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February 25, 1994

U.S. Nuclear Regulatory Commission Attention: Document Control Desk Washington, D.C. 20555

Gentlemen:

Subject: Docket Number 50-206, 50-361, 50-363

Annual Personnel Monitoring Report - 1993

San Onofre Nuclear Generating Station, Units 1, 2, and 3

This submittal provides the Annual Personnel Monitoring Report for 1993 pursuant to 10 CFR 20.407 and sections 6.9.1.5 of appendix A, Technical Specifications to Facility Licenses DPR-13, NPF-10, and NPF-15 for San Onofre Units 1, 2, and 3, respectively. The report includes the number of individuals for whom personnel monitoring was required during the calendar year, the annual exposure distribution summary and the Regulatory Guide 1.16 Statistical Summary by work and job function. Future Annual Personnel Monitoring reports will be submitted in accordance with section 10 CFR 20.2206 which became effective January 1, 1994 and supersedes 10 CFR 20.407.

If you require additional information, please let me know.

Sincerely, Halto C. March

Enclosure

cc: K. E. Perkins, Jr., Acting Regional Administrator, NRC Region V

M. K. Webb, NRC Project Manager, San Onofre Unit 1

M. B. Fields, NRC project Manager, San Onofre Units 2 & 3

J. A. Sloan, NRC Senior Resident Inspector, San Onofre Units 1, 2,& 3

R. F. Dudley, Section Chief, Non-Power, Decommissioning, and Environmental Project, Directorate of Reactor Projects - 3, 4,& 5

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NUMBER OF INDIVIDUALS RECEIVING GREATER THAN 100 MREM BY WORK AND JOB FUNCTION

| | NUMBER OF WORKERS | | | EXPOSURE (PERSON REM) | | |
|------------------|-------------------|---------|------------|-----------------------|---------|---------|
| | STATION | UTILITY | OTHERS | STATION | UTILITY | OTHERS |
| RX OPS & SURV | • | | | | | |
| MAIN | 59 | 9 | 136 | 1.496 | 0.049 | 9.649 |
| OPS. | 17 | 26 | 12 | 1.509 | 3.069 | 2.642 |
| н.Р. | 56 | 2 | 113 | 17.794 | 0.185 | 45.391 |
| SUPV | 2 | 1 | 3 | 0.570 | 0.679 | 0.036 |
| ENGR | 34 | 4 | 36 | 1.625 | 0.124 | 1.143 |
| ROUTINE MAINT | • | | | | | |
| MAIN | 140 | 20 | 633 | 24.520 | 4.364 | 119.631 |
| OPS. | 25 | 33 | 15 | 4.611 | 5.611 | 2.560 |
| H.P. | 55 | 2 | 211 | 5.802 | 0.251 | 29.878 |
| SUPV | 1 | 1 | 5 | 0.148 | 0.003 | 1.756 |
| ENGR | 39 | 7 | 75 | 1.929 | 0.311 | 5.152 |
| INSERVICE INSP | 0,5 | • | , • | | | |
| MAIN | 22 | 3 | 195 | 0.310 | 0.004 | 41.823 |
| OPS. | 4 | 3 | 0 | 0.155 | 0.030 | 0.000 |
| H.P. | ż | Ö | 9 | 0.086 | 0.000 | 0.038 |
| SUPV | 1 | ŏ | ĺ | 0.000 | 0.000 | 0.002 |
| ENGR | 32 | 6 | 54 | 3.143 | 0.565 | 12.986 |
| SPECIAL MAINT | JL | · · | • | | | |
| MAIN | 122 | 19 | 582 | 27.697 | 8.628 | 137.237 |
| OPS. | 6 | 8 | 2 | 0.092 | 0.055 | 0.011 |
| H.P. | 30 | 1 | 145 | 2.856 | 0.039 | 29.215 |
| SUPV | 1 | î | 13 | 0.076 | 0.012 | 3.151 |
| ENGR | 36 | 4 | 99 | 6.099 | 0.238 | 32.926 |
| WASTE PROCESSING | | • | | | | |
| MAIN | 2 | 0 | 18 | 0.033 | 0.000 | 0.302 |
| OPS. | 0 | ő | 0 | 0.000 | 0.000 | 0.000 |
| H.P. | 19 | ž | 9 <u>9</u> | 1.321 | 0.086 | 10.797 |
| SUPV | 0 | Ō | ő | 0.000 | 0.000 | 0.000 |
| ENGR | 5 | 1 | 1 | 0.010 | 0.001 | 0.118 |
| REFUELING | 3 | • | • | 0.010 | 0.002 | ****** |
| MAIN | 66 | 4 | 163 | 28.537 | 0.096 | 74.354 |
| OPS. | 7 | 3 | 3 | 0.564 | 0.252 | 0.194 |
| H.P. | 31 | 2 | 131 | 1.669 | 0.214 | 10.840 |
| SUPV | 1 | 1 | 1 | 0.060 | 0.146 | 0.022 |
| ENGR | 25 | 7 | 23 | 3.329 | 1.207 | 4.125 |
| TOTAL | 23 | • | 23 | 0.023 | 11107 | |
| MAIN | 149 | 20 | 722 | 82.595 | 13.143 | 382.998 |
| OPS. | 26 | 33 | 15 | 6.933 | 9.019 | 5.408 |
| H.P. | 20 64 | 2 | 219 | 29.531 | 0.777 | 126.162 |
| SUPV | 2 | 2 | 14 | 0.857 | 0.841 | 4.970 |
| | 45 | 8 | 132 | 16.139 | 2.449 | 56.454 |
| ENGR | 45 | 0 | 132 | 10.137 | L.TTJ | |
| GRAND TOTALS | 286 | 65 | 1102 | 136.055 | 26.229 | 575.992 |

TOTAL # OF INDIVIDUALS RECEIVING GREATER THAN 100 MREM:

1453

TOTAL # OF INDIVIDUALS RECEIVING GREATER THAN 500 MREM IN A SINGLE EXPOSURE:

17

Note: The TOTAL fields are not a summation of the Worker and Exposure breakdowns by Job Function, since:

Workers may be entered in more than one job function but are only counted once in the total. (e.g. A maintenance worker may work on a refueling job and a routine maintenance job and is therefore counted in both job functions; however, he/she is only counted once in the maintenance Total)

Exposure is calculated from pocket dosimeter dose for each worker on each job. Pocket dosimeter readings are used to ratio and distribute the measured TLD doses into the above exposure columns.

PERSONNEL WHOLE BODY EXPOSURES FOR CALENDAR YEAR 1993

| ANNUAL DOSE RANGES* (REM) | NUMBER OF INDIVIDUALS IN EACH RANGE |
|------------------------------------|--|
| NO MEASURABLE EXPOSURE | 2060 |
| MEASURABLE EXPOSURE LESS THAN 0.10 | 740 |
| 0.10 - 0.25 | 416 |
| 0.25 - 0.50 | 423 |
| 0.50 - 0.75 | 314 |
| 0.75 - 1.0 | 164 |
| 1.0 - 2.0 | 131 |
| 2.0 - 3.0 | 5 |
| 3.0 - 4.0 | 0 |
| 4.0 - 5.0 | 0 |
| 5.0 - 6.0 | 0 |
| 6.0 - 7.0 | 0 |
| 7.0 - 8.0 | 0 |
| 8.0 - 9.0 | 0 |
| 9.0 - 10.0 | 0 |
| 10.0 - 11.0 | Ö |
| 11.0 - 12.0 | Ö |
| 12+ | 0 |

TOTAL NUMBER OF INDIVIDUALS REPORTED 4253 TOTAL MAN-REM 767.488

THIS REPORT IS SUBMITTED IN ACCORDANCE WITH 10CFR20.407(a)(1)

^{*}INDIVIDUAL VALUES EXACTLY EQUAL TO THE VALUES SEPARATING EXPOSURE RANGES SHALL BE REPORTED IN THE HIGHER RANGE.