0.28	2.73	6.81
E	0.00	0.05	0.23	0.23	0.28	0.19	0.09	0.28	0.19	0.05	0.14	0.19	1.90	6.50
ESE	0.00	0.00	0.05	0.28	0.09	0.32	0.28	0.05	0.37	0.37	0.00	0.05	1.85	6.70
SE	0.00	0.09	0.14	0.42	0.32	0.23	0.46	0.32	0.46	0.37	0.23	0.51	3.56	7.81
SSE	0.00	0.09	0.19	0.42	0.46	0.37	0.56	0.51	0.46	0.28	0.19	0.60	4.12	7.68
S	0.00	0.00	0.46	0.37	0.51	0.56	0.65	0.46	0.60	0.60	0.09	0.42	4.72	7.31
SSW	0.00	0.00	0.28	0.46	0.56	0.46	0.65	0.60	0.28	0.09	0.09	0.19	3.66	6.48
SW	0.00	0.00	0.56	0.56	0.79	0.46	0.46	0.28	0.00	0.05	0.00	0.32	3.47	5.65
WSW	0.00	0.00	0.46	0.79	0.97	0.51	0.65	0.42	0.19	0.09	0.09	0.74	4.91	7.22
W	0.00	0.00	0.19	0.60	0.60	1.25	1.71	1.11	0.83	0.23	0.09	0.60	7.22	7.07
WNW	0.00	0.00	0.09	0.46	0.60	0.83	1.02	0.65	0.74	0.79	0.28	2.69	8.15	9.65
NW	0.00	0.00	0.05	0.51	0.46	0.51	0.42	0.56	0.28	0.23	0.09	0.32	3.43	6.94
NNW	0.00	0.14	0.23	0.32	0.65	0.51	0.51	0.28	0.05	0.05	0.09	0.14	2.96	5.69
N	0.00	0.05	0.56	0.74	0.79	0.93	0.79	0.88	0.46	0.05	0.28	0.42	5.93	6.41
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.65	5.19	9.81	11.85	12.64	13.29	11.57	10.32	7.22	4.72	12.73	100.00	7.40

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
TOTAL NUMBER OC OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2156

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 21-JUL-87
SAN ONOFRE NUCLEAR GENERATING STATION
1ST QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 01/01/87 TO 03/31/87
STABILITY CLASS #G# (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) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	3.	16.	21.	32.	46.	68.	67.	61.	52.	76.	442.	8.66
NE	0.	0.	5.	5.	4.	8.	11.	4.	2.	2.	0.	0.	41.	5.73
ENE	0.	1.	3.	4.	2.	1.	3.	0.	0.	0.	0.	0.	14.	4.31
E	0.	1.	1.	0.	1.	0.	0.	0.	0.	0.	0.	0.	3.	3.00
ESE	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.	0.	0.	2.	9.05
SE	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	1.	0.	2.	7.10
SSE	0.	2.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.	1.93
S	0.	0.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	2.	3.40
SSW	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	2.50
SW	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	2.40
WSW	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.	3.40
W	0.	0.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	2.	2.95
WNW	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	1.	6.10
NW	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	1.	6.40
NNW	0.	0.	0.	0.	2.	2.	0.	1.	0.	0.	0.	0.	5.	5.66
N	0.	0.	1.	1.	2.	1.	5.	4.	3.	1.	3.	1.	22.	7.40
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	4.	18.	30.	32.	44.	67.	77.	73.	65.	56.	77.	543.	8.09

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.14	0.74	0.97	1.48	2.13	3.15	3.11	2.83	2.41	3.53	20.50	8.66
NE	0.00	0.00	0.23	0.23	0.19	0.37	0.51	0.19	0.09	0.09	0.00	0.00	1.90	5.73
ENE	0.00	0.05	0.14	0.19	0.09	0.05	0.14	0.00	0.00	0.00	0.00	0.00	0.65	4.31
E	0.00	0.05	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	3.00
ESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.09	9.05
SE	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.09	7.10
SSE	0.00	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	1.93
S	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	3.40
SSW	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	2.50
SW	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	2.40
WSW	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	3.40
W	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	2.95
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	6.10
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	6.40
NNW	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.23	5.66
N	0.00	0.00	0.05	0.05	0.09	0.05	0.23	0.19	0.14	0.05	0.14	0.05	1.02	7.40
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.19	0.83	1.39	1.48	2.04	3.11	3.57	3.39	3.01	2.60	3.57	25.19	8.09

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
TOTAL NUMBER OF OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2156

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 21-JUL-87
SAN ONOFRE NUCLEAR GENERATING STATION
1ST QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 01/01/87 TO 03/31/87
STABILITY CLASS #F# (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) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	8.	27.	37.	44.	25.	20.	23.	8.	4.	2.	198.	6.02
NE	0.	1.	5.	8.	10.	5.	3.	0.	0.	0.	1.	1.	34.	4.75
ENE	0.	0.	2.	4.	0.	0.	0.	0.	1.	6.	0.	0.	13.	6.61
E	0.	0.	2.	3.	2.	0.	0.	0.	0.	0.	1.	0.	8.	4.60
ESE	0.	0.	0.	1.	0.	1.	1.	0.	0.	1.	0.	0.	4.	6.10
SE	0.	1.	1.	1.	2.	0.	0.	0.	0.	0.	0.	0.	5.	3.46
SSE	0.	0.	0.	0.	2.	0.	0.	0.	0.	0.	0.	1.	3.	7.03
S	0.	0.	1.	2.	1.	0.	0.	0.	0.	0.	0.	0.	4.	3.50
SSW	0.	0.	1.	2.	0.	0.	0.	0.	0.	0.	0.	0.	3.	3.40
SW	0.	0.	1.	0.	1.	0.	0.	0.	0.	0.	0.	0.	2.	3.40
WSW	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.	3.40
W	0.	0.	0.	0.	1.	2.	0.	0.	0.	0.	0.	0.	3.	5.07
WNW	0.	0.	0.	3.	1.	2.	0.	1.	0.	0.	0.	0.	7.	4.86
NW	0.	0.	0.	0.	0.	2.	0.	0.	0.	0.	0.	0.	2.	5.30
NNW	0.	0.	0.	0.	3.	0.	2.	1.	0.	0.	0.	0.	6.	5.72
N	0.	0.	3.	2.	1.	8.	4.	7.	4.	0.	1.	1.	31.	6.63
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	2.	24.	54.	61.	64.	35.	29.	28.	15.	7.	5.	324.	5.78

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.37	1.25	1.72	2.04	1.16	0.93	1.07	0.37	0.19	0.09	9.18	6.02
NE	0.00	0.05	0.23	0.37	0.46	0.23	0.14	0.00	0.00	0.00	0.05	0.05	1.58	4.75
ENE	0.00	0.00	0.09	0.19	0.00	0.00	0.00	0.00	0.05	0.28	0.00	0.00	0.60	6.61
E	0.00	0.00	0.09	0.14	0.09	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.37	4.60
ESE	0.00	0.00	0.00	0.05	0.00	0.05	0.05	0.00	0.00	0.05	0.00	0.00	0.19	6.10
SE	0.00	0.05	0.05	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	3.46
SSE	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.14	7.03
S	0.00	0.00	0.05	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	3.50
SSW	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	3.40
SW	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	3.40
WSW	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	3.40
W	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.14	5.07
WNW	0.00	0.00	0.00	0.14	0.05	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.32	4.86
NW	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.09	5.30
NNW	0.00	0.00	0.00	0.00	0.14	0.00	0.09	0.05	0.00	0.00	0.00	0.00	0.28	5.72
N	0.00	0.00	0.14	0.09	0.05	0.37	0.19	0.32	0.19	0.00	0.05	0.05	1.44	6.63
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.09	1.11	2.50	2.83	2.97	1.62	1.35	1.30	0.70	0.32	0.23	15.03	5.78

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
TOTAL NUMBER OC OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2156

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 21-JUL-87
SAN ONOFRE NUCLEAR GENERATING STATION
1ST QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 01/01/97 TO 03/31/97
STABILITY CLASS #E# (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) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	1.	6.	8.	15.	15.	15.	14.	10.	6.	1.	12.	103.	7.31
NE	0.	1.	3.	1.	7.	4.	1.	2.	2.	0.	1.	6.	28.	7.25
ENE	0.	0.	1.	1.	2.	6.	1.	1.	5.	2.	1.	3.	23.	7.60
E	0.	0.	2.	1.	3.	3.	2.	3.	2.	0.	1.	2.	19.	6.61
ESE	0.	0.	1.	4.	1.	4.	3.	1.	2.	1.	0.	0.	17.	5.79
SE	0.	0.	0.	4.	5.	3.	3.	3.	2.	1.	1.	0.	22.	6.14
SSE	0.	0.	1.	4.	2.	1.	0.	1.	0.	2.	0.	1.	12.	5.98
S	0.	0.	1.	1.	0.	2.	1.	0.	0.	1.	0.	0.	6.	5.57
SSW	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.	3.20
SW	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.	2.	7.95
WSW	0.	0.	3.	1.	0.	0.	0.	0.	0.	0.	0.	1.	5.	4.98
W	0.	0.	1.	2.	0.	1.	1.	0.	1.	0.	0.	2.	8.	8.05
WNW	0.	0.	2.	2.	2.	1.	3.	1.	0.	0.	1.	4.	16.	8.51
NW	0.	0.	1.	5.	1.	2.	1.	4.	2.	2.	0.	1.	19.	6.41
NNW	0.	1.	1.	1.	4.	2.	3.	0.	0.	1.	2.	1.	16.	6.16
N	0.	0.	4.	4.	9.	9.	7.	5.	2.	0.	0.	5.	45.	6.40
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	3.	28.	40.	51.	53.	41.	35.	28.	16.	8.	39.	342.	6.96

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.05	0.28	0.37	0.70	0.70	0.70	0.65	0.46	0.28	0.05	0.56	4.79	7.31
NE	0.00	0.05	0.14	0.05	0.32	0.19	0.05	0.09	0.09	0.00	0.05	0.28	1.30	7.25
ENE	0.00	0.00	0.05	0.05	0.09	0.28	0.05	0.05	0.23	0.09	0.05	0.14	1.07	7.60
E	0.00	0.00	0.09	0.05	0.14	0.14	0.09	0.14	0.09	0.00	0.05	0.09	0.88	6.61
ESE	0.00	0.00	0.05	0.19	0.05	0.19	0.14	0.05	0.09	0.05	0.00	0.00	0.79	5.79
SE	0.00	0.00	0.00	0.19	0.23	0.14	0.14	0.14	0.09	0.05	0.05	0.00	1.02	6.14
SSE	0.00	0.00	0.05	0.19	0.09	0.05	0.00	0.05	0.00	0.09	0.00	0.05	0.56	5.98
S	0.00	0.00	0.05	0.05	0.00	0.09	0.05	0.00	0.00	0.05	0.00	0.00	0.29	5.57
SSW	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	3.20
SW	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	7.95
WSW	0.00	0.00	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.23	4.98
W	0.00	0.00	0.05	0.09	0.00	0.05	0.05	0.00	0.05	0.00	0.00	0.09	0.37	8.05
WNW	0.00	0.00	0.09	0.09	0.09	0.05	0.14	0.05	0.00	0.00	0.05	0.19	0.74	8.51
NW	0.00	0.00	0.05	0.23	0.05	0.09	0.05	0.19	0.09	0.09	0.00	0.05	0.88	6.41
NNW	0.00	0.05	0.05	0.05	0.19	0.09	0.14	0.00	0.00	0.05	0.09	0.05	0.74	6.16
N	0.00	0.00	0.19	0.19	0.42	0.42	0.32	0.23	0.09	0.00	0.00	0.23	2.09	6.40
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.14	1.30	1.86	2.37	2.46	1.90	1.62	1.30	0.74	0.37	1.81	15.86	6.96

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
TOTAL NUMBER OC OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2156

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
1ST QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 01/01/87 TO 03/31/87
STABILITY CLASS #D# (10-40 METERS)
WINDS AT 10 METER LEVEL

21-JUL-87

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	1.	3.	4.	3.	3.	2.	1.	0.	3.	5.	25.	7.51
NE	0.	1.	0.	1.	0.	0.	0.	1.	2.	0.	1.	3.	9.	9.88
ENE	0.	0.	0.	1.	1.	0.	0.	0.	2.	1.	0.	3.	8.	9.05
E	0.	0.	0.	1.	0.	1.	0.	3.	2.	1.	1.	2.	11.	8.65
ESE	0.	0.	0.	1.	1.	2.	2.	0.	4.	5.	0.	1.	16.	7.73
SE	0.	1.	2.	3.	0.	2.	6.	4.	5.	5.	3.	10.	41.	9.03
SSE	0.	0.	2.	3.	3.	2.	3.	6.	1.	3.	1.	6.	30.	8.15
S	0.	0.	4.	2.	3.	0.	2.	1.	1.	0.	1.	2.	16.	6.21
SSW	0.	0.	0.	1.	1.	2.	1.	2.	3.	2.	0.	3.	15.	8.93
SW	0.	0.	5.	1.	0.	0.	2.	1.	0.	1.	0.	3.	13.	6.68
WSW	0.	0.	4.	1.	4.	3.	3.	0.	0.	0.	1.	11.	27.	10.05
W	0.	0.	1.	5.	1.	3.	0.	3.	0.	1.	0.	7.	21.	8.56
WNW	0.	0.	0.	5.	4.	4.	5.	3.	3.	4.	0.	16.	44.	9.93
NW	0.	0.	0.	6.	8.	4.	5.	4.	3.	2.	1.	3.	36.	6.79
NNW	0.	2.	4.	6.	5.	7.	6.	4.	1.	0.	0.	1.	36.	5.32
N	0.	1.	4.	9.	5.	2.	1.	3.	1.	0.	2.	2.	30.	5.50
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	5.	27.	49.	40.	35.	39.	37.	29.	25.	14.	78.	378.	7.92

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.05	0.14	0.19	0.14	0.14	0.09	0.05	0.00	0.14	0.23	1.16	7.51
NE	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.05	0.09	0.00	0.05	0.14	0.42	9.88
ENE	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.09	0.05	0.00	0.14	0.37	9.05
E	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.14	0.09	0.05	0.05	0.09	0.51	8.65
ESE	0.00	0.00	0.00	0.05	0.05	0.09	0.09	0.00	0.19	0.23	0.00	0.05	0.74	7.73
SE	0.00	0.05	0.09	0.14	0.00	0.09	0.28	0.19	0.23	0.23	0.14	0.46	1.90	9.03
SSE	0.00	0.00	0.09	0.14	0.14	0.09	0.14	0.28	0.05	0.14	0.05	0.28	1.39	8.15
S	0.00	0.00	0.19	0.09	0.14	0.00	0.09	0.05	0.05	0.00	0.05	0.09	0.74	6.21
SSW	0.00	0.00	0.00	0.05	0.05	0.09	0.05	0.09	0.14	0.09	0.00	0.14	0.70	8.93
SW	0.00	0.00	0.23	0.05	0.00	0.00	0.09	0.05	0.00	0.05	0.00	0.14	0.60	6.68
WSW	0.00	0.00	0.19	0.05	0.19	0.14	0.14	0.00	0.00	0.00	0.05	0.51	1.25	10.05
W	0.00	0.00	0.05	0.23	0.05	0.14	0.00	0.14	0.00	0.05	0.00	0.32	0.97	8.56
WNW	0.00	0.00	0.00	0.23	0.19	0.19	0.23	0.14	0.14	0.19	0.00	0.74	2.04	9.93
NW	0.00	0.00	0.00	0.28	0.37	0.19	0.23	0.19	0.14	0.09	0.05	0.14	1.67	6.79
NNW	0.00	0.09	0.19	0.28	0.23	0.32	0.28	0.19	0.05	0.00	0.00	0.05	1.67	5.32
N	0.00	0.05	0.19	0.42	0.23	0.09	0.05	0.14	0.05	0.00	0.09	0.09	1.39	5.50
VARIABLE													0.00	0.00
CALM													0.00	0.00
TOTAL	0.00	0.23	1.25	2.27	1.86	1.62	1.81	1.72	1.35	1.16	0.65	3.62	17.53	7.92

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
TOTAL NUMBER OC OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2156

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY 21-JUL-87
SAN ONOFRE NUCLEAR GENERATING STATION
1ST QUARTER 1987
DAMES AND MOORE JOB NO.- 00377-116-09
DATA PERIOD- 01/01/87 TO 03/31/87
STABILITY CLASS #C# (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) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	1.	3.	5.	10.20
NE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	3.	4.	11.88
ENE	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	1.	8.50
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.	1.	0.	0.	0.	1.	8.10
SE	0.	0.	0.	0.	0.	0.	0.	0.	3.	1.	0.	0.	4.	9.05
SSE	0.	0.	0.	1.	1.	2.	1.	1.	3.	0.	1.	2.	12.	8.36
S	0.	0.	1.	1.	2.	2.	0.	0.	0.	1.	0.	2.	9.	8.78
SSW	0.	0.	0.	0.	3.	0.	4.	0.	0.	0.	0.	1.	8.	7.29
SW	0.	0.	1.	0.	0.	1.	0.	0.	0.	0.	0.	2.	4.	8.43
WSW	0.	0.	0.	2.	3.	0.	1.	0.	0.	0.	0.	1.	7.	6.43
W	0.	0.	0.	1.	1.	2.	0.	0.	0.	0.	0.	0.	4.	4.70
WNW	0.	0.	0.	0.	2.	2.	1.	2.	0.	0.	0.	2.	9.	8.64
NW	0.	0.	0.	0.	1.	2.	1.	2.	1.	0.	0.	2.	9.	7.90
NNW	0.	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.	0.00
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	0.	2.	5.	13.	12.	8.	5.	9.	2.	3.	18.	77.	8.25

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.14	0.23	10.20
NE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.19	11.88
ENE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	8.50
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	0.05	0.00	0.00	0.00	0.05	8.10
SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.19	9.05
SSE	0.00	0.00	0.00	0.05	0.05	0.09	0.05	0.05	0.14	0.00	0.05	0.09	0.56	8.36
S	0.00	0.00	0.05	0.05	0.09	0.09	0.00	0.00	0.00	0.05	0.00	0.09	0.42	8.78
SSW	0.00	0.00	0.00	0.00	0.14	0.00	0.19	0.00	0.00	0.00	0.00	0.05	0.37	7.29
SW	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.09	0.19	8.43
WSW	0.00	0.00	0.00	0.09	0.14	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.32	6.43
W	0.00	0.00	0.00	0.05	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.19	4.70
WNW	0.00	0.00	0.00	0.00	0.09	0.09	0.05	0.09	0.00	0.00	0.00	0.09	0.42	8.64
NW	0.00	0.00	0.00	0.00	0.05	0.09	0.05	0.09	0.05	0.00	0.00	0.09	0.42	7.90
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	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
CALM													0.00	0.00
TOTAL	0.00	0.00	0.09	0.23	0.60	0.56	0.37	0.23	0.42	0.09	0.14	0.83	3.57	8.25

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
TOTAL NUMBER OC OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2156

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
1ST QUARTER 1987
DAMES AND MOORE JOB NO. - 00377-116-09
DATA PERIOD- 01/01/87 TO 03/31/87
STABILITY CLASS #B# (10-40 METERS)
WINDS AT 10 METER LEVEL

21-JUL-87

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	0.	0.	0.	0.	1.	0.	1.	0.	0.	0.	2.	7.50
NE	0.	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.	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.	0.00
SE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.	11.60
SSE	0.	0.	0.	0.	0.	0.	2.	1.	1.	0.	0.	0.	4.	7.08
S	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	1.	2.	9.60
SSW	0.	0.	0.	0.	0.	0.	1.	1.	1.	0.	0.	0.	3.	7.43
SW	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	1.	2.	11.00
WSW	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	1.	1.	3.	13.07
W	0.	0.	1.	0.	2.	1.	0.	0.	1.	0.	0.	0.	5.	5.12
WNW	0.	0.	0.	0.	1.	2.	1.	0.	4.	0.	0.	1.	9.	7.54
NW	0.	0.	0.	0.	0.	0.	0.	2.	0.	0.	0.	0.	2.	7.30
NNW	0.	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.	0.00
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	0.	1.	1.	3.	4.	5.	5.	8.	0.	1.	5.	33.	8.05

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.09	7.50
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	0.00	0.00	0.05	0.05	11.60
SSE	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.05	0.00	0.00	0.00	0.19	7.08
S	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.09	9.60
SSW	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.14	7.43
SW	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	11.00
WSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.14	13.07
W	0.00	0.00	0.05	0.00	0.09	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.23	5.12
WNW	0.00	0.00	0.00	0.00	0.05	0.09	0.05	0.00	0.19	0.00	0.00	0.05	0.42	7.54
NW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.09	7.30
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	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
CALM													0.00	0.00
TOTAL	0.00	0.00	0.05	0.05	0.14	0.19	0.23	0.23	0.37	0.00	0.05	0.23	1.53	8.05

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
TOTAL NUMBER OC OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2156

Table 4A

SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
1ST QUARTER 1987
DAMES AND MOORE JOB NO.- 00377-116-09
DATA PERIOD- 01/01/87 TO 03/31/87
STABILITY CLASS #A# (10-40 METERS)
WINDS AT 10 METER LEVEL

21-JUL-87

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN NUMBER OF OCCURRENCES)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.	2.	12.05
NE	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.	13.00
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.	0.00
SE	0.	0.	0.	0.	0.	0.	1.	0.	0.	1.	0.	0.	2.	8.25
SSE	0.	0.	0.	1.	2.	3.	6.	2.	5.	1.	2.	3.	25.	8.46
S	0.	0.	2.	1.	5.	7.	11.	9.	12.	11.	1.	4.	63.	7.94
SSW	0.	0.	4.	6.	8.	8.	8.	10.	2.	0.	2.	0.	48.	5.96
SW	0.	0.	3.	10.	16.	9.	8.	5.	0.	0.	0.	0.	51.	5.03
WSW	0.	0.	3.	11.	14.	8.	10.	8.	4.	2.	0.	2.	62.	6.10
W	0.	0.	0.	4.	8.	18.	36.	21.	16.	4.	2.	4.	113.	7.02
WNW	0.	0.	0.	0.	3.	7.	10.	6.	7.	13.	5.	35.	86.	10.56
NW	0.	0.	0.	0.	0.	1.	1.	0.	0.	1.	1.	1.	5.	9.00
NNW	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.	11.30
N	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.00
VARIABLE													0.	0.00
CALM													0.	0.00
TOTAL	0.	0.	12.	33.	56.	61.	91.	61.	46.	33.	13.	53.	459.	7.48

WIND FREQUENCY DISTRIBUTION
(FREQUENCY IN PERCENT OF TOTAL)

WIND DIRECTION	UPPER CLASS INTERVALS OF WIND SPEED (MPH) 1	2	3	4	5	6	7	8	9	10	11	>11	TOTAL	MEAN SPEED
NNE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	12.05
NE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	13.00
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	0.05	0.00	0.00	0.05	0.00	0.00	0.09	8.25
SSE	0.00	0.00	0.00	0.05	0.09	0.14	0.28	0.09	0.23	0.05	0.09	0.14	1.16	8.46
S	0.00	0.00	0.09	0.05	0.23	0.32	0.51	0.42	0.56	0.51	0.05	0.19	2.92	7.94
SSW	0.00	0.00	0.19	0.28	0.37	0.37	0.37	0.46	0.09	0.00	0.09	0.00	2.23	5.96
SW	0.00	0.00	0.14	0.46	0.74	0.42	0.37	0.23	0.00	0.00	0.00	0.00	2.37	5.03
WSW	0.00	0.00	0.14	0.51	0.65	0.37	0.46	0.37	0.19	0.09	0.00	0.09	2.88	6.10
W	0.00	0.00	0.00	0.19	0.37	0.83	1.67	0.97	0.74	0.19	0.09	0.19	5.24	7.02
WNW	0.00	0.00	0.00	0.00	0.14	0.32	0.46	0.28	0.32	0.60	0.23	1.62	3.99	10.56
NW	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.23	9.00
NNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	11.30
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
CALM													0.00	0.00
TOTAL	0.00	0.00	0.56	1.53	2.60	2.83	4.22	2.83	2.13	1.53	0.60	2.46	21.29	7.48

TOTAL NUMBER OF POSSIBLE OBSERVATIONS - 2160
TOTAL NUMBER OC OBSERVATIONS WITH VALID SPEED, DIRECTION AND STABILITY - 2156