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Attention: Mr. John B. Martin, Regional Administrator

Dear Sir:

Subject: Docket No. 50-206
San Onofre Unit 1

Enclosed are three copies of the radiological environmental monitoring related report entitled,

"Annual Operating Report for 1983 - Radiological Environmental Monitoring Evaluation"

This report replaces the report of the same title which was transmitted to you on March 30, 1984. Changes which were incorporated into this report correct typographical errors, are minor in nature, and do not affect the conclusions reached.

Please contact me if you have any questions concerning this report.

Very truly yours,

M O Medford

Enclosures

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I. INTRODUCTION

San Onofre Nuclear Generating Station (SONGS) consists of three pressurized water nuclear reactors housed in separate containment buildings. Unit 1 became critical June 14, 1967 and was in operation until February 2, 1982, when it was shut down due to seismic modification backfits. Unit 2 attained initial criticality July 26, 1982 and has been in operation since that point in time. Unit 3 attained initial criticality August 29, 1983 and was in ascension testing at 100 percent power at the end of 1983.

To monitor the operations of SONGS 1, 2 and 3, and to fulfill the requirements of the SONGS Environmental Technical Specifications (ETS), an Operational Radiological Environmental Monitoring Program (REMP) was conducted by SONGS during 1983. This program was designed to identify and quantify concentrations of radioactivity in various environmental media, and to quantify ambient radiation levels in the environs of SONGS. Samples of air particulates, air iodine, drinking water, ocean bottom sediment, beach sand, kelp, non-migratory marine animals, ocean water, local crops, and rabbits were collected and analyzed for specific radionuclides. Thermoluminescent dosimeters (TLDs) were used to measure direct radiation levels.

A variety of radionuclides, both naturally-occurring and man-made, were detected in the above samples. In light of the results, it was concluded that the effects of SONGS Unit 1 operation during 1983 on the radiological characteristics of the environment around SONGS were minimal.

A. The Program

In its operational phase, the REMP was conducted in accordance with Section 3.2 of the SONGS Unit 1 ETS. A brief summary and discussion of the results for 1983 can be found in Section II of this report. To detect the presence of trends of any radioactivity in the samples, radioanalytical data was examined for a period of two years. Finally, liquid and gaseous effluent records for 1983 were evaluated to determine the degree of correlation between station effluents and environmental radioactivty levels.

B. Objectives

The objectives of the operational REMP are:

1. To fulfill the obligation for radiological surveillance required by SONGS ETS.

2. To determine whether any significant increase occurs in the concentration of radionuclides in critical pathways.

3. To detect any change in ambient gamma radiation levels.

4. To verify that SONGS operations have no detrimental effects on the health and safety of the public or on the environment.

C. Sample Collection

In order to meet the stated objectives, samples of various media were selected to obtain data for the evaluation of the radiation dose to man and other organisms. The selection of sample types was based on established critical pathways for the transfer of radionuclides through the environment to man, experience gained during the preoperational phase, and the evaluation of data during the operational phase. Sampling locations were determined with consideration given to site meteorology, local demographs, and land uses (land use census).

Sampling locations were divided into two classes -- indicator and control. Indicator stations were those expected to manifest effects of station operation. Control samples were collected at locations which were believed to be unaffected by station operations. In order to determine whether observed radionuclide concentrations and direct radiation levels were the result of station operations, measurements of those parameters at the indicator stations were compared to analogous measurements at the control locations. Indicator and control station data were also evaluated relative to preoperational data whenever possible.

D. Sample Analysis

The environmental samples are collected at different locations in the vicinity of SONGS, and then submitted to a contracted radiological laboratory, namely Environmental Analysis Laboratory (EAL) Corporation located in Richmond, California.

The analytical methods utilized in this program which are described in EAL procedures manual which may be obtained from EAL Corporation. The results are grouped by sample and the analysis performed on the sample. Means, ranges, and standard deviations were calculated using standard statistical methods and are presented in Appendix A according to the format specified in Regulatory Guide 4.8. Sample types and sampling locations are listed in Appendix B.

A portion of the REMP is also devoted to quality control, including process quality control, instrument quality control, inter-laboratory cross-check analysis, and comprehensive data reviews. Results of the EPA inter-laboratory comparison program appear in Appendix D.

In order to determine the impact of SONGS on the surrounding environment, several more analyses were performed on the data. A tabulation was made (as required by the Unit 1 ETS) of all the radionuclides whose activities exceeded twice the activity of the background level (i.e., the control locations), and the TLD results which exceeded 1.25 times the dose

measured at the control location. In the instances when there was no detectable radioactivity at the control location, the indicator values were compared to twice the control location lower limit of detection values (tabulated in Appendix A), and cited if they exceeded two times the control location LLD. The results of these comparisons are in Appendix C. In addition, effluent releases from SONGS were compared to the environmental concentration of certain radionuclides, in order to evaluate the impact of plant operation on the environment. See Appendix F for details of the comparison. Finally, 1983 data for certain sample types are compared to pre-operational data in Appendix E.

II. RESULTS AND DISCUSSION

The radioanalytical results of 1983 REMP samples are divided into categories based on direct radiation, waterborne, and ingestion exposure pathways. For comparison of environmental radioactivity levels with reporting levels, Unit 2 reporting levels were used in this report because they are more comprehensive and conservative than the reporting levels listed in the SONGS Unit 1 ETS.

Direct Radiation

The purpose of this program element was to measure the amount of external gamma radiation in the vicinity of SONGS. To accomplish this task, calcium sulfate ($CaSO_4$:Dy) and lithium fluoride (LiF) thermoluminescent dosimeters (TLD's) were placed at each of 59 indicator and control locations, gathered, and analyzed at prescribed intervals. The control location was situated in Huntington Beach. The calcium sulfate TLDs were collected quarterly and were replaced with re-zeroed dosimeters, while the lithium fluoride dosimeters were collected after an exposure period of one year (i.e., at the end of 1983). A total of 235 calcium sulfate TLDs and 58 lithium fluoride TLDs were collected and analyzed throughout the year. One calcium sulfate TLD and one lithium fluoride TLD from location #10 were lost due to vandalism.

After the samples were analyzed, the measured doses were corrected for pre- and post-field exposure times. During the course of the year, the quarterly dose measured by the calcium sulfate TLDs from the indicator locations ranged from 13.2 to 34.1 mrem, with an average dose of 22.4 mrem. The quarterly dose measured by the calcium sulfate dosimeters from the control location, on the other hand, ranged from 25.7 to 27.2 mrem, with an average value of 26.3 mrem. In addition to this, a comparison of 1983 data to similar data for 1982 revealed essentially the same quarterly dose for both the indicator and control locations. The only significant offsite effect from station operations was noted in the TLDs from San Onofre State beach (location 55). The dose to man was calculated to be 1.2 mrem per year and is attributable to skyshine from the storage of radioactive waste inside the plant boundary. Only a very limited portion of the beach is affected by the radioactive waste as is demonstrated by the background radiation levels detected at San Onofre State Beach (location 56) which is located approximately 100 feet downcoast from location 55. The affected area of the beach is wholly contained within the SONGS exclusion area.

The direct radiation dose indicated by the lithium floride dosimeters ranged from 49.9 to 117.9 mrem for the indicator locations, with an average dose of 84.5 mrem. The dose measured from the control location was 95.4 mrem. These direct radiation doses are comparable to those observed for 1982.

In light of these results, it was concluded that the station had a minimal effect on the surrounding environment.

Airborne Particulate Activity

Air particulate samples were collected on a weekly basis from five indicator locations and one control station located in Huntington Beach to determine the amount of radioactivity in particulates in the vicinity of the station. After collection, the samples were analyzed for gross beta activity with a lower limit of detection of 0.003 pCi/m^3 of air. The samples were also composited quarterly and analyzed by gamma spectral analysis for gamma-emitting radionuclides, as well as for gross beta radioactivity, and for radiostrontium. The lower limits of detection for these analyses were, respectively, 0.001 pCi/m^3, 0.003 pCi/m^3, and 0.001 pCi/m^3.

All 52 samples were collected as prescribed during 1983. In each case, there was a measurable gross beta activity. The concentration of the gross beta activity in the samples collected weekly from the indicator locations ranged from 0.006 to 0.0386 pCi/m^3, with an average concentration of 0.017 pCi/m^3. The concentration of the gross beta activity in the samples collected weekly from the control station ranged from 0.006 to 0.055 pCi/m^3 of air, with an average concentration of 0.018 pCi/m^3 of air. For purposes of comparison, the data have been plotted for both indicator and control locations in Figure 1.

The quarterly gamma spectral analysis of the composite samples for gamma-emitting radionuclides indicated the presence of beryllium-7. The concentration of beryllium-7 ranged from 0.057 to 0.097 pCi/m^3 with an average concentration of 0.071 pCi/m^3. The concentration of beryllium-7 at the control location ranged from 0.041 to 0.097 pCi/m^3 with an average concentration of 0.075 pCi/m^3. In addition to this, gross alpha radioactivity was present in each of the samples collected from the first, second, and fourth quarters from both the indicator and control locations. The concentration of gross alpha radioactivity in the samples from the indicator locations ranged from 0.0004 to 0.005 pCi/m^3, with an average concentration of 0.002 pCi/m^3. The concentration of gross alpha radioactivity in the samples collected from the control location ranged from 0.0005 to 0.005 pCi/m^3 with an average concentration of 0.002 pCi/m^3. The samples collected, composited, and analyzed from the third quarter for gross alpha radioactivity showed no measureable activity using the stated lower limit of detection for gross alpha radioactivity. Finally, no strontium-89 or strontium-90 was detected in any of the samples collected throughout the year from either the indicator or control locations, using the stated lower limit of detection for radiostrontium.

In summary, gross beta and alpha radioactivity as well as beryllium-7, were detected in the air particulate samples. In the case of the gross alpha and gross beta activity, there was no appreciable difference in the results for the indicator and control locations--indicating that the radioactivity was not attributable to the operation of SONGS. In addition to this, beryllium-7 is a naturally-occuring spallation product in the upper atmoshpere and is not associated with the operation of the plant. In light of these results, it was concluded that the operation of SONGS had no detectable impact on this environmental medium.

Airborne Radioiodine

Radioiodine in air was collected by adsorption on charcoal cartridges on a weekly basis throughout 1983 from five indicator locations in the vicinity of SONGS, and from a control station located in Huntington Beach. By the end of 1983, a total of 312 air cartridges had been analyzed for their I-131 content. The results revealed that there was no measurable amount of radioiodine I-131 present in the samples, with a lower limit of detection of 0.04 pCi/m^3 of air. In two instances, on November 22, 1983 insufficient sample was received at the Units 2&3 Switchyard, and at the Huntington Beach Generating Station. Because of this, the lower limit of detection of 0.04 pCi/m^3 was not met. The error in these measurements was calculated to be 0.08 pCi/m^3. Because there was no measurable radioactivity in any of the samples, it was concluded that there was no detectable impact from plant operations on this environmental medium.

Ocean Water

Ocean water samples were collected on a monthly basis from the vicinity of each of the Station Discharge Outfalls, and from a control station located in Huntington Beach throughout 1983, in order to measure the radioactivity present in the Pacific Ocean near SONGS. Each of the ocean water samples were analyzed on a monthly basis by gamma spectral analysis for a total of 19 different radionuclides including Cs-137 , and on a bimonthly basis for gross beta activity. In addition to this, the samples were composited on a semiannual basis and analyzed for tritium by beta counting.

The only radionuclide that was detectable in the ocean water samples was potassium-40, a naturally occuring radionuclide in the environment. The concentration of potassium-40 in the samples collected at the indicator locations ranged from 280 to 420 pCi/l of water, with an average concentration of 333 pCi/l of water. The concentration of potassium-40 in the samples collected from the control location ranged from 260 to 350 pCi/l of water with an average concentration of 312 pCi/l of water. The lower limit of detection of cesium-137 in each of the analyses was 6 pCi/l of water. In the bimonthly analyses, the gross beta activity in the samples from the indicator locations ranged from 720 to 1110 pCi/l, with an average concentration of 930 pCi/l of water. The concentration of gross beta activity in the samples from the control location ranged from 740 to 1000 pCi/l of water, with an average concentration of 870 pCi/l of water. In each instance, the gross beta activity could be attributed predominantly to the presence of potassium-40. Finally, no tritium was detectable in the semiannual composites of ocean water, with a lower limit of detection of 100 pCi/l of water.

Because all of the detectable radioactivity in each of the samples was attributable to natural radioactivity in the environment, it was concluded that the operation of SONGS had no detectable impact on this environmental medium.

Drinking Water

Drinking water samples were collected on a monthly basis from two indicator locations and from a control station in Huntington Beach to measure the amount of radioactivity contained in the drinking water used for human consumption in the vicinity of the Station. After collection, the samples were analyzed by gamma spectral analysis for a total of 12 gamma-emitting radionuclides including iodine-131 and cesium-137. The samples were subsequently filtered through a membrane, and the filtrate was evaporated to dryness. The filtrate and solids were then analyzed for both gross alpha and gross beta activity. In addition to this, a portion of the unfiltered samples was composited quarterly, and processed in the same manner as the monthly samples. The filtrate was subsequently analyzed for both gross alpha and gross beta radioactivity as well as for tritium, while the solids were analyzed for gross alpha and beta radioactivity.

When the monthly samples were analyzed by gamma spectral analysis, only potassium-40 was detected in samples collected from the two indicator locations. The concentration of potassium-40 in the two samples was 50 and 60 pCi/l of water. The lower limits of detection of cesium-137 and iodine-131 in these analyses were 6 pCi/l and 1 pCi/l of water, respectively. The gross alpha radioactivity in the solids from both the indicator and control locations was less than the lower limit of detection of 0.1 pCi/l of water. There was, however, detectable gross beta activity in each of the samples collected from both the indicator and control locations. The concentration of gross beta activity in the solids in the drinking water from the indicator locations ranged from 0.5 to 1.2 pCi/l of water, with an average concentration of 0.8 pCi/l of water. The concentration of gross beta activity in the solids in the water from the control location, on the other hand, ranged from 0.6 to 1.2 pCi/l of water, with an average concentration of 0.9 pCi/l of water. When the monthly drinking water filtrate was analyzed for both gross alpha and gross beta activity, gross beta activity was detectable in each of the samples collected from both the indicator and control locations, while the gross alpha activity in the samples was below the lower limit of detection of 3 pCi/l of water. The concentration of gross beta activity in the samples from the indicator locations ranged from 5 to 20 pCi/l of water. The concentration of gross beta activity in the samples obtained from the control location varied from 6 to 18 pCi/l of water with an average concentration of 9.6 pCi/l of water.

When the quarterly composite filtrate samples were analyzed for gross alpha and gross beta activities as well as for tritium, the gross alpha and tritium activities were at the lower limits of detection of, respectively, 2 and 100 pCi/l of water. There was, however, detectable gross beta activity in each of the samples collected from both the indicator and control locations. The concentration of gross beta activity in the filtrate samples from the indicator locations varied from 9 to 22 pCi/l of water, with an average concentration of 12.5 pCi/l of water. The concentration of the gross beta activity in the filtrate samples from the control location ranged from 8 to 12 pCi/l of water, with an average concentration of 9.5 pCi/l of water. The

analysis of the solids from the quarterly composite samples also showed no measurable gross alpha activity with a lower limit of detection of 0.1 pCi/l of water. There was, however, detectable gross beta activity in the solids from the quarterly-composite samples. The concentration of the gross beta activity in the solids from the indicator locations ranged from 0.4 to 1.1 pCi/l of water, with an average concentration of 0.62 pCi/l of water. The concentration of the gross beta activity in the samples collected from the control location, on the other hand, varied from 0.5 to 1.0 pCi/l of water, with an average concentration of 0.7 pCi/l of water.

In summary, only potassium-40, and gross beta radioactivities were detectable in the drinking water samples. Potassium-40 is a naturally-occurring radionuclide and is not released in effluents from SONGS. In addition to this, the gross beta radioactivity measured in the samples from the indicator locations was comparable to the gross beta radioactivity levels measured in the samples from the control location. Because the liquid effluents from the plant are released into the ocean, it would not be expected for them to be observed in the public drinking water systems. In light of these observations, it was concluded that the operation of SONGS necessarily had no detectable effect on this environmental medium.

Shoreline Sediment (Beach Sand)

Beach sand was collected semiannually from three indicator locations and from a control station, and subsequently analyzed for radioactivity that could result in human exposure. After collection, each of the eight samples was analyzed for 19 different radionuclides including cesium-137 via gamma spectral analysis on a dry weight and "as received" wet weight basis. The results for the dry weight analyses are summarized below, while the results for the wet sample weight analyses are summarized in Appendix A.

Three radionuclides were detectable in each of the samples in varying amounts, namely: potassium-40, radium-226, and thorium-228. The concentration of potassium-40 in the samples from the indicator locations ranged from 13.1 to 14.1 pCi/g of sample with an average concentration of 13.5 pCi/g of sample. The potassium-40 activity in the samples obtained from the control location ranged from 17.4 to 17.8 pCi/g, with an average value of 17.6 pCi/g of beach sand. The radium-226 activity in the samples obtained from the indicator stations varied from 0.13 to 0.50 pCi/g of sample, with an average concentration of 0.27 pCi/g of sample. The radium-226 activity in the samples obtained from the control location varied from 0.26 to 0.46 pCi/g of sample with an average value of 0.36 pCi/g of sample. Finally, the thorium-228 activity in the samples obtained from the indicator locations varied from 0.14 to 0.72 pCi/g of sample with an average value of 0.29 pCi/g of sample. The concentration of thorium-228 in the samples obtained from the control location varied from 0.80 to 1.27 pCi/g of sample with an average value of 1.04 pCi/g of sample.

Local Crops

Representative leafy and fleshy crops were collected semiannually at harvest time from gardens located in San Mateo Canyon (which served as indicator locations), and from gardens situated south-southeast of Oceanside (which served as the control station). After collection, the samples were analyzed quantitatively for a total of 12 gamma-emitting radionuclides including cesium-137 and iodine-131 via gamma-spectral analysis, as well as for tritium and radiostrontium by beta counting. The results of the analyses in terms of dry sample weights are summarzied below, and the results of the analyses based on "as received" wet sample weights are located in the Program Data Summary (in Appendix A).

The only radionuclide that was detectable via gamma-ray spectrometry in the four samples of tomatoes and cucumbers obtained from the indicator locations was potassium-40. The concentration of potassium-40 in these samples ranged from 39 to 47 pCi/g of sample, with an average concentration of 44 pCi/g of sample. Neither strontium-90, nor aqueous or bound tritium was detected in any of the samples collected from the indicator locations. The lower limits of detection of strontium-90, and aqueous and bound tritium were, respectively, 0.04, 0.05, and 3 pCi/g of sample.

Two tomato and two kale samples were collected from the control location throughout the year. A total of three radionuclides were detectable via gamma-ray spectrometry, namely: potassium-40, beryllium-7 and cesium-137. The concentration of potassium-40 in these samples ranged from 20 to 47 pCi/g of sample, with an average concentration of 34 pCi/g of sample. Beryllium-7 was also detected in a kale sample. The concentration of beryllium-7 in this sample was 0.6 pCi/g of sample. Finally, cesium-137 was detected in the two kale samples. The concentration of cesium-137 in these samples ranged from 0.033 to 0.080 pCi/g of sample, with an average concentration of 0.056 pCi/g of sample. No bound or aqueous tritium was found in any of the samples collected from the control location. The lower limits of detection for these analyses were 2 and 0.05 pCi/g of sample, in that order. However, strontium-90 was detected by beta counting in the two kale samples. The concentration of strontium-90 in these samples ranged from 0.20 to 0.21 pCi/g of sample, with an average concentration of 0.20 pCi/g of sample.

The presence of potassium-40 in the samples is due to the naturally-occurring potassium-40 in the environment, and cannot be attributed to the operation of SONGS. The presence of beryllium-7 in one of the samples can be attributed to sapllation events occurring in the upper atmosphere, and cannot be attributed to the operation of SONGS (because it is not produced by the Station). Cesium-137 and strontium-90 are produced by the Station. However, the only measurable activities were seen in samples collected from the control location, and not from the samples collected from the indicator location. In this instance, the observed radioactivity is most probably due to fallout from nuclear weapons testing. In light of these results, it was concluded that the operation of SONGS had no detectable effect on the environment surrounding the station.

Soil Sampling

A total of five soil samples were collected in December 1983 from four indicator locations, and one control station situated in Huntington Beach, to determine whether or not there is any evidence of long-term buildup of radionuclides in the environment near SONGS. Each of the soil samples was subsequently analyzed for twelve different radionuclides via gamma spectral analysis, as well as for radiostrontium via beta counting. The results are summarized below for dry sample weights.

The results revealed the presence of three different radionuclides, namely,: potassium-40, cesium-137, and strontium-90. Potassium-40 was present in all five of the samples. The concentration of potassium-40 in the samples from the indicator locations ranged from 6.6 to 20 pCi/g of sample, with an average concentration of 13.8 pCi/g of sample. The concentration of potassium-40 in the sample from the control location was determined to be 22 pCi/g of sample. Cesium-137 was detected in one of the samples collected from an indicator location, and in the sample from the control location. The concentration of cesium-137 in the sample from the indicator location was determined to be 0.05 pCi/g of sample, while the concentration of cesium-137 in the sample from the control station was determined to be 0.07 pCi/g of sample. Finally, strontium-90 was detected in two samples from indicator locations. The concentration of strontium-90 in these samples ranges from 0.02 to 0.03 pCi/g of sample, with an average concentration of 0.025 pCi/g of sample.

The presence of potassium-40 in the samples can be attributed to natural radioactivity in the environment, and not to the operation of the plant (since the plant does not produce potassium-40). The presence of cesium-137 and strontium-90 in a few of the samples is considered to be non-indicative of plant effluents because the concentrations in the samples collected from the control location. It is considered that they are attributable to fallout from nuclear weapons testing. In reviewing data from 1979 to present, there is no evidence of a long-term buildup of these radionuclides in the environment near SONGS.

Rabbit Sampling

An adult rabbit was collected semiannually from within a two mile distance east of SONGS. In each case, the flesh portion was analyzed for a total of twelve gamma-emitting radionuclides including cesium-137 and iodine-131. In addition, the thyroid gland was analyzed for iodine-131, and the femur was analyzed for strontium-89 and strontium-90. The results of the analyses are summarized below in terms of dry sample weights.

The only radionuclide that was detectable in the gamma spectral analysis of the flesh of each of the rabbits was potassium-40. The concentration of potassium-40 in these samples ranged from 8.0 to 9.9 pCi/g, with an average concentration of 9.0 pCi/g of sample. The lower limits of detection of cesium-137 and iodine-131 for these analyses were, respectively, 0.06 and 0.05 pCi/g of sample. No iodine-131 was detected in the thyroid glands of the

rabbits. The lower limit of detection of iodine in the thyroid gland was met on the second semiannual sample, but was not met in the analysis of th first semiannual sample due to the small size of the rabbit. The error in this measurement was 10 pCi/g of iodine-131 per gram of sample. No strontium-89 was detected in the femur of either sample, nor was strontium-90 detected in the femur of the second semiannual sample, with lower limits of detection of, respectively, 3.0 pCi/g of calcium, and 2.0 pCi/g of calcium. However, strontium-90 was present in detectable amounts inthe femur of the first semiannual sample. The concentration of strontium-90 in this sample was determined to be 14 pCi/g of calcium.

The presence of potassium-40 in the samples can be attributed to naturally-occurring potassium-40 in the environment, and cannot be attributed to the operation of the plant (since the plant does not produce potassium-40). The only other detectable radioactivity in one of the samples was strontium-90. The concentration of strontium-90 present in that sample was significantly higher than the strontium-90 levels measured in rabbit samples over the preceeding five years; the concentration of strontium-90 in these samples ranged from 0 to 6 pCi/g of calcium, with an average concentration of 2.4 pCi/g of calcium. However, there is no evidence from trending these data that strontium-90 is accumulating in the rabbit population surrounding SONGS. In fact, the second semiannual sample for 1983 showed no detectable amounts of strontium-90 in the rabbit's femur. Furthermore, there has been no detectable release of strontium-90 in gaseous effluent releases from Unit 1 since the beginning of 1981, with the lower limit of detection of less than 6.0E-08 uCi/ml of gaseous effluent. No conclusions can be drawn at this time whether or nor the observed strontium-90 radioactivity observed in the rabbit sample was station related. The overall impact of station operation on this medium is at most minimal.

Kelp Sampling

Kelp samples were collected semiannually from the San Onofre kelp bed, the San Meteo kelp bed, the Carlsbad kelp bed, and from Newport Beach which served as a control location. The substitution of Carlsbad kelp for Barn kelp was made because the barn kelp bed had atrophied to a non-harvestable condition. Upon collection, the samples were analyzed by gamma spectral analysis for a total of 19 different radionuclides, including cesium-137, cobalt-58, cobalt-60, silver-110m, and iodine-131. The samples were also analyzed for aqueous and bound tritium.

Cobalt-58, cobalt-60, and silver-110m were not found in the kelp samples via gamma spectral analysis with lower limits of detection of 0.13, 0.20, and 0.07 pCi/g of dry sample, respectively. However, potassium-40, cesium-137, and iodine-131 were detected in varying amounts. The concentration of potassium-40 at the indicator locations ranged from 39 to 72 pCi/g of dry sample, with an average concentration of 55 pCi/g of dry sample. The concentration of potassium-40 at the control station ranged from 46 to 54 pCi/g of dry sample with an value of 51 pCi/g of dry sample. The concentration of Cs-137 at the indicator locations ranged from 0.028 to

0.058 pCi/g of dry sample, with an average concentration of 0.038 pCi/g of dry sample. The concentration of cesium-137 at the control station, on the other hand, ranged from 0.035 to 0.040 pCi/g of dry sample, with an average concentration of 0.038 pCi/g of dry sample. The concentration of iodine in the samples from the indicator locations ranged 0.13 to 0.49 pCi/g of dry sample, with an average concentration of 0.31 pCi/g of dry samples. The concentration of iodine in the samples obtained from the control location ranged from 0.19 to 0.28 pCi/g of sample with an average concentration of 0.24 pCi/g of sample.

In the analysis of the samples for tritium, no aqueous or bound tritium was found in any of the samples collected throughout the year. The lower limit of detection of bound tritium in these analyses was 2 pCi/g of dry sample, while the lower limit of detection of aqueous tritium in the samples was approximately 0.06 pCi/g of dry sample.

Potassium-40 which was present in the highest concntrations is a naturally-occuring radionuclide, and cannot be attributed to the operation of the plant (since it is not produced by the plant). Cesium-137 and iodine-131 observed at the indicator locations were also present at the control locations in comparable quantities. A study revealed that there have been no significant changes in the concentrations of these radionuclides in recent years. In light of these data, it was determined that the impact of the plant operation on this environmental medium was determined to be minimal.

Ocean Bottom Sediments

To determine the amount of radioactivity in ocean bottom sediments in the vicinity of the station, representative grab samples were collected semiannually from each of the station discharge outfalls, and from Newport Beach (which served as a control location). After collection, the samples were analysed by gamma spectral analysis for a total of 19 different radionuclides, including cesium-137, cobalt-58, cobalt-60, and silver-110m.

Cobalt-58 and silver-110m were not detectable in any of the ocean bottom sediment samples, with a lower limit of detection of 0.07 pCi/g of dry sample for both radionuclides. However, potassium-40, radium-226, thorium-228, cesium-137, and cobalt-60 were present in the samples in varying amounts. The concentration of potassium-40 in the samples from the indicator locations varied from 13 to 16.1 pCi/g of dry sample with an average value of 14.3 pCi/g of dry sample. The concentration of potassium-40 from the control location, on the other hand, varied from 8.6 to 15.1 pCi/g of dry sample with an average value of 11.8 pCi/g of dry sample. The concentration of radium-226 in the samples from the indicator locations ranged from 0.34 to 0.84 pCi/g of dry sample, with an average value of 0.61 pCi/g of dry sample. The concentration of radium-226 in the samples from the control location varied from 0.10 to 0.12 pCi/g of dry sample, with an average value of 0.11 pCi/g of dry sample. The concentration of thorium-228 in the samples from the indicator location ranged from 0.41 to 1.12 pCi/g of dry sample, with an average value of 0.74 pCi/g of sample. The concentration of thorium-228 in the samples from

the control location varied from 0.11 to 0.13 pCi/g of dry sample with an average value of 0.12 pCi/g of dry sample. Cobalt-60 was detectable in both the semiannual samples from a location east of the Unit 1 discharge outfall, and in the first semiannual sample collected from west of the Unit 1 dishcarge outfall. The concentration of cobalt-60 in these samples ranged from 0.06 to 0.83 pCi/g of dry sample, with an average concentration of 0.34 pCi/g of dry sample. No cobalt-60 was detected in the samples from the control location, with a lower limit of detection of 0.05 pCi/g of dry sample. Finally, cesium-137 was detected in the second semiannual samples from east and west of the Unit 1 outfall, with a concentration of 0.06 pCi/g of sample. No cesium-137 was detected in the sediment samples from the control location.

Potassium-40, radium-226, and thorium-228 which were detected in the ocean bottom sediments are naturally-occurring radionuclides in the environment, and are not produced by the operation of the plant. However, the presence of cobalt-58, cobalt-60, and cesium-137 detected in the sediments from each of the Outfalls can be attributable to liquid effluent releases from the plant; although present in detectable quantities, the measured levels are much lower than the reporting levels, and there has been no evidence of a long-term buildiup of these radionuclides in the ocean bottom sediment in the vicinity of SONGS. In conclusion, the operation of SONGS has had a minimal impact on this environmental medium.

Non-migratory Marine Species

Fish, crustaceae, and mollusks were collected quarterly from the Unit 1, Unit 2 and 3 discharge outfalls and from a control location in Newport Beach to determine the amount of radioactivity that could be consumed by man or in the food chain to main. Upon collection, the flesh portion of each of the samples was analyzed for gamma-emitting radionuclides attributable to facility operation, including cesium-137, cobalt-58, cobalt-60, and silver-110m. The lower limits of detection for cesium-137, cobalt-58, cobalt-60, and silver-110m were 0.01, 0.03, 0.02 pCi/g of sample. The samples were also analyzed for both aqueous and bound tritium. The results of the analyses are summarized below for dry sample weights. A summary of the results in terms of "as received" wet sample weights are located in Appendix A.

A total of 24 perch and sheepshead fish samples were collected from the indicator and control locations throughout 1983. Gamma spectral analysis of the flesh portion of the fish showed the presence of potassium-40, cesium-137, and cobalt-60. All of the other radionuclides were below the lower limits of detection. Potassium-40 was present in all of the samples obtained from both the indicator and control locations. The concentration of potassium-40 in the samples obtained from the indicator locations ranged from 10.3 to 15.4 pCi/g of dry sample, with an average concentration of 12.9 pCi/g of dry sample. The concentration of potassium-40 in the samples collected from the control location ranged from 10.6 to 19 pCi/g of dry sample, with an average concentration of 12.8 pCi/g of dry sample. Cesium-137 was also detectable in all of the samples collected from the indicator and control locations. The concentration of cesium-137 in the samples from the indicator locations ranged

from 0.023 to 0.082 pCi/g of dry sample, with an average concentration of 0.038 pCi/g of dry sample. The concentration of cesium-137 in the samples obtained from the control location varied from 0.022 to 0.031 pCi/g of dry sample, with an average concentrtion of 0.027 pCi/g of dry sample. Cobalt-60 was only detected in three samples collected from the Unit 1 discharge outfall. The concentration of cobalt-60 in these samples ranged from 0.04 to 0.15 pCi/g of dry sample, with an average concentration of 0.08 pCi/g of dry sample.

A total of 8 radionuclides were detected in the rock crab, spiney lobster, and sheepcrab (crustaceae) samples, namely: potassium-40, radium-226, thorium-228, cobalt-58, colbalt-60, silver-110m, cesium-137, and manganese-54. The concentration of potassium-40 in the samples from the indicator location ranged from 9.2 to 14 pCi/g of dry sample with an average concentration of 11 pCi/g of dry sample. The concentration of potassium-40 in the samples from the control location ranged from 11.1 to 13.8 pCi/g of dry sample with an average concentration of 12.6 pCi/g of sample. Radium was only present in two rock crab samples collected from SONGS Units 1 and Unit 2 outfalls. The concentrations of radium-226 in these samples were, respectively, 0.24 and 0.06 pCi/g of dry sample. Thorium-228 was also only detectable in the two rock crab samples obtained from the SONGS Units 1 and Unit 2 outfalls. The concentrations of thorium-228 in these samples were 0.34 and 0.07 pCi/g of dry sample, in that order. Cobalt-58 was detectable in all three species collected in the first, second, and fourth quarters from the SONGS Units 1 and 2 outfalls. The concentration of cobalt-58 in these samples ranged from 0.03 to 0.29 pCi/g of dry sample, with an average concentration of 0.10 pCi/g of dry sample. Cobalt-58 was not detected in the samples collected from the station outfalls during the third quarter, nor was it detectable in any of the samples collected throughout the year from the control location. Cobalt-60 was detectable in all three species obtained from the SONGS Units 1 and 2 outfalls throughout the year, but was not detected in any of the samples obtained from the control location. The concentration of cobalt-60 in the species from the indicator locations ranged from 0.03 to 1.3 pCi/g of dry sample, with an average concentration of 0.39 pCi/g of dry sample. Silver-110m was also present in seven of the eight spiney lobster and rock crab samples collected from the station outfalls throughout the year. The concentration of silver-110m in these samples varied from 0.04 to 0.34 pCi/g of sample with an average concentration of 0.14 pCi/g of dry sample. Silver-110m was not detectable, however, in any of the samples collected from the control location. Cesium-137 was present in seven out of eight samples collected from the outfalls throughout the year, and in three out of four of the samples from the control locations. The concentration of cesium-137 in the samples from the station outfalls ranged from 0.019 to 0.034 pCi/g of dry sample, with an average concentration of 0.024 pCi/g of dry sample. The concentration of cesium-137 in the samples obtained from the control location ranged from 0.018 to 0.020 pCi/g of dry sample, with an average concentration of 0.019 pCi/g of dry sample. Finally, manganese-54 was detected in a rock crab sample collected from the SONGS 1 outfall in the fourth quarter. The concentration of manganese-54 in this sample was 0.05 pCi/g of dry sample.

Finally, a total of seven different radionuclides were detectable in the seahares, bay mussels, and keyhole limpets collected from the station outfalls, and from the control location during 1983. These radionuclides include potassium-40, radium-226, and thorium-228, as well as cobalt-58, cobalt-60, silver-110m, and cesium-137. Potassium-40 was present in each of the samples collected from the outfalls and the control station. The concentration of potassium-40 in the samples from the outfalls ranged from 6.0 to 14.0 pCi/g of dry sample, with an average concentration of 10.3 pCi/g of sample. The concentration of potassium-40 in the samples from the control location varied from 5 to 7.4 pCi/g of dry sample, with an average concentration 6.4 pCi/g of dry sample. Radium was detected in three seahares collected from the SONGS Unit 1 outfall during the first, second, and fourth quarters. The concentration of radium in the samples ranged from 0.16 to 0.5 pCi/g of sample, with an average concentration of 0.32 pCi/g of dry sample. Radium was not detected in any of the samples from Units 2 and 3 outfall, or in the samples from the control location. Thorium-228 was detectable in samples collected from the SONGS outfalls during the first three quarters as well as in the samples collected from the control location during the first two quarters. The concentration of thorium-228 in the samples from the SONGS outfalls ranged from 0.39 to 1.1 pCi/g of dry sample with an average concentration of 0.70 pCi/g of dry sample. The concentration of thorium-228 in the samples obtained from the control location varied from 0.18 to 0.21 pCi/g of dry sample, with an average concentration of 0.20 pCi/g of dry sample. Cobalt-58 was present in six of eight samples collected from the station outfalls, but was not detectable in any of the samples collected from the control location. The concentration of cobalt-58 in samples varied from 0.03 to 0.57 pCi/g of dry sample, with an average concentration of 0.20 pCi/g of dry sample. Cobalt-60 was detected in all of the samples from the station outfalls, and was detected in one sample from the control location. The concentration of cobalt-60 in the samples from the outfalls ranged from 0.04 to 3.6 pCi/g of dry sample, with an average concentration of 0.88 pCi/g of dry sample. The concentration of cobalt-60 in the keyhole limpet from the control location was 0.03 pCi/g of dry sample. Silver-110m was detected in three samples collected from the SONGS Unit 1 outfall, and in two samples from the control location. The concentration of silver-110m in the samples from the outfall varied from 0.02 to 0.37 pCi/g of dry sample, with an average concentration of 0.19 pCi/g of dry sample. The concentration of silver-110m in the samples from the control location varied from 0.02 to 0.03 pCi/g of dry sample, with an average concentration of 0.02 pCi/g of dry sample. Finally, cesium-137 was present in one seahare collected from the SONGS Unit 1 outfall during the first quarter, and in one keyhole limpet obtained from the control location. The concentration of cesium-137 in the seahare was 0.015 pCi/g of dry sample, while concentration of cesium-137 in the keyhole limpet was 0.017 pCi/g of dry sample.

Potassium-40, radium-226, and thorium-228 are naturally-occurring radionuclides in the environment and cannot be attributed to th operation of the plant, because they are not produced by the plant. Cobalt-58, cobalt-60, silver-110m, cesium-137, manganese-54, and tritium which were also detectable in the samples are, however, plant related. In all cases, though, the measured activity was much lower than the Unit 1 reporting levels for those radionuclides. In light of these results, it was determined that the operation of the plant had a minimal impact on this environmental medium.

III. CONCLUSIONS

The variability of the levels of radioactivity in environmental media depend on many factors. These factors include site release rates; meteorology; number, location, and size of nuclear weapons testing; seasonal variability of fallout; soil conditions; local terrain; and variability in the natural environment.

Radiological environmental data, collected throughout 1983 have been evaluated to determine the environmental significance, if any, of San Onofre operations. The following methods of evaluation were employed:

Compilation and verification of all data. A special listing and review were made of all data determined to be two times greater as compared to the background levels (control samples).

Graphical display and examination of time-dependent variations of the various pertinent radioisotopes and sample species throughout the year.

Graphical comparison of gross beta radioactivity and specific long-lived gamma emmiters in various media in 1983 against the levels and annual variation in the pre-operational years 1980 through 1983.

Comparison of data against reportability levels contained in the plant Technical Specifications.

The question of the environmental significance of the radiological environmental findings is addressed by considering not only the existence and concentration of specific radionuclides in the various sample media, but also any evidence which would indicate that a buildup is in progress which could lead to future environmentally significant levels.

By consideration of the findings relative to the conservatively-defined limits of the facility operating license, it is concluded that the radiological environmental impact of San Onofre Unit 1 Operations through 1983 has been negligible. In addition, no evidence indicating a pattern of significant buildup due to long-term operations was found.

IV. REFERENCES

(1) SONGS Unit 1 Radiological Environmental Monitoring Program, Annual Operating Reports (1978-1982)

(2) SONGS Unit 1 Annual Effluent Report (January 1981 - December 1982)

(3) SONGS Unit 1 Radiological Environmental Monitoring Program, Supplement to the Annual Operating Report 1981

(4) Draft ODCM, "Offsite Dose Calculation Manual of SONGS Unit 2," August 1982

(5) USNRC Draft Regulatory Guide 4.8, "Standard Format and Principal Content of Environmental Technical Specifications," December 1975

(6) USNRC Regulatory Guide 4.13, "Performance, Testing, and Procedural Specifications for Thermoluminescent Dosimetry - Environmental Applications," 1977

(7) USNRC Regulatory Guide 4.15, "Quality Assuance for Radiological Monitoring Programs," 1979

(8) SONGS Unit 1 Provisional Operating License, DPR-13, Appendix B, Section 3/2, June 1977

(9) Environmental Monitoring Program Plan and Procedures Manual (EMPP) for SONGS, 1982

(10) "Drinking Water," SCE Technical Reports, Nuclear Analysis, NA 1, 2&3-EM-82-01, September 1982

(11) EAL Technical Procedures Manual, EAL Corporation, 1982

(12) Study of Recent Trends of Cs-137 and Co-60 in Ocean Bottom Sediments in San Onofre Vicinity, SCE Technical Reports, Nuclear Analysis, NA 1, 2&3-EM-83-02, February 1983

APPENDIX A

PROGRAM DATA SUMMARY

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Table 1a Direct Radiation Quarterly Composite (millirem)							
Gamma Exposure	59	5.0000	22.398(57/ 58) (13.600-33.800)	San Onofre State Beach (Unit 1) 0.2 mi. W	33.8(1/ 1) (33.800-33.800)	26.1(1/ 1) (26.100-26.100)	0

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Table 1a Direct Radiation Quarterly Composite (millirem)							
Gamma Exposure	59	5.0000	22.675(57/ 58) (14.500-34.100)	San Onofre State Beach (Unit 1) 0.2 mi. W	34.1(1/ 1) (34.100-34.100)	26.2(1/ 1) (26.200-26.200)	0

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Table 1a Direct Radiation Quarterly Composite (millirem)							
Gamma Exposure	59	5.0000	21.474(58/ 58) (13.200-32.900)	San Onofre State Beach (Unit 1) 0.2 mi. W	32.9(1/ 1) (32.900-32.900)	25.7(1/ 1) (25.700-25.700)	0

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Table 1a Direct Radiation Quarterly Composite (millirem)							
Gamma Exposure	59	5.0000	22.853(58/ 58) (13.300-31.500)	San Onofre State Beach (Unit 1) 0.2 mi. W	31.5(1/ 1) (31.500-31.500)	27.2(1/ 1) (27.200-27.200)	0

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Table 1b Direct Radiation Annual Composite (millirem)							
Gamma Exposure	59	5.0000	84.521(57/ 58) (49.900- 117.9)	San Onofre State Beach (Unit 1) 0.2 mi. W	117.9(1/ 1) (117.9- 117.9)	95.4(1/ 1) (95.400-95.400)	0

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Table 2 Airborne Weekly Composite (pCi/cu. m)							
	Gross Beta 78	0.0010	0.0139(65/ 65) (0.003- 0.037)	Meteorological Tower - SONGS 0.3 mi. NW	0.0161(13/ 13) (0.007- 0.037)	0.0151(13/ 13) (0.006- 0.029)	0

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Table 2 Airborne Weekly Composite (pCi/cu. m)								
	Gross Beta	78	0.0010	0.0140(65/ 65) (0.005- 0.025)	NE Site Boundary Visitors Center 0.2 mi. NNE	0.0146(13/ 13) (0.010- 0.019)	0.0138(13/ 13) (0.008- 0.023)	0

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Table 2 Airborne Weekly Composite (pCi/cu. m)							
	Gross Beta 78	0.0010	0.0180(65/ 65) (0.009- 0.032)	Meteorological Tower - SONGS 0.3 mi. NW	0.0191(13/ 13) (0.012- 0.029)	0.0171(13/ 13) (0.010- 0.025)	0

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Table 2 Airborne Weekly Composite (pCi/cu. m)							
	Gross Beta 78	0.0010	0.0206(65/ 65) (0.006- 0.046)	Huntington Beach Generating Station 37 mi. NW	0.0253(13/ 13) (0.012- 0.055)	0.0253(13/ 13) (0.012- 0.055)	0

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Table 3 Airborne Weekly Composite (pCi/cu. m)							
I-131	78	0.0400	<LLD (0/ 65)	ALL <LLD	-----	<LLD (0/ 13)	0

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Table 3 Airborne Weekly Composite (pCi/cu. m)							
I-131	78	0.0400	<LLD (0/ 65)	ALL <LLD	-----	<LLD (0/ 13)	0

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Table 3 Airborne Weekly Composite (pCi/cu. m)							
	I-131	78	0.0400	<LLD (0/ 65)	ALL <LLD	-----	<LLD (0/ 13)	0

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Table 3 Airborne Weekly Composite (pCi/cu. m)							
I-131	78	0.0900	<LLD (0/ 65)	ALL <LLD	-----	<LLD (0/ 13)	0

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Table 4a Airborne Quarterly Composite (pCi/cu. m)							
	Ag-110m 6	0.0020	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Be-7 6	0.0060	0.0666(5/ 5) (0.057- 0.074)	Huntington Beach Generating Station 37 mi. NW	0.0780(1/ 1) (0.078- 0.078)	0.0780(1/ 1) (0.078- 0.078)	0
	Ce-141 6	0.0040	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ce-144 6	0.0050	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-58 6	0.0020	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-60 6	0.0020	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Cs-134 6	0.0010	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Cs-137 6	0.0010	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	K-40 6	0.0200	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 4a Airborne Quarterly Composite (pCi/cu. m)							
Ru-103	6	0.0040	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
Zr(Nb)-95	6	0.0040	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0

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SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: April 01, 1983 to June 30, 1983

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurements
Table 4a Airborne Quarterly Composite (pCi/cu. m)							
	Ag-110m	6	0.0020	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Be-7	6	0.0060	0.0622(5/ 5) (0.059- 0.072)	NE Site Boundary Visitors Center 0.2 mi. NNE	0.0720(1/ 1) (0.072- 0.072)	0.0410(1/ 1) (0.041- 0.041)	0
	Ce-141	6	0.0040	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ce-144	6	0.0050	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-58	6	0.0020	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-60	6	0.0020	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Cs-134	6	0.0010	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Cs-137	6	0.0010	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	K-40	6	0.0200	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 4a Airborne Quarterly Composite (pCi/cu. m)							
Ru-103	6	0.0040	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
Zr(Nb)-95	6	0.0040	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 4a Airborne Quarterly Composite (pCi/cu. m)							
Ag-110m	6	0.0020	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
Be-7	6	0.0060	0.0680(5/ 5) (0.063- 0.077)	Huntington Beach Generating Station 37 mi. NW	0.0830(1/ 1) (0.083- 0.083)	0.0830(1/ 1) (0.083- 0.083)	0
Ce-141	6	0.0040	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
Ce-144	6	0.0050	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-58	6	0.0020	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-60	6	0.0020	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
Cs-134	6	0.0010	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
Cs-137	6	0.0010	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
K-40	6	0.0200	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 4a Airborne Quarterly Composite (pCi/cu. m)							
Ru-103	6	0.0040	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
Zr(Nb)-95	6	0.0040	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 4a Airborne Quarterly Composite (pCi/cu. m)							
	Ag-110m	6	0.0020	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Be-7	6	0.0060	0.0882(5/ 5) (0.077- 0.097)	Units 2/3 Switchyard 0.13 mi. ESE	0.0970(1/ 1) (0.097- 0.097)	0.0970(1/ 1) (0.097- 0.097)	0
	Ce-141	6	0.0040	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ce-144	6	0.0050	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-58	6	0.0020	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-60	6	0.0020	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Cs-134	6	0.0010	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Cs-137	6	0.0010	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	K-40	6	0.0200	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 4a Airborne Quarterly Composite (pCi/cu. m)							
Ru-103	6	0.0040	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
Zr(Nb)-95	6	0.0040	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 4c Airborne Quarterly Composite (pCi/cu. m)							
	Gross Alpha	6	0.0003	0.0018(5/ 5) (0.002- 0.002)	San Clemente City SDG&E Offices 5.6 mi. NW	0.0020(1/ 1) (0.002- 0.002)	0.0015(1/ 1) (0.001- 0.001)	0
	Sr-90	6	0.0010	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 4c Airborne Quarterly Composite (pCi/cu. m)							
	Gross Alpha 6	0.0003	0.0016(5/ 5) (0.000- 0.002)	San Clemente City SDG&E Offices 5.6 mi. NW	0.0022(1/ 1) (0.002- 0.002)	0.0005(1/ 1) (0.000- 0.000)	0
	Sr-90 6	0.0010	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 4c Airborne Quarterly Composite (pCi/cu. m)							
	Gross Alpha 6	0.0003	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0
	Sr-90 6	0.0010	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 4c Airborne Quarterly Composite (pCi/cu. m)							
	Gross Alpha 6	0.0003	0.0040(5/ 5) (0.003- 0.005)	Meteorological Tower - SONGS 0.3 mi. NW	0.0050(1/ 1) (0.005- 0.005)	0.0050(1/ 1) (0.005- 0.005)	0
	Sr-90 6	0.0010	<LLD (0/ 5)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 5 Ocean Water Monthly Composite (pci/l)							
Ag-110m	12	10	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-141	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-144	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-57	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-58	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-60	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-134	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-137	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Fe-59	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 5 Ocean Water Monthly Composite (pCi/l)							
K-40	12	20	338.89(9/ 9) (290- 390)	Station Discharge Outfall - Unit 1 0.5 mi. SW	350(3/ 3) (300- 390)	316.67(3/ 3) (310- 320)	0
Mn-54	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Mo(Tc)-99m	12	2000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ra-226	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ru-103	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ru-106	12	30	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Th-228	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Zn-65	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Zr(Nb)-95	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 5 Ocean Water Monthly Composite (pCi/l)							
Ag-110m	12	10	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-141	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-144	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-57	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-58	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-60	12	6.0000	<LLD (0/ 9)	ALL <LLD	----	<LLD (0/ 3)	0
Cs-134	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-137	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Fe-59	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 5 Ocean Water Monthly Composite (pCi/l)							
K-40	12	20	321.11(9/ 9) (280- 380)	Outfall - Unit 3 0.7 mi. SW	340(3/ 3) (320- 380)	306.67(3/ 3) (290- 320)	0
Mn-54	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Mo(Tc)-99m	12	2000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ra-226	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ru-103	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ru-106	12	30	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Th-228	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Zn-65	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Zr(Nb)-95	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 5 Ocean Water Monthly Composite (pCi/l)							
Ag-110m	12	10	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-141	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-144	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-57	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-58	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-60	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-134	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-137	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Fe-59	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 5 Ocean Water Monthly Composite (pCi/l)							
K-40	12	20	325.56(9/ 9) (310- 350)	Station Discharge Outfall - Unit 1 0.5 mi. SW	336.67(3/ 3) (310- 350)	310(3/ 3) (290- 320)	0
Mn-54	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Mo(Tc)-99m	12	2000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ra-226	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ru-103	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ru-106	12	30	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Th-228	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Zn-65	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Zr(Nb)-95	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 5 Ocean Water Monthly Composite (pCi/l)							
Ag-110m	12	10	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-141	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-144	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-57	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-58	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-60	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-134	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-137	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Fe-59	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 5 Ocean Water Monthly Composite (pCi/l)							
K-40	12	20	347.78(9/ 9) (290- 420)	Outfall - Unit 3 0.7 mi. SW	356.67(3/ 3) (340- 380)	313.33(3/ 3) (260- 350)	0
Mn-54	12	6.0000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Mo(Tc)-99m	12	2000	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ra-226	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ru-103	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Ru-106	12	30	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Th-228	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Zn-65	12	20	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0
Zr(Nb)-95	12	15	<LLD (0/ 9)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 6 **Ocean Water** **Bi-Monthly Composite** **(pCi/l)**							
Gross Beta	8	100	930(6/ 6) (850- 1050)	Outfall - Unit 2 0.7 mi. SW	995(2/ 2) (940- 1050)	905(2/ 2) (900- 910)	0

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Table 6 Ocean Water Bi-Monthly composite (pCi/l)							
	Gross Beta 4	100	843.33(3/ 3) (790- 920)	Outfall - Unit 3 0.7 mi. SW	920(1/ 1) (920- 920)	740(1/ 1) (740- 740)	0

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Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurements
Table 6 Ocean Water Bi-Monthly Composite (pCi/l)							
	Gross Beta 8	100	935(6/ 6) (720- 1110)	Outfall - Unit 2 0.7 mi. SW	1035(2/ 2) (960- 1110)	835(2/ 2) (790- 880)	0

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Table 6 Ocean Water Bi-Monthly composite (pCi/l)							
	Gross Beta 4	100	1003.3(3/ 3) (980- 1030)	Station Discharge Outfall - Unit 1 0.5 mi. SW	1030(1/ 1) (1030- 1030)	1000(1/ 1) (1000- 1000)	0

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Table 7 Ocean Water Quarterly Composite (pCi/l)							
Tritium	4	100	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 7 Ocean Water Quarterly Composite (pCi/l)							
Tritium	4	100	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 7 Ocean Water Quarterly Composite (pCi/l)							
Tritium	4	100	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 7 Ocean Water Quarterly Composite (pCi/l)							
	Tritium 4	100	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 9a Drinking Water Monthly Composite (pCi/l)							
Ru-103	9	15	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Zr(Nb)-95	9	15	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 9a Drinking Water Monthly Composite (pCi/l)							
Ag-110m	9	10	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Be-7	9	50	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-141	9	15	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-144	9	20	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-58	9	6.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-60	9	6.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-134	9	6.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-137	9	6.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
H-3	9	100	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 9a Drinking Water Monthly Composite (pCi/l)							
Ru-103	9	15	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Zr(Nb)-95	9	15	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 9a Drinking Water Monthly Composite (pCi/l)							
Ag-110m	9	10	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Be-7	9	50	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-141	9	15	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-144	9	20	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-58	9	6.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-60	9	6.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-134	9	6.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-137	9	6.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
H-3	9	100	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 9a Drinking Water Monthly Composite (pCi/l)							
Ru-103	9	15	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Zr(Nb)-95	9	15	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 9a Drinking Water Monthly Composite (pCi/l)							
Ag-110m	9	10	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Be-7	9	50	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-141	9	15	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Ce-144	9	20	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-58	9	6.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Co-60	9	6.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-134	9	6.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
Cs-137	9	6.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
H-3	9	100	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 9a Drinking Water Monthly Composite (pCi/l)							
	Ru-103	9	15	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
	Zr(Nb)-95	9	15	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0

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Table 9b Drinking Water Monthly Composite (pci/l)							
	Gross Alpha 9	0.2000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
	Gross Beta 9	0.1000	0.6667(6/ 6) (0.600- 0.800)	Huntington Beach 37 mi. NW	1.0000(3/ 3) (1.000- 1.000)	1.0000(3/ 3) (1.000- 1.000)	0

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Table 9b Drinking Water Monthly Composite (pCi/l)							
	Gross Alpha 9	0.2000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
	Gross Beta 9	0.1000	0.6333(6/ 6) (0.500- 0.800)	Huntington Beach 37 mi. NW	0.6667(3/ 3) (0.600- 0.700)	0.6667(3/ 3) (0.600- 0.700)	0

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Table 9b Drinking Water Monthly Composite (pCi/l)							
	Gross Alpha 9	0.2000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
	Gross Beta 9	0.1000	0.8167(6/ 6) (0.700- 0.900)	Tri-Cities Munic. Water Dist. Res. 8.7 mi. NW	0.8333(3/ 3) (0.800- 0.900)	0.8000(3/ 3) (0.600- 1.000)	0

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Table 9b Drinking Water Monthly Composite (pCi/l)								
	Gross Alpha	9	0.2000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
	Gross Beta	9	0.1000	0.8667(6/ 6) (0.500- 1.200)	Tri-Cities Munic. Water Dist. Res. 8.7 mi. NW	0.9667(3/ 3) (0.900- 1.100)	0.9333(3/ 3) (0.800- 1.200)	0

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Table 9c Drinking Water Monthly Composite (pci/l)							
	Gross Alpha 9	3.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
	Gross Beta 9	0.5000	11.333(6/ 6) (9.000-14.000)	San Clemente Golf Course Wall 3.5 mi. NNW	11.667(3/ 3) (9.000-14.000)	6.6667(3/ 3) (6.000- 8.000)	0

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Table 9c Drinking Water Monthly Composite (pCi/l)							
	Gross Alpha 9	3.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
	Gross Beta 9	0.5000	8.6667(6/ 6) (5.000-11.000)	Huntington Beach 37 mi. NW	9.3333(3/ 3) (8.000-11.000)	9.3333(3/ 3) (8.000-11.000)	0

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Table 9c Drinking Water Monthly Composite (pCi/l)							
	Gross Alpha 9	3.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
	Gross Beta 9	0.5000	13.833(6/ 6) (11.000-18.000)	Tri-Cities Munic. Water Dist. Res. 8.7 mi. NW	15.333(3/ 3) (13.000-18.000)	14.333(3/ 3) (11.000-18.000)	0

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Table 9c Drinking Water Monthly Composite (pCi/l)							
	Gross Alpha 9	3.0000	<LLD (0/ 6)	ALL <LLD	-----	<LLD (0/ 3)	0
	Gross Beta 9	0.5000	14.5(6/ 6) (9.000-20.000)	Tri-Cities Munic. Water Dist. Res. 8.7 mi. NW	18(3/ 3) (16.000-20.000)	7.6667(3/ 3) (6.000- 9.000)	0

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Table 9d Drinking Water Quarterly Composite (pCi/l)							
	Gross Alpha 3	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Gross Beta 3	0.1000	0.5000(2/ 2) (0.400- 0.600)	Huntington Beach 37 mi. NW	0.6000(1/ 1) (0.600- 0.600)	0.6000(1/ 1) (0.600- 0.600)	0

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Table 9d Drinking Water Quarterly Composite (pCi/l)							
	Gross Alpha	3	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Gross Beta	3	0.1000	0.5500(2/ 2) (0.500- 0.600)	Tri-Cities Munic. Water Dist. Res. 8.7 mi. NW	0.6000(1/ 1) (0.600- 0.600)	0.5000(1/ 1) (0.500- 0.500)	0

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Table 9d Drinking Water Quarterly Composite (pCi/l)							
Gross Alpha	3	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Gross Beta	3	0.1000	0.8500(2/ 2) (0.600- 1.100)	Tri-Cities Munic. Water Dist. Res. 8.7 mi. NW	1.1000(1/ 1) (1.100- 1.100)	1.0000(1/ 1) (1.000- 1.000)	0

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Table 9d Drinking Water Quarterly Composite (pCi/l)							
	Gross Alpha	3	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Gross Beta	3	0.1000	0.5500(2/ 2) (0.500- 0.600)	Huntington Beach 37 mi. NW	0.7000(1/ 1) (0.700- 0.700)	0.7000(1/ 1) (0.700- 0.700)	0

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Table 9a Drinking Water Quarterly Composite (pCi/l)							
	Ag-110m 3	15	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Be-7 3	100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ce-141 3	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ce-144 3	20	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-58 3	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-60 3	6.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Cs-134 3	6.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Cs-137 3	6.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Gross Alpha 3	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 9a Drinking Water Quarterly Composite (pCi/l)							
Gross Beta	3	0.5000	10(2/ 2) (9.000-11.000)	San Clemente Golf Course Well 3.5 mi. NNW	11(1/ 1) (11.000-11.000)	9.0000(1/ 1) (9.000- 9.000)	0
H-3	3	100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Ru-103	3	25	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Zr(Nb)-95	3	30	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 9a Drinking Water Quarterly Composite (pCi/l)							
	Ag-110m 3	15	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Be-7 3	100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ce-141 3	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ce-144 3	20	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-58 3	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-60 3	6.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Cs-134 3	6.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Cs-137 3	6.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Gross Alpha 3	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

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Table 9a Drinking Water Quarterly Composite (pCi/l)							
Gross Beta	3	0.5000	11(2/ 2) (11.000-11.000)	San Clemente Golf Course Well 3.5 mi. NNW	11(1/ 1) (11.000-11.000)	8.0000(1/ 1) (8.000- 8.000)	0
H-3	3	100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Ru-103	3	25	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Zr(Nb)-95	3	30	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 9a Drinking Water Quarterly Composite (pCi/l)							
Ag-110m	3	15	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Be-7	3	100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Ce-141	3	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Ce-144	3	20	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-58	3	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-60	3	6.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Cs-134	3	6.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Cs-137	3	6.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Gross Alpha	3	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 9a Drinking Water Quarterly Composite (pCi/l)							
	Gross Beta 3	0.5000	12.5(2/ 2) (11.000-14.000)	Tri-Cities Munic. Water Dist. Res. 8.7 mi. NW	14(1/ 1) (14.000-14.000)	12(1/ 1) (12.000-12.000)	0
	H-3 3	100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ru-103 3	25	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Zr(Nb)-95 3	30	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 9a Drinking Water Quarterly Composite (pCi/l)							
Ag-110m	3	15	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Be-7	3	100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Ce-141	3	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Ce-144	3	20	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-58	3	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-60	3	6.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Cs-134	3	6.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Cs-137	3	6.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
Gross Alpha	3	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 9e Drinking Water Quarterly Composite (pCi/l)							
	Gross Beta	3	0.5000	16.5(2/ 2) (11.000-22.000)	Tri-Cities Munic. Water Dist. Res. 8.7 mi. NW	22(1/ 1) (22.000-22.000)	9.0000(1/ 1) (9.000- 9.000)	0
	H-3	3	100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ru-103	3	25	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
	Zr(Nb)-95	3	30	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 10 Shoreline Sediment Semi-Annual Composite (pCi/g)							
I-131	4	0.5000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
K-40	4	2.0000	13.533(3/ 3) (13.100-14.000)	Newport Beach (North End) 30 mi. NW	17.8(1/ 1) (17.800-17.800)	17.8(1/ 1) (17.800-17.800)	0
Mn-54	4	0.0500	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Mo(Tc)-99m	4	300	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Ra-226	4	0.1000	0.1867(3/ 3) (0.130- 0.240)	Newport Beach (North End) 30 mi. NW	0.2600(1/ 1) (0.260- 0.260)	0.2600(1/ 1) (0.260- 0.260)	0
Ru-103	4	0.1000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Ru-106	4	0.3000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Th-228	4	0.1000	0.1900(3/ 3) (0.140- 0.250)	Newport Beach (North End) 30 mi. NW	0.8000(1/ 1) (0.800- 0.800)	0.8000(1/ 1) (0.800- 0.800)	0
Zn-65	4	0.2000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 10 Shoreline Sediment Semi-Annual Composite (pCi/g)							
Zr(Nb)-95	4	0.1000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 10 Shoreline Sediment Semi-Annual Composite (pCi/g)							
Ag-110m	4	0.0700	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Ce-141	4	0.1000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Ce-144	4	0.2000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-57	4	0.0500	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-58	4	0.0500	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-60	4	0.0500	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Cs-134	4	0.0500	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Cs-137	4	0.0500	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Fe-59	4	0.2000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 10 Shoreline Sediment Semi-Annual Composite (pCi/g)							
I-131	4	0.5000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
K-40	4	2.0000	13.567(3/ 3) (13.200-14.100)	Newport Beach (North End) 30 mi. NW	17.3(1/ 1) (17.300-17.300)	17.3(1/ 1) (17.300-17.300)	0
Mn-54	4	0.0500	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Mo(Tc)-99m	4	300	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Ra-226	4	0.1000	0.3567(3/ 3) (0.260- 0.500)	San Onofre Surfing Beach 0.9 mi. NW	0.5000(1/ 1) (0.500- 0.500)	0.4600(1/ 1) (0.460- 0.460)	0
Ru-103	4	0.1000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Ru-106	4	0.3000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
Th-228	4	0.1000	0.3900(3/ 3) (0.210- 0.720)	Newport Beach (North End) 30 mi. NW	1.2700(1/ 1) (1.270- 1.270)	1.2700(1/ 1) (1.270- 1.270)	0
Zn-65	4	0.2000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 10 Shoreline Sediment Semi-Annual Composite (pCi/g)							
Zr(Nb)-95	4	0.1000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 11 Ocean Bottom Sediments Semi-Annual Composite (pCi/g)							
Ag-110m	S	0.0500	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Ce-141	S	0.0800	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Ce-144	S	0.1500	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-57	S	0.0400	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-58	S	0.0400	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-60	S	0.0400	0.0500(1/ 4) (0.050- 0.050)	Unit 1 Outfall 0.5 mi. W	0.0500(1/ 1) (0.050- 0.050)	<LLD (0/ 1)	0
Cs-134	S	0.0400	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Cs-137	S	0.0400	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Fe-59	S	0.1500	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 11 Ocean Bottom Sediments Semi-Annual Composite (pCi/g)							
I-131	S	0.4000	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
K-40	S	1.5000	10.65(4/ 4) (10.200-11.500)	Unit 2 Outfall 0.8 mi. SSW	11.5(1/ 1) (11.500-11.500)	7.1000(1/ 1) (7.100- 7.100)	0
Mn-54	S	0.0400	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Mo(Tc)-99m	S	230	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Ra-226	S	0.0800	0.4725(4/ 4) (0.270- 0.660)	Unit 1 Outfall 0.6 mi. N	0.6600(1/ 1) (0.660- 0.660)	0.0800(1/ 1) (0.080- 0.080)	0
Ru-103	S	0.0800	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Ru-106	S	0.2000	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Th-228	S	0.0800	0.6150(4/ 4) (0.320- 0.870)	Unit 1 Outfall 0.5 mi. N	0.8700(1/ 1) (0.870- 0.870)	0.0900(1/ 1) (0.090- 0.090)	0
Zn-65	S	1.5000	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 11 Ocean Bottom Sediments Semi-Annual Composite (pCi/g)							
Zr(Nb)-95	5	0.0800	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 11 Ocean Bottom Sediments Semi-Annual Composite (pCi/g)								
	Ag-110m	S	0.0500	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ce-141	S	0.0800	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ce-144	S	0.1500	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-57	S	0.0400	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-58	S	0.0400	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
	Co-60	S	0.0400	0.3600(2/ 4) (0.090- 0.630)	Unit 1 Outfall 0.6 mi. W	0.6300(1/ 1) (0.630- 0.630)	<LLD (0/ 1)	0
	Cs-134	S	0.0400	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
	Cs-137	S	0.0400	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
	Fe-59	S	0.1500	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 11 Ocean Bottom Sediments Semi-Annual Composite (pCi/g)								
	I-131	S	0.4000	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
	K-40	S	1.5000	11.5(4/ 4) (10.200-12.500)	Newport Beach 30 mi. NW	13.1(1/ 1) (13.100-13.100)	13.1(1/ 1) (13.100-13.100)	0
	Mn-54	S	0.0400	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
	Mo(Tc)-99m	S	230	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ra-226	S	0.0800	0.4675(4/ 4) (0.300- 0.620)	Unit 1 Outfall 0.6 mi. N	0.6200(1/ 1) (0.620- 0.620)	0.1000(1/ 1) (0.100- 0.100)	0
	Ru-103	S	0.0800	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
	Ru-106	S	0.2000	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
	Th-228	S	0.0800	0.5275(4/ 4) (0.310- 0.650)	Unit 1 Outfall 0.6 mi. N	0.6500(1/ 1) (0.650- 0.650)	0.1100(1/ 1) (0.110- 0.110)	0
	Zn-65	S	1.5000	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 11 Ocean Bottom Sediments Semi-Annual Composite (pCi/g)							
Zr(Nb)-95	5	0.0800	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
bay mussel	Ag-110m	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Ce-141	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Ce-144	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Co-57	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Co-58	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Co-60	1	0.0070	0.0370(1/ 1) (0.037- 0.037)	Units 2/3 Outfall 0.7 mi. SSW	0.0370(1/ 1) (0.037- 0.037)	<LLD (0/ 0) 0
bay mussel	Cs-134	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Cs-137	1	0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Fe-59	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0

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SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: January 01, 1983 to March 31, 1983

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed		Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurements
Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
bay mussel	H-3 Aqueous	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	H-3 Bound	1	3.0000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	I-131	1	0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	K-40	1	0.2000	1.9000(1/ 1) (1.900- 1.900)	Units 2/3 Outfall 0.7 mi. SSW	1.9000(1/ 1) (1.900- 1.900)	<LLD (0/ 0)	0
bay mussel	Mn-54	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Mo(Tc)-99m	1	10	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ra-226	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-103	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-106	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
bay mussel	Th-228	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Zn-65	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Zr(Nb)-95	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Ag-110m	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-141	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-144	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-57	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-58	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-60	3	0.0070	0.0120(1/ 2) (0.012- 0.012)	Unit 1 Outfall 0.6 mi. NSW	0.0120(1/ 1) (0.012- 0.012)	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
black perch	Cs-134	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Cs-137	3	0.0030	0.0070(2/ 2) (0.007- 0.007)	Units 2/3 Outfall 0.7 mi. SSW	0.0070(1/ 1) (0.007- 0.007)	0.0060(1/ 1) (0.006- 0.006)	0
black perch	Fe-59	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	H-3 Aqueous	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	H-3 Bound	3	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	I-131	3	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	K-40	3	0.2000	2.8000(2/ 2) (2.500- 3.100)	Units 2/3 Outfall 0.7 mi. SSW	3.1000(1/ 1) (3.100- 3.100)	2.9000(1/ 1) (2.900- 2.900)	0
black perch	Mn-54	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Mo(Tc)-99m	3	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
black perch	Ra-226	3 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/	0
black perch	Ru-103	3 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-106	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Th-228	3 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Zn-65	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Zr(Nb)-95	3 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ag-110m	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-141	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-144	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
keyhole limpet	Co-57 1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-58 1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-60 1	0.0070	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Cs-134 1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Cs-137 1	0.0030	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Fe-59 1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	H-3 Aqueous 1	0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	H-3 Bound 1	3.0000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	I-131 1	0.2000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
keyhole limpet	K-40	1	0.2000	<LLD (0/ 0)	Newport Beach 30 mi. NW	1.0000(1/ 1) (1.000- 1.000)	1.0000(1/ 1) (1.000- 1.000)	0
keyhole limpet	Mn-54	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Mo(Tc)-99m	1	10	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ra-226	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-103	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-106	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Th-228	1	0.0300	<LLD (0/ 0)	Newport Beach 30 mi. NW	0.0340(1/ 1) (0.034- 0.034)	0.0340(1/ 1) (0.034- 0.034)	0
keyhole limpet	Zn-65	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Zr(Nb)-95	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
rock crab	Ag-110m	2	0.0700	0.0820(1/ 2) (0.082- 0.082)	Unit 1 Outfall 0.6 mi. WSW	0.0820(1/ 1) (0.082- 0.082)	<LLD (0/ 0)	0
rock crab	Ce-141	2	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Ce-144	2	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Co-57	2	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Co-58	2	0.0100	0.0615(2/ 2) (0.053- 0.070)	Unit 1 Outfall 0.6 mi. WSW	0.0700(1/ 1) (0.070- 0.070)	<LLD (0/ 0)	0
rock crab	Co-60	2	0.0070	0.2850(2/ 2) (0.260- 0.310)	Unit 1 Outfall 0.6 mi. WSW	0.3100(1/ 1) (0.310- 0.310)	<LLD (0/ 0)	0
rock crab	Cs-134	2	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Cs-137	2	0.0030	0.0075(2/ 2) (0.007- 0.008)	Unit 1 Outfall 0.6 mi. WSW	0.0080(1/ 1) (0.008- 0.008)	<LLD (0/ 0)	0
rock crab	Fe-59	2	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
rock crab	H-3 Aqueous	2	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0) 0
rock crab	H-3 Bound	2	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0) 0
rock crab	I-131	2	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0) 0
rock crab	K-40	2	0.2000	2.6500(2/ 2) (2.400- 2.900)	Units 2/3 Outfall 0.7 mi. SSW	2.9000(1/ 1) (2.900- 2.900)	<LLD (0/ 0) 0
rock crab	Mn-54	2	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0) 0
rock crab	Mo(Tc)-99m	2	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0) 0
rock crab	Ra-226	2	0.0300	0.0600(1/ 2) (0.060- 0.060)	Unit 1 Outfall 0.6 mi. WSW	0.0600(1/ 1) (0.060- 0.060)	<LLD (0/ 0) 0
rock crab	Ru-103	2	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0) 0
rock crab	Ru-106	2	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0) 0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
rock crab	Th-228	2	0.0300	0.1400(2/ 2) (0.080- 0.200)	Units 2/3 Outfall 0.7 mi. SSW	0.2000(1/ 1) (0.200- 0.200)	<LLD (0/ 0)	0
rock crab	Zn-65	2	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Zr(Nb)-95	2	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ag-110m	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ce-141	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ce-144	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Co-57	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Co-58	1	0.0100	0.0660(1/ 1) (0.066- 0.066)	Unit 1 Outfall 0.6 mi. WSW	0.0660(1/ 1) (0.066- 0.066)	<LLD (0/ 0)	0
sea hare	Co-60	1	0.0070	0.4100(1/ 1) (0.410- 0.410)	Unit 1 Outfall 0.6 mi. WSW	0.4100(1/ 1) (0.410- 0.410)	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly composite (pCi/g) (flesh type)							
sea hare	Cs-134	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Cs-137	1 0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Fe-59	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	H-3 Aqueous	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	H-3 Bound	1 3.0000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	I-131	1 0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	K-40	1 0.2000	1.0200(1/ 1) (1.020- 1.020)	Unit 1 Outfall 0.6 mi. WSW	1.0200(1/ 1) (1.020- 1.020)	<LLD (0/ 0)	0
sea hare	Mn-54	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Mo(Tc)-99m	1 10	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
sea hare	Ra-226	1 0.0300	0.0340(1/ 1) (0.034- 0.034)	Unit 1 Outfall 0.6 mi. WSW	0.0340(1/ 1) (0.034- 0.034)	<LLD (0/ 0)	0
sea hare	Ru-103	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ru-106	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Th-228	1 0.0300	0.0710(1/ 1) (0.071- 0.071)	Unit 1 Outfall 0.6 mi. WSW	0.0710(1/ 1) (0.071- 0.071)	<LLD (0/ 0)	0
sea hare	Zn-65	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Zr(Nb)-95	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepshead	Ag-110m	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-141	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-144	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
sheepshead	Co-57	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-58	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-60	3	0.0070	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Cs-134	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Cs-137	3	0.0030	0.0115(2/ 2) (0.009- 0.014)	Unit 1 Outfall 0.6 mi. MSW	0.0140(1/ 1) (0.014- 0.014)	0.0070(1/ 1) (0.007- 0.007)	0
sheepshead	Fe-59	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	H-3 Aqueous	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	H-3 Bound	3	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	I-131	3	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
sheepshead	K-40	3	0.2000	3.8000(2/ 2) (3.700- 3.900)	Units 2/3 Outfall 0.7 mi. SSW	3.9000(1/ 1) (3.900- 3.900)	3.1000(1/ 1) (3.100- 3.100)	0
sheepshead	Mn-54	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Mo(Tc)-99m	3	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ra-226	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ru-103	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ru-106	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Th-228	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zn-65	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zr(Nb)-95	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
spiney lobster	Ag-110m	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ce-141	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ce-144	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-57	1 0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-58	1 0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-60	1 0.0070	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Cs-134	1 0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Cs-137	1 0.0030	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Fe-59	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

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Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurement
Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
spiney lobster	H-3 Aqueous	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	H-3 Bound	1 3.0000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	I-131	1 0.2000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	K-40	1 0.2000	<LLD (0/ 0)	Newport Beach 30 mi. NW	4.0000(1/ 1) (4.000- 4.000)	4.0000(1/ 1) (4.000- 4.000)	0
spiney lobster	Mn-54	1 0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Mo(Tc)-99m	1 10	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ra-226	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-103	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-106	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
bay mussel	Ag-110m	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ce-141	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ce-144	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-57	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-58	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-60	1 0.0070	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Cs-134	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Cs-137	1 0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Fe-59	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
bay mussel	H-3 Aqueous	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	H-3 Bound	1 3.0000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	I-131	1 0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	K-40	1 0.2000	1.4200(1/ 1) (1.420- 1.420)	Units 2/3 Outfall 0.7 mi. SSW	1.4200(1/ 1) (1.420- 1.420)	<LLD (0/ 0)	0
bay mussel	Mn-54	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Mo(Tc)-99m	1 10	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ra-226	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-103	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-106	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
bay mussel	Th-228	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Zn-65	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Zr(Nb)-95	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Ag-110m	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-141	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-144	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-57	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-58	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-60	3	0.0070	0.0080(1/ 2) (0.008- 0.008)	Unit 1 Outfall 0.6 mi. MSW	0.0080(1/ 1) (0.008- 0.008)	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
black perch	Cs-134	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Cs-137	3	0.0030	0.0090(2/ 2) (0.007- 0.011)	Unit 1 Outfall 0.6 mi. WSW	0.0110(1/ 1) (0.011- 0.011)	0.0070(1/ 1) (0.007- 0.007)	0
black perch	Fe-59	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	H-3 Aqueous	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	H-3 Bound	3	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	I-131	3	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	K-40	3	0.2000	3.1500(2/ 2) (2.900- 3.400)	Unit 1 Outfall 0.6 mi. WSW	3.4000(1/ 1) (3.400- 3.400)	3.0000(1/ 1) (3.000- 3.000)	0
black perch	Mn-54	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Mo(Tc)-99m	3	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
black perch	Ra-226	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-103	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-106	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Th-228	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Zn-65	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Zr(Nb)-95	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ag-110m	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-141	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-144	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
keyhole limpet	Co-57	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-58	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-60	1	0.0070	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Cs-134	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Cs-137	1	0.0030	<LLD (0/ 0)	Newport Beach 30 mi. NW	0.0030(1/ 1) (0.003- 0.003)	0.0030(1/ 1) (0.003- 0.003)	0
keyhole limpet	Fe-59	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	H-3 Aqueous	1	0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	H-3 Bound	1	3.0000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	I-131	1	0.2000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
keyhole limpet	K-40	1	0.2000	<LLD (0/ 0)	Newport Beach 30 mi. NW	1.1000(1/ 1) (1.100- 1.100)	1.1000(1/ 1) (1.100- 1.100)	0
keyhole limpet	Mn-54	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Mo(Tc)-99m	1	10	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ra-226	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-103	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-106	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Th-228	1	0.0300	<LLD (0/ 0)	Newport Beach 30 mi. NW	0.0370(1/ 1) (0.037- 0.037)	0.0370(1/ 1) (0.037- 0.037)	0
keyhole limpet	Zn-65	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Zr(Nb)-95	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
rock crab	Ag-110m	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Ce-141	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Ce-144	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Co-57	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Co-58	1 0.0100	0.0100(1/ 1) (0.010- 0.010)	Unit 1 Outfall 0.6 mi. WSW	0.0100(1/ 1) (0.010- 0.010)	<LLD (0/ 0)	0
rock crab	Co-60	1 0.0070	0.1110(1/ 1) (0.111- 0.111)	Unit 1 Outfall 0.6 mi. WSW	0.1110(1/ 1) (0.111- 0.111)	<LLD (0/ 0)	0
rock crab	Cs-134	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Cs-137	1 0.0030	0.0050(1/ 1) (0.005- 0.005)	Unit 1 Outfall 0.6 mi. WSW	0.0050(1/ 1) (0.005- 0.005)	<LLD (0/ 0)	0
rock crab	Fe-59	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
rock crab	H-3 Aqueous	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	H-3 Bound	1 3.0000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	I-131	1 0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	K-40	1 0.2000	2.9000(1/ 1) (2.900- 2.900)	Unit 1 Outfall 0.6 mi. WSW	2.9000(1/ 1) (2.900- 2.900)	<LLD (0/ 0)	0
rock crab	Mn-54	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Mo(Tc)-99m	1 10	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Ra-226	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Ru-103	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Ru-106	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
rock crab	Th-228	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Zn-65	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Zr(Nb)-95	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ag-110m	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ce-141	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ce-144	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Co-57	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Co-58	1 0.0100	0.0340(1/ 1) (0.034- 0.034)	Unit 1 Outfall 0.6 mi. WSW	0.0340(1/ 1) (0.034- 0.034)	<LLD (0/ 0)	0
sea hare	Co-60	1 0.0070	0.2800(1/ 1) (0.280- 0.280)	Unit 1 Outfall 0.6 mi. WSW	0.2800(1/ 1) (0.280- 0.280)	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
sea hare	Cs-134	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Cs-137	1	0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Fe-59	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	H-3 Aqueous	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	H-3 Bound	1	3.0000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	I-131	1	0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	K-40	1	0.2000	1.8500(1/ 1) (1.850- 1.850)	Unit 1 Outfall 0.6 mi. WSW	1.8500(1/ 1) (1.850- 1.850)	<LLD (0/ 0)	0
sea hare	Mn-54	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Mo(Tc)-99m	1	10	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
sea hare	Ra-226	1	0.0300	0.0700(1/ 1) (0.070- 0.070)	Unit 1 Outfall 0.6 mi. WSW	0.0700(1/ 1) (0.070- 0.070)	<LLD (0/ 0)	0
sea hare	Ru-103	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ru-106	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Th-228	1	0.0300	0.0910(1/ 1) (0.091- 0.091)	Unit 1 Outfall 0.6 mi. WSW	0.0910(1/ 1) (0.091- 0.091)	<LLD (0/ 0)	0
sea hare	Zn-65	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Zr(Nb)-95	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepshead	Ag-110m	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-141	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-144	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: April 01, 1983 to June 30, 1983

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurements
Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
sheepshead	Co-57	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
sheepshead	Co-58	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
sheepshead	Co-60	3	0.0070	0.0390(1/ 2) (0.039- 0.039)	Unit 1 Outfall 0.6 mi. MSW	0.0390(1/ 1) (0.039- 0.039)	<LLD (0/ 1) 0
sheepshead	Cs-134	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
sheepshead	Cs-137	3	0.0030	0.0170(2/ 2) (0.013- 0.021)	Unit 1 Outfall 0.6 mi. MSW	0.0210(1/ 1) (0.021- 0.021)	0.0070(1/ 1) (0.007- 0.007) 0
sheepshead	Fe-59	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
sheepshead	H-3 Aqueous	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
sheepshead	H-3 Bound	3	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
sheepshead	I-131	3	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
sheepshead	K-40	3	0.2000	3.5000(2/ 2) (3.400- 3.600)	Newport Beach 30 mi. NW	3.6000(1/ 1) (3.600- 3.600)	3.6000(1/ 1) (3.600- 3.600)	0
sheepshead	Mn-54	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Mo(Tc)-99m	3	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ra-226	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ru-103	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ru-106	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Th-228	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zn-65	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zr(Nb)-95	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
spiney lobster	Ag-110m	2	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ce-141	2	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ce-144	2	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-57	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-58	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-60	2	0.0070	0.0130(1/ 1) (0.013- 0.013)	Units 2/3 Outfall 0.7 mi. SSW	0.0130(1/ 1) (0.013- 0.013)	<LLD (0/ 1)	0
spiney lobster	Cs-134	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Cs-137	2	0.0030	0.0050(1/ 1) (0.005- 0.005)	Newport Beach 30 mi. NW	0.0050(1/ 1) (0.005- 0.005)	0.0050(1/ 1) (0.005- 0.005)	0
spiney lobster	Fe-59	2	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
spiney lobster	H-3 Aqueous	2	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	H-3 Bound	2	3.0000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	I-131	2	0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	K-40	2	0.2000	3.0000(1/ 1) (3.000- 3.000)	Newport Beach 30 mi. NW	3.2000(1/ 1) (3.200- 3.200)	3.2000(1/ 1) (3.200- 3.200)	0
spiney lobster	Mn-54	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Mo(Tc)-99m	2	10	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ra-226	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-103	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-106	2	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
spiney lobster	Th-228	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Zn-65	2	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Zr(Nb)-95	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
bay mussel	Ag-110m	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ce-141	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ce-144	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-57	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-58	1 0.0100	0.0130(1/ 1) (0.013- 0.013)	Units 2/3 Outfall 0.7 mi. SSW	0.0130(1/ 1) (0.013- 0.013)	<LLD (0/ 0)	0
bay mussel	Co-60	1 0.0070	0.0150(1/ 1) (0.015- 0.015)	Units 2/3 Outfall 0.7 mi. SSW	0.0150(1/ 1) (0.015- 0.015)	<LLD (0/ 0)	0
bay mussel	Cs-134	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Cs-137	1 0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Fe-59	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
bay mussel	H-3 Aqueous	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	H-3 Bound	1 3.0000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	I-131	1 0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	K-40	1 0.2000	1.2700(1/ 1) (1.270- 1.270)	Units 2/3 Outfall 0.7 mi. SSW	1.2700(1/ 1) (1.270- 1.270)	<LLD (0/ 0)	0
bay mussel	Mn-54	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Mo(Tc)-99m	1 10	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ra-226	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-103	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-106	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
bay mussel	Th-228	1	0.0300	0.0830(1/ 1) (0.083- 0.083)	Units 2/3 Outfall 0.7 mi. SSW	0.0830(1/ 1) (0.083- 0.083)	<LLD (0/ 0)	0
bay mussel	Zn-65	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Zr(Nb)-95	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Ag-110m	2	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Ce-141	2	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Ce-144	2	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Co-57	2	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Co-58	2	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Co-60	2	0.0070	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
black perch	Cs-134	2	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Cs-137	2	0.0030	0.0070(2/ 2) (0.006- 0.008)	Unit 1 Outfall 0.6 mi. WSW	0.0080(1/ 1) (0.008- 0.008)	<LLD (0/ 0)	0
black perch	Fe-59	2	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	H-3 Aqueous	2	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	H-3 Bound	2	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	I-131	2	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	K-40	2	0.2000	2.6500(2/ 2) (2.600- 2.700)	Unit 1 Outfall 0.6 mi. WSW	2.7000(1/ 1) (2.700- 2.700)	<LLD (0/ 0)	0
black perch	Mn-54	2	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Mo(Tc)-99m	2	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
black perch	Ra-226	2 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Ru-103	2 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Ru-106	2 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Th-228	2 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Zn-65	2 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Zr(Nb)-95	2 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
keyhole limpet	Ag-110m	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-141	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-144	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
keyhole limpet	Co-57	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
keyhole limpet	Co-58	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
keyhole limpet	Co-60	1	0.0070	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
keyhole limpet	Cs-134	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
keyhole limpet	Cs-137	1	0.0030	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
keyhole limpet	Fe-59	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
keyhole limpet	H-3 Aqueous	1	0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
keyhole limpet	H-3 Bound	1	3.0000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
keyhole limpet	I-131	1	0.2000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
keyhole limpet	K-40	1 0.2000	<LLD (0/ 0)	Newport Beach 30 mi. NW	1.2700(1/ 1) (1.270- 1.270)	1.2700(1/ 1) (1.270- 1.270)	0
keyhole limpet	Mn-54	1 0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Mo(Tc)-99m	1 10	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ra-226	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-103	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-106	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Th-228	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Zn-65	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Zr(Nb)-95	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
sea hare	Ag-110m	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ce-141	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ce-144	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Co-57	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Co-58	1 0.0100	0.0250(1/ 1) (0.025- 0.025)	Unit 1 Outfall 0.6 mi. NNW	0.0250(1/ 1) (0.025- 0.025)	<LLD (0/ 0)	0
sea hare	Co-60	1 0.0070	0.0620(1/ 1) (0.062- 0.062)	Unit 1 Outfall 0.6 mi. NNW	0.0620(1/ 1) (0.062- 0.062)	<LLD (0/ 0)	0
sea hare	Cs-134	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Cs-137	1 0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Fe-59	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
sea hare	H-3 Aqueous	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	H-3 Bound	1 3.0000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	I-131	1 0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	K-40	1 0.2000	1.4200(1/ 1) (1.420- 1.420)	Unit 1 Outfall 0.6 mi. WSW	1.4200(1/ 1) (1.420- 1.420)	<LLD (0/ 0)	0
sea hare	Mn-54	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Mo(Tc)-99m	1 10	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ra-226	1 0.0300	0.0400(1/ 1) (0.040- 0.040)	Unit 1 Outfall 0.6 mi. WSW	0.0400(1/ 1) (0.040- 0.040)	<LLD (0/ 0)	0
sea hare	Ru-103	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ru-106	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: July 01, 1983 to September 30, 1983

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurement
Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
sea hare	Th-228	1 0.0300	0.1500(1/ 1) (0.150- 0.150)	Unit 1 Outfall 0.6 mi. WSW	0.1500(1/ 1) (0.150- 0.150)	<LLD (0/ 0)	0
sea hare	Zn-65	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Zr(Nb)-95	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepshead	Ag-110m	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-141	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-144	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-57	3 0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-58	3 0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-60	3 0.0070	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
sheepshead	Ra-226	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ru-103	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ru-106	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Th-228	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zn-65	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zr(Nb)-95	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ag-110m	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ce-141	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ce-144	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
spiney lobster	Co-57	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
spiney lobster	Co-58	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
spiney lobster	Co-60	3	0.0070	0.0095(2/ 2) (0.007- 0.012)	Units 2/3 Outfall 0.7 mi. SSW	0.0120(1/ 1) (0.012- 0.012)	<LLD (0/ 1) 0
spiney lobster	Cs-134	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
spiney lobster	Cs-137	3	0.0030	0.0050(1/ 2) (0.005- 0.005)	Newport Beach 30 mi. NW	0.0050(1/ 1) (0.005- 0.005)	0.0050(1/ 1) (0.005- 0.005) 0
spiney lobster	Fe-59	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
spiney lobster	H-3 Aqueous	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
spiney lobster	H-3 Bound	3	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
spiney lobster	I-131	3	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
spiney lobster	K-40	3	0.2000	2.5000(2/ 2) (2.300- 2.700)	Newport Beach 30 mi. NW	2.9000(1/ 1) (2.900- 2.900)	2.9000(1/ 1) (2.900- 2.900)	0
spiney lobster	Mn-54	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Mo(Tc)-99m	3	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ra-226	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-103	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-106	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Th-228	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Zn-65	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Zr(Nb)-95	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
BLACK PERCH	Ag-110m	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Ce-141	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Ce-144	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Co-57	1 0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Co-58	1 0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Co-60	1 0.0070	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Cs-134	1 0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Cs-137	1 0.0030	<LLD (0/ 0)	Newport Beach 30 mi. NW	0.0070(1/ 1) (0.007- 0.007)	0.0070(1/ 1) (0.007 007)	0
BLACK PERCH	Fe-59	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
BLACK PERCH	H-3 Aqueous	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	H-3 Bound	1 3.0000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	I-131	1 0.2000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	K-40	1 0.2000	<LLD (0/ 0)	Newport Beach 30 mi. NW	2.6000(1/ 1) (2.600- 2.600)	2.6000(1/ 1) (2.600- 2.600)	0
BLACK PERCH	Mn-54	1 0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Mo(Tc)-99m	1 10	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Ra-226	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Ru-103	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Ru-106	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
BLACK PERCH	Th-228	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Zn-65	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
BLACK PERCH	Zr(Nb)-95	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
bay mussel	Ag-110m	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ce-141	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ce-144	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-57	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-58	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-60	1 0.0070	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Cs-134	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Cs-137	1 0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Fe-59	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
bay mussel	H-3 Aqueous	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	H-3 Bound	1	3.0000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	I-131	1	0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	K-40	1	0.2000	0.8900(1/ 1) (0.890- 0.890)	Units 2/3 Outfall 0.7 mi. SSW	0.8900(1/ 1) (0.890- 0.890)	<LLD (0/ 0)	0
bay mussel	Mn-54	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Mo(Tc)-99m	1	10	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ra-226	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-103	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-106	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
bay mussel	Th-228	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Zn-65	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Zr(Nb)-95	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Ag-110m	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-141	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-144	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-57	3 0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-58	3 0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-60	3 0.0070	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
black perch	Cs-134	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Cs-137	3	0.0030	0.0065(2/ 2) (0.006- 0.007)	Units 2/3 Outfall 0.7 mi. SSW	0.0070(1/ 1) (0.007- 0.007)	0.0060(1/ 1) (0.006- 0.006)	0
black perch	Fe-59	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	H-3 Aqueous	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	H-3 Bound	3	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	I-131	3	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	K-40	3	0.2000	3.0000(2/ 2) (2.700- 3.300)	Newport Beach 30 mi. NW	5.0000(1/ 1) (5.000- 5.000)	5.0000(1/ 1) (5.000- 5.000)	0
black perch	Mn-54	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Mo(Tc)-99m	3	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
black perch	Ra-226	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-103	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-106	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Th-228	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Zn-65	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Zr(Nb)-95	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ag-110m	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-141	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-144	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
keyhole limpet	Co-57	1 0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-58	1 0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-60	1 0.0070	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Cs-134	1 0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Cs-137	1 0.0030	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Fe-59	1 0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	H-3 Aqueous	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	H-3 Bound	1 3.0000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	I-131	1 0.2000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
keyhole limpet	K-40	1	0.2000	<LLD (0/ 0)	Newport Beach 30 mi. NW	1.2600(1/ 1) (1.260- 1.260)	1.2600(1/ 1) (1.260- 1.260)	0
keyhole limpet	Mn-54	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Mo(Tc)-99m	1	10	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ra-226	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-103	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-106	1	0.0700	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Th-228	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Zn-65	1	0.0700	<LLD (0/ 0)	ALL <LLD	----	<LLD (0/ 1)	0
keyhole limpet	Zr(Nb)-95	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
sea hare	Ag-110m	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ce-141	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ce-144	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Co-57	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Co-58	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Co-60	1 0.0070	0.0690(1/ 1) (0.069- 0.069)	Unit 1 Outfall 0.6 mi. WSW	0.0690(1/ 1) (0.069- 0.069)	<LLD (0/ 0)	0
sea hare	Cs-134	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Cs-137	1 0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Fe-59	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
sea hare	H-3 Aqueous	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	H-3 Bound	1 3.0000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	I-131	1 0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	K-40	1 0.2000	2.1000(1/ 1) (2.100- 2.100)	Unit 1 Outfall 0.6 mi. WSW	2.1000(1/ 1) (2.100- 2.100)	<LLD (0/ 0)	0
sea hare	Mn-54	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Mo(Tc)-99m	1 10	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ra-226	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ru-103	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Ru-106	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
sea hare	Th-228	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Zn-65	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sea hare	Zr(Nb)-95	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Ag-110m	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Ce-141	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Ce-144	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Co-57	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Co-58	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Co-60	1	0.0070	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
sheepcrab	Cs-134	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Cs-137	1	0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Fe-59	1	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	H-3 Aqueous	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	H-3 Bound	1	3.0000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	I-131	1	0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	K-40	1	0.2000	1.6000(1/ 1) (1.600- 1.600)	Units 2/3 Outfall 0.7 mi. SSW	1.6000(1/ 1) (1.600- 1.600)	<LLD (0/ 0)	0
sheepcrab	Mn-54	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Mo(Tc)-99m	1	10	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
sheepcrab	Ra-226	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Ru-103	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Ru-106	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Th-228	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Zn-65	1 0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Zr(Nb)-95	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepshead	Ag-110m	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-141	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-144	3 0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
sheepshead	Co-57	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-58	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-60	3	0.0070	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Cs-134	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Cs-137	3	0.0030	0.0090(2/ 2) (0.007- 0.011)	Units 2/3 Outfall 0.7 mi. SSW	0.0110(1/ 1) (0.011- 0.011)	0.0070(1/ 1) (0.007- 0.007)	0
sheepshead	Fe-59	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	H-3 Aqueous	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	H-3 Bound	3	3.0000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	I-131	3	0.2000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
sheepshead	K-40	3	0.2000	3.2500(2/ 2) (2.900- 3.600)	Units 2/3 Outfall 0.7 mi. SSW	3.6000(1/ 1) (3.600- 3.600)	2.5000(1/ 1) (2.500- 2.500)	0
sheepshead	Mn-54	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Mo(Tc)-99m	3	10	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ra-226	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ru-103	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ru-106	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Th-228	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zn-65	3	0.0700	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zr(Nb)-95	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
spiney lobster	Ag-110m 2	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ce-141 2	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ce-144 2	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-57 2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-58 2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-60 2	0.0070	0.0080(1/ 1) (0.008- 0.008)	Unit 1 Outfall 0.6 mi. WSW	0.0080(1/ 1) (0.008- 0.008)	<LLD (0/ 1)	0
spiney lobster	Cs-134 2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Cs-137 2	0.0030	0.0050(1/ 1) (0.005- 0.005)	Unit 1 Outfall 0.6 mi. WSW	0.0050(1/ 1) (0.005- 0.005)	0.0040(1/ 1) (0.004- 0.004)	0
spiney lobster	Fe-59 2	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)							
spiney lobster	H-3 Aqueous	2	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	H-3 Bound	2	3.0000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	I-131	2	0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	K-40	2	0.2000	2.9000(1/ 1) (2.900- 2.900)	Newport Beach 30 mi. NW	2.9000(1/ 1) (2.900- 2.900)	2.9000(1/ 1) (2.900- 2.900)	0
spiney lobster	Mn-54	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Mo(Tc)-99m	2	10	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ra-226	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-103	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-106	2	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12a Non-Migratory Marine Quarterly Composite (pCi/g) (flesh type)								
spiney lobster	Th-228	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Zn-65	2	0.0700	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Zr(Nb)-95	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
bay mussel		Ag-110m 1	0.0100	0.2000(1/ 1) (0.200- 0.200)	Units 2/3 Outfall 0.7 mi. SSW	0.2000(1/ 1) (0.200- 0.200)	<LLD (0/ 0)	0
bay mussel		Ce-141 1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel		Ce-144 1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel		Co-57 1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel		Co-58 1	0.0200	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel		Co-60 1	0.0100	0.0120(1/ 1) (0.012- 0.012)	Units 2/3 Outfall 0.7 mi. SSW	0.0120(1/ 1) (0.012- 0.012)	<LLD (0/ 0)	0
bay mussel		Cs-134 1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel		Cs-137 1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel		Fe-59 1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
bay mussel	I-131	1	0.3000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	K-40	1	0.2000	3.5000(1/ 1) (3.500- 3.500)	Units 2/3 Outfall 0.7 mi. SSW	3.5000(1/ 1) (3.500- 3.500)	<LLD (0/ 0)	0
bay mussel	Mn-54	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Mo(Tc)-99m	1	60	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ra-226	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-103	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-106	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Th-228	1	0.0500	0.1100(1/ 1) (0.110- 0.110)	Units 2/3 Outfall 0.7 mi. SSW	0.1100(1/ 1) (0.110- 0.110)	<LLD (0/ 0)	0
bay mussel	Zn-65	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
bay mussel	Zr(Nb)-95	1	0.0600	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Ag-110m	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-141	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-144	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-57	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-58	3	0.0200	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-60	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Cs-134	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Cs-137	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
black perch	Fe-59	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	I-131	3	0.3000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	K-40	3	0.2000	0.8000(2/ 2) (0.400- 1.200)	Newport Beach 30 mi. NW	1.2000(1/ 1) (1.200- 1.200)	1.2000(1/ 1) (1.200- 1.200)	0
black perch	Mn-54	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Mo(Tc)-99m	3	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ra-226	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-103	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-106	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Th-228	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

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Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed		Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurements
Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
keyhole limpet	Cs-137	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Fe-59	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	I-131	1	0.3000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	K-40	1	0.2000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Mn-54	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Mo(Tc)-99m	1	60	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ra-226	1	0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-103	1	0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-106	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
keyhole limpet	Th-228	1	0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Zn-65	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Zr(Nb)-95	1	0.0600	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
rock crab	Ag-110m	2	0.0100	0.0350(2/ 2) (0.030- 0.040)	Units 2/3 Outfall 0.7 mi. SSW	0.0400(1/ 1) (0.040- 0.040)	<LLD (0/ 0)	0
rock crab	Ce-141	2	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Ce-144	2	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Co-57	2	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Co-58	2	0.0200	0.0360(2/ 2) (0.029- 0.043)	Unit 1 Outfall 0.6 mi. NSW	0.0430(1/ 1) (0.043- 0.043)	<LLD (0/ 0)	0
rock crab	Co-60	2	0.0100	0.1850(2/ 2) (0.120- 0.250)	Unit 1 Outfall 0.6 mi. NSW	0.2500(1/ 1) (0.250- 0.250)	<LLD (0/ 0)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
rock crab	Cs-134	2	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Cs-137	2	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Fe-59	2	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	I-131	2	0.3000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	K-40	2	0.2000	2.6000(2/ 2) (1.800- 3.400)	Unit 1 Outfall 0.6 mi. WSW	3.4000(1/ 1) (3.400- 3.400)	<LLD (0/ 0)	0
rock crab	Mn-54	2	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Mo(Tc)-99m	2	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Ra-226	2	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Ru-103	2	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
rock crab	Ru-106	2	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Th-228	2	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Zn-65	2	0.1040	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Zr(Nb)-95	2	0.0600	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepshead	Ag-110m	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-141	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-144	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-57	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-58	3	0.0200	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
sheepshead	Co-60	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Cs-134	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Cs-137	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Fe-59	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	I-131	3	0.3000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	K-40	3	0.2000	0.7000(2/ 2) (0.600- 0.800)	Newport Beach 30 mi. NW	1.1000(1/ 1) (1.100- 1.100)	1.1000(1/ 1) (1.100- 1.100)	0
sheepshead	Mn-54	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Mo(Tc)-99m	3	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ra-226	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
sheepshead	Ru-103	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ru-106	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Th-228	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zn-65	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zr(Nb)-95	3	0.0600	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiny lobster	Ag-110m	1	0.0100	<LLD (0/ 0)	Newport Beach 30 mi. NW	0.0400(1/ 1) (0.040- 0.040)	0.0400(1/ 1) (0.040 0.040)	0
spiny lobster	Ce-141	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiny lobster	Ce-144	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiny lobster	Co-57	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
spiney lobster	Co-58	1	0.0200	<LLD (0/ 0)	0.0400(1/ 1) (0.040- 0.040)	0.0400(1/ 1) (0.040- 0.040)	0
				Newport Beach 30 mi. NW			
spiney lobster	Co-60	1	0.0100	<LLD (0/ 0)	0.1700(1/ 1) (0.170- 0.170)	0.1700(1/ 1) (0.170- 0.170)	0
				Newport Beach 30 mi. NW			
spiney lobster	Cs-134	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Cs-137	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Fe-59	1	0.1000	<LLD (0/ 0)	ALL <LLD	- -	<LLD (0/ 1)	0
spiney lobster	I-131	1	0.3000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	K-40	1	0.2000	<LLD (0/ 0)	1.7000(1/ 1) (1.700- 1.700)	1.7000(1/ 1) (1.700- 1.700)	0
				Newport Beach 30 mi. NW			
spiney lobster	Mn-54	1	0.0300	<LLD (0/ 0)	0.0400(1/ 1) (0.040- 0.040)	0.0400(1/ 1) (0.040- 0.040)	0
				Newport Beach 30 mi. NW			
spiney lobster	Na(Tc)-99m	1	60	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
spiney lobster	Ra-226	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-103	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-106	1 0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Th-228	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Zn-65	1 0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Zr(Nb)-95	1 0.0600	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
bay mussel	Ag-110m	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ce-141	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ce-144	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-57	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-58	1	0.0200	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-60	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Cs-134	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Cs-137	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Fe-59	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
bay mussel	I-131	1	0.3000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	K-40	1	0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Mn-54	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Mo(Tc)-99m	1	60	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ra-226	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-103	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-106	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Th-228	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Zn-65	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
bay mussel	Zr(Nb)-95	1	0.0600	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Ag-110m	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-141	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-144	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-57	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-58	3	0.0200	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-60	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Cs-134	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Cs-137	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
black perch	Fe-59	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	I-131	3	0.3000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	K-40	3	0.2000	0.5000(2/ 2) (0.500- 0.500)	Newport Beach 30 mi. NW	0.5500(1/ 1) (0.550- 0.550)	0.5500(1/ 1) (0.550- 0.550)	0
black perch	Mn-54	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Mo(Tc)-99m	3	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ra-226	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-103	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-106	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Th-228	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
black perch	Zn-65	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Zr(Nb)-95	3	0.0600	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ag-110m	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-141	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-144	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-57	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-58	1	0.0200	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-60	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Cs-134	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
keyhole limpet	Cs-137	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Fe-59	1 0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	I-131	1 0.3000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	K-40	1 0.2000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Mn-54	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Mo(Tc)-99m	1 60	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ra-226	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-103	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-106	1 0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: April 01, 1983 to June 30, 1983

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurements
Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
keyhole limpet	Th-228	1	0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
keyhole limpet	Zn-65	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
keyhole limpet	Zr(Nb)-95	1	0.0600	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
rock crab	Ag-110m	1	0.0100	0.1100(1/ 1) (0.110- 0.110)	Unit 1 Outfall 0.6 mi. WSW	0.1100(1/ 1) (0.110- 0.110)	<LLD (0/ 0) 0
rock crab	Ce-141	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
rock crab	Ce-144	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
rock crab	Co-57	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
rock crab	Co-58	1	0.0200	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
rock crab	Co-60	1	0.0100	0.0610(1/ 1) (0.061- 0.061)	Unit 1 Outfall 0.6 mi. WSW	0.0610(1/ 1) (0.061- 0.061)	<LLD (0/ 0) 0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
rock crab	Cs-134	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Cs-137	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Fe-59	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	I-131	1	0.3000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	K-40	1	0.2000	1.7200(1/ 1) (1.720- 1.720)	Unit 1 Outfall 0.6 mi. WSW	1.7200(1/ 1) (1.720- 1.720)	<LLD (0/ 0)	0
rock crab	Mn-54	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Mo(Tc)-99m	1	60	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Ra-226	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Ru-103	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
rock crab	Ru-106	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Th-228	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Zn-65	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
rock crab	Zr(Nb)-95	1	0.0600	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepshead	Ag-110m	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-141	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-144	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-57	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-58	3	0.0200	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
sheepshead	Co-60	3	0.0100	0.0230(1/ 2) (0.023- 0.023)	Unit 1 Outfall 0.6 mi. WSW	0.0230(1/ 1) (0.023- 0.023)	<LLD (0/ 1)	0
sheepshead	Cs-134	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Cs-137	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Fe-59	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	I-131	3	0.3000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	K-40	3	0.2000	0.8700(2/ 2) (0.740- 1.000)	Units 2/3 Outfall 0.7 mi. SSW	1.0000(1/ 1) (1.000- 1.000)	0.8000(1/ 1) (0.800- 0.800)	0
sheepshead	Mn-54	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Mo(Tc)-99m	3	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ra-226	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
sheepshead	Ru-103	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ru-106	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Th-228	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zn-65	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zr(Nb)-95	3	0.0600	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ag-110m	2	0.0100	0.0300(1/ 1) (0.030- 0.030)	Units 2/3 Outfall 0.7 mi. SSW	0.0300(1/ 1) (0.030- 0.030)	<LLD (0/ 1)	0
spiney lobster	Ce-141	2	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ce-144	2	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-57	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
spiney lobster	Co-58	2	0.0200	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-60	2	0.0100	0.0150(1/ 1) (0.015- 0.015)	Units 2/3 Outfall 0.7 mi. SSW	0.0150(1/ 1) (0.015- 0.015)	<LLD (0/ 1)	0
spiney lobster	Cs-134	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Cs-137	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Fe-59	2	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	I-131	2	0.3000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	K-40	2	0.2000	2.2000(1/ 1) (2.200- 2.200)	Newport Beach 30 mi. NW	2.8000(1/ 1) (2.800- 2.800)	2.8000(1/ 1) (2.800- 2.800)	0
spiney lobster	Mn-54	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Mo(Tc)-99m	2	60	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
spiney lobster	Ra-226	2	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-103	2	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-106	2	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Th-228	2	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Zn-65	2	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Zr(Nb)-95	2	0.0600	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (wet type)							
bay mussel	Ag-110m	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Ce-141	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Ce-144	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Co-57	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Co-58	1	0.0200	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Co-60	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Cs-134	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Cs-137	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
bay mussel	Fe-59	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
bay mussel	I-131	1 0.3000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	K-40	1 0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Mn-54	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Mo(Tc)-99m	1 60	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ra-226	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-103	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-106	1 0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Th-228	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Zn-65	1 0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
bay mussel	Zr(Nb)-95	1 0.0600	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Ag-110m	3 0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-141	3 0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-144	3 0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-57	3 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-58	3 0.0200	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-60	3 0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Cs-134	3 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Cs-137	3 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
black perch	Fe-59	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	I-131	3	0.3000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	K-40	3	0.2000	0.9500(2/ 2) (0.700- 1.200)	Unit 1 Outfall 0.6 mi. NSW	1.2000(1/ 1) (1.200- 1.200)	0.8000(1/ 1) (0.800- 0.800)	0
black perch	Mn-54	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Mo(Tc)-99m	3	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ra-226	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-103	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-106	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Th-228	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
black perch	Zn-65	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Zr(Nb)-95	3	0.0600	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ag-110m	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-141	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-144	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-57	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-58	1	0.0200	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-60	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Cs-134	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
keyhole limpet	Cs-137	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Fe-59	1 0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	I-131	1 0.3000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	K-40	1 0.2000	<LLD (0/ 0)	Newport Beach 30 mi. NW	0.2000(1/ 1) (0.200- 0.200)	0.2000(1/ 1) (0.200- 0.200)	0
keyhole limpet	Mn-54	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Mo(Tc)-99m	1 60	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ra-226	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-103	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-106	1 0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
keyhole limpet	Th-228	1	0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
keyhole limpet	Zn-65	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
keyhole limpet	Zr(Nb)-95	1	0.0600	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1) 0
sheepshead	Ag-110m	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
sheepshead	Ce-141	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
sheepshead	Ce-144	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
sheepshead	Co-57	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
sheepshead	Co-58	3	0.0200	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0
sheepshead	Co-60	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1) 0

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SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: July 01, 1983 to September 30, 1983

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurements
Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
sheepshead	Cs-134	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Cs-137	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Fe-59	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	I-131	3	0.3000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	K-40	3	0.2000	1.0000(2/ 2) (0.800- 1.200)	Unit 1 Outfall 0.6 mi. WSW	1.2000(1/ 1) (1.200- 1.200)	0.9000(1/ 1) (0.900- 0.900)	0
sheepshead	Mn-54	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Mo(Tc)-99m	3	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ra-226	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ru-103	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
sheepshead	Ru-106	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Th-228	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zn-65	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zr(Nb)-95	3	0.0600	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ag-110m	3	0.0100	0.0220(2/ 2) (0.019- 0.025)	Units 2/3 Outfall 0.7 mi. SSW	0.0250(1/ 1) (0.025- 0.025)	<LLD (0/ 1)	0
spiney lobster	Ce-141	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ce-144	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-57	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-58	3	0.0200	0.0200(1/ 2) (0.020- 0.020)	Units 2/3 Outfall 0.7 mi. SSW	0.0200(1/ 1) (0.020- 0.020)	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
spiney lobster	Co-60	3	0.0100	0.0200(1/ 2) (0.020- 0.020)	Units 2/3 Outfall 0.7 mi. SSW	0.0200(1/ 1) (0.020- 0.020)	<LLD (0/ 1)	0
spiney lobster	Cs-134	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Cs-137	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Fe-59	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	I-131	3	0.3000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	K-40	3	0.2000	2.9000(2/ 2) (2.800- 3.000)	Units 2/3 Outfall 0.7 mi. SSW	3.0000(1/ 1) (3.000- 3.000)	1.9000(1/ 1) (1.900- 1.900)	0
spiney lobster	Mn-54	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Mo(Tc)-99m	3	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ra-226	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
spiney lobster	Ru-103	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ru-106	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Th-228	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Zn-65	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Zr(Nb)-95	3	0.0600	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
bay mussel	Ag-110m	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ce-141	1 0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ce-144	1 0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-57	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-58	1 0.0200	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Co-60	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Cs-134	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Cs-137	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Fe-59	1 0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (Gamma type)							
bay mussel	I-131	1 0.3000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	K-40	1 0.2000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Mn-54	1 0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Mo(Tc)-99m	1 60	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ra-226	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-103	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Ru-106	1 0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Th-228	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
bay mussel	Zn-65	1 0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
bay mussel	Zr(Nb)-95	1	0.0600	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
black perch	Ag-110m	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-141	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ce-144	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-57	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-58	3	0.0200	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Co-60	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Cs-134	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Cs-137	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
black perch	Fe-59	3 0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	I-131	3 0.3000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	K-40	3 0.2000	0.5650(2/ 2) (0.400- 0.730)	Newport Beach 30 mi. NW	0.8200(1/ 1) (0.820- 0.820)	0.8200(1/ 1) (0.820- 0.820)	0
black perch	Mn-54	3 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Mo(Tc)-99m	3 60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ra-226	3 0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-103	3 0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Ru-106	3 0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Th-228	3 0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
black perch	Zn-65	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
black perch	Zr(Nb)-95	3	0.0600	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ag-110m	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-141	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ce-144	1	0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-57	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-58	1	0.0200	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Co-60	1	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Cs-134	1	0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
keyhole limpet	Cs-137	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Fe-59	1 0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	I-131	1 0.3000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	K-40	1 0.2000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Mn-54	1 0.0300	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Mo(Tc)-99m	1 60	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ra-226	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-103	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Ru-106	1 0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
keyhole limpet	Th-228	1 0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Zn-65	1 0.1000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
keyhole limpet	Zr(Nb)-95	1 0.0600	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepcrab	Ag-110m	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Ce-141	1 0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Ce-144	1 0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Co-57	1 0.0300	<LLD (0/ 1)	ALL <LLD	----	<LLD (0/ 0)	0
sheepcrab	Co-58	1 0.0200	<LLD (0/ 1)	ALL <LLD	--	<LLD (0/ 0)	0
sheepcrab	Co-60	1 0.0100	<LLD (0/ 1)	ALL <LLD	-	<LLD (0/ 0)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
sheepcrab	Cs-134	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
sheepcrab	Cs-137	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
sheepcrab	Fe-59	1	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
sheepcrab	I-131	1	0.3000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
sheepcrab	K-40	1	0.2000	1.7000(1/ 1) (1.700- 1.700)	Units 2/3 Outfall 0.7 mi. SSW	1.7000(1/ 1) (1.700- 1.700)	<LLD (0/ 0) 0
sheepcrab	Mn-54	1	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
sheepcrab	Mo(Tc)-99m	1	60	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
sheepcrab	Ra-226	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0
sheepcrab	Ru-103	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0) 0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
sheepcrab	Ru-106	1 0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Th-228	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Zn-65	1 0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepcrab	Zr(Nb)-95	1 0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
sheepshead	Ag-110m	3 0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-141	3 0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ce-144	3 0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-57	3 0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Co-58	3 0.0200	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
sheepshead	Co-60	3	0.0100	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Cs-134	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Cs-137	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Fe-59	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	I-131	3	0.3000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	K-40	3	0.2000	0.7700(2/ 2) (0.620- 0.920)	Unit 1 Outfall 0.6 mi. WSW	0.9200(1/ 1) (0.920- 0.920)	0.8000(1/ 1) (0.800- 0.800)	0
sheepshead	Mn-54	3	0.0300	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Mo(Tc)-99m	3	60	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ra-226	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
sheepshead	Ru-103	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Ru-106	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Th-228	3	0.0500	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zn-65	3	0.1000	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
sheepshead	Zr(Nb)-95	3	0.0600	<LLD (0/ 2)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ag-110m	2	0.0100	0.0120(1/ 1) (0.012- 0.012)	Unit 1 Outfall 0.6 mi. WSW	0.0120(1/ 1) (0.012- 0.012)	<LLD (0/ 1)	0
spiney lobster	Ce-141	2	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Ce-144	2	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-57	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)								
spiney lobster	Co-58	2	0.0200	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Co-60	2	0.0100	0.0130(1/ 1) (0.013- 0.013)	Unit 1 Outfall 0.6 mi. WSW	0.0130(1/ 1) (0.013- 0.013)	<LLD (0/ 1)	0
spiney lobster	Cs-134	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Cs-137	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Fe-59	2	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	I-131	2	0.3000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	K-40	2	0.2000	2.2000(1/ 1) (2.200- 2.200)	Unit 1 Outfall 0.6 mi. WSW	2.2000(1/ 1) (2.200- 2.200)	1.6500(1/ 1) (1.650- 1.650)	0
spiney lobster	Mn-54	2	0.0300	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiney lobster	Na(Tc)-99m	2	60	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Non-Migratory Marine Quarterly Composite (pCi/g) (bone type)							
spiny lobster	Ra-226	2	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiny lobster	Ru-103	2	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiny lobster	Ru-106	2	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiny lobster	Th-228	2	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiny lobster	Zn-65	2	0.1000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
spiny lobster	Zr(Nb)-95	2	0.0600	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 13a Local Crops Semi-Annual Composite (pCi/g)							
cucumber	Ag-110m	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Be-7	1 0.0400	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Ce-141	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Ce-144	1 0.0200	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Co-58	1 0.0070	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Co-60	1 0.0070	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Cs-134	1 0.0050	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Cs-137	1 0.0050	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	I-131	1 0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 13a Local Crops Semi-Annual Composite (pCi/g)								
cucumber	K-40	1	0.0700	1.5700(1/ 1) (1.570- 1.570)	San Mateo Canyon 2.6 mi. NW	1.5700(1/ 1) (1.570- 1.570)	<LLD (0/ 0)	0
cucumber	Ru-103	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Zr(Nb)-95	1	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
tomato	Ag-110m	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Be-7	2	0.0400	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Ce-141	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Ce-144	2	0.0200	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Co-58	2	0.0070	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Co-60	2	0.0070	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 13a Local Crops Semi-Annual Composite (pCi/g)								
tomato	Cs-134	2	0.0050	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Cs-137	2	0.0050	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	I-131	2	0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	K-40	2	0.0700	2.3000(1/ 1) (2.300- 2.300)	SE of Oceanside 22 mi. SE	2.6000(1/ 1) (2.600- 2.600)	2.6000(1/ 1) (2.600- 2.600)	0
tomato	Ru-103	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Zr(Nb)-95	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 13a Local Crops Semi-Annual Composite (pCi/g)							
cucumber	Ag-110m	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Be-7	1 0.0400	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Ce-141	1 0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Ce-144	1 0.0200	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Co-58	1 0.0070	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Co-60	1 0.0070	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Cs-134	1 0.0050	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Cs-137	1 0.0050	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	I-131	1 0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0

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Table 13a Local Crops Semi-Annual Composite (pCi/g)							
cucumber	K-40	1	0.0700	1.7000(1/ 1) (1.700- 1.700)	San Mateo Canyon 2.6 mi. NW 1.7000(1/ 1) (1.700- 1.700)	<LLD (0/ 0)	0
cucumber	Ru-103	1	0.0100	<LLD (0/ 1)	ALL <LLD	----- <LLD (0/ 0)	0
cucumber	Zr(Nb)-95	1	0.0100	<LLD (0/ 1)	ALL <LLD	----- <LLD (0/ 0)	0
kale	Ag-110m	2	0.0100	<LLD (0/ 0)	ALL <LLD	----- <LLD (0/ 2)	0
kale	Be-7	2	0.0400	<LLD (0/ 0)	SE of Oceanside 22 mi. SE 0.0800(1/ 2) (0.080- 0.080)	0.0800(1/ 2) (0.080- 0.080)	0
kale	Ce-141	2	0.0100	<LLD (0/ 0)	ALL <LLD	----- <LLD (0/ 2)	0
kale	Ce-144	2	0.0200	<LLD (0/ 0)	ALL <LLD	----- <LLD (0/ 2)	0
kale	Co-58	2	0.0070	<LLD (0/ 0)	ALL <LLD	----- <LLD (0/ 2)	0
kale	Co-60	2	0.0070	<LLD (0/ 0)	ALL <LLD	----- <LLD (0/ 2)	0

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Table 13a Local Crops Semi-Annual Composite (pCi/g)							
kale	Cs-134	2	0.0050	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 2)	0
kale	Cs-137	2	0.0050	<LLD (0/ 0)	SE of Oceanside 22 mi. SE	0.0400(1/ 2) (0.040- 0.040)	0.0400(1/ 2) (0.040- 0.040)	0
kale	I-131	2	0.0030	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 2)	0
kale	K-40	2	0.0700	<LLD (0/ 0)	SE of Oceanside 22 mi. SE	2.4450(2/ 2) (1.790- 3.100)	2.4450(2/ 2) (1.790- 3.100)	0
kale	Ru-103	2	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 2)	0
kale	Zr(Nb)-95	2	0.0100	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 2)	0
tomato	Ag-110m	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Be-7	2	0.0400	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Ce-141	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 13a Local Crops Semi-Annual Composite (pCi/g)							
tomato	Ce-144	2	0.0200	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Co-58	2	0.0070	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Co-60	2	0.0070	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Cs-134	2	0.0050	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Cs-137	2	0.0050	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	I-131	2	0.0030	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	K-40	2	0.0700	2.1000(1/ 1) (2.100- 2.100)	SE of Oceanside 22 mi. SE	2.1500(1/ 1) (2.150- 2.150)	2.1500(1/ 1) (2.150- 2.150)	0
tomato	Ru-103	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Zr(Nb)-95	2	0.0100	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 13b Local Crops Semi-Annual Composite (pCi/g)							
cucumber	H-3 Aqueous	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	H-3 Bound	1	0.5000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Sr-90	1	0.0040	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
tomato	H-3 Aqueous	2	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	H-3 Bound	2	0.5000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Sr-90	2	0.0040	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 12b Local Crops Semi-Annual Composite (pCi/g)							
cucumber	H-3 Aqueous	1	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	H-3 Bound	1	0.5000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
cucumber	Sr-90	1	0.0040	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 0)	0
kale	H-3 Aqueous	2	0.0500	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 2)	0
kale	H-3 Bound	2	0.5000	<LLD (0/ 0)	ALL <LLD	-----	<LLD (0/ 2)	0
kale	Sr-90	2	0.0040	<LLD (0/ 0)	SE of Oceanside 22 mi. SE	0.0220(2/ 2) (0.018- 0.026)	0.0220(2/ 2) (0.018- 0.026)	0
tomato	H-3 Aqueous	2	0.0500	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	H-3 Bound	2	0.5000	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0
tomato	Sr-90	2	0.0040	<LLD (0/ 1)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 14 Soil Samples Annual Composite (pCi/g)							
Ag-110m	S	0.1000	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Be-7	S	0.3000	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Ce-141	S	0.1000	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Ce-144	S	0.1000	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-58	S	0.0500	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
Co-60	S	0.0500	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
I-131	S	0.5000	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0
K-40	S	2.0000	13.8(4/ 4) (6.600-20.000)	Huntington Beach Generating Station 37 mi. NW	22(1/ 1) (22.000-22.000)	22(1/ 1) (22.000-22.000)	0
Ru-103	S	0.1000	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 14 Soil Samples Annual Composite (pCi/g)							
Sr-90	S	0.0100	0.0250(2/ 4) (0.020- 0.030)	Old Route 101 SE 3.0 mi. SE	0.0300(1/ 1) (0.030- 0.030)	<LLD (0/ 1)	0
Zr(Nb)-95	S	0.1300	<LLD (0/ 4)	ALL <LLD	-----	<LLD (0/ 1)	0

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Table 18 Kelp Semi-Annual Composite (pCi/g)							
macrocystis p.	Ag-110m	4	0.0050	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Je-141	4	0.0200	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Ce-144	4	0.0200	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Cs-57	4	0.0050	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Cs-58	4	0.0040	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Co-60	4	0.0040	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Cs-134	4	0.0040	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Cs-137	4	0.0040	0.0047(2/ 3) (0.004- 0.005)	Barn Kelp Bed 6.6 mi. SSE	0.0053(1/ 1) (0.005- 0.005)	<LLD (0/ 1)	0
macrocystis p.	Fe-59	4	0.0200	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

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ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: April 01, 1983 to June 30, 1983

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurements
Table 15 Kelp Semi-Annual Composite (pCi/g)							
macrocystis p.	H-3 Aqueous	4	0.0500	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	H-3 Bound	4	0.5000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	I-131	4	0.0100	0.0430(3/ 3) (0.027- 0.053)	San Onofre Kelp Bed 1.5 mi. S	0.0530(1/ 1) (0.053- 0.053)	0.0250(1/ 1) (0.025- 0.025)	0
macrocystis p.	K-40	4	0.0400	6.1000(3/ 3) (4.600- 7.200)	San Mateo Kelp Bed 3.5 mi. WNW	7.2000(1/ 1) (7.200- 7.200)	6.3000(1/ 1) (6.300- 6.300)	0
macrocystis p.	Mn-54	4	0.0050	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Mo(Tc)-99m	4	2.0000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Ra-226	4	0.0090	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Ru-103	4	0.0090	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Ru-106	4	0.0200	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

27MAR84

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: April 01, 1983 to June 30, 1983

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Table 15 Kelp Semi-Annual Composite (pCi/g)							
macrocystis p.	Th-228 4	0.0090	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Zn-65 4	0.0200	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Zr(Nb)-95 4	0.0180	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

27MAR84

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: October 01, 1983 to December 31, 1983

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurements
Table 15 Kelp Semi-Annual Composite (pCi/g)							
macrocystis p.	Ag-110m	4	0.0050	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Ce-141	4	0.0200	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Ce-144	4	0.0200	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Co-57	4	0.0050	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Co-58	4	0.0040	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Co-60	4	0.0040	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Cs-134	4	0.0040	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Cs-137	4	0.0040	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Fe-59	4	0.0200	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

27MAR84

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: October 01, 1983 to December 31, 1983

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurements
Table 15 Kelp Semi-Annual Composite (pCi/g)							
macrocystis p.	H-3 Aqueous	4	0.0500	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	H-3 Bound	4	0.5000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	I-131	4	0.0100	0.0227(3/ 3) (0.015- 0.033)	San Onofre Kelp Bed 1.5 mi. S	0.0330(1/ 1) (0.033- 0.033)	0.0250(1/ 1) (0.025- 0.025)	0
macrocystis p.	K-40	4	0.0400	5.3333(3/ 3) (4.600- 6.700)	San Onofre Kelp Bed 1.5 mi. S	6.7000(1/ 1) (6.700- 6.700)	4.7000(1/ 1) (4.700- 4.700)	0
macrocystis p.	Mn-54	4	0.0050	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Mo(Tc)-99m	4	2.0000	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Ra-226	4	0.0090	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Ru-103	4	0.0090	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Ru-106	4	0.0200	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: October 01, 1983 to December 31, 1983

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD)	All Indicator Locations Mean(f) Range	Location with Highest Statistical Mean Name, Distance and Direction	Mean(f) Range	Control Locations Mean(f) Range	Number of Nonroutine Reported Measurements
Table 15 Kelp Semi-Annual Composite (pCi/g)							
macrocystis p.	Th-228	4	0.0090	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Zn-65	4	0.0200	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0
macrocystis p.	Zr(Nb)-95	4	0.0100	<LLD (0/ 3)	ALL <LLD	-----	<LLD (0/ 1)	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: January 1, 1983 to December 31, 1983

dium or thway nit of asurement)	Type and Total Number of Analyses Performed		Lower Limit of Detection (LLD)	All Indicator Locations Means (f) Range	Location with Highest Annual Mean Name, Distance and Direction	Mean (f) Range	Control Locations Mean (f) Range	Number of Nonroutine Reported Measurements
ble 16 ckrabbit Ci/g)								
Femur	Sr-89	2	(3)	<LLD (2/2)	All <LLD	----	----	0
	Sr-90	2	(1/2)	14.00 (14.00-14.00)	0.5 mile east	----	----	0
Thyroid	I-131	2	(5)	<LLD (2/2)	All <LLD	----	----	0
Flesh	Be-7	2	(0.3)	<LLD (2/2)	All <LLD	----	----	0
	Co-58	2	(0.06)	<LLD (2/2)	All <LLD	----	----	0
	Co-60	2	(0.06)	<LLD (2/2)	All <LLD	----	----	0
	Zr-Nb-95	2	(0.1)	<LLD (2/2)	All <LLD	----	----	0
	Ru-103	2	(0.06)	<LLD (2/2)	All <LLD	----	----	0
	Ag-110m	2	(0.06)	<LLD (2/2)	All <LLD	----	----	0
	I-131	2	(0.05)	<LLD (2/2)	All <LLD	----	----	0
	Cs-134	2	(0.06)	<LLD (2/2)	All <LLD	----	----	0
	Cs-137	2	(0.06)	<LLD (2/2)	All <LLD	----	----	0
	Ce-141	2	(0.2)	<LLD (2/2)	All <LLD	----	----	0
	Ce-144	2	(0.2)	<LLD (2/2)	All <LLD	----	----	0

APPENDIX B

SAMPLE TYPE AND SAMPLING LOCATION

RADIOLOGICAL ENVIRONMENTAL MONITORING SAMPLE LOCATIONS

Type of Sample and Sampling Location	Distance* (Miles)	Direction*
Direct Radiation		
1 City of San Clemente (SDG&E Offices)	5.6	NW
2 Camp San Mateo	3.5	N
3 Camp San Onofre	2.6	NE
4 Camp Horno	4.5	E
5 Camp Las Pulgas	8.5	ESE
6 Old Route 101 - ESE	3.0	ESE
7 Old Route 101 - ESE	0.5	ESE
8 Noncommissioned Officers Beach Club	1.2	NW
9 Basilone Road/I-5 Freeway Offramp	2.0	NW
10 Bluff	0.8	NW
11 Visitors Center	0.2	NNE
12 South Edge of Switchyard	0.2	NE
13 Site Boundary	0.13	SE
14 Huntington Beach Generating Station	37.0	NW
15 ESE Site Boundary	0.2	ESE
16 East Site Boundary	0.5	E
17 Transit Dose	-	-
18 Transit Dose	-	-
19 San Clemente Highlands	5.0	NNW
20 San Clemente Pier	5.0	NW

* Distance (miles) and direction (sectors) are measured relative to Units 2&3 midpoint. Direction is determined from degrees true north.

RADIOLOGICAL ENVIRONMENTAL MONITORING SAMPLE LOCATIONS

Type of Sample and Sampling Location	Distance (Miles)	Direction*
21 Concordia Elementary School - San Clemente	3.5	NW
22 Coast Guard Station - San Mateo Point	2.7	WNW
23 San Clemente General Hospital	8.2	NW
24 San Clemente High School	6.0	NW
25 Convalescent Home - San Clemente	8.0	NW
26 Dana Hills High School	11.0	NW
27 U.S. Post Office - Dana Point	10.5	NW
28 Doheny Fire Station - Capistrano Beach	9.5	NW
29 San Juan Capistrano Fire Station	10.8	NW
30 Laguna Beach Fire Station	17.5	NW
31 Aurora Park Mission Viejo	18.6	NNW
32 Santa Ana Police Department	32.0	NW
33 Camp Talega	5.7	N
34 San Onofre School	1.7	NW
35 Range 312 (Marine Corps Base, Camp Pendleton)	4.7	NNE
36 Range 208C (Marine Corps Base, Camp Pendleton)	4.0	NE
37 Laguna Niguel Fire Station	13.5	NW
38 San Onofre State Beach Park	3.6	SE
39 Basilone Road Trailer Park	1.4	NNW
40 SCE Training Center - Japanese Mesa	0.8	NW
41 Old Route 101 - East	0.3	E
42 Horno Canyon	4.6	E

* Distance (miles) and direction (sectors) are measured relative to Units 2&3 midpoint. Direction is determined from degrees true north.

RADIOLOGICAL ENVIRONMENTAL MONITORING SAMPLE LOCATIONS

Type of Sample and Sampling Location	Distance (Miles)	Direction*
43 Edson Range (Marine Corps Base, Camp Pendleton)	10.6	SE
44 Fallbrook Fire Station	18.0	E
45 Interstate 5 Weigh Station	2.0	ESE
46 San Onofre State Beach Park	1.4	SE
47 Camp Las Flores	8.6	SE
48 Mainside (Marine Corps Base, Camp Pendleton)	15.0	ESE
49 Camp Chappo	12.8	ESE
50 Oceanside Fire Station	15.5	SE
51 Carlsbad Fire Station	18.6	SE
52 Vista Fire Station	21.0	ESE
53 San Diego County Operations Center	45.0	SE
54 Escondido Fire Station	32.0	ESE
55 San Onofre State Beach (Unit 1)	0.2	W
56 San Onofre State Beach (Unit 1)	0.1	W
57 San Onofre State Beach (Unit 2)	0.1	SSW
58 San Onofre State Beach (Unit 3)	0.1	S
59 SONGS Meteorological Tower	0.3	NW
Airborne		
1 City of San Clemente (SDG&E Offices)	5.5	NW
2 Camp San Onofre	1.8	NE
3 Huntington Beach Generating Station	37.0	NW

* Distance (miles) and direction (sectors) are measured relative to Units 2&3 midpoint. Direction is determined from degrees true north.

RADIOLOGICAL ENVIRONMENTAL MONITORING SAMPLE LOCATIONS

Type of Sample and Sampling Location		Distance (Miles)	Direction*
4	Northeast Site Boundary	0.2	NNE
5	Units 2&3 Switchyard	0.13	ESE
6	SONGS Meteorological Tower	0.3	NW
Soil Samples			
1	Camp San Onofre	2.5	NE
2	Old Route 101 - SE	3.0	SE
3	Basilone Road/I-5 Freeway Offramp	2.0	NW
4	Huntington Beach Generating Station	37.0	NW
5	East Site Boundary	0.2	NNW
Ocean Water			
A	Station Discharge Outfall - Unit 1	0.5	SW
B	Outfall - Unit 2	0.7	SW
C	Outfall - Unit 3	0.7	SW
D	Newport Beach	30.0	NW
Drinking Water			
1	Tri-Cities Municipal Water District Reservoir	8.7	NW
2	San Clemente Golf Course Well	3.5	NNW
3	Huntington Beach	37.0	NW

* Distance (miles) and direction (sectors) are measured relative to Units 2&3 midpoint. Direction is determined from degrees true north.

RADIOLOGICAL ENVIRONMENTAL MONITORING SAMPLE LOCATIONS

Type of Sample and Sampling Location		Distance (Miles)	Direction*
Sediment from Shoreline (Beach Sand)			
1	San Onofre State Beach	0.6	SE
2	San Onofre Surfing Beach	0.9	NW
3	San Onofre State Beach	3.5	SE
4	Newport Beach (North End)	30.0	NW
Local Crops			
1	San Mateo Canyon	2.6	NW
2	Southeast of Oceanside	22.0	SE
Non-Migratory Marine Animals			
A	Unit 1 Outfall	0.6	WSW
B	Units 2&3 Outfall	0.7	SSW
C	Newport Beach	30.0	NW
Kelp			
A	San Onofre Kelp Bed	1.5	S
B	San Mateo Kelp Bed	3.5	WNW
C	Barn Kelp Bed**	6.6	SSE
D	Newport Beach	30.0	NW

* Distance (miles) and direction (sectors) are measured relative to Units 2&3 midpoint. Direction is determined from degrees true north.

**This kelp has been replaced by Carlsbad kelp bed because Barn kelp bed no longer exists.

RADIOLOGICAL ENVIRONMENTAL MONITORING SAMPLE LOCATIONS

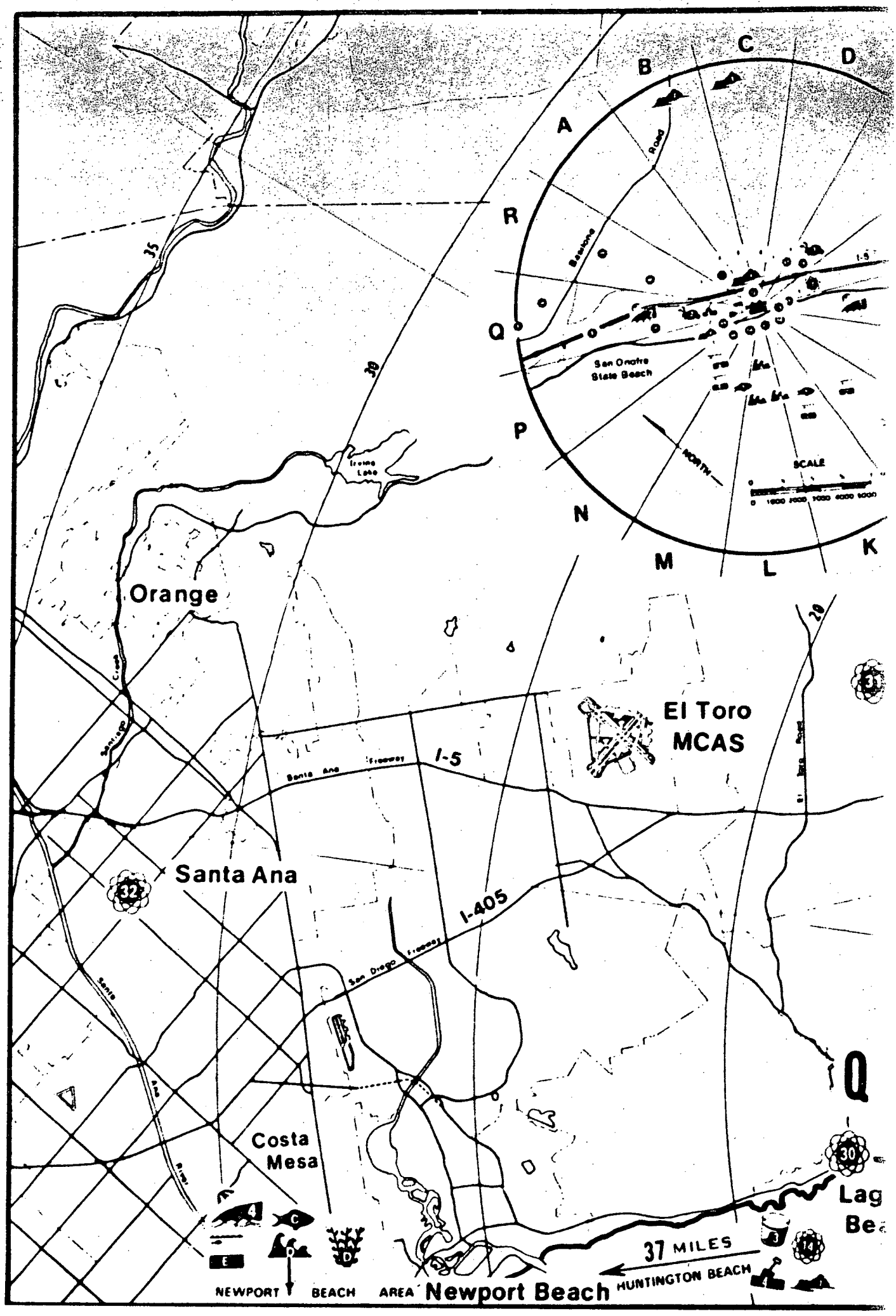
Type of Sample and Sampling Location		Distance (Miles)	Direction*
Ocean Bottom Sediments			
A	Unit 1 Outfall	0.5	W
B	Unit 1 Outfall	0.6	W
C	Unit 2 Outfall	0.8	SSW
D	Unit 3 Outfall	0.9	S
E	Newport Beach	30.0	NW
1	Jack Rabbit	0.5	E

* Distance (miles) and direction (sectors) are measured relative to Units 2&3 midpoint. Direction is determined from degrees true north.

SECTOR AND DIRECTION DESIGNATION FOR RADIOLOGICAL ENVIRONMENTAL MONITORING SAMPLE LOCATION MAP

Degrees True North from SONGS 2&3 Mid-Point			22.5°	Nomenclature
Sector Limit	Center Line	Sector Limit	Sector*	Direction
348.75°F	0 & 360	11.25	A	N
11.25	22.5	33.75	B	NNE
33.75	45	56.25	C	NE
56.25	67.5	78.75	D	ENE
78.75	90	101.25	E	E
101.25	112	123.75	F	ESE
123.75	135	146.25	G	SE
146.25	157	168.75	H	SSE
168.75	180	191.25	J	S
191.25	202.5	213.75	K	SSW
213.75	225	236.25	L	SW
236.25	247.5	258.75	M	WSW
258.75	270	281.25	N	W
281.25	292.5	303.75	P	WNW
303.75	315	326.25	Q	NW
326.25	337.5	348.75	R	NNW

* The letters I and O have been omitted from these sector designators so as to eliminate possible confusion between numbers and letters.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I-5
Santa Ana Freeway
Santa Ana
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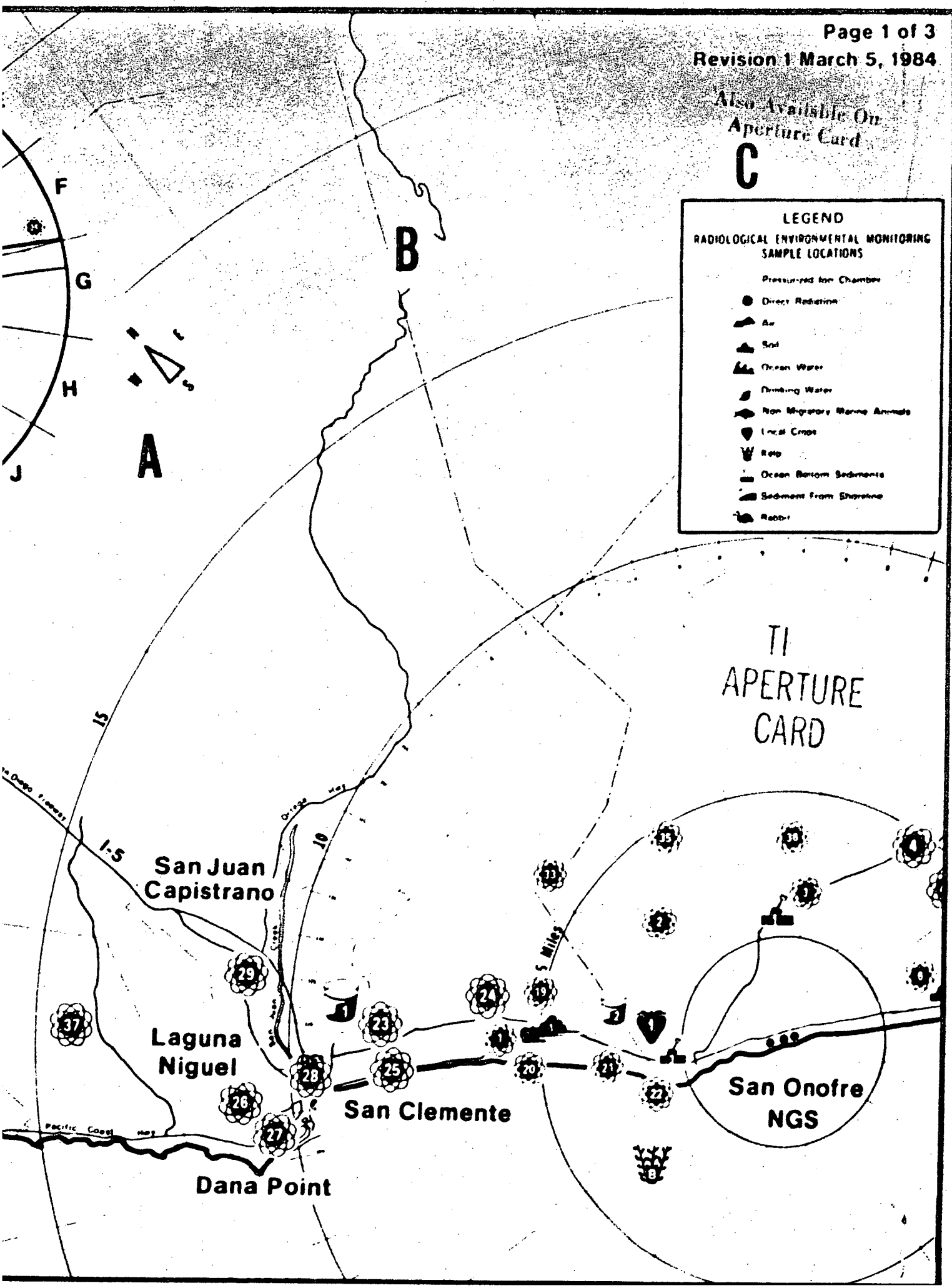
37 MILES
HUNTINGTON BEACH
NEWPORT BEACH AREA
Newport Beach

Also Available On
Aperture Card



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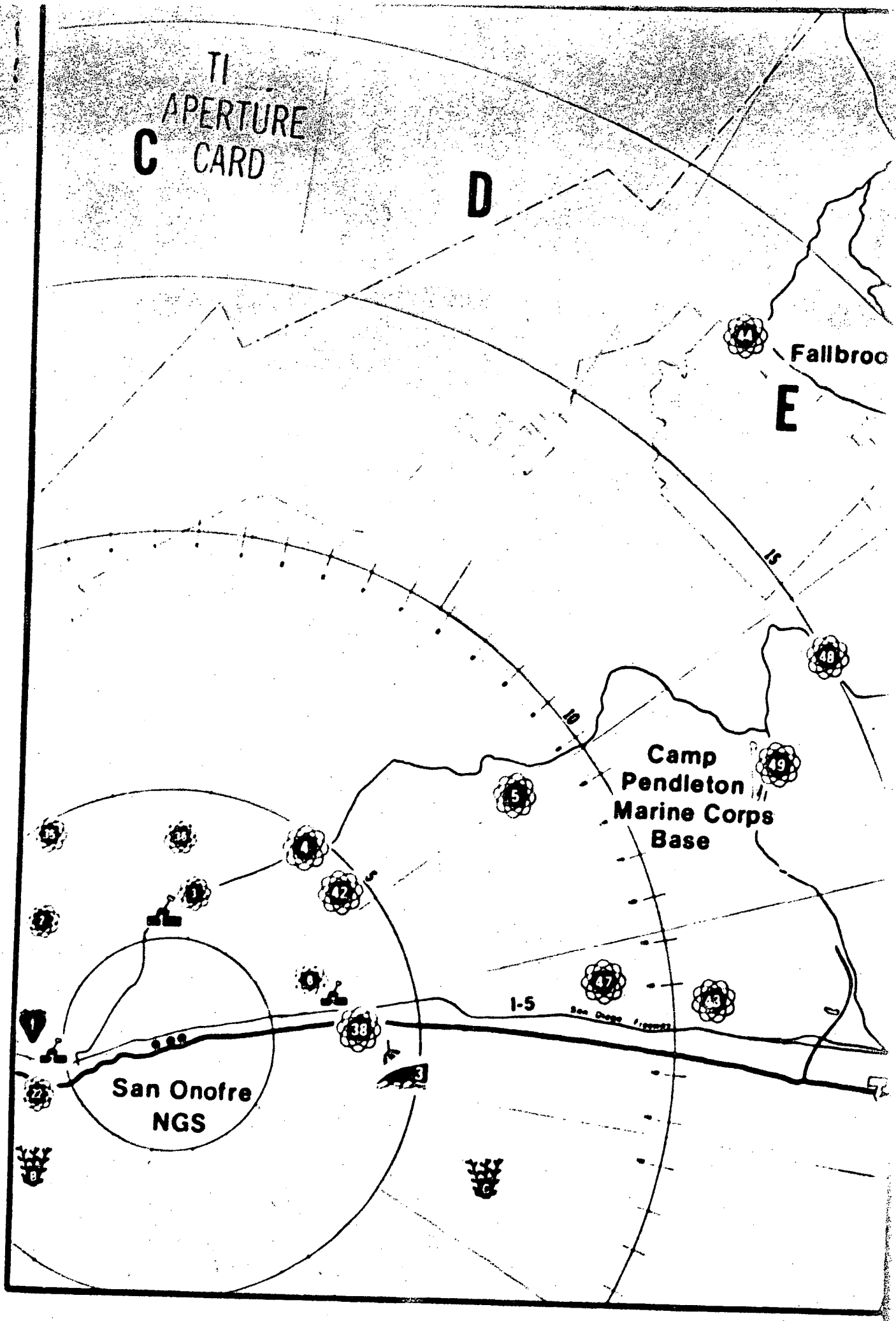
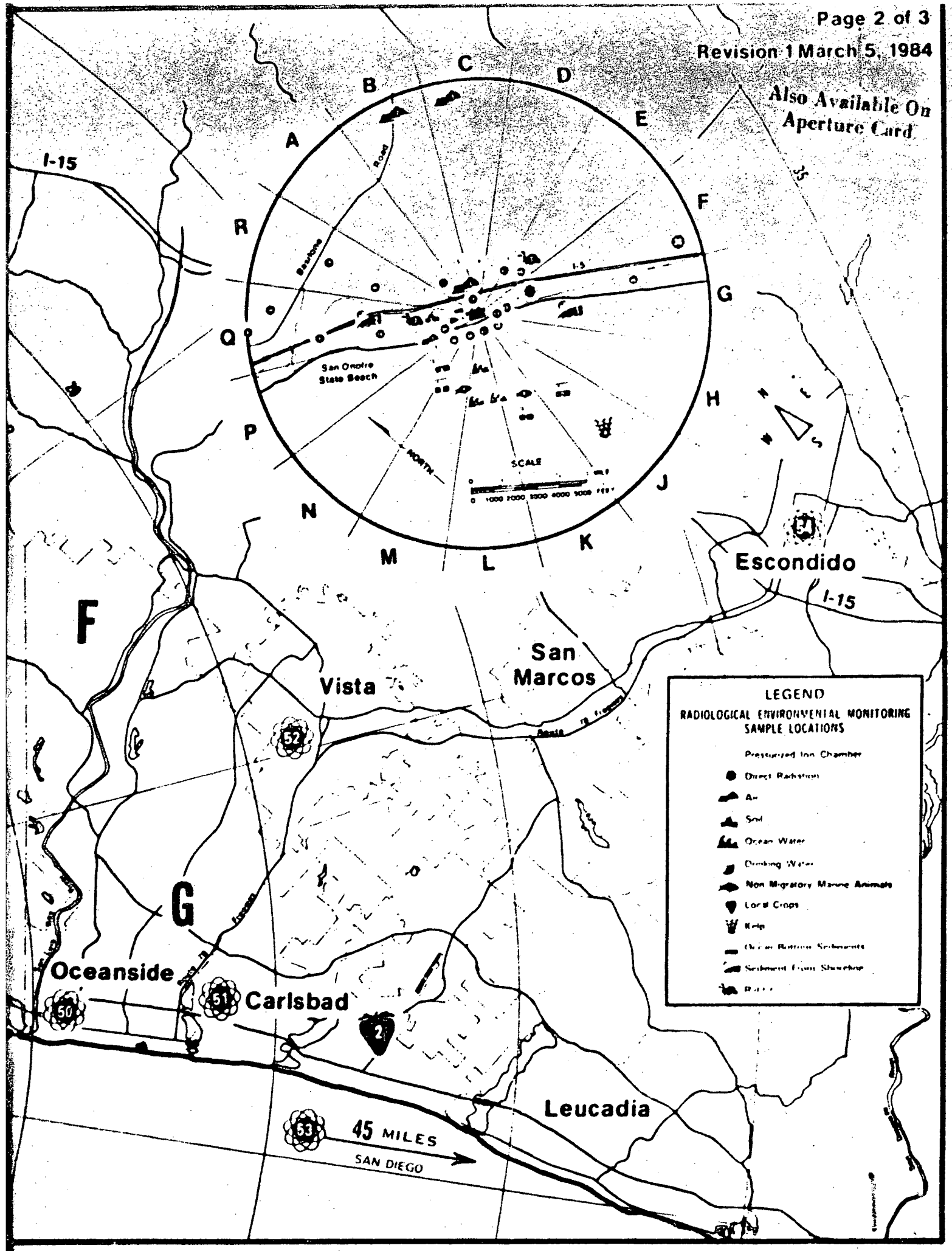


Revision 1 March 5, 1984

Also Available On Aperture Card



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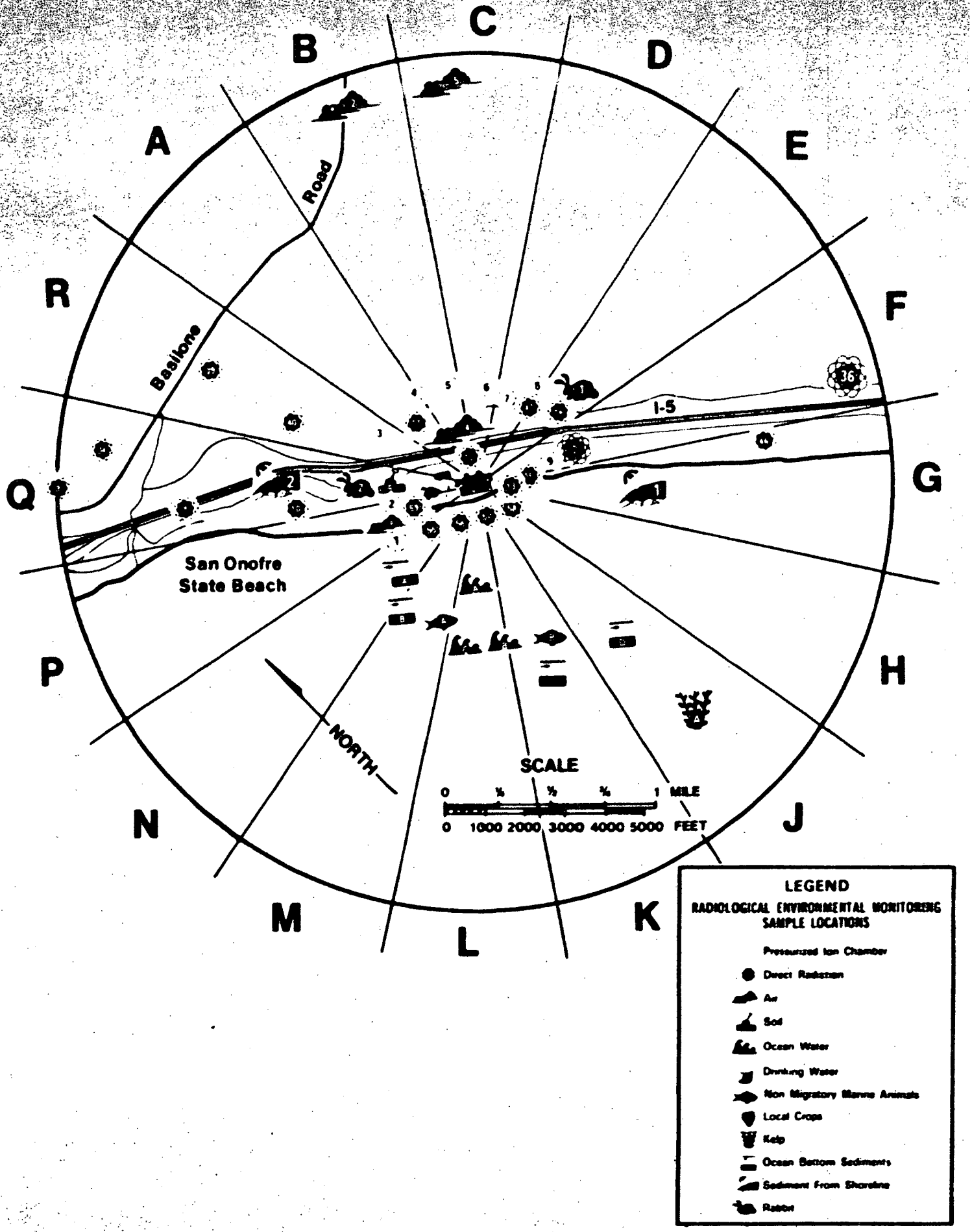
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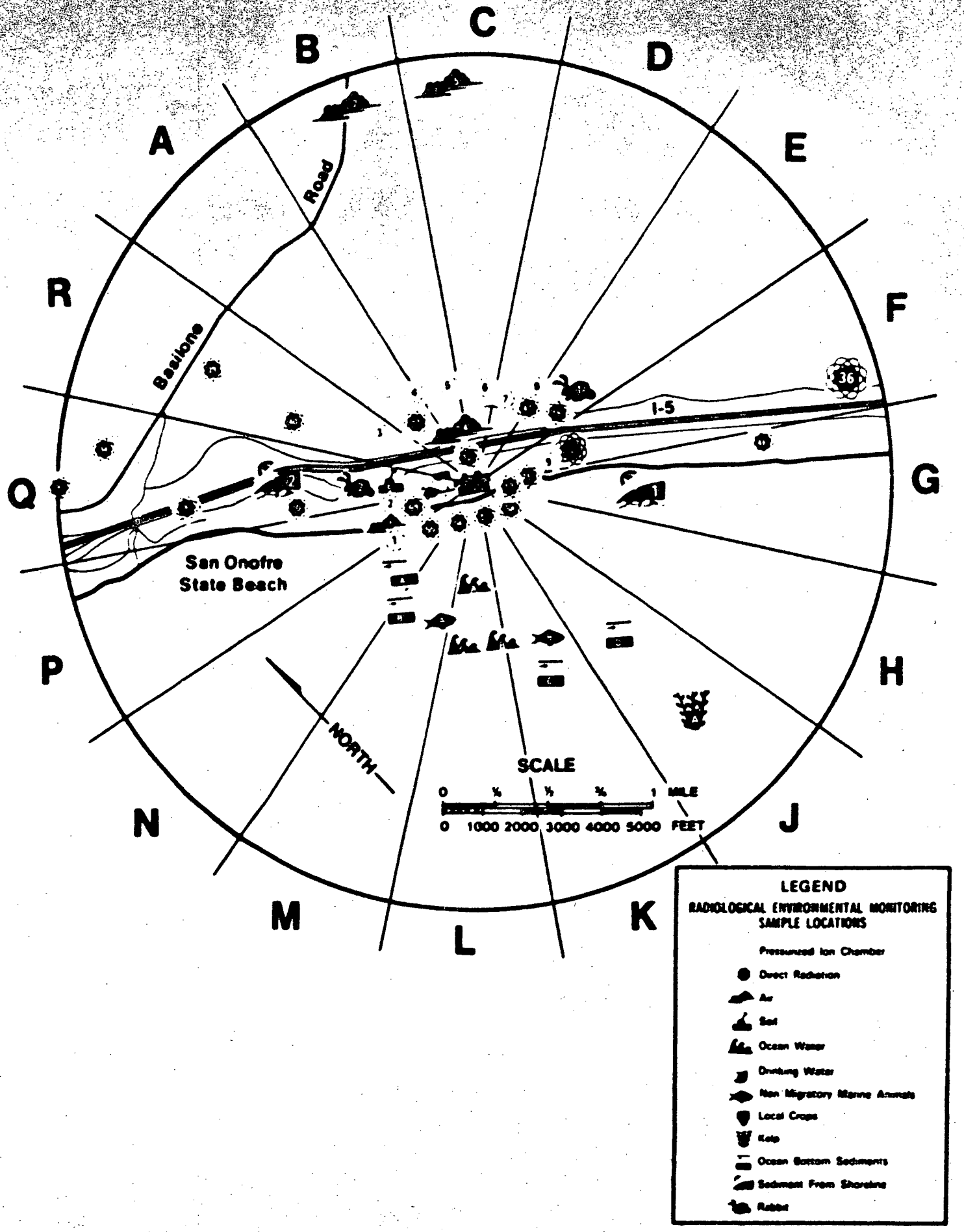
LEGEND
RADIOLOGICAL ENVIRONMENTAL MONITORING
SAMPLE LOCATIONS
Pressurized Ion Chamber
Direct Radiation
Air
Soil
Ocean Water
Drinking Water
Non Migratory Marine Animals
Local Crops
Kelp
Ocean Bottom Sediments
Sediment From Shoreline
Rabbit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LEGEND
RADIOLOGICAL ENVIRONMENTAL MONITORING
SAMPLE LOCATIONS
Pressurized Ion Chamber
Direct Radiation
Air
Soil
Ocean Water
Drinking Water
Non Migratory Marine Animals
Local Crops
Kelp
Ocean Bottom Sediments
Sediment From Shoreline
Rubble

APPENDIX C

TWICE-BACKGROUND TABLES

APPENDIX C

MEASUREMENTS EXCEEDING TWICE BACKGROUND LEVEL*

Medium	Analysis Performed	Location	Date of Collection	Indicator	Control
TLD**	Gamma Exposure	San Onofre State Beach (Unit 1)	3/31/83	34.1	26.1
	Gamma Exposure	San Onofre State Beach (Unit 1)	6/30/83	33.8	26.1
	Gamma Exposure	San Onofre State Beach (Unit 1)	9/30/83	32.9	25.7
Quarterly Composite Airborne Particulates (pCi/m^3)	Gross Alpha	City of San Clemente (SDG&E Offices)	6/30/83	0.0022	0.0005
	Gross Alpha	Camp San Onofre	6/30/83	0.0021	0.0005
	Gross Alpha	Northeast Site Boundary	6/30/83	0.0015	0.0005
	Gross Alpha	Units 2/3 Switchyard	6/30/83	0.0016	0.0005
Monthly Drinking Water Filtrate (pCi/l)	Gross Beta	San Onofre Golf Course	1/4/83	14	6
	Gross Beta	Tri-Cities MWD Reservoir	2/1/83	14	6
	Gross Beta	Tri-Cities MWD Reservoir	10/4/83	20	9
	Gross Beta	Tri-Cities MWD Reservoir	11/1/83	18	6
	Gross Beta	San Clemente Golf Course	11/1/83	13	6
Quarterly Composite Drinking Water Filtrate Analysis (pCi/l)	Gross Beta	Tri-Cities MWD Reservoir	12/31/83	22	9

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* Reported values are based on dry weight (where applicable).

** For external dose, measurements exceeding 1.25 times background were reported.

APPENDIX C (cont.)

MEASUREMENTS EXCEEDING TWICE BACKGROUND LEVEL

Medium	Analysis Performed	Location	Date of Collection	Indicator	Control
Semi-Annual Ocean Bottom Sediment Gamma Spectral Analysis (pCi/g)	Ra-226	SONGS I West	5/3/83	0.84	0.10
	Ra-226	SONGS I East	5/3/83	0.78	0.10
	Ra-226	SONGS II	5/3/83	0.46	0.10
	Ra-226	SONGS III	5/3/83	0.34	0.10
	Th-228	SONGS I West	5/3/83	1.07	0.11
	Th-228	SONGS I East	5/3/83	1.12	0.11
	Th-228	SONGS II	5/4/83	0.54	0.11
	Th-228	SONGS III	5/4/83	0.41	0.11
	Ra-226	SONGS I West	11/4/83	0.81	0.12
	Ra-226	SONGS I East	11/4/83	0.40	0.12
	Ra-226	SONGS II	11/4/83	0.65	0.12
	Ra-226	SONGS III	11/4/83	0.57	0.12
	Th-228	SONGS I West	11/4/83	0.86	0.13
	Th-228	SONGS I East	11/4/83	0.42	0.13
	Th-228	SONGS II	11/4/83	0.73	0.13
	Th-228	SONGS III	11/4/83	0.74	0.13
Annual Soil Analysis (pCi/g)	Sr-90	Camp San Onofre	12/15/83	0.02	0.01
	Sr-90	Old Route 101	12/15/83	0.03	0.01
Semi-Annual Kelp Analysis (pCi/g)	Cs-137	Carlsbad Kelp Bed	5/2/83	0.058	0.029
	I-131	San Onofre Kelp Bed	5/2/83	0.49	0.19
	I-131	San Mateo Kelp Bed	5/2/83	0.41	0.19

APPENDIX C (cont.)

MEASUREMENTS EXCEEDING TWICE BACKGROUND LEVEL

Medium	Analysis Performed	Location and Type	Date of Collection	Indicator	Control
Quarterly Non-Migratory Marine Animals Analysis (pCi/g) Dry weight	Cs-58	SONGS I (Seahare)	2/7/83	0.57	0.08
	Co-58	SONGS I (Rock Crab)	2/10/83	0.29	0.03
	Co-58	SONGS 2/3 (Rock Crab)	2/10/83	0.21	0.03
	Co-60	SONGS I (Rock Crab)	2/10/83	1.30	0.03
	Co-60	SONGS 2/3 (Rock Crab)	2/10/83	1.03	0.03
	Co-60	SONGS 2/3 (Black Perch)	2/15/83	0.05	0.02
	Co-60	SONGS I (Seahare)	2/7/83	3.60	0.03
	Co-60	SONGS 2/3 (Bay Mussel)	2/7/83	0.16	0.03
	Ag-110m	SONGS 1 (Rock Crab)	2/10/83	0.34	0.02
	Ag-110m	SONGS 1 (Seahare)	2/7/83	0.37	0.03
	Ag-110m	SONGS 2/3 (Rock Crab)	2/10/83	0.22	0.02
	H-3 (Aqueous)	SONGS 1 (Seahare)	2/11/83	0.18	0.05
	H-3 (Aqueous)	SONGS 2/3 (Rock Crab)	2/18/83	0.14	0.05
	Co-58	SONGS 1 (Seahare)	5/6/83	0.25	0.03
	Co-60	SONGS 1 (Seahare)	5/18/83	2.10	0.02
	Co-60	SONGS 2/3 (Bay Mussel)	5/14/83	0.05	0.02
	Co-60	SONGS 1 (Rock Crab)	5/13/83	0.54	0.02
	Co-60	SONGS 2/3 (Spiney Lobster)	5/3/83	0.05	0.02

APPENDIX C (cont.)

MEASUREMENTS EXCEEDING TWICE BACKGROUND LEVEL

Medium	Analysis Performed	Location and Type	Date of Collection	Indicator	Control
	Co-60	SONGS 1 (Sheepshead)	6/8/83	0.15	0.029
	Ag-110m	SONGS 1 (Seahare)	5/18/83	0.18	0.02
	Ag-110m	SONGS 1 (Rock Crab)	5/3/83	0.19	0.02
	Ag-110m	SONGS 2/3 (Spiney Lobster)	5/6/83	0.06	0.02
	H-3 (Bound)	SONGS 1 (Seahare)	8/11/83	8.00	2.00
	Co-60	SONGS 2/3 (Sheepcrab)	11/8/83	0.06	0.02
Local Crops (pCi/g) Dry Weight	None				

APPENDIX D

SUMMARY OF INTERLABORATORY COMPARISONS

Results of Interlaboratory Comparisons for 1983

Date	Sample Type	Analysis Type	Mean EAL ± s. d.	Known EPA ± s. d.	Control Limit	R ± σR
February	Water (pCi/l)	Gamma Emitters				
•	Water	Cr-51	40 ± 5	45 ± 5	36.3-53.7	1.35
•	Water	Co-60	22 ± 2	22 ± 5	13.3-30.7	0.35
•	Water	Zn-65	21 ± 2	21 ± 5	12.3-29.7	0.35
•	Water	Ru-106	32 ± 3	48 ± 5	39.3-56.7	0.71
•	Water	Cs-134	20 ± 1	20 ± 5	11.3-28.7	0.12
•	Water	Cs-137	20 ± 1	19 ± 5	10.3-27.7	0.12
June	Water	Gamma Emitters				
•	Water	Cr-51	70 ± 4	60 ± 5	51.3-68.7	0.95
•	Water	Co-60	11 ± 1	13 ± 5	4.3-21.7	0.24
•	Water	Zn-65	37 ± 4	36 ± 5	27.3-44.7	0.83
•	Water	Ru-106	30 ± 8	40 ± 5	37.1-42.9	2.47
•	Water	Cs-134	41 ± 2	47 ± 5	38.3-55.6	0.35
•	Water	CS-137	29 ± 1	26 ± 5	17.3-34.7	0.12
October	Water	Gamma Emitters				
•	Water	Cr-51	53 ± 3	51 ± 5	42.3-59.7	0.71
•	Water	Co-60	20 ± 2	19 ± 5	10.3-27.7	0.35
•	Water	Zn-65	42 ± 2	40 ± 5	31.3-48.7	0.35
•	Water	Ru-106	50 ± 4	52 ± 5	43.3-60.7	0.83
•	Water	Cs-134	14 ± 1	15 ± 5	6.3-23.7	0.12
•	Water	Cs-137	26 ± 1	22 ± 5	13.3-30.7	0.12
April	Water	I-131	25.7 ± 0.6	26.8 ± 6.0	16.4-37.2	0.10
August	Water	I-131	14 ± 0	14 ± 6	3.6-24.4	0.00
December	Water	I-131	19 ± 1	20 ± 6	9.6-30.4	0.10
January	Water	Gross Alpha	48 ± 2	29 ± 7	16.4-41.6	0.33
March	Water	Gross Alpha	-	-	-	-
May	Water	Gross Alpha	13 ± 1	11 ± 5	2.3-19.7	0.12
July	Water	Gross Alpha	<3	7 ± 5	1.7-15.7	-

Date	Sample Type	Analysis Type	Mean EAL ± s. d.	Known EPA ± s. d.	Control Limit	R ± σR
September	Water	Gross Alpha	5 ± 1	5 ± 5	-0.0-13.7	0.24
November	Water	Gross Alpha	12 ± 1	14 ± 5	5.3-22.7	0.24
January	Water	Gross Beta	70	31 ± 5	22.3-39.7	0.47
March	Water	Gross Beta	-	-	-	-
May	Water	Gross Beta	42 ± 2	57 ± 5	48.3-65.7	0.35
July	Water	Gross Beta	23 ± 2	22 ± 5	13.3-30.7	0.35
September	Water	Gross Beta	12 ± 1	9 ± 5	-0.0-17.7	0.12
November	Water	Gross Beta	13 ± 1	16 ± 5	7.3-24.7	0.24
February	Water	Tritium	-	-	-	-
April	Water	Tritium	3150 ± 26	3330 ± 362	2703-3957	0.08
June	Water	Tritium	-	1529 ± 337	945-2113	-
August	Water	Tritium	1730 ± 20	1836 ± 342	1138-2322	0.07
October	Water	Tritium	-	-	-	-
December	Water	Tritium	-	-	-	-
March	Water	Ra-226	10.2 ± 0.4	12.7 ± 1.9	9.4-16.0	2.30
June	Water	Ra-226	6.2 ± 0.4	4.8 ± 0.7	3.6-6.0	0.66
September	Water	Ra-226	2.7 ± 0.2	3.1 ± 0.5	2.3-3.9	0.50
December	Water	Ra-226	4.6 ± 0.3	7.4 ± 1.1	5.5-9.3	0.32
March	Water	Ra-228	<2	0.	-	-
June	Water	Ra-228	<2	0.	-	-

Date	Sample Type	Analysis Type	Mean EAL ± s. d.	Known EPA ± s. d.	Control Limit	R ± σR
September	Water	Ra-228	<2	2.0 ± 0.3	1.5-2.5	-
December	Water	Ra-228	4.4 ± 0.4	3.9 ± 0.6	2.9-4.9	0.79
January	Water	Pu-239	8.5 ± 0.2	8.6 ± 0.9	7.0-10.2	0.26
July	Water	Pu-239	9.1 ± 0.4	8.9 ± 0.9	7.3-10.5	0.53
January	Water	Sr-89	28.3 ± 0.6	29.2 ± 5.0	20.5-37.9	0.12
May	Water	Sr-89	58.7 ± 1.5	57.1 ± 5.0	48.4±65.8	0.35
September	Water	Sr-89	17 ± 1	15 ± 5	6.3-23.7	0.12
January	Water	Sr-90	17.3 ± 0.1	17.2 ± 1.5	14.6-19.8	0.08
May	Water	Sr-90	40.3 ± 0.6	37.7 ± 1.9	34.4-41.0	0.31
September	Water	Sr-90	9 ± 1	10.0 ± 1.5	7.4-12.5	0.39
February	Water	U-238	30 ± 1	31 ± 6	20.6-41.4	0.20
August	Water	U-238	29 ± 2	26 ± 6	15.6-36.4	0.30
		(Performance Evaluation)				
May	Water	Gross Alpha	75 ± 2	64 ± 16	36.3-91.7	0.11
May	Water	Gross Beta	133 ± 4	149.0 ± 7.5	136-162	0.63
May	Water	Sr-89	30 ± 2	24 ± 5	15.3-32.7	0.47
May	Water	Sr-90	15 ± 1	13.0 ± 1.5	10.4-15.6	0.39
May	Water	Ra-226	6.7 ± 0.1	8.5 ± 1.3	6.2-10.8	0.09
May	Water	Ra-228	8.4 ± 0.8	4.7 ± 0.7	3.5-5.9	1.51
May	Water	Co-60	30 ± 0	30 ± 5	21.3-38.7	0.00
May	Water	Cs-134	28 ± 1	33 ± 5	24.3-41.7	0.24

Date	Sample Type	Analysis Type	Mean EAL ± s. d.	Known EPA ± s. d.	Control Limit	R ± σR
May	Water	Cs-137	27 ± 0	27 ± 5	18.3-35.7	0.00
May	Water	U	25 ± 1	25 ± 6	14.6-35.4	0.10
October	Water	Gross Alpha	26 ± 1	22.0 ± 5.5	12.5-31.5	0.21
October	Water	Gross Beta	61.7 ± 0.6	63 ± 5	54.3-71.7	0.12
October	Water	Sr-89	17 ± 0	17 ± 5	8.3-25.7	0.00
October	Water	Sr-90	8.3 ± 0.6	8.0 ± 1.5	5.4-10.6	0.39
October	Water	Ra-226	4.8 ± 0.6	5.1 ± 0.8	3.8-6.4	0.96
October	Water	Ra-228	6.0 ± 0.2	2.8 ± 0.4	2.1-3.5	0.44
October	Water	Co-60	12 ± 1	11 ± 5	2.3-19.7	0.24
October	Water	Cs-134	13 ± 0	15 ± 5	6.3-23.7	0.00
October	Water	Cs-137	16 ± 1	15 ± 5	6.3-23.7	0.24
October	Water	U	11.3 ± 0.6	11 ± 6	0.6-21.4	0.10
March	Air Filter (pCi/Filter)	Gross Alpha	26 ± 1	26.0 ± 6.5	14.7±37.3	0.18
August	Air Filter	Gross Alpha	14 ± 1	13 ± 5	4.3-21.7	0.12
November	Air Filter	Gross Alpha	26.3 ± 0.6	19 ± 5	7.7-27.7	0.12
March	Air Filter	Gross Beta	62 ± 1	68 ± 5	59.3-76.7	0.24
August	Air Filter	Gross Beta	24 ± 1	36 ± 5	27.3-44.7	0.24
November	Air Filter	Gross Beta	50.3 ± 1.5	50 ± 5	41.3-58.7	0.12
March	Air Filter	Sr-90	15 ± 1	20.0 ± 1.5	17.4-22.6	0.39

Date	Sample Type	Analysis Type	Mean EAL ± s. d.	Known EPA ± s. d.	Control Limit	R ± σR
August	Air Filter	Sr-90	10 ± 1	10.0 ± 1.5	4.8-15.2	0.79
November	Air Filter	Sr-90	15 ± 0	15.0 ± 1.5	12.4-17.6	0.00
March	Air Filter	Cs-137	31 ± 1	27 ± 5	18.3-35.7	0.59
August	Air Filter	Cs-137	19 ± 1	15 ± 5	6.3-23.7	0.12
November	Air Filter	Cs-137	24 ± 1	20 ± 5	11.3-28.7	0.24
February	Milk (pCi/l)	Sr-89	33.7 ± 1.5	37.4 ± 5.0	28.7-46.1	0.59
February	Milk	Sr-90	18.0 ± 0.0	17.8 ± 1.5	15.2±20.4	0.00
February	Milk	I-131	58.0 ± 2.0	54.5 ± 6.0	44.1-64.9	0.39
February	Milk	Cs-137	23.7 ± 0.6	25.6 ± 5.0	16.9-34.3	0.12
February	Milk	Ba-140	<20	0.	-	-
February	Milk	K(mg/l)	1587 ± 32	1512 ± 76	1380-1644	0.47
June	Milk	Sr-89	27 ± 0.47	25 ± 5	15.3-33.7	0.47
June	Milk	Sr-90	14 ± 1	16.0 ± 1.5	13.4-18.6	0.39
June	Milk	I-131	32 ± 2	30 ± 6	10.4-40.4	0.39
June	Milk	Cs-137	46 ± 2	47 ± 5	38.3-55.7	0.35
June	Milk	Ba-140				
June	Milk	K(mg/l)	1517 ± 32	1486 ± 74	1358-1614	0.48
October	Milk	Sr-89	9.3 ± 1.2	15 ± 5	6.3-23.7	0.24
October	Milk	Sr-90	18.3 ± 0.6	14.0 ± 1.5	11.4-16.6	0.39
October	Milk	I-131	44.7 ± 2.5	40 ± 6	29.6-50.4	0.49

Date	Sample Type	Analysis Type	Mean EAL ± s. d.	Known EPA ± s. d.	Control Limit	R ± σR
October	Milk	Cs-131	39.3 ± 2.9	33 ± 5	24.3-41.7	0.59
October	Milk	K	1530 ± 30	1550 ± 78	1416-1684	0.45
March	Urine	Tritium	2583 ± 45	2470 ± 352	1860-3080	0.15
June	Urine	Tritium	1627 ± 25	1589 ± 338	1084-2174	0.09
November	Urine	Tritium	1433 ± 64	1008 ± 338	423-1593	0.21
March	Food (pCi/Kg)	Sr-89	114.7 ± 4.7	34.6 ± 5.0	25.9-43.3	1.06
March	Food	Sr-90	22.7 ± 1.2	27.8 ± 1.5	25.2-30.4	1.20
March	Food	Cs-137	34 ± 0	31.3 ± 5.0	22.6-40.0	0
March	Food	Ba-140	0.	0.	---	0
March	Food (mg/Kg)	K	2067 ± 57	2592 ± 130	2366.8-2817.2	0.45
March	Food (pCi/Kg)	I-131	---	36.9 ± 6.0	26.5 - 47.3	---

The results of interlaboratory cross-check program showed that 16% of the samples fell outside the control limit range. The errors were randomly distributed among all different samples and different analyses.

APPENDIX E

COMPARISON OF OPERATIONAL DATA WITH PREOPERATIONAL

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COMPARISON OF OPERATION DATA WITH PREOPERATIONAL

A. COMPARISON OF AVERAGE MONTHLY AIRBORNE PARTICULATES GROSS BETA ACTIVITY

In order to provide the preoperational data for SONGS 1, a number of studies were conducted from 1964 to 1967. One of these studies was devoted to the measurement of gross beta activity in air particulates. Air samples from different locations near the plant were collected on a weekly basis and analyzed. Figure 8 presents the monthly variation in the gross beta activity of the air particulates in San Clemente for preoperational and operational periods. As is seen in Figure 8, the 1983 operational levels are much lower than the preoperational ones. The presence of many peaks in the preoperational phase is indicative of atmospheric nuclear weapons testing within the corresponding time period. The increase in the beta acitivty in air during the preoperational period is thought to be the result of Chinese nuclear tests of December 1966. The decrease in activity levels from 1965 to 1966 might be ascribed to the curtailment of nuclear testing in the atmosphere since 1962. Figure 8 also compares the operational data obtained during January to December 1983 with the preoperational data of 1965 and 1966. These data suggest that there is no plant-related activity released to the environment since the operational levels are significantly lower than the preoperational activity levels. It should be mentioned that SONGS 1 has not been in operation in 1983 and operational data are also related to SONGS 2/3.

A comparison between the control location (Huntington Beach) and the indicator locations does not indicate any significant difference in activity levels. Therefore, it can be concluded that the rise in beta activity in September to December (Figure 1) is not the result of plant operation since the control location is highest and all other locations show consistently higher activity at the same time. This may be the result of other environmental phenomena and due to seasonal variations. It should be mentioned that the presence of weapons testing make the comparison difficult since the background level is affected.

B. COMPARISON OF QUARTERLY WATER FILTRATE GROSS BETA ACTIVITY

A comparison of drinking water filtrate gross beta activity in Tri-Cities Municipal Reservoir versus preoperational levels is made. In Figure 9 it can be seen that the activity levels of operational data are much lower then the preoperational. For example, in March 1966, the highest gross beta activity measured was 90.0 pCi/l where the highest value for the operational period (1982-1983) was 20.0 pCi/l in October 1983. This is 4.5 times lower than the preoperational value. The nuclear weapons testing and the resulting fallout can contribute to the higher preoperational activity levels. Figure 10 compares the operational data for water filtrate gross beta activity (1982-1983) in San Clemente with the 1965-1966 preoperational activity levels. It is seen that the

preoperational levels are higher than the operational ones due to fallout contribution. The maximum gross beta activity in water during the preoperational period was 45.8 pCi/l where the maximum activity for the operational period was 20 pCi/l in October with an average gross beta of 13.4 pCi/l almost 1.5 times lower than the average preoperational value of 20.3 pCi/l. In 1982, the average gross beta activities of the Huntington Beach control location and indicator locations were 9.5 and 11.7 pCi/l, respectively. The average gross beta activity in the water taken from Tri-Cities municipal (13.4 pCi/l) was approximately 3.5 pCi/l higher than the water taken at San Clemente (9.9 pCi/l). This may be due to the fact that an open reservoir (Tri-Cities) can be affected more by fallout than would be a well.

C. CONCLUSIONS

This assessment indicates that the variation of radioactivity level in environmental media will be affected by several sources. Meteorology, atmospheric nuclear weapon testing, fallout frequency, terrestrial conditions, coal and fuel processing plants, and the occurrence of earthquake and volcanic activities are among the factors which may affect, and lead to the elevation of the natural background levels in the environment. All activities noted during the operational phase are either at or below activity attributable to these sources. It is also seen that the variation in operational data is very small compared to the preoperational (Figures 9 and 10, shaded areas). For example, the gross beta activity in Tri-Cities reservoir ranged 18 to 90 pCi/l during the preoperational time, where the operational levels varied between 6 to 18 pCi/l. For San Clemente, the preoperational activity varied between 5 to 46 pCi/l where the operational activity range was 8 to 20 pCi/l. The results indicate that the plant's effect on the environment is minimal.

APPENDIX F

CORRELATION OF ENVIRONMENTAL CONCENTRATION WITH EFFLUENT RELEASE

APPENDIX F

CORRELATION OF ENVIRONMENTAL CONCENTRATION WITH EFFLUENT RELEASES

A. Cobalt-58

1. SONGS 1 Outfall

No detectable levels of Cobalt-58 were observed in SONGS 1 species caught at the Unit 1 outfall. Rock Crab taken in March and June showed some activity, 0.07 and 0.01 nCi/kg wet weight respectively. The only species that showed Co-58 activity during the year 1983 was seahare with an activity of 0.007 to 0.066 nCi/kg wet weight. The effluent maximum activity was 23.8 mCi in January. Although the maximum activity of 0.066 nCi/kg wet may be attributable to the effluent release, this value is 0.2% of the Unit 1 reporting level (30 nCi/kg wet) (Figures 11, 23 and 24).

2. SONGS 2/3 Outfall

Sheepshead and black perch showed no detectable activity. Rock crab showed an activity of 0.053 nCi/kg wet in March 1983. Sheepshead had an activity of 0.004 nCi/kg wet in its flesh in December. Bay mussel species showed 0.013 and 0.003 nCi/kg wet in September and December, respectively. The rest of the species did not show any detectable level (Figures 12, 23 and 24). The highest Co-58 activity released by SONGS 1 outfall was 23.8 mCi in January (Figure 21). The only sample which is likely to be related to the January discharge would be the March rock crab. The highest level of Co-58 was found to be 0.053 nCi/kg wet in rock crab which is 0.2% of the established reporting level (30 nCi/kg wet).

B. Cobalt-60

1. SONGS 1 Outfall

The highest Cobalt-60 activity released at SONGS 1 outfall was 333 mCi in the month of February (Figure 21). The highest Cobalt-60 activity observed in marine species was 0.41 nCi/kg wet in seahare caught at SONGS 1 outfall in March. The seahare species showed a concentration range of 0.062 to 0.410 nCi/kg wet weight throughout the year. The highest Colbalt-60 activity observed in spiney

lobster was 0.008 nCi/kg wet weight in December. Sheepshead caught at SONGS 1 outfall in June had an activity of 0.039 nCi/kg wet. Other samples of sheepshead, black perch and spiney lobster did not show any detectable cobalt-60 activity in their flesh (Figures 13, 23 and 24). Although the activity observed in seahare species in March and June may be attributable to the effluent release, these are much lower than the established reporting level of 14 nCi/kg wet. The maximum activity of 0.41 nCi/kg wet is 3% of the Unit 1 reporting level. In general a decreasing trend in Co-60 activity throughout the year was noted among all the species analyzed.

2. SONGS 2/3 Outfall

The greatest quantity of Cobalt-60 (333 mCi) was released in February. The cobalt-60 activity in the fish species was below the detection limit. Cobalt-60 was detected in crustecea flesh at levels ranging between 0.009 and 0.26 nCi/kg wet and in seahares at levels between C.004 and 0.037 nCi/kg wet (Figures 14, 23 and 24). The times of peak concentrations do not correspond to the dates of highest release from the plant.

Cobalt-60 has a long biological half-life accumulating for many years in some crustecea. The levels detected are not significantly greater than normal and do not show an increasing trend. The highest concentration of Co-60 observed (in rock crab - 0.26 nCi/kg wet) is 2% of the reporting level for this radionuclide (14 nCi/kg wet). The cobalt-60 activities observed to date are above normal background levels and may be attributable to the effluent releases from SONGS. However, measured concentrations are far below the reporting levels. Further environmental monitoring of the species will be conducted to determine if there is a long-term accumulation pattern.

C. Silver-110m

1. SONGS 1 Outfall

Silver-110m activity of the effluent was below the detection limit (9.7×10^{-3} Ci), but some marine species such as crustacea and mollusks showed detectable levels of Ag-110m in their flesh (Figures 15, 23 and 24). The Ag-110m activity range in these species was 0.010 to 0.082 nCi/kg wet weight. These levels are much lower than the Unit 1 reporting level of 8.0 nCi/kg wet. The value 0.082 observed in rock crab is 1% of the Unit 1 reporting level established for Ag-110m. No direct correlation could be made between the Ag-110m activity level and the effluent.

2. SONGS 2/3 Outfall

The silver-110m activity in the effluent was below the detection limit. Species such as crustacea, which are capable of accumulating silver 110-m over years, showed some detectable activity (Figures 16, 23 and 24). The range of Ag-110m in crustacea was 0.016 to 0.060 nCi/kg wet and in seahare it was 0.004 to 0.043 in rock crab is 1% of Unit 1 reporting level of 8.0 nCi/kg wet weight.

D. Cesium-137

1. SONGS 1 Outfall

The highest cesium-137 activity released by SONGS 1 effluent was 102 mCi in January and 48 mCi in February (Figure 21). The comparison between the Cs-137 activity in the liquid effluent and Cs-137 in the marine species indicated the presence of some activity in the flesh portion (0.005 - 0.021 nCi/kg wet). The Cesium-137 activity in the effluent was highest in January and February whereas marine species caught at SONGS 1 Outfall (sheepshead and black perch) showed a low and steady level of Cs-137 in their flesh. Some of SONGS 1 crustaceae such as spiney lobster and rock crab did not show any detectable activity and a few of these species had levels in the range of 0.005 to 0.008 nCi/kg wet. No activity was observed in seahare species except one species with a concentration of 0.0018 nCi/kg wet in March. It is worth noting that the highest Cs-137 activity of 0.021 nCi/kg wet observed in sheepshead (Figures 17, 23 and 24) is 0.2%, of the Unit 1 reporting level of 12.0 nCi/kg wet. No direct correlation was observed between the liquid effluent release and the concentration levels in the above media.

2. SONGS 2/3 Outfall

Sheepshead and black perch did not show any detectable Cs-137 activity (Figures 18, 23 and 24). The range of Cesium-137 in these species was 0.006 to 0.013 nCi/kg wet weight throughout the year. The concentration of Cs-137 in these species was uniform and less than 0.1% of the reporting level (14 nCi/kg wet). The maximum effluent activity of 102 mCi was observed in January (Figure 21). Crustaceae such as lobster and rock crab showed a range of 0.003 to 0.007 nCi/kg wet and seahare caught in March had a concentration of 0.0018 nCi/kg wet. There seems to be no direct correlation between the effluent release and concentration level of Cs-137 in the marine species. The highest concentration of Cs-137 was observed in sheepshead. This value was 0.013 nCi/kg wet and is less than 0.1% of the Unit 1 reporting level (14 nCi/kg wt). It should be noted that the control location activity was in the range 0.004 to 0.005 nCi/kg wet.

E. Tritium (H-3) - SONGS 1, 2 and 3

The effect of tritium released by SONGS 1 effluent on the marine species was studied. The quantity of tritium released each month ranged from 2 mCi to 2870 mCi, the highest release occurring in October (Figure 22). No positive correlation between the SONGS 1 effluent release of tritium and 1983 marine species tritium level was observed. Seahare caught at SONGS 1 outfall in the first quarter had a concentration of 0.021 nCi/kg wet weight. Rock crab caught at SONGS 1 and 2/3 outfalls in the third quarter had activities of 0.02 and 0.04 nCi/kg wet weight respectively for aqueous tritium. Only one seahare sample caught at SONGS 1 outfall in the third quarter had a detectable activity of 0.9 nCi/kg wet for bound tritium. The maximum observed activity of 0.04 nCi/kg wet weight is 0.001% of the Unit 1 reporting level of 4400 nCi/kg wet weight. The value of 0.9 nCi/kg wet weight observed for bound tritium is also 0.02% of the Unit 1 reporting level. In general, no direct correlation was observed.

F. Ocean Bottom Sediment

Buildup of radionuclides in the ocean bottom sediment was studied to investigate the effect of the plant operation, if any, on the marine species. The measurement of sediment activity is not considered to be of major importance as a pathway to man. However, a potential exists for long-term buildup of plant-specific radionuclides Cs-137 and Co-60 in the sediment. Figures 19 and 20 show the Co-60 and Cs-137 levels in the sediment during the period from 1980 through 1983. The results of the 4-year study showed no accumulation pattern for these radionuclides in the sediments.

G. Conclusions

Even though, higher-than twice background activity levels of radionuclides such as Co-60 and Cs-137 may be attributable to the effluent release of these radionuclides to the ocean and deposition to the bottom sediments no direct positive correlation has been observed, to date, between the high effluent values, the bottom sediments, and the marine biota.

It should be noted that the presence of the Co-60 or Cs-137 in the bottom sediments may not necessarily affect the marine species since the accumultion or uptake of these radionuclides depends on many factors. Type or age of species, biological half life of the radionuclies in different species, availability to the species, solubility of the radionuclides and their chemical forms in ocean water and the digestive fluids of the organisms, uptake rate, and the presence of other substances that could affect the uptake rate will all contribute to the accumulation mechanism. It should be noted that the Co-60 and Cs-137 activities of the liquid effluent were much lower than the technical specifications requirements and are shown below:

1st quarter	2nd quarter	3rd quarter	4th quarter
2.08%	0.73%	0.49%	0.85%

None of the radionuclide observed in the gaseous effluent was observed in any of the environmental samples. Therefore, it is concluded that the 1983 effluent releases have had negligible impact on the environment.

APPENDIX G

FIGURES

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Monthly Airborne Particulates
Gross Beta Activity

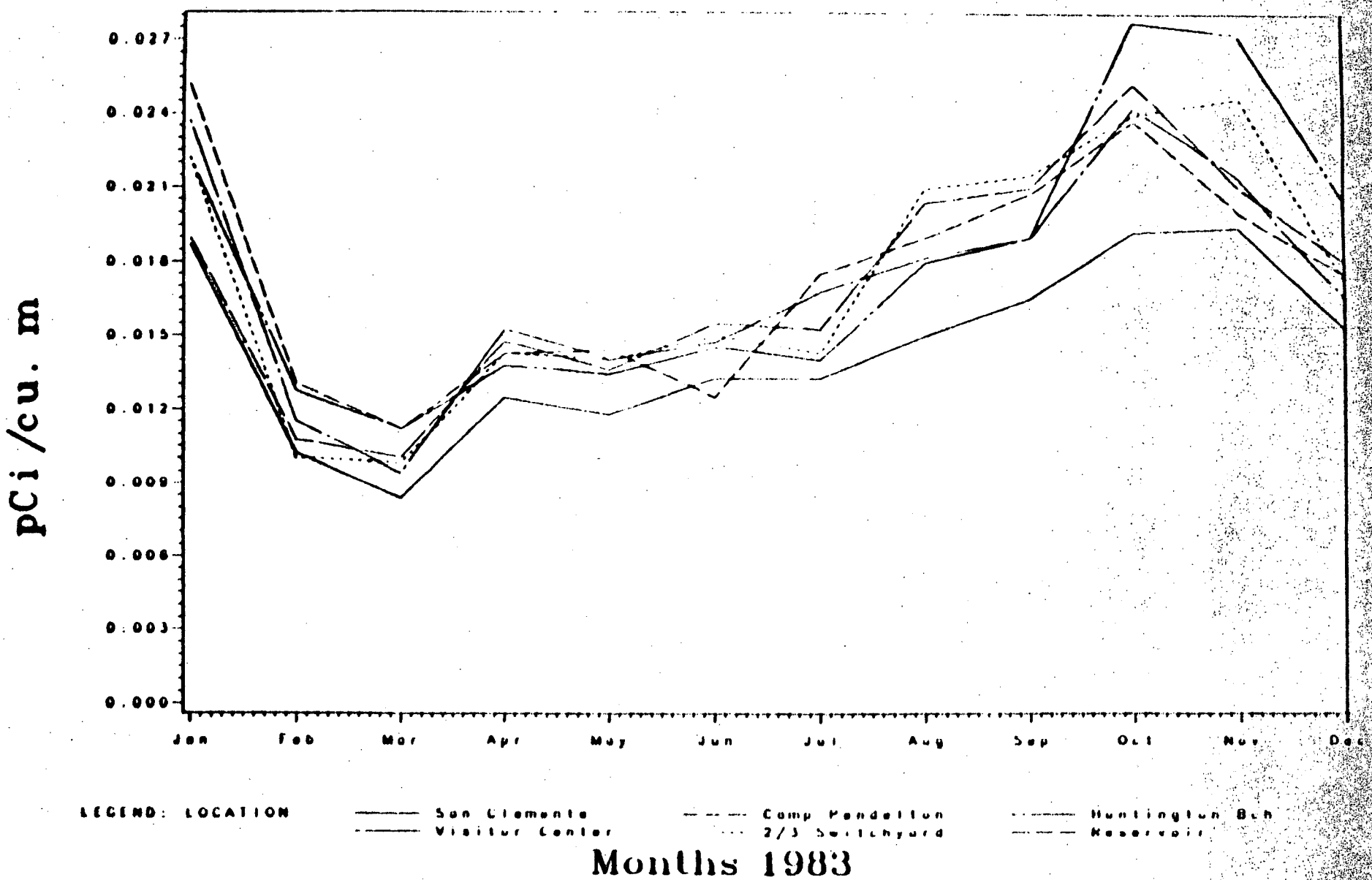
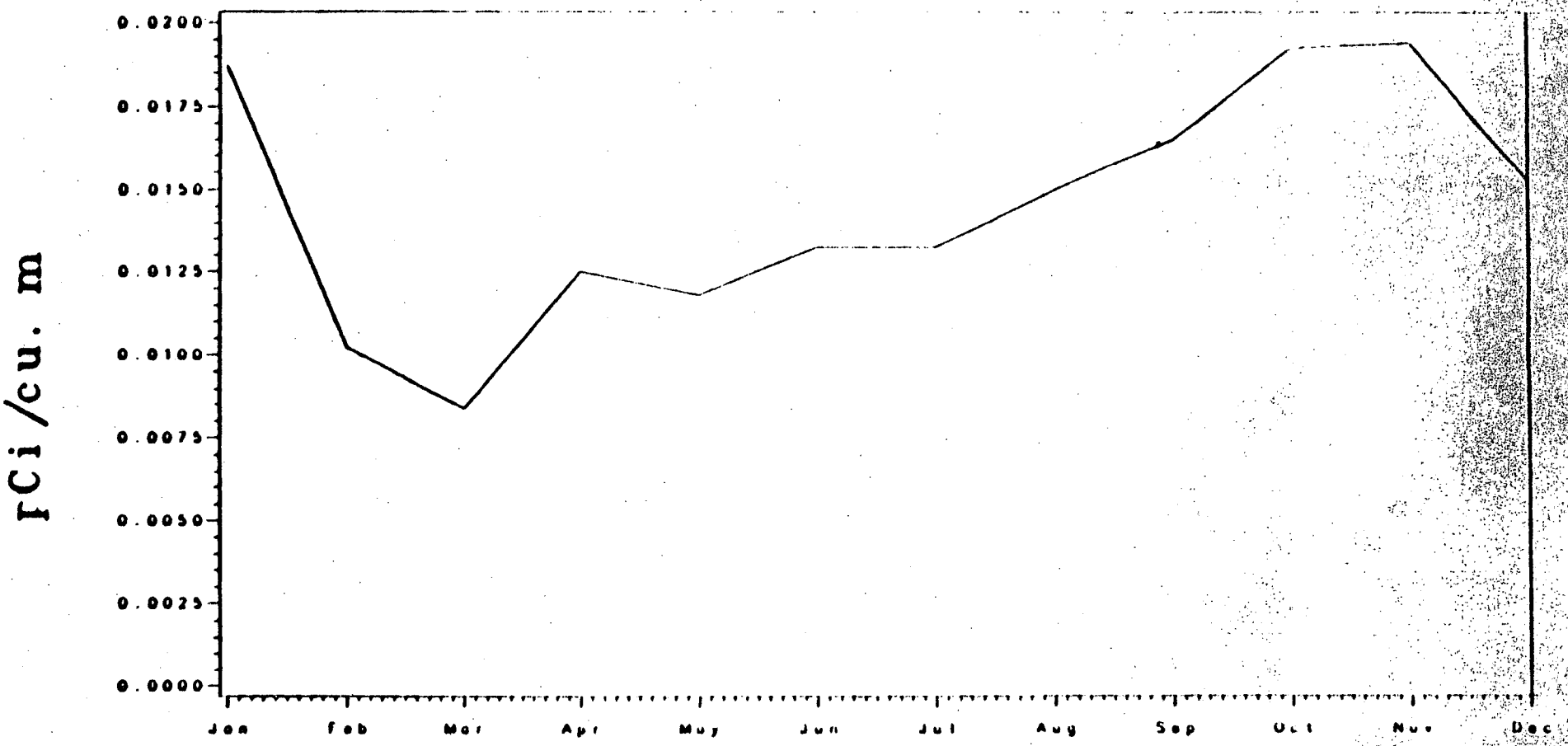


Figure 1

Monthly Airborne Particulates
Gross Beta Activity
San Clemente



Months 1983

Figure 2

Monthly Airborne Particulates
Gross Beta Activity
Camp Pendelton

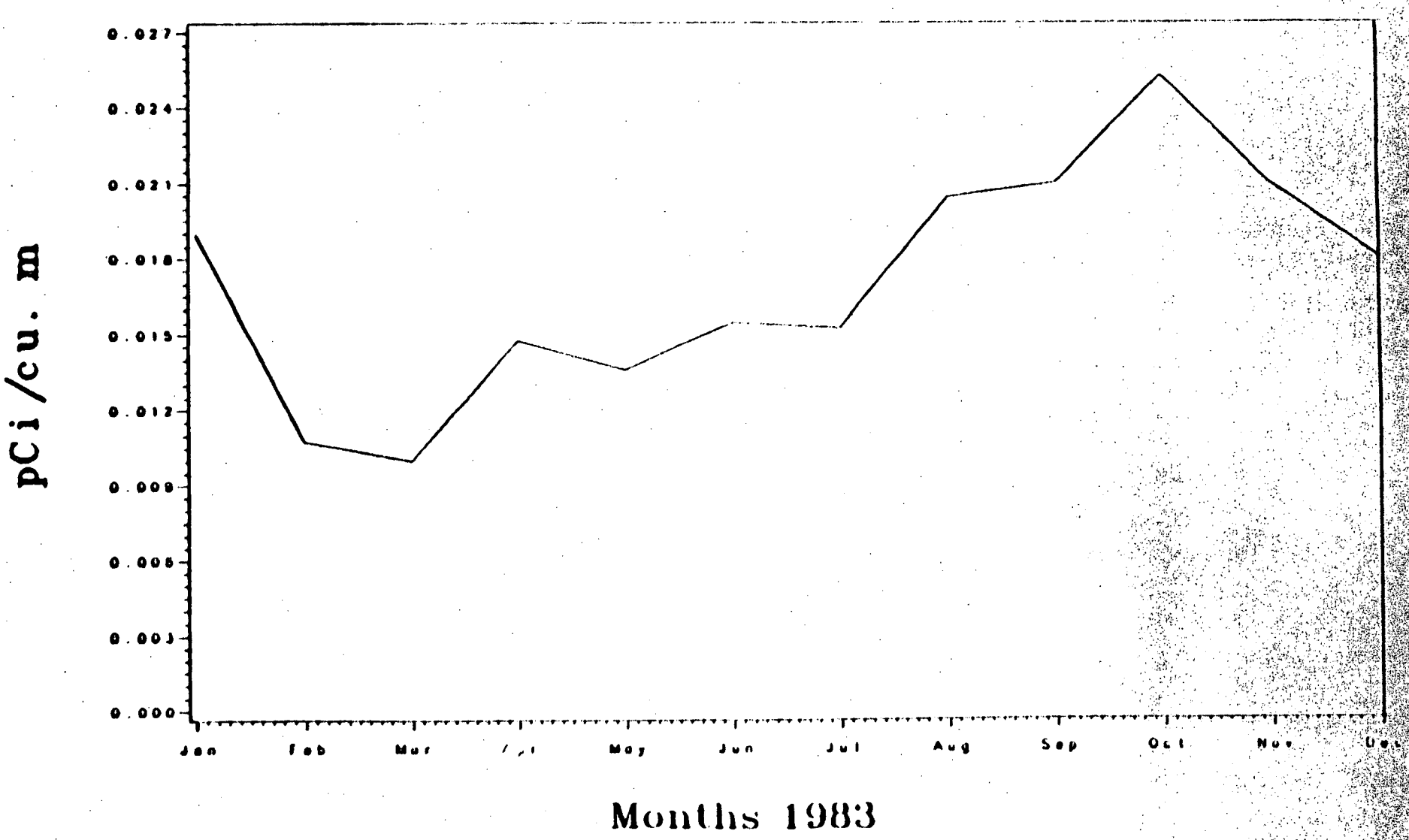


Figure 3

Monthly Airborne Particulates
Gross Beta Activity
Visitor Center

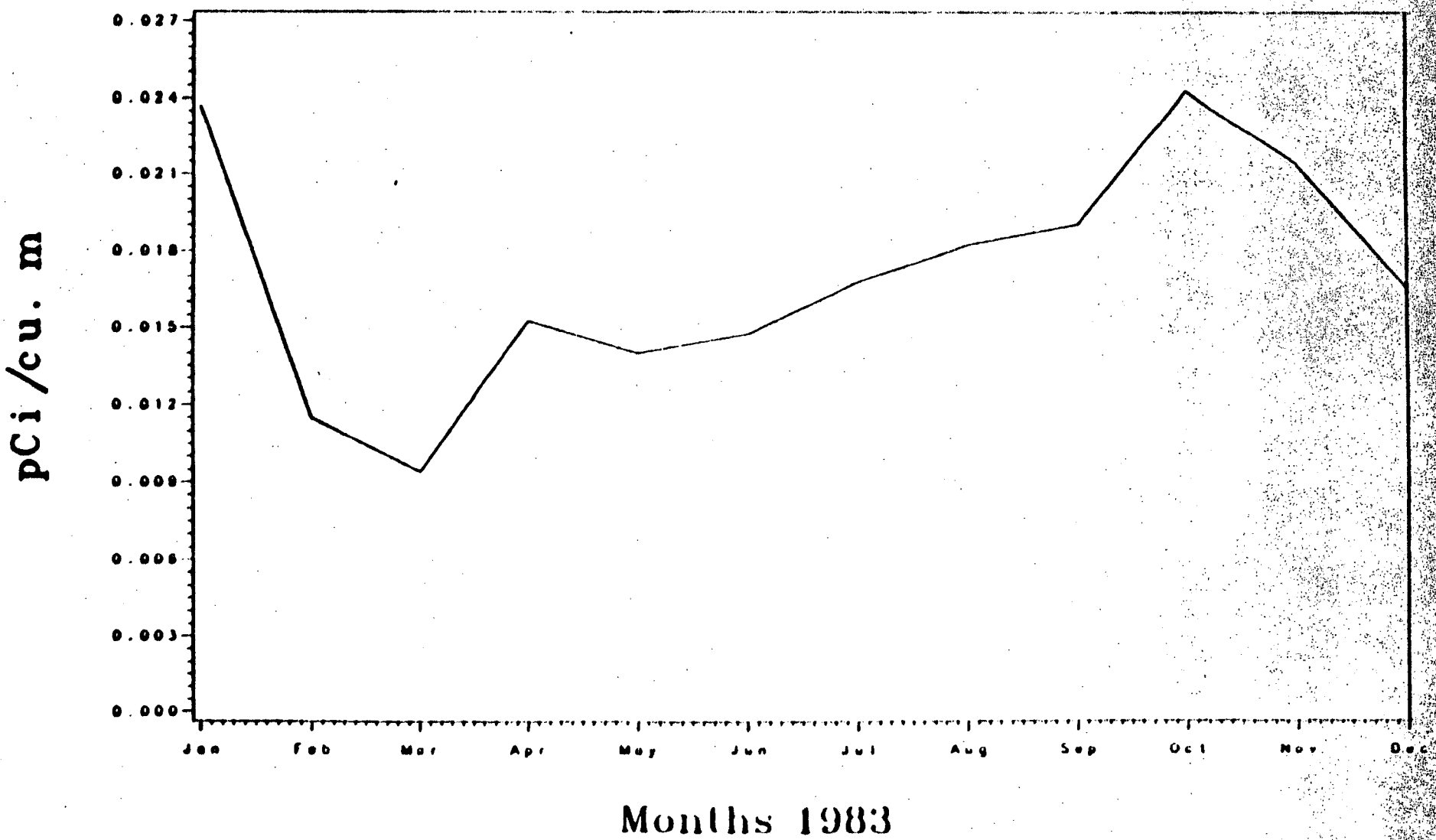


Figure 4

Monthly Airborne Particulates
Gross Beta Activity
Units 2/3 Switchyard

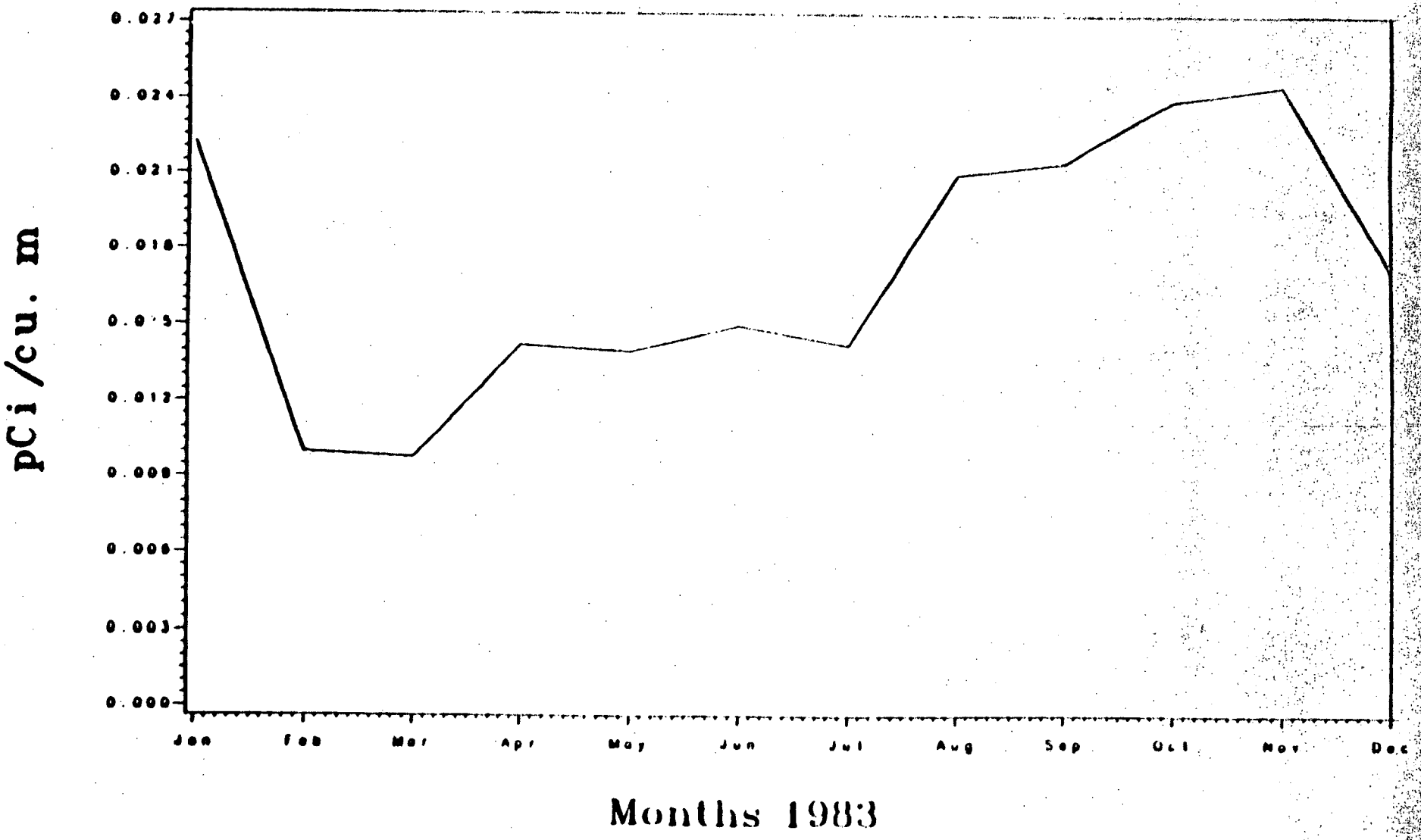


Figure 5

Monthly Airborne Particulates
Gross Beta Activity
Reservoir

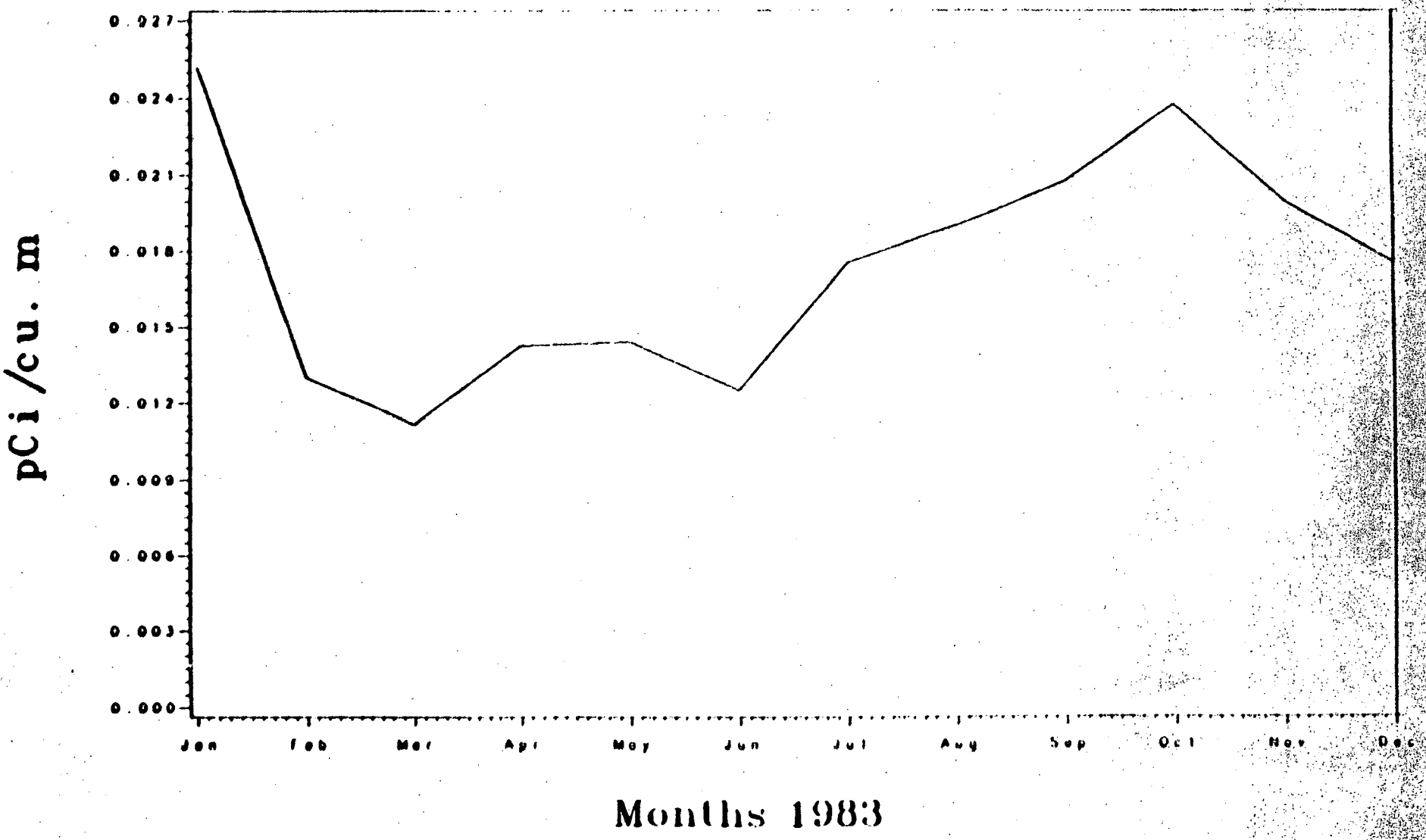


Figure 6

Monthly Airborne Particulates
Gross Beta Activity
Huntington Beach

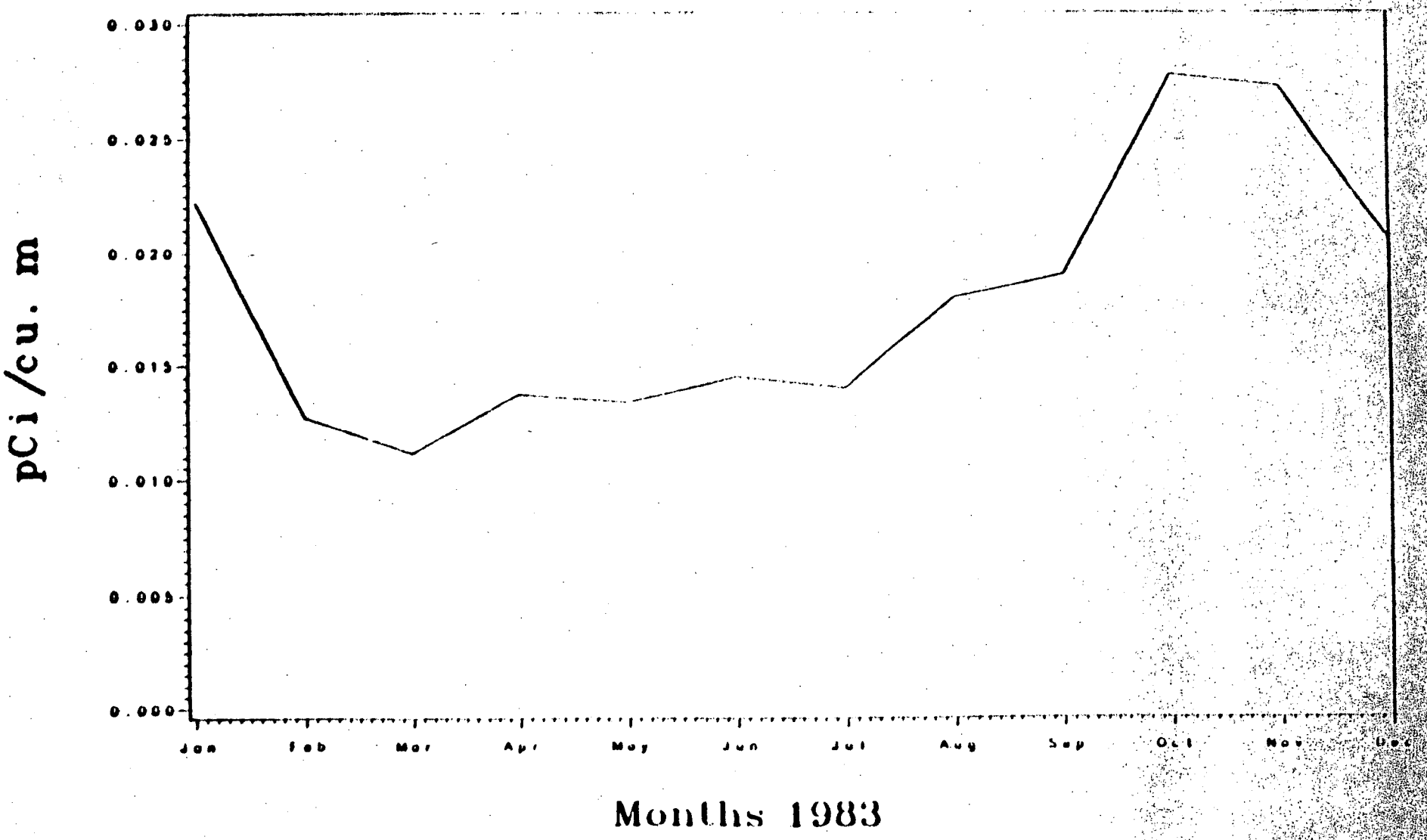


Figure 7

Average Monthly Airborne Particulates
Gross Beta Activity
Pre-Op vs Operational
San Clemente

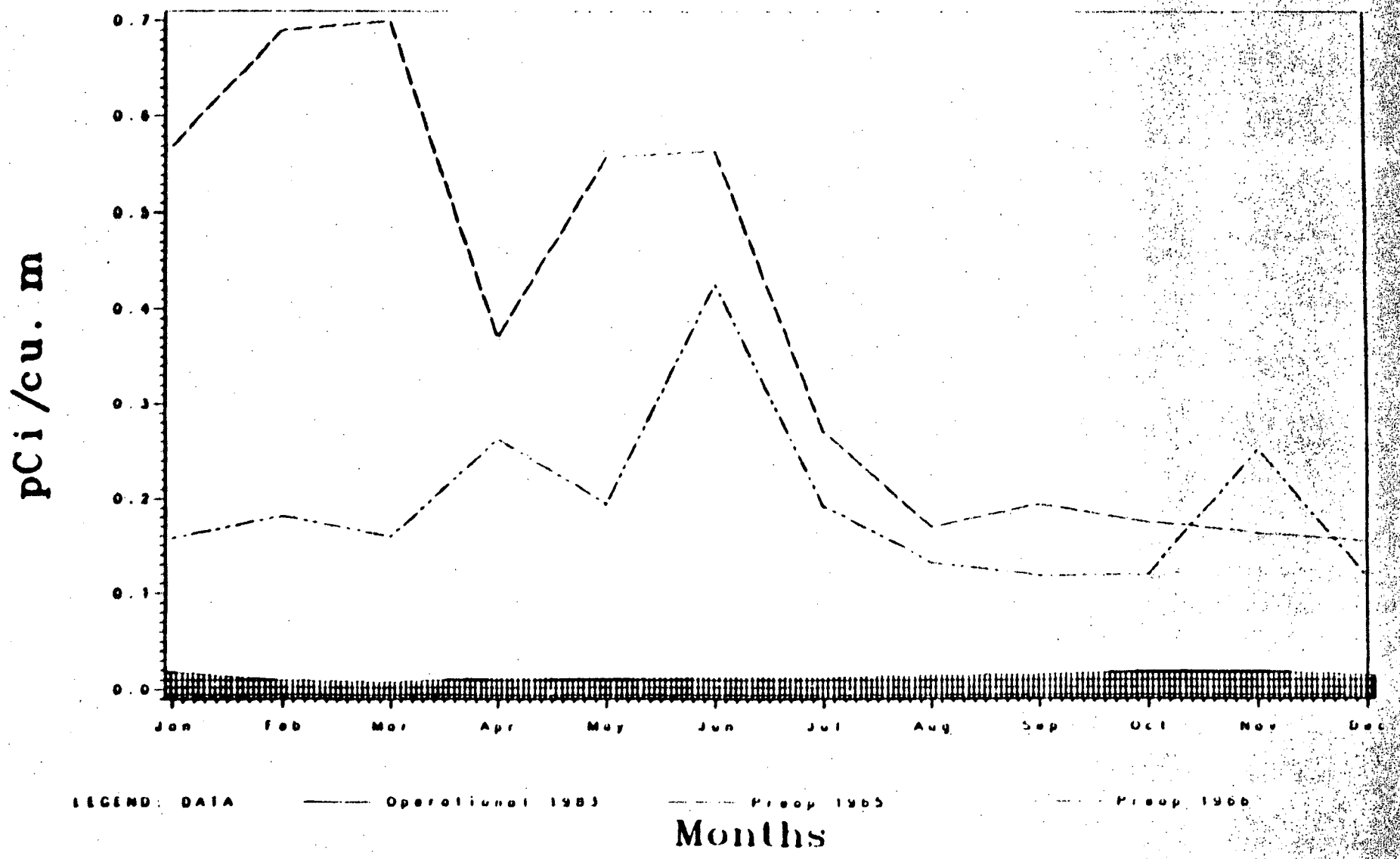
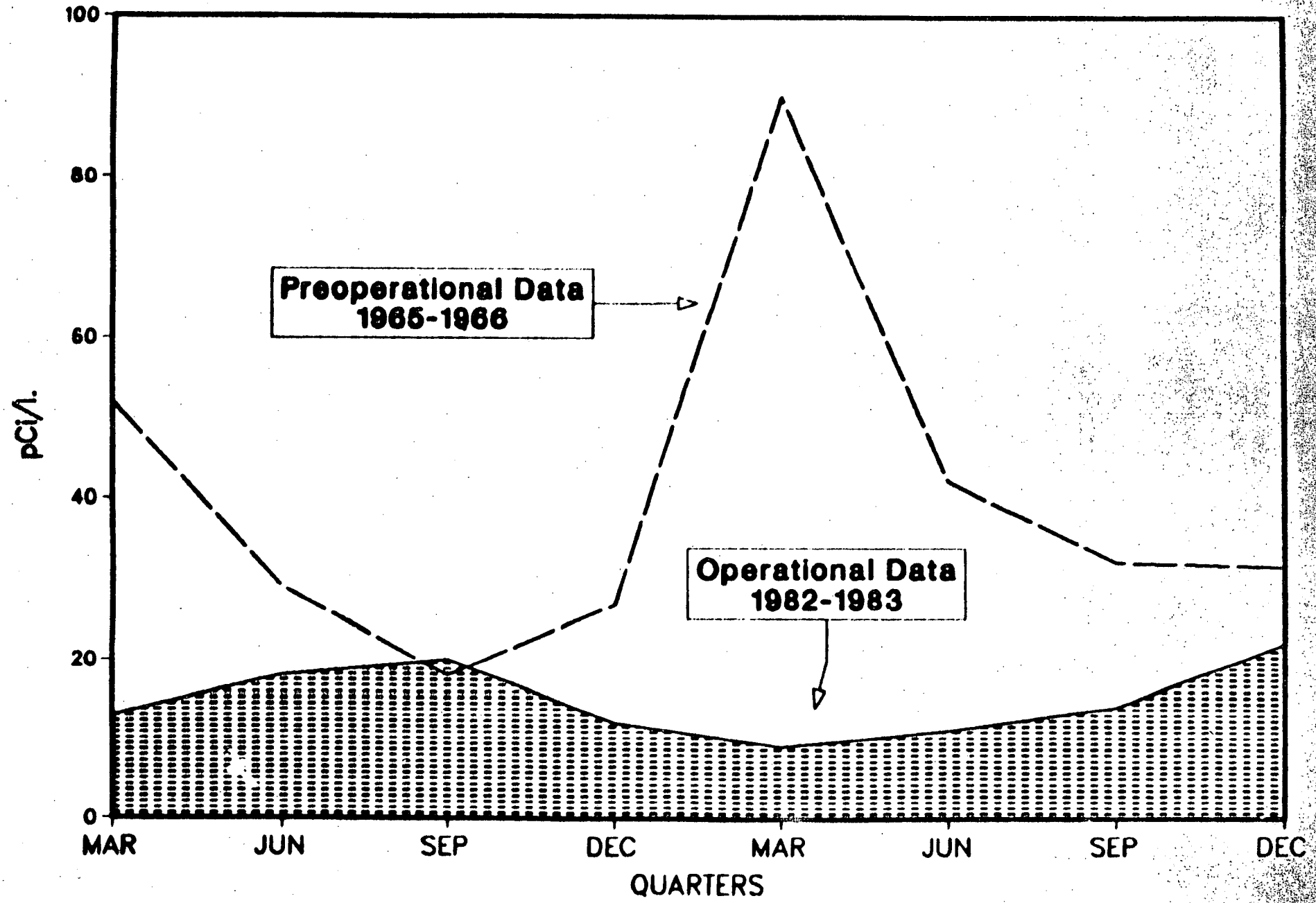


Figure 8

QUARTERLY WATER FILTRATE
GROSS BETA ACTIVITY
PRE-OP vs OPERATIONAL
TRI-CITIES



QUARTERLY WATER FILTRATE
GROSS BETA ACTIVITY
PRE-OP vs OPERATIONAL
SAN CLEMENTE

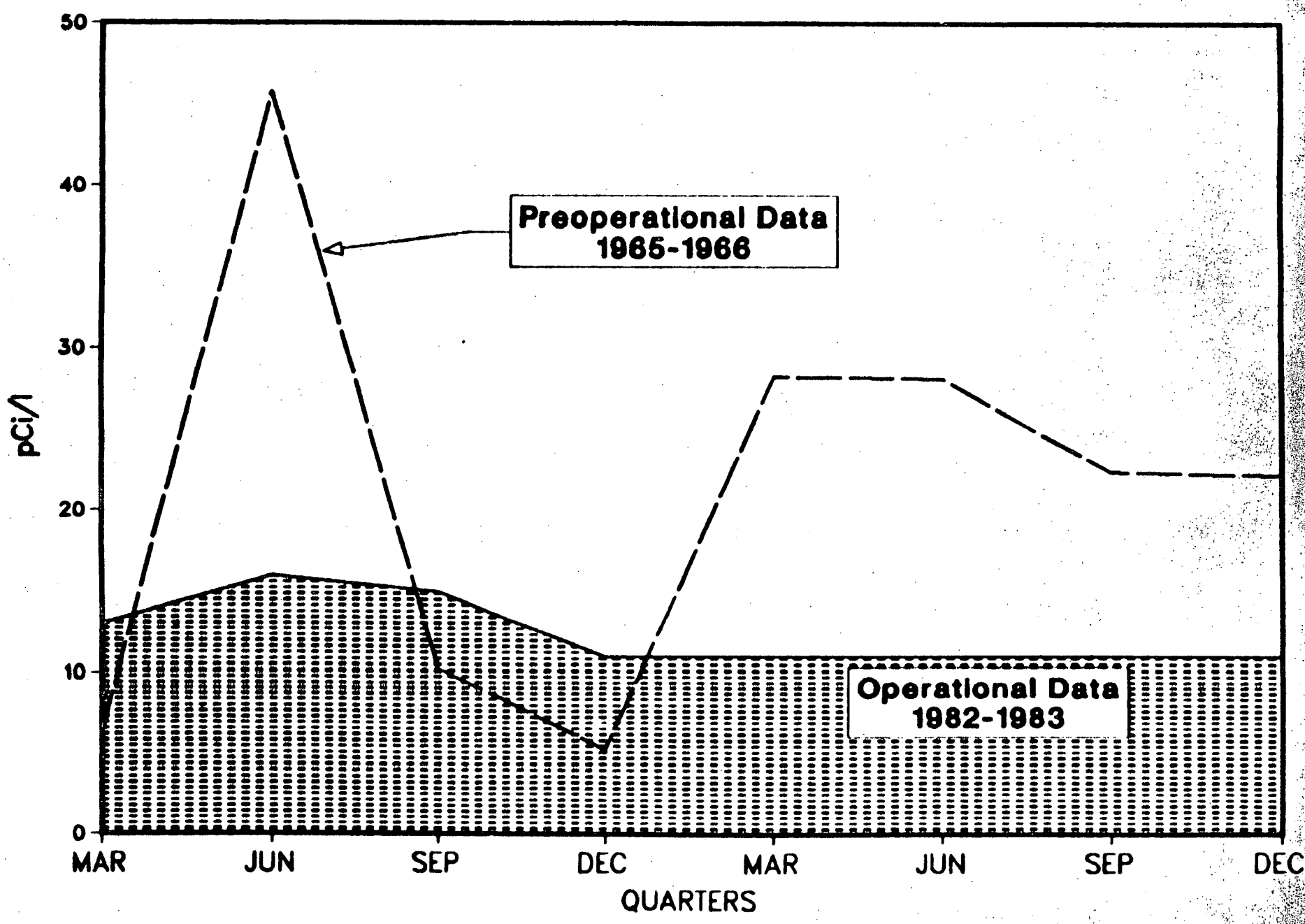


Figure 10

Quarterly Evaluation of Co-58
in
Marine Species (Flesh)
SONGS 1

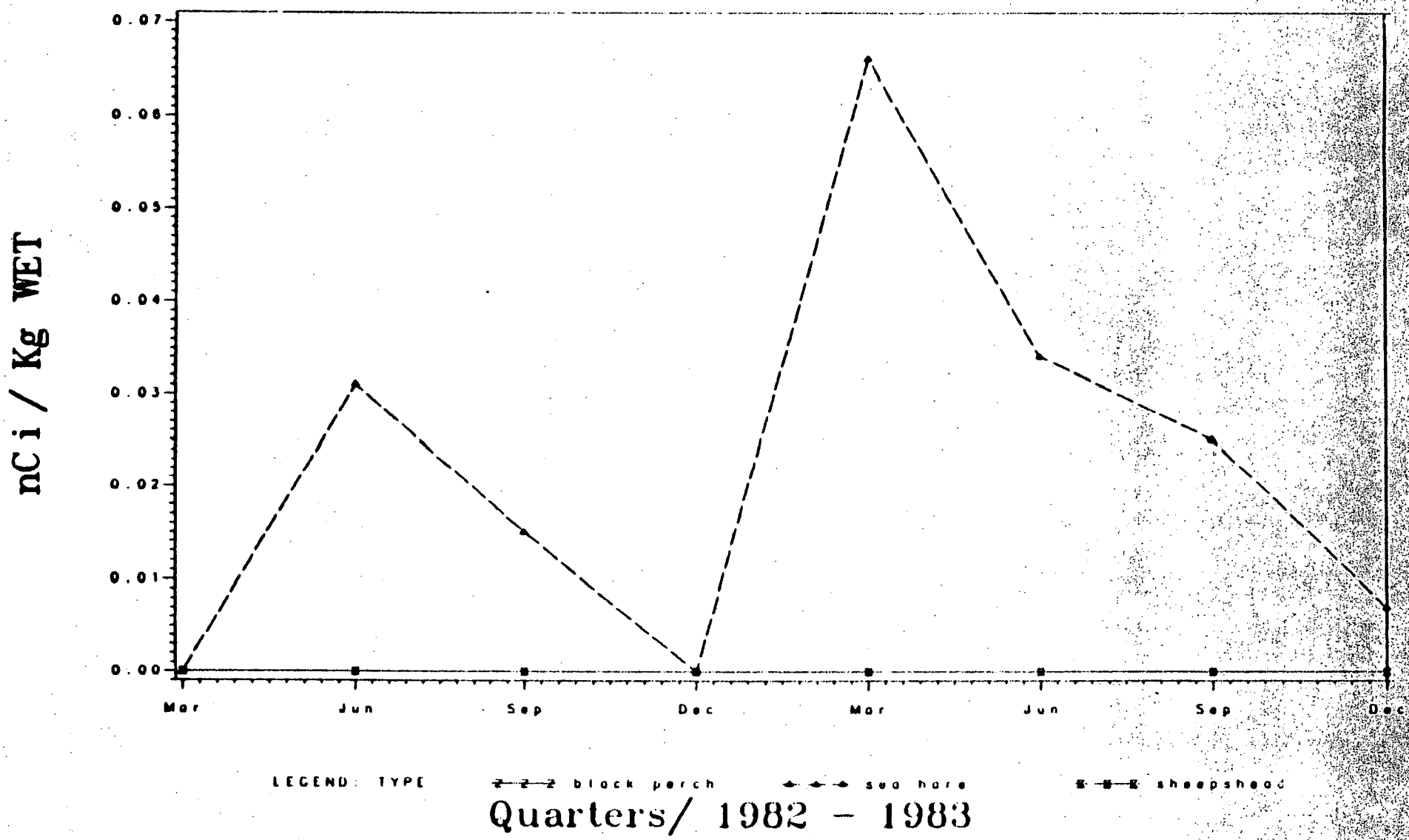
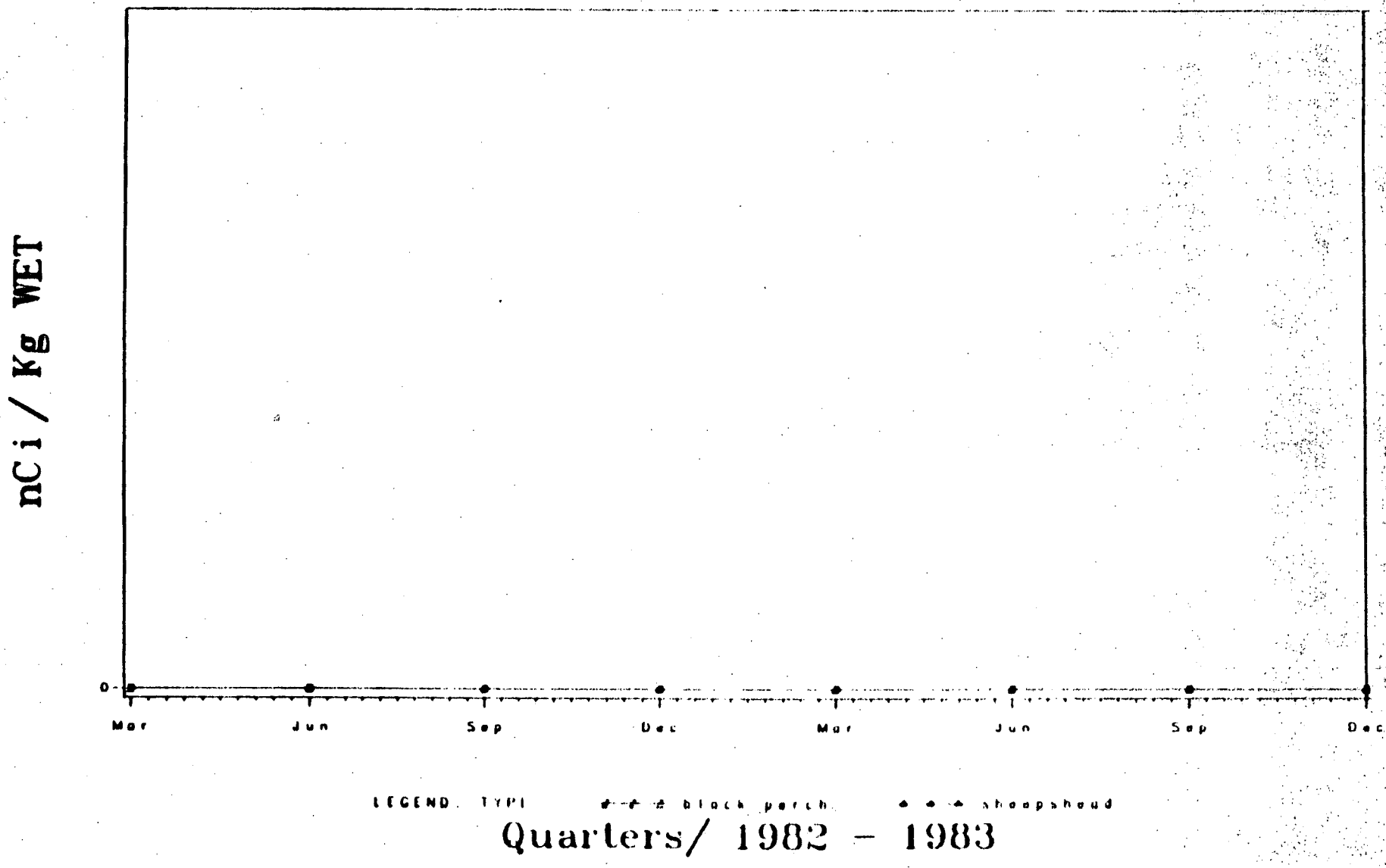


Figure 11

Quarterly Evaluation of Co-58
in
Marine Species (Flesh)
SONGS 2/3



Quarterly Evaluation of Co-60
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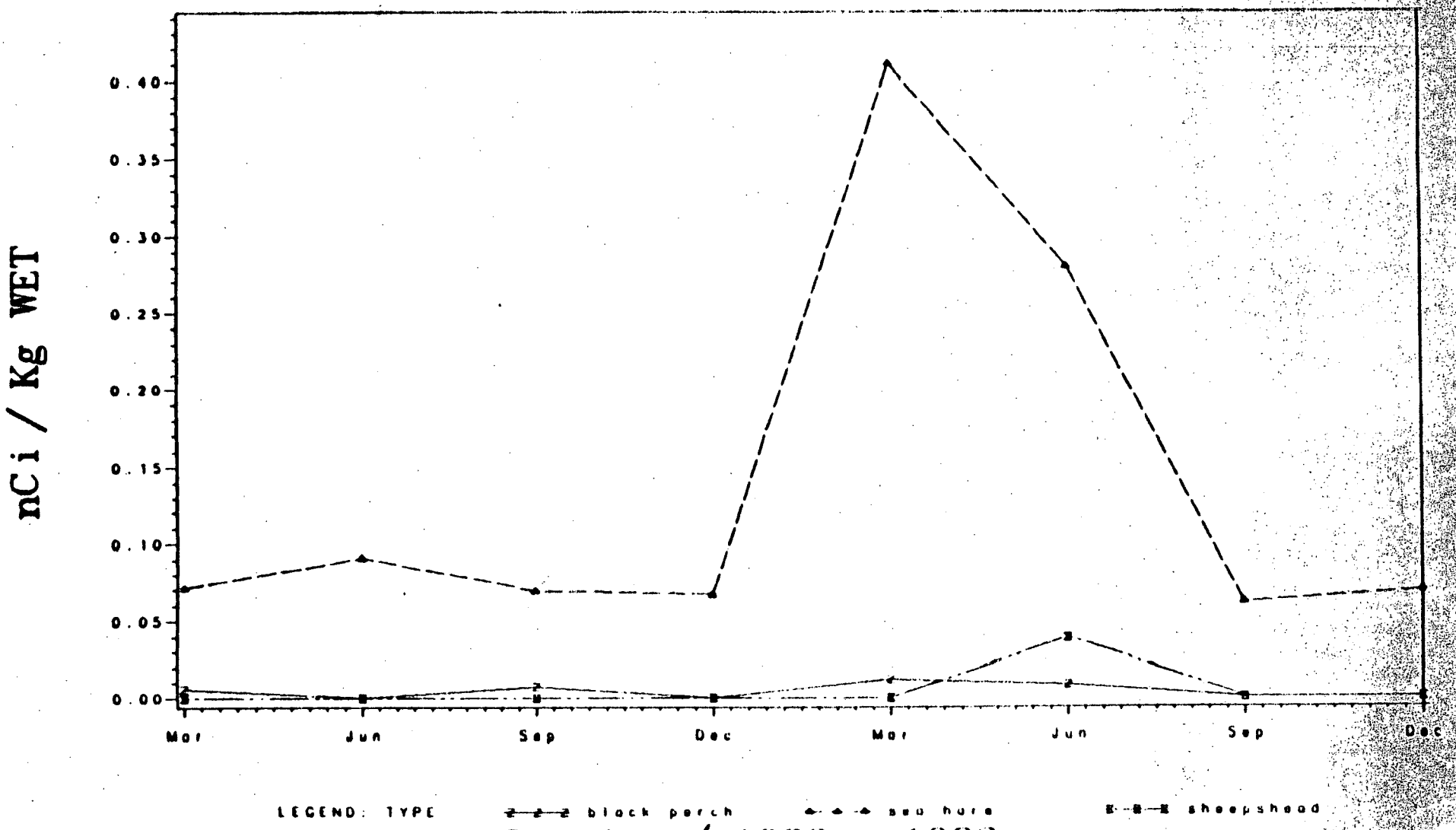
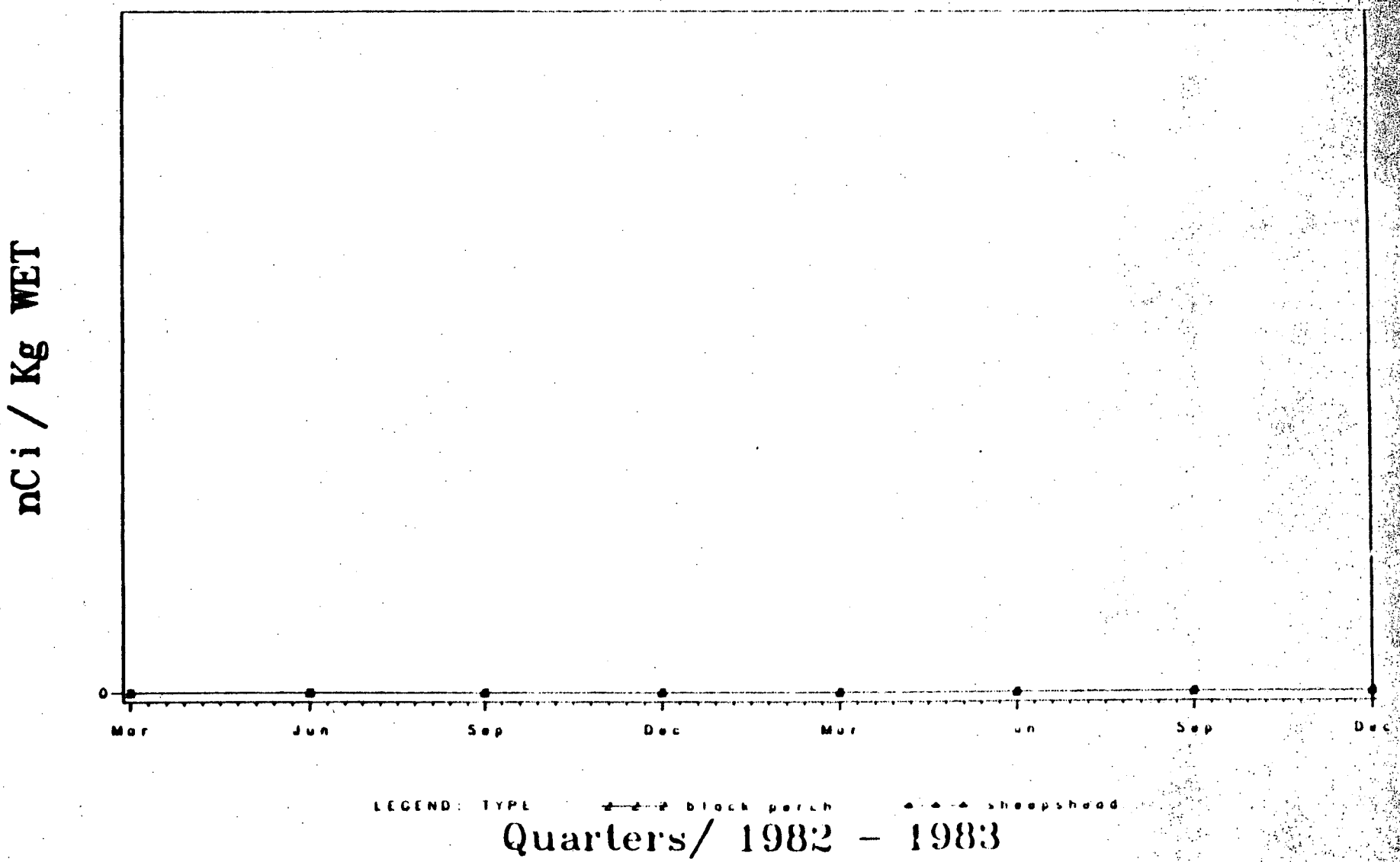
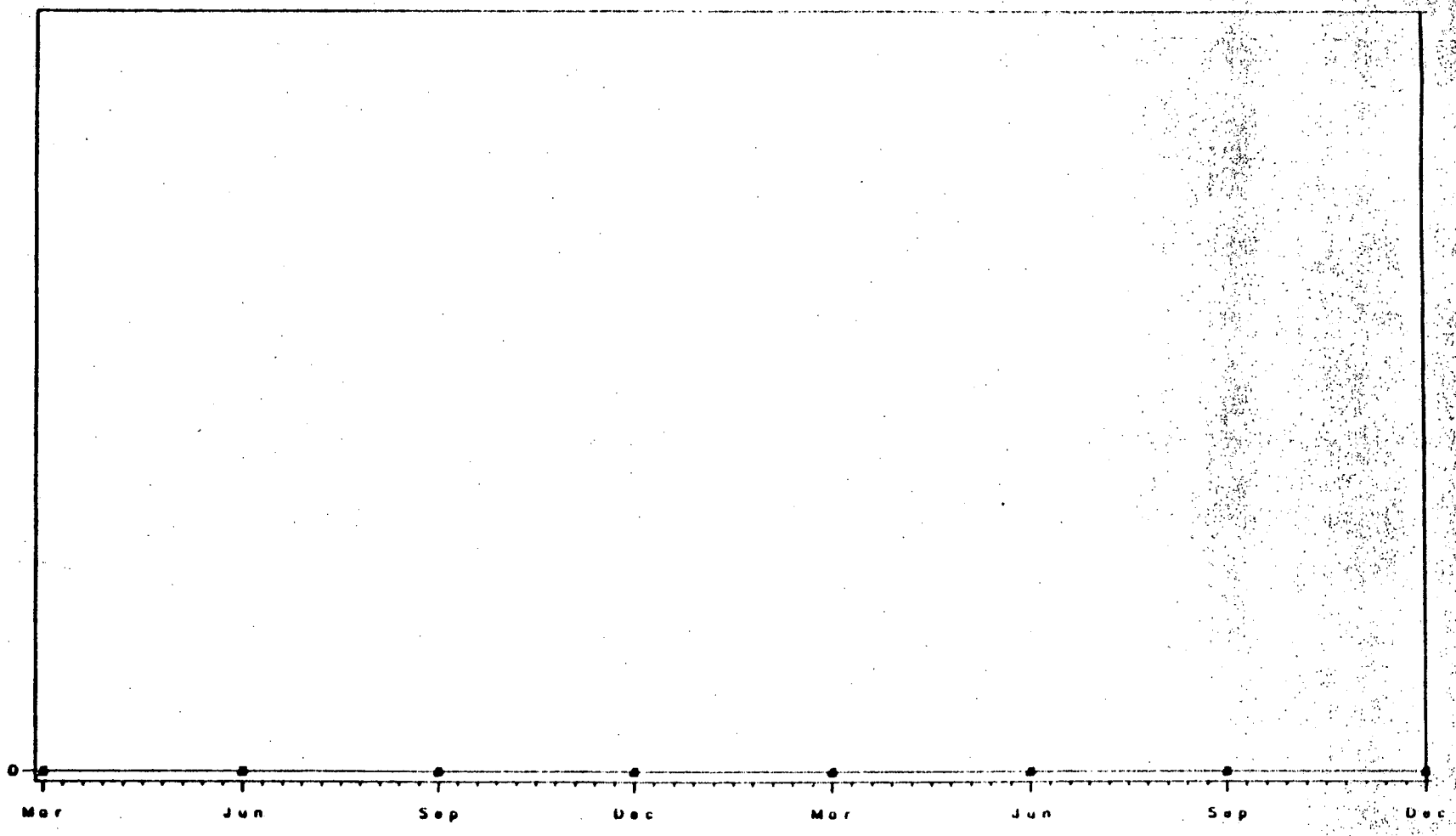
Marine Species (Flesh)
SONGS 1



Quarterly Evaluation of Co-60
in
Marine Species (Flesh)
SONGS 2/3



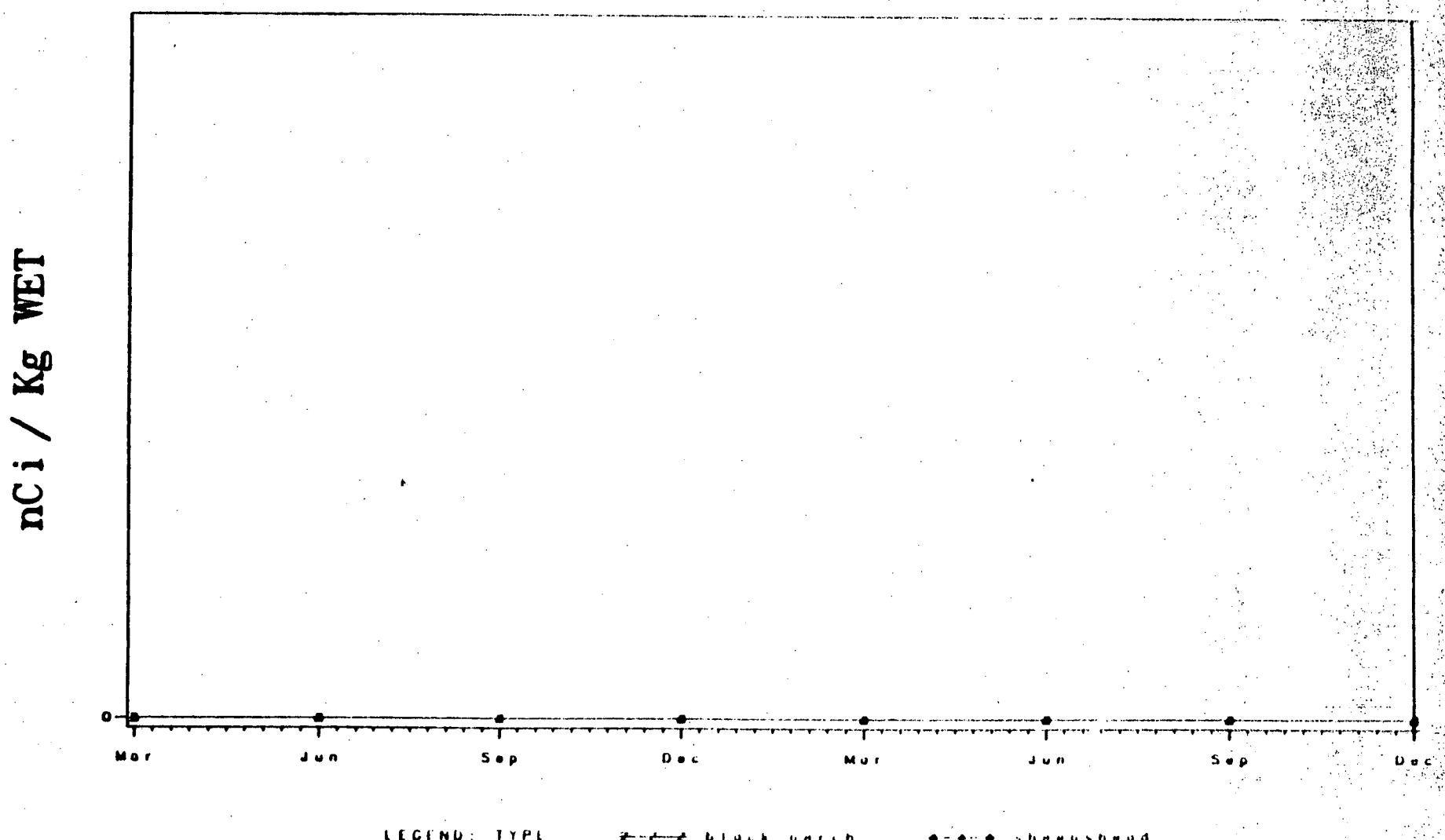
Quarterly Evaluation of Ag-110m
in
Marine Species (Flesh)
SONGS 1



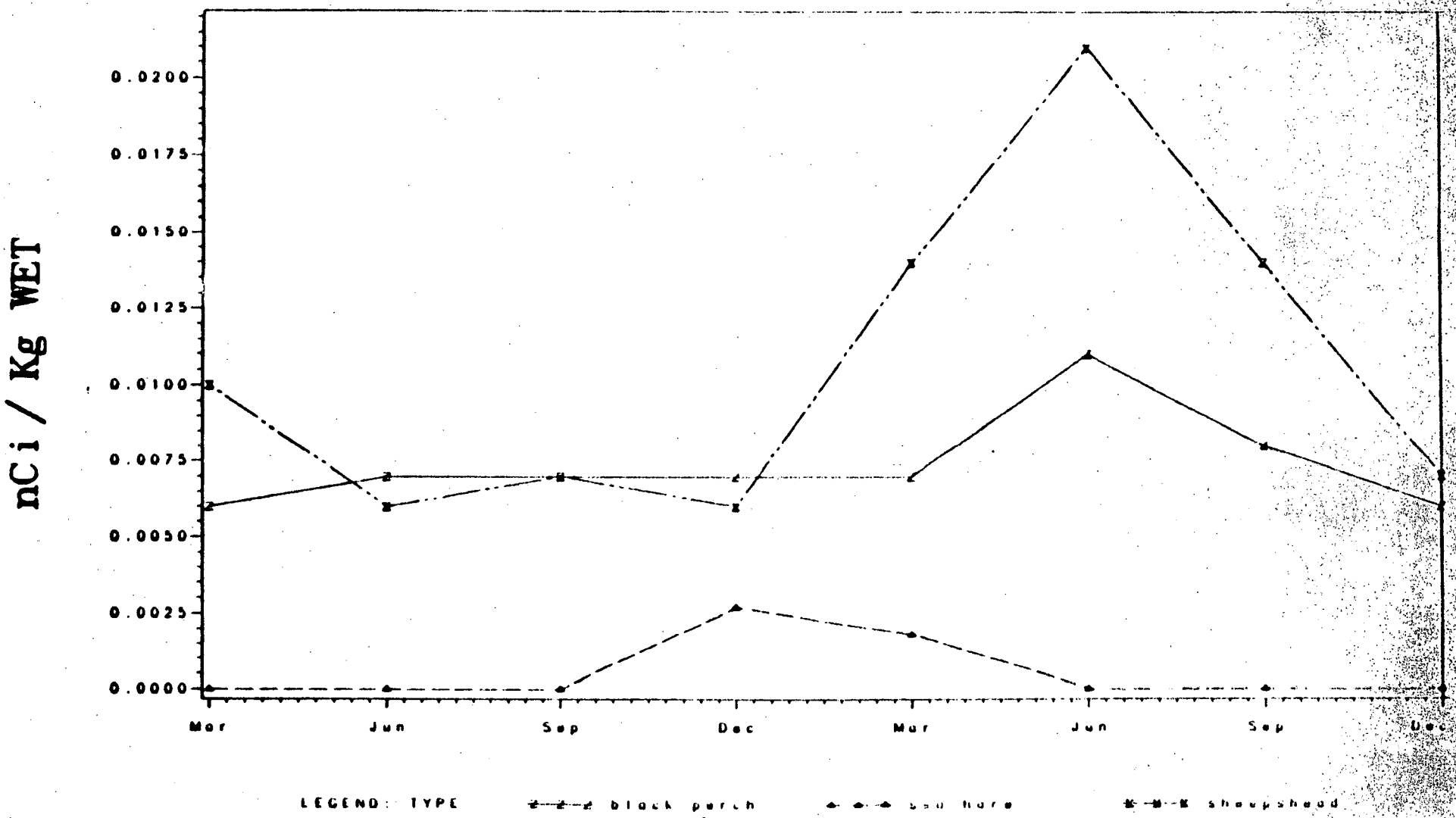
LEGEND: TYPE black perch sheepshead

Quarters/ 1982 - 1983

Quarterly Evaluation of Ag-110m
in
Marine Species (Flesh)
SONGS 2/3

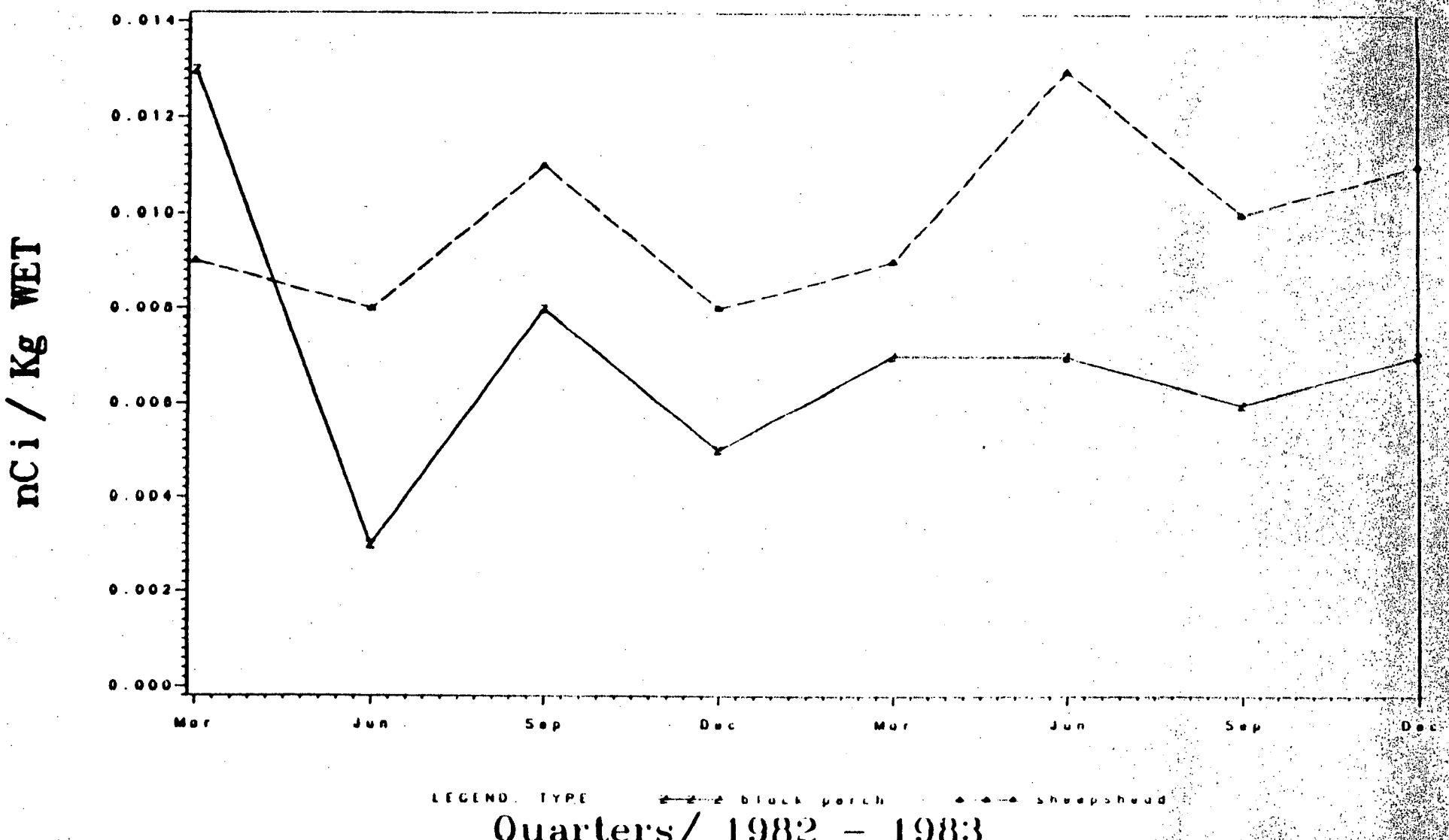


Quarterly Evaluation of Cs-137
in
Marine Species (Flesh)
SONGS 1

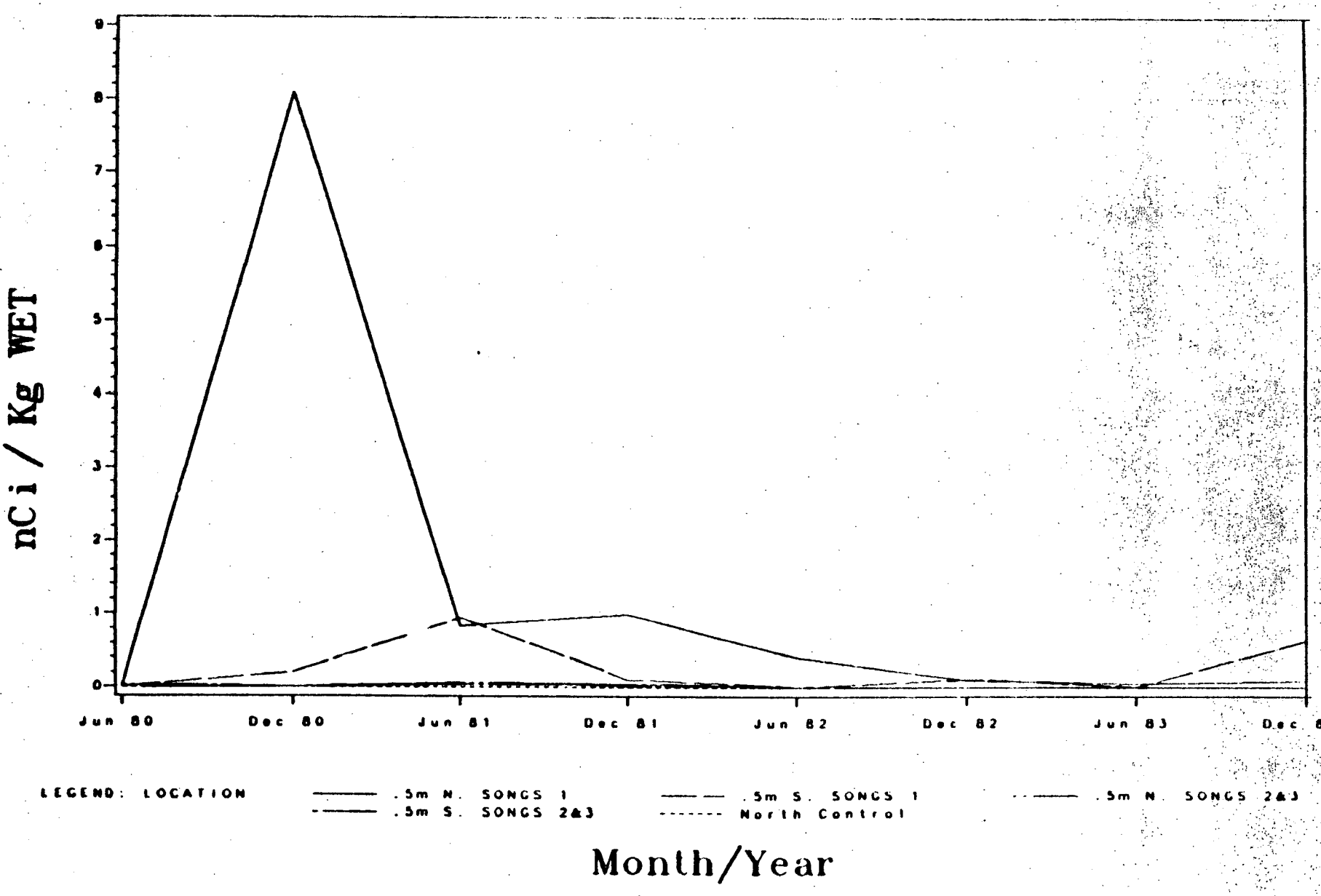


Quarters/ 1982 - 1983

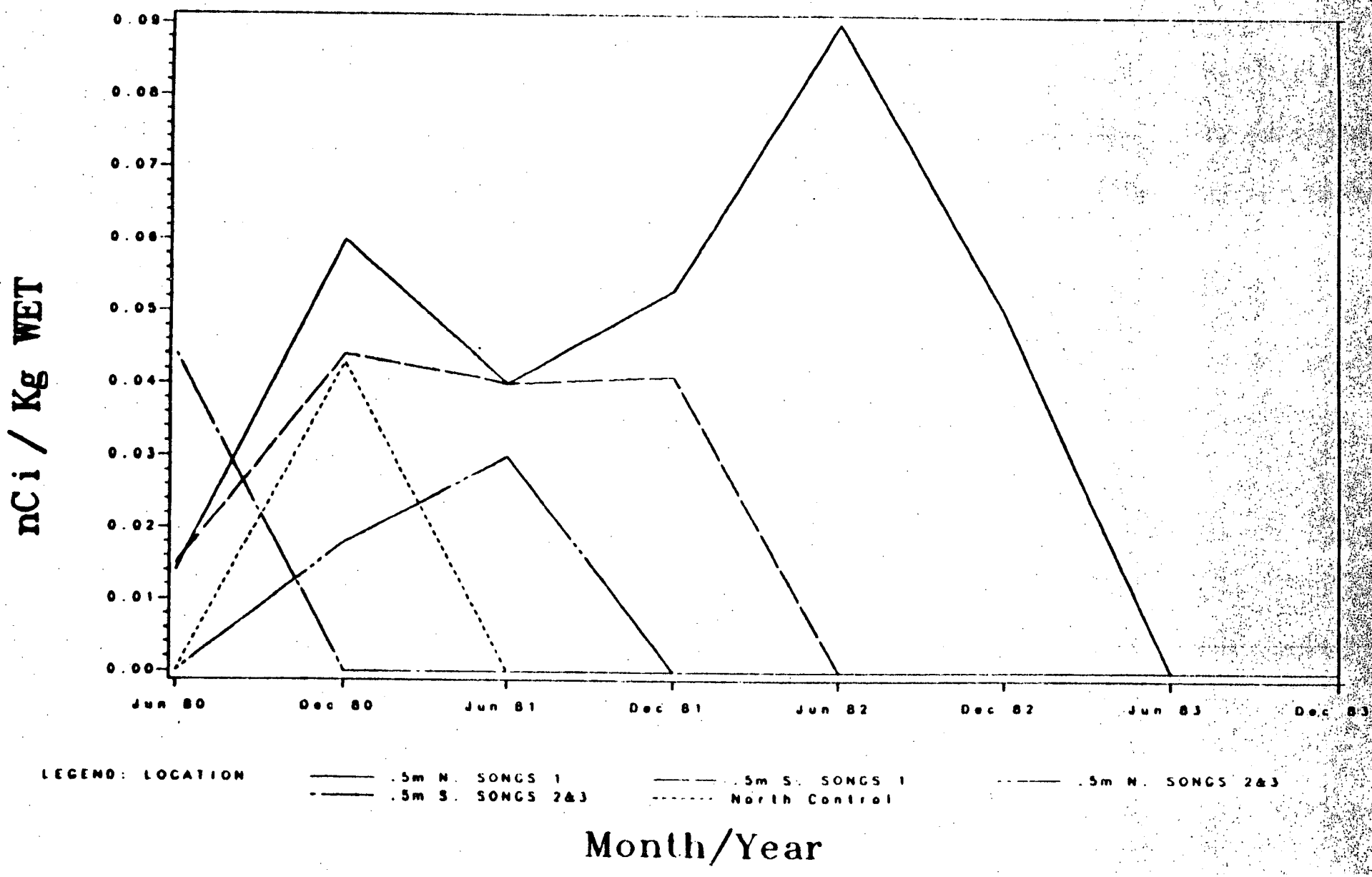
Quarterly Evaluation of Cs-137
in
Marine Species (Flesh)
SONGS 2/3



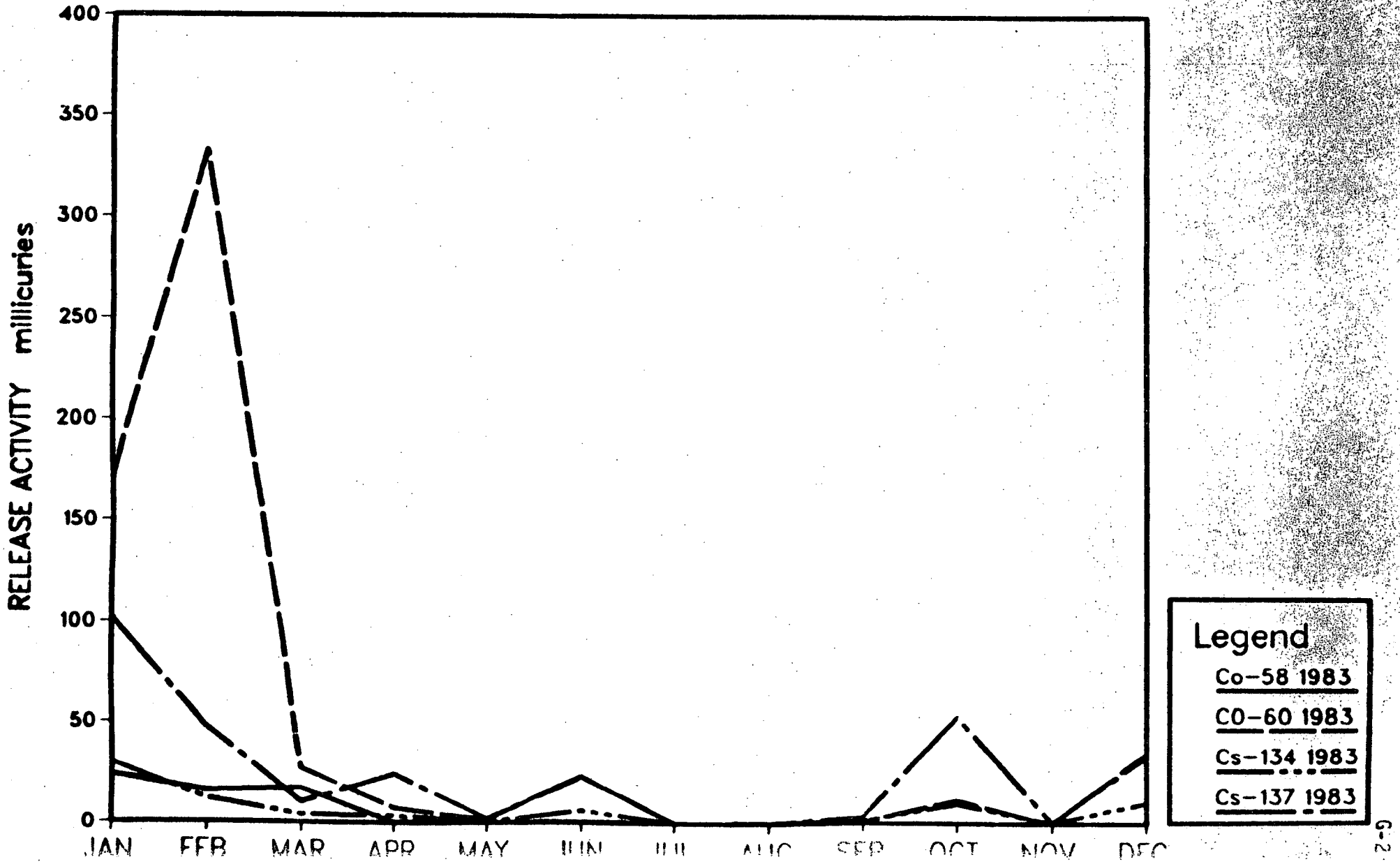
Co-60 Activity in Ocean Bottom Sediment



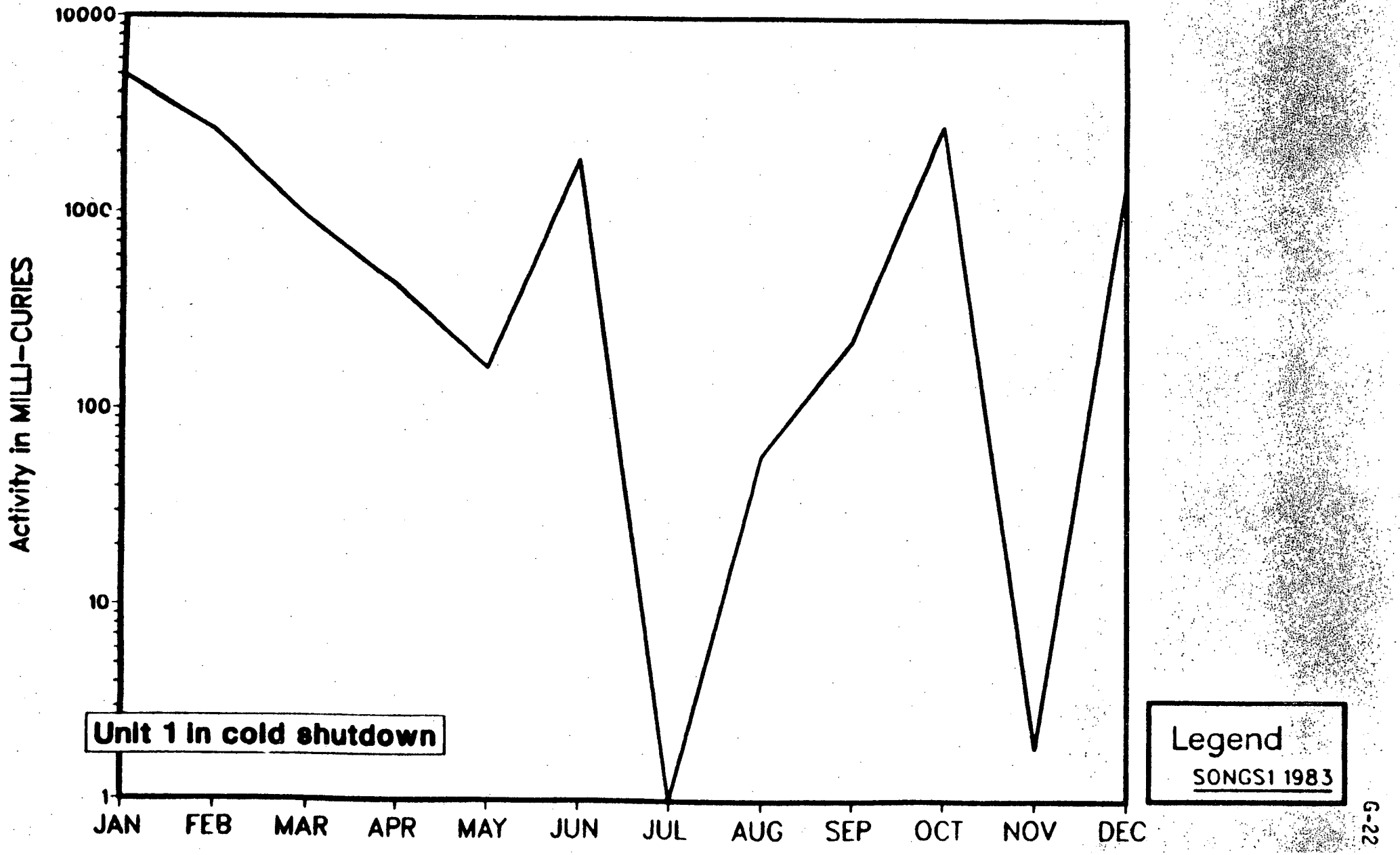
Cs-137 Activity in Ocean Bottom Sediment



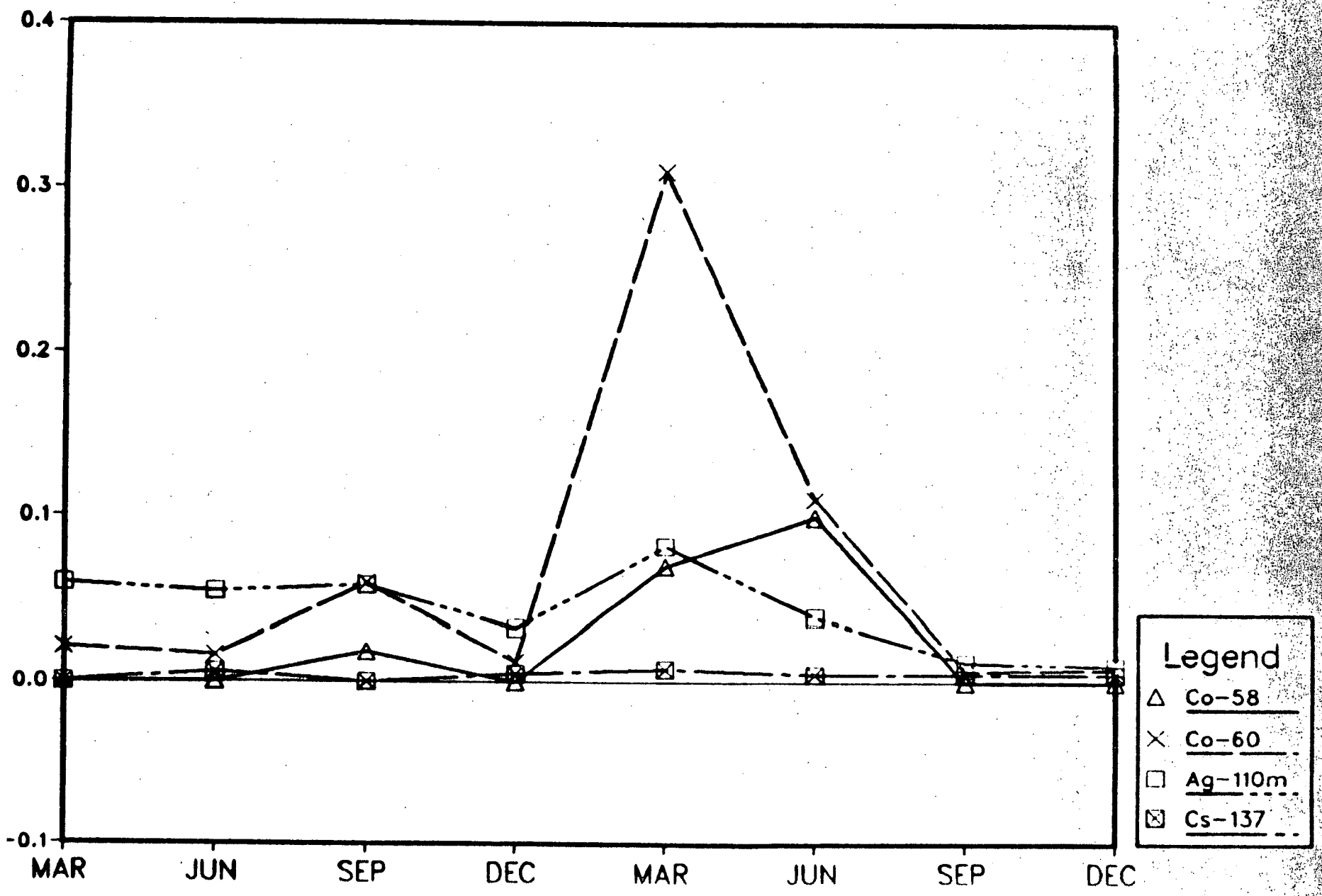
MONTHLY LIQUID EFFLUENT RELEASES
SONGS1



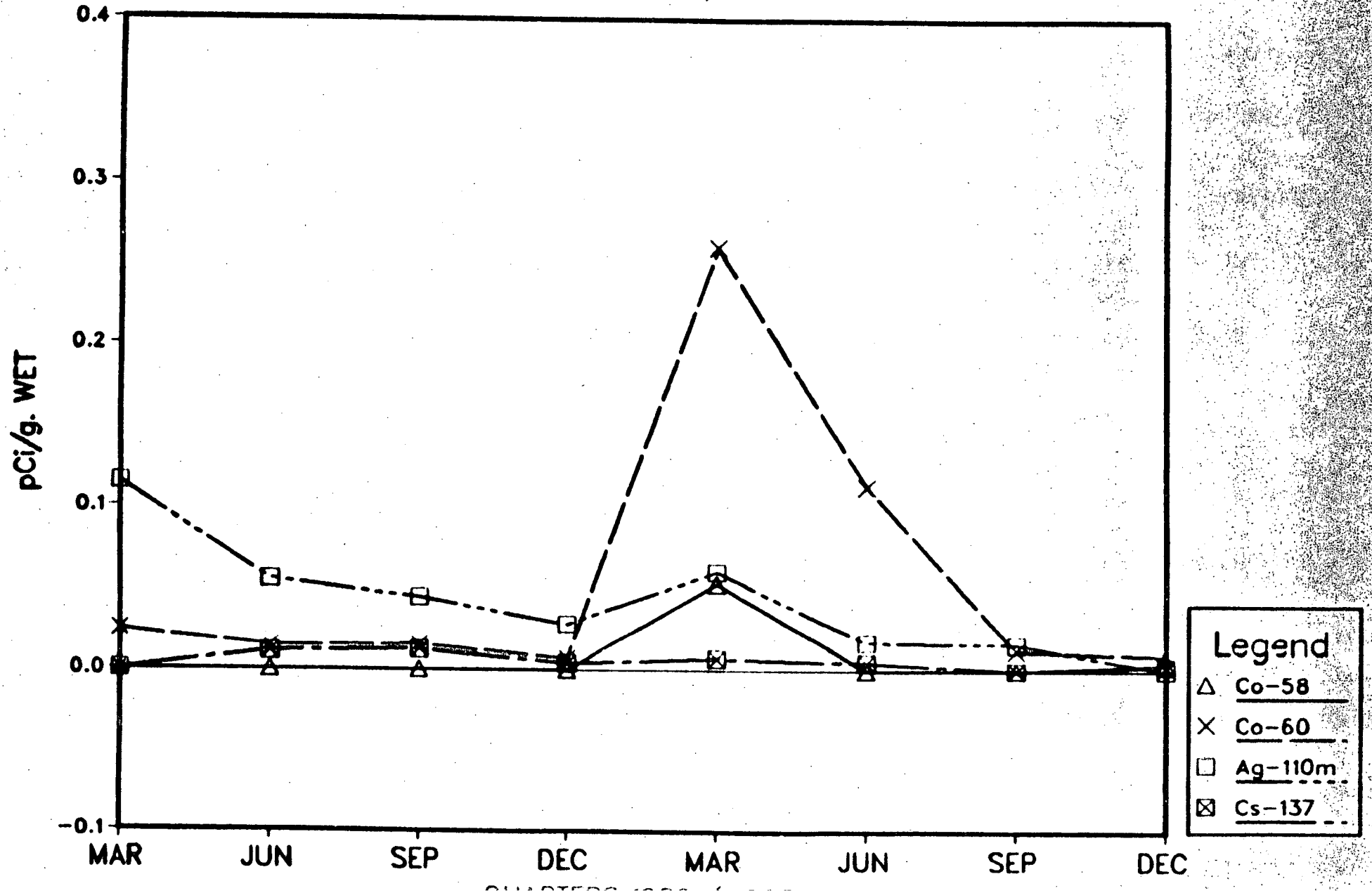
Tritium Activity in Liquid Effluent SONGS 1



QUARTERLY EVALUATION OF RADIOISOTOPES IN CRUSTACEAE
SONGS 1



QUARTERLY EVALUATION OF RADIOISOTOPES IN CRUSTACEAE SONGS 2/3



APPENDIX H

DATA TABLES

ACTION LEVELS

The following ETS action levels are used as guidelines for further analysis requirements:

Air Particulates - If gross beta in the indicator sample is equal or greater than 0.4 pCi/m^3, then gamma spectral analysis must be performed.

Ocean Water - If Cesium-137 in the indicator sample is greater than twice the background leve (control), then strontium analysis must be performed.

Drinking Water - If Cesium-137 in the indicator sample is equal or greater than 200 pCi/l, then strontium analysis must be performed.

If gross beta in composite filtrate is equal or greater than 30 pCi/l, then gamma spectral analysis must be performed.

Marine Species - If Cesium-137 is equal or greater than 6 nCi/kg wet weight of the edible tissue, then strontium analysis must be performed.

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15	Semi-Annual Kelp Analysis	H-44
16	Semi-Annual Jackrabbit Analysis	H-45

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible], Ph.D. Date: [illegible] 27, 1984

Table 1A: Quarterly Gamma Exposure

Control Location: 814

Observation Number	Calendar Date	Location 81	Location 82	Location 83	Location 84	Location 85	Location 86	Location 87	Location 88	Location 89	Location 810	Location 811	Location 812
33	03/31/83	2.22	26.2	23.3	24.1	21.5	17.8	22.8	23.3	24.4	25.0	23.5	21.8
34	06/30/83	20.10	27.2	23.5	24.6	21.2	18.2	22.2	23.1	23.6	0.0	23.5	20.9
35	09/30/83	19.40	26.5	23.4	23.7	20.1	18.2	21.2	22.6	23.0	23.0	21.3	18.9
36	12/31/83	22.60	28.9	24.6	25.7	22.3	19.5	23.4	23.6	24.8	24.9	24.4	21.1

Observation Number	Calendar Date	Location 813	Location 814	Location 815	Location 816	Location 817	Location 818	Location 819	Location 820	Location 821	Location 822	Location 823	Location 824
33	03/31/83	21.2	26.2	21.3	22.8	15.1	14.5	25.5	23.6	22.7	23.0	27.7	23.3
34	06/30/83	20.6	26.1	21.2	21.6	13.8	13.6	24.5	23.2	23.1	23.1	26.0	24.6
35	09/30/83	19.3	25.7	20.4	20.0	13.4	13.2	23.3	22.0	20.9	22.6	25.3	23.9
36	12/31/83	20.6	27.2	21.3	21.4	13.3	13.8	25.2	23.8	22.8	24.0	27.0	26.1

Observation Number	Calendar Date	Location 825	Location 826	Location 827	Location 828	Location 829	Location 830	Location 831	Location 832	Location 833	Location 834	Location 835	Location 836
33	03/31/83	23.6	23.4	22.0	25.0	24.3	22.2	25.3	23.2	22.9	22.7	22.8	25.8
34	06/30/83	22.9	22.6	21.3	24.5	24.1	22.7	23.5	23.2	23.1	22.3	22.6	25.5
35	09/30/83	23.1	22.3	19.4	23.9	23.2	21.5	22.2	22.5	22.7	22.0	22.6	25.2
36	12/31/83	24.4	24.0	22.5	25.6	25.0	24.1	23.6	23.7	23.5	22.7	22.4	25.8

Observation Number	Calendar Date	Location 837	Location 838	Location 839	Location 840	Location 841	Location 842	Location 843	Location 844	Location 845	Location 846	Location 847	Location 848
33	03/31/83	26.2	17.7	22.5	21.9	21.5	28.9	20.7	20.4	21.1	17.4	20.0	22.0
34	06/30/83	25.9	17.4	22.9	22.4	23.6	29.8	21.2	20.8	21.2	17.8	20.8	21.3
35	09/30/83	24.7	16.2	22.1	19.1	20.8	27.0	19.3	19.2	20.4	17.0	19.4	20.4
36	12/31/83	27.7	16.6	23.0	23.3	22.4	28.9	21.1	20.0	20.5	17.4	20.0	21.4

Observation Number	Calendar Date	Location 849	Location 850	Location 851	Location 852	Location 853	Location 854	Location 855	Location 856	Location 857	Location 858	Location 859
33	03/31/83	22.5	21.0	20.3	21.2	20.4	21.9	34.1	26.5	19.7	21.0	26.0
34	06/30/83	21.4	19.9	19.9	21.3	20.5	22.0	33.8	27.5	19.0	19.7	24.9
35	09/30/83	20.4	19.4	19.4	21.1	20.3	21.4	32.9	26.7	18.8	19.3	24.0
36	12/31/83	22.5	20.7	20.2	21.9	21.5	22.4	31.5	27.5	19.3	19.5	23.8

N=4

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible], Ph.D. Date: 3/27/84

Table 1b: Annual Gamma Exposure

Control Location: 814

Observation Number	Calendar Date	Location 81	Location 82	Location 83	Location 84	Location 85	Location 86	Location 87	Location 88	Location 89	Location 810	Location 811	Location 812
9	12/31/83	77.6	104.1	89.8	91.8	78.4	65	76.2	80.2	79.4	*	80.6	71.4

Observation Number	Calendar Date	Location 813	Location 814	Location 815	Location 816	Location 817	Location 818	Location 819	Location 820	Location 821	Location 822	Location 823	Location 824
9	12/31/83	69.8	95.4	76.2	76.7	49.9	57	96.5	90.7	92	94.3	108.5	99.9

Observation Number	Calendar Date	Location 825	Location 826	Location 827	Location 828	Location 829	Location 830	Location 831	Location 832	Location 833	Location 834	Location 835	Location 836
9	12/31/83	94.5	94	83.3	97.3	98.1	88	95.4	86.6	89	87.4	81.4	95.1

Observation Number	Calendar Date	Location 837	Location 838	Location 839	Location 840	Location 841	Location 842	Location 843	Location 844	Location 845	Location 846	Location 847	Location 848
9	12/31/83	99	56.1	80.3	75.4	81.7	104.2	71.6	76.1	78.1	67.1	77.2	83.3

Observation Number	Calendar Date	Location 849	Location 850	Location 851	Location 852	Location 853	Location 854	Location 855	Location 856	Location 857	Location 858	Location 859
9	12/31/83	87.4	82.8	78.6	87.2	80.2	90.1	117.9	104.2	71.8	75.6	95.7

N=1

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible], Ph D Date: 3/27/84

Table 2: Weekly Airborne Particulates Gross Beta Activity

Control Location: B3

Observation Number	Calendar Date	Location B1	Location B1 (2 sigma)	Location B2	Location B2 (2 sigma)	Location B3	Location B3 (2 sigma)
1259	01/04/83	0.016	0.002	0.022	0.001	0.029	0.002
1260	01/11/83	0.027	0.002	0.019	0.001	0.025	0.002
1261	01/18/83	0.021	0.001	0.023	0.001	0.025	0.001
1262	01/25/83	0.011	0.001	0.012	0.001	0.010	0.001
1263	02/01/83	0.009	0.001	0.007	0.001	0.017	0.003
1264	02/08/83	0.006	0.001	0.006	0.001	0.009	0.001
1265	02/15/83	0.013	0.001	0.017	0.001	0.015	0.002
1266	02/22/83	0.013	0.001	0.013	0.001	0.010	0.001
1267	03/01/83	0.010	0.001	0.014	0.001	0.014	0.001
1268	03/08/83	0.006	0.001	0.007	0.001	0.007	0.001
1269	03/15/83	0.008	0.001	0.012	0.001	0.017	0.002
1270	03/22/83	0.008	0.001	0.007	0.001	0.006	0.001
1271	03/29/83	0.010	0.001	0.010	0.001	0.012	0.001
1272	04/05/83	0.010	0.001	0.012	0.001	0.011	0.001
1273	04/12/83	0.018	0.001	0.020	0.001	0.021	0.001
1274	04/19/83	0.013	0.001	0.012	0.001	0.010	0.001
1275	04/26/83	0.009	0.001	0.015	0.001	0.013	0.001
1276	05/03/83	0.005	0.001	0.009	0.001	0.008	0.001
1277	05/10/83	0.011	0.001	0.014	0.003	0.009	0.001
1278	05/17/83	0.013	0.001	0.014	0.001	0.013	0.001
1279	05/24/83	0.014	0.001	0.018	0.001	0.023	0.002

Observation Number	Calendar Date	Location B4	Location B4 (2 sigma)	Location B5	Location B5 (2 sigma)	Location B6	Location B6 (2 sigma)
1259	01/04/83	0.024	0.001	0.027	0.001	0.026	0.002
1260	01/11/83	0.032	0.002	0.027	0.002	0.037	0.003
1261	01/18/83	0.025	0.001	0.025	0.001	0.026	0.001
1262	01/25/83	0.014	0.001	0.010	0.001	0.012	0.001
1263	02/01/83	0.009	0.001	0.011	0.001	0.010	0.001
1264	02/08/83	0.007	0.001	0.006	0.001	0.008	0.001
1265	02/15/83	0.013	0.001	0.014	0.001	0.017	0.001
1266	02/22/83	0.017	0.002	0.009	0.001	0.017	0.002
1267	03/01/83	0.010	0.001	0.013	0.001	0.015	0.001
1268	03/08/83	0.007	0.001	0.003	0.001	0.007	0.001
1269	03/15/83	0.013	0.002	0.016	0.002	0.016	0.002
1270	03/22/83	0.006	0.001	0.007	0.001	0.008	0.001
1271	03/29/83	0.011	0.001	0.010	0.001	0.010	0.001
1272	04/05/83	0.017	0.002	0.010	0.001	0.018	0.002
1273	04/12/83	0.019	0.001	0.021	0.001	0.013	0.001
1274	04/19/83	0.013	0.001	0.014	0.001	0.014	0.001
1275	04/26/83	0.012	0.001	0.012	0.001	0.012	0.001
1276	05/03/83	0.010	0.001	0.006	0.001	0.010	0.001

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible], Ph.D. Date: 3/27/84

Table 2: Weekly Airborne Particulates Gross Beta Activity

Control Location: 83

Observation Number	Calendar Date	Location 81	Location 81 (2 sigma)	Location 82	Location 82 (2 sigma)	Location 83	Location 83 (2 sigma)
1280	05/31/83	0.016	0.001	0.013	0.001	0.014	0.001
1281	06/07/83	0.010	0.001	0.014	0.001	0.012	0.001
1282	06/14/83	0.012	0.001	0.015	0.001	0.012	0.001
1283	06/21/83	0.016	0.001	0.018	0.001	0.021	0.001
1284	06/28/83	0.015	0.001	0.015	0.001	0.013	0.001
1285	07/05/83	0.014	0.001	0.016	0.001	0.018	0.001
1286	07/12/83	0.013	0.001	0.012	0.001	0.010	0.001
1287	07/19/83	0.013	0.001	0.019	0.001	0.015	0.001
1288	07/26/83	0.013	0.001	0.014	0.001	0.013	0.001
1289	08/02/83	0.015	0.001	0.020	0.001	0.017	0.001
1290	08/09/83	0.014	0.001	0.016	0.001	0.014	0.001
1291	08/16/83	0.014	0.001	0.021	0.002	0.021	0.002
1292	08/23/83	0.011	0.001	0.013	0.001	0.013	0.001
1293	08/30/83	0.021	0.001	0.032	0.002	0.025	0.002
1294	09/06/83	0.013	0.001	0.017	0.001	0.014	0.001
1295	09/13/83	0.015	0.001	0.026	0.002	0.022	0.002
1296	09/20/83	0.022	0.001	0.027	0.002	0.021	0.001
1297	09/27/83	0.016	0.001	0.014	0.001	0.019	0.001
1298	10/04/83	0.016	0.001	0.011	0.001	0.012	0.001
1299	10/11/83	0.016	0.001	0.026	0.001	0.026	0.001
1300	10/18/83	0.014	0.001	0.021	0.001	0.018	0.002

Observation Number	Calendar Date	Location 84	Location 84 (2 sigma)	Location 85	Location 85 (2 sigma)	Location 86	Location 86 (2 sigma)
1280	05/31/83	0.017	0.001	0.014	0.001	0.017	0.001
1281	06/07/83	0.010	0.001	0.009	0.001	0.008	0.001
1282	06/14/83	0.015	0.001	0.017	0.001	0.010	0.001
1283	06/21/83	0.018	0.001	0.019	0.001	0.019	0.001
1284	06/28/83	0.016	0.001	0.015	0.001	0.013	0.001
1285	07/05/83	0.016	0.001	0.018	0.001	0.016	0.001
1286	07/12/83	0.014	0.001	0.009	0.001	0.016	0.001
1287	07/19/83	0.018	0.001	0.020	0.001	0.018	0.001
1288	07/26/83	0.019	0.001	0.010	0.001	0.020	0.001
1289	08/02/83	0.016	0.001	0.019	0.001	0.019	0.001
1290	08/09/83	0.016	0.001	0.019	0.001	0.019	0.001
1291	08/16/83	0.016	0.001	0.022	0.001	0.020	0.002
1292	08/23/83	0.014	0.001	0.014	0.001	0.014	0.001
1293	08/30/83	0.029	0.002	0.031	0.002	0.023	0.002
1294	09/06/83	0.019	0.001	0.017	0.001	0.012	0.001
1295	09/13/83	0.020	0.002	0.026	0.002	0.029	0.002
1296	09/20/83	0.023	0.001	0.025	0.001	0.027	0.001
1297	09/27/83	0.014	0.001	0.018	0.001	0.015	0.001
1298	10/04/83	0.013	0.001	0.010	0.001	0.013	0.001
1299	10/11/83	0.023	0.001	0.024	0.001	0.026	0.001
1300	10/18/83	0.028	0.001	0.016	0.002	0.016	0.001

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Gerald C. Hulse, Ph.D. Date: 3/27/84

Table 2: Weekly Airborne Particulates Gross Beta Activity

Control Location: 03

Observation Number	Calendar Date	Location 01	Location 01 (2 sigma)	Location 02	Location 02 (2 sigma)	Location 03	Location 03 (2 sigma)
1301	10/25/83	0.031	0.001	0.043	0.002	0.055	0.002
1302	11/01/83	0.029	0.001	0.027	0.001	0.028	0.001
1303	11/08/83	0.013	0.001	0.030	0.001	0.022	0.001
1304	11/15/83	0.023	0.001	0.019	0.001	0.037	0.002
1305	11/22/83	0.015	0.001	0.015	0.001	0.033	0.003
1306	11/29/83	0.017	0.001	0.014	0.001	0.016	0.001
1307	12/06/83	0.022	0.001	0.025	0.001	0.027	0.001
1308	12/13/83	0.013	0.001	0.016	0.001	0.014	0.001
1309	12/20/83	0.012	0.001	0.019	0.001	0.029	0.002
1310	12/27/83	0.014	0.001	0.012	0.001	0.012	0.001

Observation Number	Calendar Date	Location 04	Location 04 (2 sigma)	Location 05	Location 05 (2 sigma)	Location 06	Location 06 (2 sigma)
1301	10/25/83	0.033	0.001	0.046	0.002	0.040	0.002
1302	11/01/83	0.033	0.001	0.033	0.001	0.033	0.001
1303	11/08/83	0.022	0.001	0.023	0.001	0.017	0.001
1304	11/15/83	0.018	0.001	0.017	0.001	0.019	0.001
1305	11/22/83	0.024	0.001	0.035	0.002	0.025	0.001
1306	11/29/83	0.010	0.001	0.015	0.001	0.006	0.001
1307	12/06/83	0.022	0.001	0.020	0.001	0.018	0.001
1308	12/13/83	0.016	0.001	0.018	0.001	0.017	0.001
1309	12/20/83	0.018	0.001	0.021	0.003	0.021	0.001
1310	12/27/83	0.010	0.001	0.010	0.001	0.014	0.001

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Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible], Ph.D. Date: 3/27/84

Table 3: Weekly Radioiodine I-131 Activity

Control Location: 83

Observation Number	Calendar Date	Location 81	Location 81 (2 sigma)	Location 82	Location 82 (2 sigma)	Location 83	Location 83 (2 sigma)
423	01/04/83	0	0.04	0	0.04	0	0.04
424	01/11/83	0	0.04	0	0.04	0	0.04
425	01/18/83	0	0.04	0	0.04	0	0.04
426	01/25/83	0	0.04	0	0.04	0	0.04
427	02/01/83	0	0.04	0	0.04	0	0.04
428	02/08/83	0	0.04	0	0.04	0	0.04
429	02/15/83	0	0.04	0	0.04	0	0.04
430	02/22/83	0	0.04	0	0.04	0	0.04
431	03/01/83	0	0.04	0	0.04	0	0.04
432	03/08/83	0	0.04	0	0.04	0	0.04
433	03/15/83	0	0.04	0	0.04	0	0.04
434	03/22/83	0	0.04	0	0.04	0	0.04
435	03/29/83	0	0.04	0	0.04	0	0.04
436	04/05/83	0	0.04	0	0.04	0	0.04
437	04/12/83	0	0.04	0	0.04	0	0.04
438	04/19/83	0	0.04	0	0.04	0	0.04
439	04/26/83	0	0.04	0	0.04	0	0.04
440	05/03/83	0	0.04	0	0.04	0	0.04
441	05/10/83	0	0.04	0	0.04	0	0.04
442	05/17/83	0	0.04	0	0.04	0	0.04
443	05/24/83	0	0.04	0	0.04	0	0.04

Observation Number	Calendar Date	Location 84	Location 84 (2 sigma)	Location 85	Location 85 (2 sigma)	Location 86	Location 86 (2 sigma)
423	01/04/83	0	0.04	0	0.04	0	0.04
424	01/11/83	0	0.04	0	0.04	0	0.04
425	01/18/83	0	0.04	0	0.04	0	0.04
426	01/25/83	0	0.04	0	0.04	0	0.04
427	02/01/83	0	0.04	0	0.04	0	0.04
428	02/08/83	0	0.04	0	0.04	0	0.04
429	02/15/83	0	0.04	0	0.04	0	0.04
430	02/22/83	0	0.04	0	0.04	0	0.04
431	03/01/83	0	0.04	0	0.04	0	0.04
432	03/08/83	0	0.04	0	0.04	0	0.04
433	03/15/83	0	0.04	0	0.04	0	0.04
434	03/22/83	0	0.04	0	0.04	0	0.04
435	03/29/83	0	0.04	0	0.04	0	0.04
436	04/05/83	0	0.04	0	0.04	0	0.04
437	04/12/83	0	0.04	0	0.04	0	0.04
438	04/19/83	0	0.04	0	0.04	0	0.04
439	04/26/83	0	0.04	0	0.04	0	0.04
440	05/03/83	0	0.04	0	0.04	0	0.04
441	05/10/83	0	0.04	0	0.04	0	0.04
442	05/17/83	0	0.04	0	0.04	0	0.04
443	05/24/83	0	0.04	0	0.04	0	0.04

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible], Ph.D Date: 3/27/84

Table 3: Weekly Radioiodine I-131 Activity

Control Location: 83

Observation Number	Calendar Date	Location 81	Location 81 (2 sigma)	Location 82	Location 82 (2 sigma)	Location 83	Location 83 (2 sigma)
444	05/31/83	0	0.04	0	0.04	0	0.04
445	06/07/83	0	0.04	0	0.04	0	0.04
446	06/14/83	0	0.04	0	0.04	0	0.04
447	06/21/83	0	0.04	0	0.04	0	0.04
448	06/28/83	0	0.04	0	0.04	0	0.04
449	07/05/83	0	0.04	0	0.04	0	0.04
450	07/12/83	0	0.04	0	0.04	0	0.04
451	07/19/83	0	0.04	0	0.04	0	0.04
452	07/26/83	0	0.04	0	0.04	0	0.04
453	08/02/83	0	0.04	0	0.04	0	0.04
454	08/09/83	0	0.04	0	0.04	0	0.04
455	08/16/83	0	0.04	0	0.04	0	0.04
456	08/23/83	0	0.04	0	0.04	0	0.04
457	08/30/83	0	0.04	0	0.04	0	0.04
458	09/06/83	0	0.04	0	0.04	0	0.04
459	09/13/83	0	0.04	0	0.04	0	0.04
460	09/20/83	0	0.04	0	0.04	0	0.04
461	09/27/83	0	0.04	0	0.04	0	0.04
462	10/04/83	0	0.04	0	0.04	0	0.04
463	10/11/83	0	0.04	0	0.04	0	0.04
464	10/18/83	0	0.04	0	0.04	0	0.04

Observation Number	Calendar Date	Location 84	Location 84 (2 sigma)	Location 85	Location 85 (2 sigma)	Location 86	Location 86 (2 sigma)
444	05/31/83	0	0.04	0	0.04	0	0.04
445	06/07/83	0	0.04	0	0.04	0	0.04
446	06/14/83	0	0.04	0	0.04	0	0.04
447	06/21/83	0	0.04	0	0.04	0	0.04
448	06/28/83	0	0.04	0	0.04	0	0.04
449	07/05/83	0	0.04	0	0.04	0	0.04
450	07/12/83	0	0.04	0	0.04	0	0.04
451	07/19/83	0	0.04	0	0.04	0	0.04
452	07/26/83	0	0.04	0	0.04	0	0.04
453	08/02/83	0	0.04	0	0.04	0	0.04
454	08/09/83	0	0.04	0	0.04	0	0.04
455	08/16/83	0	0.04	0	0.04	0	0.04
456	08/23/83	0	0.04	0	0.04	0	0.04
457	08/30/83	0	0.04	0	0.04	0	0.04
458	09/06/83	0	0.04	0	0.04	0	0.04
459	09/13/83	0	0.04	0	0.04	0	0.04
460	09/20/83	0	0.04	0	0.04	0	0.04
461	09/27/83	0	0.04	0	0.04	0	0.04

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Jeanne C. Keller, Ph.D. Date: 3/27/84

Table 3: Weekly Radioiodine I-131 Activity

Control Location: 83

Observation Number	Calendar Date	Location 81	Location 81 (2 sigma)	Location 82	Location 82 (2 sigma)	Location 83	Location 83 (2 sigma)
465	10/25/83	0	0.04	0	0.04	0	0.04
466	11/01/83	0	0.04	0	0.04	0	0.04
467	11/08/83	0	0.04	0	0.04	0	0.04
468	11/15/83	0	0.04	0	0.04	0	0.04
469	11/22/83	0	0.04	0	0.04	0	0.08
470	11/29/83	0	0.04	0	0.04	0	0.04
471	12/06/83	0	0.04	0	0.04	0	0.04
472	12/13/83	0	0.04	0	0.04	0	0.04
473	12/20/83	0	0.04	0	0.04	0	0.04
474	12/27/83	0	0.04	0	0.04	0	0.04

Observation Number	Calendar Date	Location 84	Location 84 (2 sigma)	Location 85	Location 85 (2 sigma)	Location 86	Location 86 (2 sigma)
465	10/25/83	0	0.04	0	0.04	0	0.04
466	11/01/83	0	0.04	0	0.04	0	0.04
467	11/08/83	0	0.04	0	0.04	0	0.04
468	11/15/83	0	0.04	0	0.04	0	0.04
469	11/22/83	0	0.04	0	0.08	0	0.04
470	11/29/83	0	0.04	0	0.04	0	0.04
471	12/06/83	0	0.04	0	0.04	0	0.04
472	12/13/83	0	0.04	0	0.04	0	0.04
473	12/20/83	0	0.04	0	0.04	0	0.04
474	12/27/83	0	0.04	0	0.04	0	0.04

N=52

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible], Ph.D. Date: 3/27/84

Table 4a: Quarterly Composite Airborne Particulates Gamma Spectral Analysis

Control Location: B3

Observation Number	Calendar Date	Location	Be-7	Be-7 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-134	Cs-134 (2 sigma)	K-40	K-40 (2 sigma)	Ru-103	Ru-103 (2 sigma)	Cs-137
171	01/01/83	1	0.060	0.003	0	0.001	0	0.001	0	0.002	0	0.001	0
172	01/01/83	2	0.068	0.003	0	0.001	0	0.001	0	0.004	0	0.001	0
173	01/01/83	3	0.078	0.004	0	0.001	0	0.001	0	0.003	0	0.001	0
174	01/01/83	4	0.057	0.003	0	0.001	0	0.001	0	0.003	0	0.001	0
175	01/01/83	5	0.074	0.004	0	0.001	0	0.001	0	0.006	0	0.001	0
176	01/01/83	6	0.074	0.004	0	0.001	0	0.001	0	0.002	0	0.001	0
177	04/01/83	1	0.059	0.005	0	0.002	0	0.001	0	0.008	0	0.001	0
178	04/01/83	2	0.059	0.005	0	0.002	0	0.001	0	0.005	0	0.002	0
179	04/01/83	3	0.041	0.005	0	0.001	0	0.001	0	0.004	0	0.001	0
180	04/01/83	4	0.072	0.007	0	0.003	0	0.001	0	0.010	0	0.002	0
181	04/01/83	5	0.062	0.005	0	0.002	0	0.001	0	0.005	0	0.001	0
182	04/01/83	6	0.059	0.006	0	0.002	0	0.001	0	0.009	0	0.001	0
183	07/01/83	1	0.063	0.004	0	0.004	0	0.001	0	0.004	0	0.004	0
184	07/01/83	2	0.066	0.004	0	0.004	0	0.001	0	0.010	0	0.004	0
185	07/01/83	3	0.083	0.004	0	0.004	0	0.001	0	0.004	0	0.004	0
186	07/01/83	4	0.077	0.004	0	0.004	0	0.001	0	0.005	0	0.004	0
187	07/01/83	5	0.069	0.007	0	0.004	0	0.001	0	0.005	0	0.004	0
188	07/01/83	6	0.065	0.005	0	0.004	0	0.001	0	0.010	0	0.004	0
189	10/01/83	1	0.077	0.006	0	0.004	0	0.001	0	0.005	0	0.004	0
190	10/01/83	2	0.097	0.005	0	0.004	0	0.001	0	0.005	0	0.004	0
191	10/01/83	3	0.097	0.007	0	0.004	0	0.001	0	0.009	0	0.004	0

Observation Number	Calendar Date	Cs-137 (2 sigma)	Co-58	Co-58 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-60	Co-60 (2 sigma)	I-131	I-131 (2 sigma)	Ce-144	Ce-144 (2 sigma)
171	01/01/83	0.001	0	0.001	0	0.001	0	0.001	0	0.001	*	*	0	0.001
172	01/01/83	0.001	0	0.001	0	0.001	0	0.001	0	0.001	*	*	0	0.001
173	01/01/83	0.001	0	0.001	0	0.001	0	0.001	0	0.001	*	*	0	0.001
174	01/01/83	0.001	0	0.001	0	0.001	0	0.001	0	0.001	*	*	0	0.001
175	01/01/83	0.001	0	0.001	0	0.001	0	0.001	0	0.001	*	*	0	0.001
176	01/01/83	0.001	0	0.001	0	0.001	0	0.001	0	0.001	*	*	0	0.001
177	04/01/83	0.001	0	0.001	0	0.001	0	0.003	0	0.001	*	*	0	0.003
178	04/01/83	0.001	0	0.001	0	0.001	0	0.002	0	0.001	*	*	0	0.002
179	04/01/83	0.001	0	0.001	0	0.001	0	0.002	0	0.001	*	*	0	0.002
180	04/01/83	0.001	0	0.001	0	0.001	0	0.003	0	0.001	*	*	0	0.003
181	04/01/83	0.001	0	0.001	0	0.001	0	0.002	0	0.001	*	*	0	0.002
182	04/01/83	0.001	0	0.001	0	0.001	0	0.003	0	0.001	*	*	0	0.002
183	07/01/83	0.001	0	0.002	0	0.002	0	0.004	0	0.002	*	*	0	0.005
184	07/01/83	0.001	0	0.002	0	0.002	0	0.004	0	0.002	*	*	0	0.005
185	07/01/83	0.001	0	0.002	0	0.002	0	0.004	0	0.002	*	*	0	0.005
186	07/01/83	0.001	0	0.002	0	0.002	0	0.004	0	0.002	*	*	0	0.005
187	07/01/83	0.001	0	0.002	0	0.002	0	0.004	0	0.002	*	*	0	0.005
188	07/01/83	0.001	0	0.002	0	0.002	0	0.004	0	0.002	*	*	0	0.005
189	10/01/83	0.001	0	0.002	0	0.002	0	0.004	0	0.002	*	*	0	0.005

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible], Ph.D. Date: 3/27/84

Table 4a: Quarterly Composite Airborne Particulates Gamma Spectral Analysis

Control Location: 83

Observation Number	Calendar Date	Location	Be-7	Be-7 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-134	Cs-134 (2 sigma)	K-40	K-40 (2 sigma)	Ru-103	Ru-103 (2 sigma)	Cs-137
192	10/01/83	4	0.085	0.006	0	0.004	0	0.001	0	0.006	0	0.004	0
193	10/01/83	5	0.097	0.005	0	0.004	0	0.001	0	0.004	0	0.004	0
194	10/01/83	6	0.085	0.005	0	0.004	0	0.001	0	0.007	0	0.004	0

Observation Number	Calendar Date	Cs-137 (2 sigma)	Co-58	Co-58 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-60	Co-60 (2 sigma)	I-131	I-131 (2 sigma)	Ce-144	Ce-144 (2 sigma)
192	10/01/83	0.001	0	0.002	0	0.002	0	0.004	0	0.002	*	*	0	0.005
193	10/01/83	0.001	0	0.002	0	0.002	0	0.004	0	0.002	*	*	0	0.005
194	10/01/83	0.001	0	0.002	0	0.002	0	0.004	0	0.002	*	*	0	0.005

N=24

Southern California Edison Company Environmental Monitoring Program Database Listings

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Table 4c: Quarterly Composite Airborne Particulates Gross Alpha and Strontium Activities

Control Location: 83

Observation Number	Calendar Date	Location 1 Sr-89	Location 1 Sr-89(2 sigma)	Location 1 Sr-90	Location 1 Sr-90(2 sigma)	Location 1 Gross Alpha	Location 1 Gross Alpha (2 sigma)	Location 2 Sr-89
54	01/01/83	*	*	0	0.001	0.0020	0.0002	*
55	04/01/83	*	*	0	0.001	0.0022	0.0002	*
56	07/01/83	*	*	0	0.001	0.0000	0.0030	*
57	10/01/83	*	*	0	0.001	0.0040	0.0010	*

Observation Number	Calendar Date	Location 2 Sr-89(2 sigma)	Location 2 Sr-90	Location 2 Sr-90(2 sigma)	Location 2 Gross Alpha	Location 2 Gross Alpha (2 sigma)	Location 3 Sr-89	Location 3 Sr-89(2 sigma)
54	01/01/83	*	0	0.001	0.0018	0.0001	*	*
55	04/01/83	*	0	0.001	0.0021	0.0002	*	*
56	07/01/83	*	0	0.001	0.0000	0.0030	*	*
57	10/01/83	*	0	0.001	0.0040	0.0010	*	*

Observation Number	Calendar Date	Location 3 Sr-90	Location 3 Sr-90(2 sigma)	Location 3 Gross Alpha	Location 3 Gross Alpha (2 sigma)	Location 4 Sr-89	Location 4 Sr-89(2 sigma)	Location 4 Sr-90
54	01/01/83	0	0.001	0.0015	0.0001	*	*	0
55	04/01/83	0	0.001	0.0005	0.0001	*	*	0
56	07/01/83	0	0.001	0.0000	0.0030	*	*	0
57	10/01/83	0	0.001	0.0050	0.0010	*	*	0

Observation Number	Calendar Date	Location 4 Sr-90(2 sigma)	Location 4 Gross Alpha	Location 4 Gross Alpha (2 sigma)	Location 5 Sr-89	Location 5 Sr-89(2 sigma)	Location 5 Sr-90	Location 5 Sr-90(2 sigma)
54	01/01/83	0.001	0.0016	0.0002	*	*	0	0.001
55	04/01/83	0.001	0.0015	0.0002	*	*	0	0.001
56	07/01/83	0.001	0.0000	0.0030	*	*	0	0.001
57	10/01/83	0.001	0.0040	0.0010	*	*	0	0.001

Observation Number	Calendar Date	Location 5 Gross Alpha	Location 5 Gross Alpha (2 sigma)	Location 6 Sr-89	Location 6 Sr-89(2 sigma)	Location 6 Sr-90	Location 6 Sr-90(2 sigma)	Location 6 Gross Alpha	Location 6 Gross Alpha (2 sigma)
54	01/01/83	0.0019	0.0001	*	*	0	0.001	0.0019	0.0002
55	04/01/83	0.0016	0.0001	*	*	0	0.001	0.0004	0.0001
56	07/01/83	0.0000	0.0030	*	*	0	0.001	0.0000	0.0030
57	10/01/83	0.0030	0.0010	*	*	0	0.001	0.0050	0.0010

*N=4

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Jeanne C. Fralick, Ph.D. Date: 3/27/84

Table 5: Monthly Ocean Water Gamma Spectral Analysis

Control Location: D

Observation Number	Calendar Date	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)
177	01/03/83	D	310	20	0	20	0	6	0	6	0	15	0	6
178	01/05/83	A	360	30	0	20	0	6	0	6	0	15	0	6
179	01/05/83	B	350	20	0	20	0	6	0	6	0	15	0	6
180	01/05/83	C	380	30	0	20	0	6	0	6	0	15	0	6
181	02/07/83	A	390	30	0	20	0	6	0	6	0	15	0	6
182	02/07/83	B	360	30	0	20	0	6	0	6	0	15	0	6
183	02/07/83	C	300	30	0	20	0	6	0	6	0	15	0	6
184	02/07/83	D	320	30	0	20	0	6	0	6	0	15	0	6
185	03/04/83	D	320	20	0	20	0	6	0	6	0	15	0	6
186	03/09/83	A	300	50	0	20	0	6	0	6	0	15	0	6
187	03/09/83	B	290	40	0	20	0	6	0	6	0	15	0	6
188	03/09/83	C	320	30	0	20	0	6	0	6	0	15	0	6

Observation Number	Calendar Date	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 sigma)	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59
177	01/03/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
178	01/05/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
179	01/05/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
180	01/05/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
181	02/07/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
182	02/07/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
183	02/07/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
184	02/07/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
185	03/04/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
186	03/09/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
187	03/09/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
188	03/09/83	0	6	0	2000	0	15	0	6	0	15	0	20	0

Observation Number	Calendar Date	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)
177	01/03/83	20	0	30	0	15	0	6	0	10	0	20	*	*
178	01/05/83	20	0	30	0	15	0	6	0	10	0	20	*	*
179	01/05/83	20	0	30	0	15	0	6	0	10	0	20	*	*
180	01/05/83	20	0	30	0	15	0	6	0	10	0	20	*	*
181	02/07/83	20	0	30	0	15	0	6	0	10	0	20	*	*
182	02/07/83	20	0	30	0	15	0	6	0	10	0	20	*	*
183	02/07/83	20	0	30	0	15	0	6	0	10	0	20	*	*
184	02/07/83	20	0	30	0	15	0	6	0	10	0	20	*	*
185	03/04/83	20	0	30	0	15	0	6	0	10	0	20	*	*
186	03/09/83	20	0	30	0	15	0	6	0	10	0	20	*	*
187	03/09/83	20	0	40	0	15	0	6	0	10	0	20	*	*
188	03/09/83	20	0	30	0	15	0	6	0	10	0	20	*	*

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible] Ph.D. Date: 3/27/84

Table 5: Monthly Ocean Water Gamma Spectral Analysis

Control Location: D

Observation Number	Calendar Date	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)
189	04/05/83	D	320	40	0	20	0	6	0	6	0	15	0	6
190	04/08/83	A	280	30	0	20	0	6	0	6	0	15	0	6
191	04/08/83	B	320	30	0	20	0	6	0	6	0	15	0	6
192	04/08/83	C	320	20	0	20	0	6	0	6	0	15	0	6
193	05/06/83	D	290	30	0	20	0	6	0	6	0	20	0	6
194	05/16/83	A	300	30	0	20	0	6	0	6	0	20	0	6
195	05/16/83	B	350	30	0	20	0	6	0	6	0	20	0	6
196	05/16/83	C	380	40	0	20	0	6	0	6	0	20	0	6
197	06/06/83	A	300	30	0	20	0	6	0	6	0	20	0	6
198	06/06/83	B	320	40	0	20	0	6	0	6	0	20	0	6
199	06/06/83	C	320	30	0	20	0	6	0	6	0	20	0	6
200	06/07/83	D	310	40	0	20	0	6	0	6	0	20	0	6

Observation Number	Calendar Date	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 sigma)	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59
189	04/05/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
190	04/08/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
191	04/08/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
192	04/08/83	0	6	0	2000	0	15	0	6	0	15	0	20	0
193	05/06/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
194	05/16/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
195	05/16/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
196	05/16/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
197	06/06/83	0	6	0	200000	0	20	0	6	0	20	0	20	0
198	06/06/83	0	6	0	300000	0	20	0	6	0	20	0	20	0
199	06/06/83	0	6	0	200000	0	20	0	6	0	20	0	20	0
200	06/07/83	0	6	0	300000	0	20	0	6	0	20	0	20	0

Observation Number	Calendar Date	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)
189	04/05/83	20	0	30	0	15	0	6	0	10	0	20	*	*
190	04/08/83	20	0	30	0	15	0	6	0	10	0	20	*	*
191	04/08/83	20	0	30	0	15	0	6	0	10	0	20	*	*
192	04/08/83	20	0	30	0	15	0	6	0	10	0	20	*	*
193	05/06/83	20	0	30	0	20	0	6	0	10	0	20	*	*
194	05/16/83	20	0	30	0	20	0	6	0	10	0	20	*	*
195	05/16/83	20	0	30	0	20	0	6	0	10	0	20	*	*
196	05/16/83	20	0	30	0	20	0	6	0	10	0	20	*	*
197	06/06/83	20	0	30	0	20	0	6	0	10	0	20	*	*
198	06/06/83	20	0	30	0	20	0	6	0	10	0	20	*	*
199	06/06/83	20	0	30	0	20	0	6	0	10	0	20	*	*
200	06/07/83	20	0	30	0	20	0	6	0	10	0	20	*	*

Southern California Edison Company Environmental Monitoring Program Database Listings

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Table 3: Monthly Ocean Water Gamma Spectral Analysis

Control Location: D

Observation Number	Calendar Date	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)
201	07/06/83	D	320	30	0	20	0	6	0	6	0	20	0	6
202	07/08/83	A	350	30	0	20	0	6	0	6	0	20	0	6
203	07/08/83	B	330	30	0	20	0	6	0	6	0	20	0	6
204	07/08/83	C	310	30	0	20	0	6	0	6	0	20	0	6
205	08/02/83	D	290	30	0	20	0	6	0	6	0	20	0	6
206	08/04/83	A	350	30	0	20	0	6	0	6	0	20	0	6
207	08/04/83	B	320	30	0	20	0	6	0	6	0	20	0	6
208	08/04/83	C	330	30	0	20	0	6	0	6	0	20	0	6
209	09/08/83	D	320	30	0	20	0	6	0	6	0	20	0	6
210	09/10/83	A	310	40	0	20	0	6	0	6	0	20	0	6
211	09/10/83	B	310	30	0	20	0	6	0	6	0	20	0	6
212	09/10/83	C	320	40	0	20	0	6	0	6	0	20	0	6

Observation Number	Calendar Date	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 sigma)	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59
201	07/06/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
202	07/08/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
203	07/08/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
204	07/08/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
205	08/02/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
206	08/04/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
207	08/04/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
208	08/04/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
209	09/08/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
210	09/10/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
211	09/10/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
212	09/10/83	0	6	0	2000	0	20	0	6	0	20	0	20	0

Observation Number	Calendar Date	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)
201	07/06/83	20	0	30	0	20	0	6	0	10	0	20	*	*
202	07/08/83	20	0	30	0	20	0	6	0	10	0	20	*	*
203	07/08/83	20	0	30	0	20	0	6	0	10	0	20	*	*
204	07/08/83	20	0	30	0	20	0	6	0	10	0	20	*	*
205	08/02/83	20	0	30	0	20	0	6	0	10	0	20	*	*
206	08/04/83	20	0	30	0	20	0	6	0	10	0	20	*	*
207	08/04/83	20	0	30	0	20	0	6	0	10	0	20	*	*
208	08/04/83	20	0	40	0	20	0	6	0	10	0	20	*	*
209	09/08/83	20	0	30	0	20	0	6	0	10	0	20	*	*
210	09/10/83	20	0	30	0	20	0	6	0	10	0	20	*	*
211	09/10/83	20	0	30	0	20	0	6	0	10	0	20	*	*
212	09/10/83	20	0	30	0	20	0	6	0	10	0	20	*	*

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Jeanne C. Beale, Ph.D. Date: 3/27/84

Table 5: Monthly Ocean Water Gamma Spectral Analysis

Control Location: D

Observation Number	Calendar Date	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)
213	10/10/83	D	350	30	0	20	0	6	0	6	0	20	0	6
214	10/11/83	A	330	40	0	20	0	6	0	6	0	20	0	6
215	10/11/83	B	290	30	0	20	0	6	0	6	0	20	0	6
216	10/11/83	C	340	30	0	20	0	6	0	6	0	20	0	6
217	11/04/83	A	370	40	0	20	0	6	0	6	0	20	0	6
218	11/04/83	B	300	30	0	20	0	6	0	6	0	20	0	6
219	11/04/83	C	350	30	0	20	0	6	0	6	0	20	0	6
220	11/04/83	D	330	30	0	20	0	6	0	6	0	20	0	6
221	12/08/83	A	350	30	0	20	0	6	0	6	0	20	0	6
222	12/08/83	B	420	40	0	20	0	6	0	6	0	20	0	6
223	12/08/83	C	380	40	0	20	0	6	0	6	0	20	0	6
224	12/08/83	D	260	30	0	20	0	6	0	6	0	20	0	6

Observation Number	Calendar Date	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 sigma)	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59
213	10/10/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
214	10/11/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
215	10/11/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
216	10/11/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
217	11/04/83	0	6	0	9000	0	20	0	6	0	20	0	20	0
218	11/04/83	0	6	0	8000	0	20	0	6	0	20	0	20	0
219	11/04/83	0	6	0	9000	0	20	0	6	0	20	0	20	0
220	11/04/83	0	6	0	10000	0	20	0	6	0	20	0	20	0
221	12/08/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
222	12/08/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
223	12/08/83	0	6	0	2000	0	20	0	6	0	20	0	20	0
224	12/08/83	0	6	0	2000	0	20	0	6	0	20	0	20	0

Observation Number	Calendar Date	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)
213	10/10/83	20	0	30	0	20	0	6	0	10	0	20	*	*
214	10/11/83	20	0	30	0	20	0	6	0	10	0	20	*	*
215	10/11/83	20	0	30	0	20	0	6	0	10	0	20	*	*
216	10/11/83	20	0	30	0	20	0	6	0	10	0	20	*	*
217	11/04/83	20	0	30	0	20	0	6	0	10	0	20	*	*
218	11/04/83	20	0	30	0	20	0	6	0	10	0	20	*	*
219	11/04/83	20	0	30	0	20	0	6	0	10	0	20	*	*
220	11/04/83	20	0	30	0	20	0	6	0	10	0	20	*	*
221	12/08/83	20	0	30	0	20	0	6	0	10	0	20	*	*
222	12/08/83	20	0	30	0	20	0	6	0	10	0	20	*	*
223	12/08/83	20	0	30	0	20	0	6	0	10	0	20	*	*
224	12/08/83	20	0	30	0	20	0	6	0	10	0	20	*	*

N=48

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible] Ph.D Date: 3/27/84

Table 6: Bi-Monthly Ocean Water Gross Beta Activity

Control Location: 81

Observation Number	Calendar Date	Location 81	Location 81 (2 sigma)	Location 82	Location 82 (2 sigma)	Location 83	Location 83 (2 sigma)	Location 84	Location 84 (2 sigma)
52	01/05/83	910	80	850	80	1050	80	890	90
53	03/09/83	900	80	940	70	940	70	910	80
54	05/16/83	740	70	820	80	790	80	920	70
55	07/08/83	790	80	1020	90	1110	80	880	80
56	09/10/83	880	90	920	70	960	90	720	80
57	11/04/83	1000	60	1030	50	980	40	1000	40

N=6

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible] Ph.D. Date: 3/27/84

Table 7: Quarterly Composite Ocean Water Tritium Activity

Control Location: 01

Observation Number	Calendar Date	Location 01	Location 01 (2 sigma)	Location 02	Location 02 (2 sigma)	Location 03	Location 03 (2 sigma)	Location 04	Location 04 (2 sigma)
19	03/31/83	0	100	0	100	0	100	0	100
20	06/30/83	0	100	0	100	0	100	0	100
21	09/30/83	0	100	0	100	0	100	0	100
22	12/31/83	0	100	0	100	0	100	0	100

N=4

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible], M.D. Date: 3/27/84

Table 8: Ocean Water Strontium Action Level Analysis

Control Location: D

Observation Number	Calendar Date	Location	Cs-137	Cs-137 (2 sigma)	Sr-89	Sr-89 (2 sigma)	Sr-90	Sr-90 (2 sigma)
176	01/03/83	D	0	6	*	*	*	*
177	01/05/83	A	0	6	*	*	*	*
178	01/05/83	B	0	6	*	*	*	*
179	01/05/83	C	0	6	*	*	*	*
180	02/07/83	A	0	6	*	*	*	*
181	02/07/83	B	0	6	*	*	*	*
182	02/07/83	C	0	6	*	*	*	*
183	02/07/83	D	0	6	*	*	*	*
184	03/04/83	D	0	6	*	*	*	*
185	03/09/83		0	6	*	*	*	*
186	03/09/83		0	6	*	*	*	*
187	03/09/83		0	6	*	*	*	*
188	04/05/83	D	0	6	*	*	*	*
189	04/08/83	A	0	5	*	*	*	*
190	04/08/83	B	0	6	*	*	*	*
191	04/08/83	C	0	6	*	*	*	*

N=16

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Rodriguez Ph.D Date: March 27, 1984

Table 9a: Monthly Drinking Water Analysis

Control Location: 83

Observation Number	Calendar Date	Location	Be-7	Be-7 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-134	Cs-134 (2 sigma)	K-40	K-40 (2 sigma)
25	01/04/83	1	0	50	0	15	0	6	*	*
26	01/04/83	2	0	50	0	15	0	6	*	*
27	01/04/83	3	0	50	0	15	0	6	*	*
28	02/01/83	1	0	50	0	15	0	6	0	50
29	02/01/83	2	0	50	0	6	0	6	0	70
30	02/01/83	3	0	50	0	15	0	6	0	50
31	03/08/83	1	0	50	0	15	0	6	0	50
32	03/08/83	2	0	50	0	15	0	6	0	50
33	03/08/83	3	0	50	0	15	0	6	0	50
34	04/05/83	1	0	50	0	15	0	6	0	30
35	04/05/83	2	0	50	0	15	0	6	0	90
36	04/05/83	3	0	50	0	15	0	6	0	50

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-58	Co-58 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Ce-141
25	01/04/83	0	15	0	6	0	6	0	10	0
26	01/04/83	0	15	0	6	0	6	0	10	0
27	01/04/83	0	15	0	6	0	6	0	10	0
28	02/01/83	0	15	0	6	0	6	0	10	0
29	02/01/83	0	15	0	6	0	6	0	10	0
30	02/01/83	0	15	0	6	0	6	0	10	0
31	03/08/83	0	15	0	6	0	6	0	10	0
32	03/08/83	0	15	0	6	0	6	0	10	0
33	03/08/83	0	15	0	6	0	6	0	10	0
34	04/05/83	0	15	0	6	0	6	0	10	0
35	04/05/83	0	15	0	6	0	6	0	10	0
36	04/05/83	0	15	0	6	0	6	0	10	0

Observation Number	Calendar Date	Ce-141 (2 sigma)	Co-60	Co-60 (2 sigma)	I-131	I-131 (2 sigma)	Ce-144	Ce-144 (2 sigma)	H-3	H-3 (2 sigma)
25	01/04/83	15	0	6	0	2	0	20	0	100
26	01/04/83	15	0	6	0	2	0	20	0	100
27	01/04/83	15	0	6	0	2	0	20	0	100
28	02/01/83	15	0	6	0	2	0	20	0	100
29	02/01/83	15	0	6	0	2	0	20	0	100
30	02/01/83	15	0	6	0	2	0	20	0	100
31	03/08/83	15	0	6	0	2	0	20	0	100
32	03/08/83	15	0	6	0	2	0	20	0	100
33	03/08/83	15	0	6	0	2	0	20	0	100
34	04/05/83	15	0	6	0	2	0	20	0	100
35	04/05/83	15	0	6	0	2	0	20	0	100
36	04/05/83	15	0	6	0	2	0	20	0	100

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Gordon, Ph.D. Date: March 27, 1984

Table 9a: Monthly Drinking Water Analysis

Control Location: 83

Observation Number	Calendar Date	Location	Be-7	Be-7 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-134	Cs-134 (2 sigma)	K-40	K-40 (2 sigma)
37	05/10/83	1	0	50	0	15	0	6	0	50
38	05/10/83	2	0	50	0	15	0	6	0	90
39	05/10/83	3	0	50	0	15	0	6	0	50
40	06/07/83	1	0	40	0	20	0	6	50	30
41	06/07/83	2	0	50	0	20	0	6	60	30
42	06/07/83	3	0	40	0	20	0	6	0	40
43	07/05/83	1	0	50	0	20	0	6	0	50
44	07/05/83	2	0	50	0	20	0	6	0	40
45	07/05/83	3	0	50	0	20	0	6	0	50
46	08/02/83	1	0	50	0	20	0	6	0	50
47	08/02/83	2	0	30	0	20	0	6	0	90
48	08/02/83	3	0	50	0	20	0	6	0	40

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-58	Co-58 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Ce-141
37	05/10/83	0	15	0	6	0	6	0	10	0
38	05/10/83	0	15	0	6	0	6	0	10	0
39	05/10/83	0	15	0	6	0	6	0	10	0
40	06/07/83	0	20	0	6	0	6	0	10	0
41	06/07/83	0	20	0	6	0	6	0	10	0
42	06/07/83	0	20	0	6	0	6	0	10	0
43	07/05/83	0	20	0	6	0	6	0	10	0
44	07/05/83	0	20	0	6	0	6	0	10	0
45	07/05/83	0	20	0	6	0	6	0	10	0
46	08/02/83	0	20	0	6	0	6	0	10	0
47	08/02/83	0	20	0	6	0	6	0	10	0
48	08/02/83	0	20	0	6	0	6	0	10	0

Observation Number	Calendar Date	Ce-141 (2 sigma)	Co-60	Co-60 (2 sigma)	I-131	I-131 (2 sigma)	Ce-144	Ce-144 (2 sigma)	H-3	H-3 (2 sigma)
37	05/10/83	15	0	6	0	2	0	20	0	100
38	05/10/83	15	0	6	0	2	0	20	0	100
39	05/10/83	15	0	6	0	2	0	20	0	100
40	06/07/83	20	0	6	0	2	0	20	0	100
41	06/07/83	20	0	6	0	2	0	20	0	100
42	06/07/83	20	0	7	0	2	0	20	0	100
43	07/05/83	20	0	6	0	2	0	20	0	100
44	07/05/83	20	0	6	0	2	0	20	0	100
45	07/05/83	20	0	6	0	2	0	20	0	100
46	08/02/83	20	0	6	0	2	0	20	0	100
47	08/02/83	20	0	6	0	2	0	20	0	100
48	08/02/83	20	0	6	0	20	0	20	0	100

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible], Ph.D. Date: March 27, 1984

Table 9a: Monthly Drinking Water Analysis

Control Location: 83

Observation Number	Calendar Date	Location	Be-7	Be-7 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-134	Cs-134 (2 sigma)	K-40	K-40 (2 sigma)
49	09/06/83	1	0	50	0	20	0	6	0	70
50	09/06/83	2	0	50	0	20	0	6	0	30
51	09/06/83	3	0	50	0	20	0	6	0	40
52	10/04/83	1	0	50	0	20	0	6	0	7[illegible]
53	10/04/83	2	0	50	0	20	0	6	0	40
54	10/04/83	3	0	50	0	20	0	6	0	20
55	11/01/83	1	0	50	0	20	0	6	0	40
56	11/01/83	2	0	50	0	20	0	6	0	40
57	11/01/83	3	0	50	0	20	0	6	0	80
58	12/06/83	1	0	50	0	20	0	6	0	40
59	12/06/83	2	0	50	0	20	0	6	0	90
60	12/06/83	3	0	50	0	20	0	6	0	40

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-58	Co-58 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Ce-141
49	09/06/83	0	20	0	6	0	6	0	10	0
50	09/06/83	0	20	0	6	0	6	0	10	0
51	09/06/83	0	20	0	6	0	6	0	10	0
52	10/04/83	0	20	0	6	0	6	0	10	0
53	10/04/83	0	20	0	6	0	6	0	10	0
54	10/04/83	0	20	0	6	0	6	0	10	0
55	11/01/83	0	20	0	6	0	6	0	10	0
56	11/01/83	0	20	0	6	0	6	0	10	0
57	11/01/83	0	20	0	6	0	6	0	10	0
58	12/06/83	0	20	0	6	0	6	0	10	0
59	12/06/83	0	20	0	6	0	6	0	10	0
60	12/06/83	0	20	0	6	0	6	0	10	0

Observation Number	Calendar Date	Ce-141 (2 sigma)	Co-60	Co-60 (2 sigma)	I-131	I-131 (2 sigma)	Ce-144	Ce-144 (2 sigma)	H-3	H-3 (2 sigma)
49	09/06/83	20	0	6	0	2	0	20	0	100
50	09/06/83	20	0	6	0	2	0	20	0	100
51	09/06/83	20	0	6	0	2	0	20	0	100
52	10/04/83	20	0	6	0	2	0	20	0	100
53	10/04/83	20	0	6	0	2	0	20	0	100
54	10/04/83	20	0	6	0	2	0	20	0	100
55	11/01/83	20	0	6	0	2	0	20	0	100
56	11/01/83	20	0	6	0	2	0	20	0	100
57	11/01/83	20	0	6	0	2	0	20	0	100
58	12/06/83	20	0	6	0	2	0	20	0	100
59	12/06/83	20	0	6	0	2	0	20	0	100
60	12/06/83	20	0	6	0	2	0	20	0	100

N=36

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Alma Gonzalez, Ph.D. Date: March 27, 1984

Table 9b: Monthly Drinking Water Solids Gross Alpha and Gross Beta Activities

Control Location: 83

Observation Number	Calendar Date	Location 1 Gross Alpha	Location 1 Gross Alpha (2 sigma)	Location 1 Gross Beta	Location 1 Gross Beta (2 sigma)	Location 2 Gross Alpha	Location 2 Gross Alpha (2 sigma)
103	01/04/83	0	0.1	1.0	0.1	0	0.1
104	02/01/83	0	0.1	1.0	0.1	0	0.1
105	03/08/83	0	0.1	1.0	0.1	0	0.1
106	04/05/83	0	0.1	0.7	0.1	0	0.1
107	05/10/83	0	0.1	0.6	0.1	0	0.3
108	06/07/83	0	0.1	0.7	0.1	0	0.1
109	07/05/83	0	0.1	0.8	0.1	0	0.1
110	08/02/83	0	0.1	0.6	0.1	0	0.1
111	09/06/83	0	0.1	1.0	0.1	0	0.1
112	10/04/83	0	0.1	0.8	0.1	0	0.1
113	11/01/83	0	0.1	0.8	0.1	0	0.1
114	12/06/83	0	0.1	1.2	0.1	0	0.1

Observation Number	Calendar Date	Location 2 Gross Beta	Location 2 Gross Beta (2 sigma)	Location 3 Gross Alpha	Location 3 Gross Alpha (2 sigma)	Location 3 Gross Beta	Location 3 Gross Beta (2 sigma)
103	01/04/83	0.6	0.1	0	0.1	0.6	0.1
104	02/01/83	0.8	0.1	0	0.1	0.7	0.1
105	03/08/83	0.7	0.1	0	0.1	0.6	0.1
106	04/05/83	0.7	0.1	0	0.1	0.6	0.1
107	05/10/83	0.8	0.1	0	0.2	0.6	0.1
108	06/07/83	0.5	0.1	0	0.1	0.6	0.1
109	07/05/83	0.8	0.1	0	0.3	0.9	0.1
110	08/02/83	0.8	0.1	0	0.1	0.8	0.1
111	09/06/83	0.9	0.1	0	0.1	0.7	0.1
112	10/04/83	1.1	0.1	0	0.1	0.6	0.1
113	11/01/83	0.9	0.1	0	0.1	0.5	0.1
114	12/06/83	0.9	0.1	0	0.2	1.2	0.1

N=12

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mona Cuenders, PhD. Date: March 27, 1984

Table 9c: Monthly Drinking Water Filtrate Gross Alpha and Gross Beta Activities

Control Location: B3

Observation Number	Calendar Date	Location 1 Gross Alpha	Location 1 Gross Alpha (2 sigma)	Location 1 Gross Beta	Location 1 Gross Beta (2 sigma)	Location 2 Gross Alpha	Location 2 Gross Alpha (2 sigma)
107	01/04/83	0	1	6	1	0	1
108	02/01/83	0	1	6	1	0	1
109	03/08/83	0	1	8	1	0	1
110	04/05/83	0	1	8	1	0	2
111	05/10/83	0	3	11	1	0	3
112	06/07/83	0	3	9	1	0	2
113	07/05/83	0	1	18	1	0	3
114	08/02/83	0	2	14	1	0	3
115	09/06/83	0	1	11	1	0	1
116	10/04/83	0	1	9	1	0	3
117	11/01/83	0	2	6	1	0	1
118	12/06/83	0	2	8	1	0	2

Observation Number	Calendar Date	Location 2 Gross Beta	Location 2 Gross Beta (2 sigma)	Location 3 Gross Alpha	Location 3 Gross Alpha (2 sigma)	Location 3 Gross Beta	Location 3 Gross Beta (2 sigma)
107	01/04/83	10	1	0	1	14	1
108	02/01/83	14	1	0	1	9	1
109	03/08/83	9	1	0	1	12	1
110	04/05/83	8	1	0	1	5	1
111	05/10/83	9	1	0	2	8	1
112	06/07/83	11	1	0	1	11	1
113	07/05/83	18	1	0	1	14	1
114	08/02/83	15	1	0	2	12	1
115	09/06/83	13	1	0	2	11	1
116	10/04/83	20	1	0	1	11	1
117	11/01/83	18	1	0	1	13	1
118	12/06/83	16	1	0	2	9	1

N=12

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Nina Gonzales, Ph.D. Date: March 27, 1984

Table 9d: Quarterly Composite Drinking Water Solids Gross Alpha and Gross Beta Activities

Control Location: #3

Observation Number	Calendar Date	Location 1 Gross Alpha	Location 1 Gross Alpha (2 sigma)	Location 1 Gross Beta	Location 1 Gross Beta (2 sigma)	Location 2 Gross Alpha	Location 2 Gross Alpha (2 sigma)
89	01/01/83	0	0.1	0.6	0.1	0	0.1
90	04/01/83	0	0.1	0.5	0.1	0	0.1
91	07/01/83	0	0.1	1.0	0.1	0	0.1
92	10/01/83	0	0.2	0.7	0.1	0	0.1

Observation Number	Calendar Date	Location 2 Gross Beta	Location 2 Gross Beta (2 sigma)	Location 3 Gross Alpha	Location 3 Gross Alpha (2 sigma)	Location 3 Gross Beta	Location 3 Gross Beta (2 sigma)
89	01/01/83	0.4	0.1	0	0.1	0.6	0.1
90	04/01/83	0.6	0.1	0	0.1	0.5	0.1
91	07/01/83	1.1	0.1	0	0.1	0.6	0.1
92	10/01/83	0.5	0.1	0	0.1	0.6	0.1

N=4

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: M Lina Gonzalez Ph.D Date: March 27, 1984

Table 9a: Quarterly Composite Drinking Water Filtrate Analysis

Control Location: B3

Observation Number	Calendar Date	Location	Be-7	Be-7 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-134	Cs-134 (2 sigma)	K-40	K-40 (2 sigma)	Ru-103	Ru-103 (2 sigma)
178	03/31/83	1	*	*	*	*	*	*	*	*	*	*
179	03/31/83	2	*	*	*	*	*	*	*	*	*	*
180	03/31/83	3	*	*	*	*	*	*	*	*	*	*
181	06/30/83	1	*	*	*	*	*	*	*	*	*	*
182	06/30/83	2	*	*	*	*	*	*	*	*	*	*
183	06/30/83	3	*	*	*	*	*	*	*	*	*	*
184	09/30/83	1	*	*	*	*	*	*	*	*	*	*
185	09/30/83	2	*	*	*	*	*	*	*	*	*	*
186	09/30/83	3	*	*	*	*	*	*	*	*	*	*
187	12/31/83	1	*	*	*	*	*	*	*	*	*	*
188	12/31/83	2	*	*	*	*	*	*	*	*	*	*
189	12/31/83	3	*	*	*	*	*	*	*	*	*	*

Observation Number	Calendar Date	Cs-137	Cs-137 (2 sigma)	Co-58	Co-58 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-60	Co-60 (2 sigma)	I-131
178	03/31/83	*	*	*	*	*	*	*	*	*	*	*
179	03/31/83	*	*	*	*	*	*	*	*	*	*	*
180	03/31/83	*	*	*	*	*	*	*	*	*	*	*
181	06/30/83	*	*	*	*	*	*	*	*	*	*	*
182	06/30/83	*	*	*	*	*	*	*	*	*	*	*
183	06/30/83	*	*	*	*	*	*	*	*	*	*	*
184	09/30/83	*	*	*	*	*	*	*	*	*	*	*
185	09/30/83	*	*	*	*	*	*	*	*	*	*	*
186	09/30/83	*	*	*	*	*	*	*	*	*	*	*
187	12/31/83	*	*	*	*	*	*	*	*	*	*	*
188	12/31/83	*	*	*	*	*	*	*	*	*	*	*
189	12/31/83	*	*	*	*	*	*	*	*	*	*	*

Observation Number	Calendar Date	I-131 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Gross Alpha	Gross Alpha (2 sigma)	Gross Beta	Gross Beta (2 sigma)	H-3	H-3 (2 sig
178	03/31/83	*	*	*	0	2	9	1	0	100
179	03/31/83	*	*	*	0	1	11	1	0	100
180	03/31/83	*	*	*	0	1	9	1	0	100
181	06/30/83	*	*	*	0	2	11	1	0	100
182	06/30/83	*	*	*	0	1	11	1	0	100
183	06/30/83	*	*	*	0	1	8	1	0	100
184	09/30/83	*	*	*	0	1	14	1	0	100
185	09/30/83	*	*	*	0	1	11	1	0	100
186	09/30/83	*	*	*	0	1	12	1	0	100
187	12/31/83	*	*	*	0	1	22	1	0	100
188	12/31/83	*	*	*	0	1	11	1	0	100
189	12/31/83	*	*	*	0	2	9	1	0	100

N=12

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Nina Godrey, Ph.D. Date: March 27, 1984

Table 9f: Drinking Water Strontium Action Level Analysis

Control Location: B3

Observation Number	Calendar Date	Location	Cs-137	Cs-137 (2 sigma)	Sr-89	Sr-89 (2 sigma)	Sr-90	Sr-90 (2 sigma)
25	01/04/83	1	0	6	*	*	*	*
26	01/04/83	2	0	6	*	*	*	*
27	01/04/83	3	0	6	*	*	*	*
28	02/01/83	1	0	6	*	*	*	*
29	02/01/83	2	0	6	*	*	*	*
30	02/01/83	3	0	6	*	*	*	*
31	03/08/83	1	0	6	*	*	*	*
32	03/08/83	2	0	6	*	*	*	*
33	03/08/83	3	0	6	*	*	*	*
34	04/05/83	1	0	6	*	*	*	*
35	04/05/83	2	0	6	*	*	*	*
36	04/05/83	3	0	6	*	*	*	*

N=12

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Gonzalez, Ph.D. Date: March 27, 1984

Table 10: Semi-Annual Shoreline Sediment Gamma Spectral Analysis

Control Location: #4

Observation Number	Calendar Date	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sig
72	04/26/83	1	14.0	0.7	0	0.2	0	0.05	0	0.05	0	0.1	0	0.02
73	04/26/83	2	13.1	0.7	0	0.2	0	0.05	0	0.05	0	0.1	0	0.02
74	04/26/83	3	13.5	0.7	0	0.2	0	0.05	0	0.05	0	0.1	0	0.02
75	04/29/83	4	17.8	0.9	0	0.2	0	0.05	0	0.05	0	0.1	0	0.02
76	09/27/83	1	13.2	0.7	0	0.2	0	0.05	0	0.05	0	0.1	0	0.02
77	09/27/83	2	14.1	0.7	0	0.2	0	0.05	0	0.05	0	0.1	0	0.02
78	09/27/83	3	13.4	0.7	0	0.2	0	0.05	0	0.05	0	0.1	0	0.02
79	09/27/83	4	17.3	0.9	0	0.2	0	0.05	0	0.05	0	0.1	0	0.02

Observation Number	Calendar Date	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 sigma)	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-5
72	04/26/83	0	0.05	0	5	0	0.1	0	0.05	0	0.1	0	0.2	0
73	04/26/83	0	0.05	0	5	0	0.1	0	0.05	0	0.1	0	0.2	0
74	04/26/83	0	0.05	0	5	0	0.1	0	0.05	0	0.1	0	0.2	0
75	04/29/83	0	0.05	0	5	0	0.1	0	0.05	0	0.1	0	0.2	0
76	09/27/83	0	0.05	0	5	0	0.1	0	0.05	0	0.1	0	0.2	0
77	09/27/83	0	0.05	0	5	0	0.1	0	0.05	0	0.1	0	0.2	0
78	09/27/83	0	0.05	0	5	0	0.1	0	0.05	0	0.1	0	0.2	0
79	09/27/83	0	0.05	0	5	0	0.1	0	0.05	0	0.1	0	0.2	0

Observation Number	Calendar Date	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 si
72	04/26/83	0.2	0	0.3	0.19	0.05	0	0.05	0	0.1	0.18	0.05	0	0.[illegible]
73	04/26/83	0.2	0	0.3	0.24	0.05	0	0.05	0	0.1	0.25	0.05	0	0.[illegible]
74	04/26/83	0.2	0	0.3	0.13	0.05	0	0.05	0	0.1	0.14	0.05	0	0.[illegible]
75	04/29/83	0.2	0	0.3	0.26	0.05	0	0.05	0	0.1	0.80	0.05	0	0.[illegible]
76	09/27/83	0.2	0	0.3	0.26	0.05	0	0.05	0	0.1	0.24	0.05	0	0.[illegible]
77	09/27/83	0.2	0	0.3	0.50	0.05	0	0.05	0	0.1	0.72	0.05	0	0.[illegible]
78	09/27/83	0.2	0	0.3	0.31	0.05	0	0.05	0	0.1	0.21	0.05	0	0.[illegible]
79	09/27/83	0.2	0	0.3	0.46	0.05	0	0.05	0	0.1	1.27	0.06	0	0.[illegible]

N=8

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Nina Gaddery, Ph.D. Date: March 27, 1984

Table 11: Semi-Annual Ocean Bottom Sediment Gamma Spectral Analysis

Control Location: E

Observation Number	Calendar Date	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sig
74	05/04/83	A	10.3	0.5	0	0.2	0	0.04	0	0.04	0	0.08	0	0.04
75	05/04/83	B	10.2	0.5	0	0.2	0	0.04	0	0.04	0	0.08	0	0.04
76	05/04/83	C	11.5	0.6	0	0.2	0	0.04	0	0.04	0	0.08	0	0.04
77	05/04/83	D	10.6	0.5	0	0.2	0	0.04	0	0.04	0	0.08	0	0.04
78	05/04/83	E	7.1	0.4	0	0.2	0	0.04	0	0.04	0	0.08	0	0.04
79	11/04/83	A	11.9	0.6	0	0.1	0	0.04	0	0.04	0	0.07	0	0.04
80	11/04/83	B	11.4	0.6	0	0.2	0	0.04	0	0.04	0	0.08	0	0.04
81	11/04/83	C	10.2	0.5	0	0.2	0	0.04	0	0.04	0	0.08	0	0.04
82	11/04/83	D	12.5	0.6	0	0.2	0	0.04	0	0.04	0	0.08	0	0.04
83	11/08/83	E	13.1	0.7	0	0.2	0	0.04	0	0.04	0	0.09	0	0.04

Observation Number	Calendar Date	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 sigma)	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-
74	05/04/83	0	0.04	0	400	0	0.08	0	0.04	0	0.08	0	0.2	0
75	05/04/83	0	0.04	0	300	0	0.08	0	0.04	0	0.08	0	0.2	0
76	05/04/83	0	0.04	0	300	0	0.08	0	0.04	0	0.08	0	0.2	0
77	05/04/83	0	0.04	0	200	0	0.08	0	0.04	0	0.08	0	0.2	0
78	05/04/83	0	0.04	0	400	0	0.08	0	0.04	0	0.08	0	0.2	0
79	11/04/83	0	0.04	0	20	0	0.07	0	0.04	0	0.07	0	0.1	0
80	11/04/83	0	0.04	0	30	0	0.08	0	0.04	0	0.08	0	0.2	0
81	11/04/83	0	0.04	0	30	0	0.08	0	0.04	0	0.08	0	0.2	0
82	11/04/83	0	0.04	0	50	0	0.08	0	0.04	0	0.08	0	0.2	0
83	11/08/83	0	0.04	0	100	0	0.09	0	0.04	0	0.09	0	0.2	0

Observation Number	Calendar Date	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 si
74	05/04/83	0.2	0	0.2	0.60	0.04	0.05	0.04	0	0.08	0.87	0.04	0	0.
75	05/04/83	0.2	0	0.2	0.66	0.04	0.00	0.04	0	0.08	0.84	0.04	0	0.
76	05/04/83	0.2	0	0.2	0.36	0.04	0.00	0.04	0	0.08	0.43	0.04	0	0.
77	05/04/83	0.2	0	0.2	0.27	0.04	0.00	0.04	0	0.08	0.32	0.04	0	0.
78	05/04/83	0.2	0	0.2	0.08	0.04	0.00	0.04	0	0.08	0.09	0.04	0	0.
79	11/04/83	0.1	0	0.2	0.30	0.04	0.09	0.04	0	0.07	0.31	0.04	0	0.
80	11/04/83	0.2	0	0.2	0.62	0.04	0.63	0.04	0	0.08	0.65	0.04	0	0.
81	11/04/83	0.2	0	0.2	0.58	0.04	0.00	0.04	0	0.08	0.56	0.04	0	0.
82	11/04/83	0.2	0	0.2	0.45	0.04	0.00	0.04	0	0.08	0.59	0.04	0	0.
83	11/08/83	0.2	0	0.3	0.10	0.04	0.00	0.04	0	0.09	0.11	0.04	0	0.

N=10

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Coodery, Ph.D. Date: March 27, 1984

Table 12a: Quarterly Non-Migratory Marine Animals Analysis (Flesh Type)

Control Location: C

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(Nb
361	02/01/83	sheepshead	C	3.10	0.20	0	0.06	0	0.010	0	0.010	(
362	02/01/83	black perch	C	2.90	0.20	0	0.05	0	0.010	0	0.010	(
363	02/01/83	spiney lobster	C	4.00	0.20	0	0.06	0	0.010	0	0.010	(
364	02/01/83	keyhole limpet	C	1.00	0.20	0	0.04	0	0.008	0	0.008	(
365	02/07/83	sheepshead	A	3.70	0.20	0	0.06	0	0.010	0	0.010	(
366	02/07/83	sea hare	A	1.02	0.09	0	0.02	0	0.005	0	0.005	(
367	02/07/83	sheepshead	B	3.90	0.20	0	0.06	0	0.010	0	0.010	(
368	02/07/83	black perch	B	3.10	0.20	0	0.05	0	0.010	0	0.010	(

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 sig
361	02/01/83	0.03	0.0070	0.0010	0	0.010	0	30	0	0.06	0.000	0.00
362	02/01/83	0.03	0.0060	0.0010	0	0.010	0	30	0	0.05	0.000	0.00
363	02/01/83	0.03	0.0000	0.0070	0	0.010	0	6	0	0.06	0.000	0.00
364	02/01/83	0.02	0.0000	0.0060	0	0.008	0	7	0	0.04	0.000	0.02
365	02/07/83	0.03	0.0140	0.0010	0	0.010	0	6	0	0.06	0.000	0.00
366	02/07/83	0.02	0.0018	0.0006	0	0.005	0	2	0	0.02	0.066	0.00
367	02/07/83	0.03	0.0090	0.0020	0	0.010	0	6	0	0.06	0.000	0.00
368	02/07/83	0.03	0.0070	0.0010	0	0.010	0	5	0	0.05	0.000	0.00

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)
361	02/01/83	0	0.020	0	0.06	0	0.06	0	0.060	0.000	0.020	0.000	0.005
362	02/01/83	0	0.030	0	0.05	0	0.05	0	0.050	0.000	0.020	0.000	0.006
363	02/01/83	0	0.020	0	0.06	0	0.06	0	0.060	0.000	0.020	0.000	0.008
364	02/01/83	0	0.020	0	0.04	0	0.04	0	0.040	0.000	0.010	0.006	0.002
365	02/07/83	0	0.020	0	0.06	0	0.06	0	0.060	0.000	0.020	0.000	0.006
366	02/07/83	0	0.009	0	0.02	0	0.02	0	0.030	0.034	0.008	0.410	0.020
367	02/07/83	0	0.020	0	0.06	0	0.06	0	0.060	0.000	0.020	0.000	0.006
368	02/07/83	0	0.020	0	0.05	0	0.05	0	0.050	0.000	0.020	0.000	0.005

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueous (2 sigm
361	02/01/83	0.000	0.006	0.000	0.020	0	0.10	0.0	0.6	0.000	0.200
362	02/01/83	0.000	0.005	0.000	0.020	0	0.10	0.0	0.8	0.000	0.020
363	02/01/83	0.000	0.007	0.000	0.020	0	0.10	0.0	0.6	0.000	0.010
364	02/01/83	0.006	0.002	0.034	0.008	0	0.10	0.0	0.4	0.000	0.010
365	02/07/83	0.000	0.006	0.000	0.020	0	0.10	0.0	0.6	0.000	0.010
366	02/07/83	0.043	0.002	0.071	0.005	0	0.06	0.0	0.2	0.021	0.006
367	02/07/83	0.000	0.006	0.000	0.020	0	0.10	0.0	0.6	0.000	0.020
368	02/07/83	0.000	0.005	0.000	0.020	0	0.10	0.0	0.5	0.000	0.010

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified Mina Choudhary, Ph.D. Date: March 27, 1984

Table 12a: Quarterly Non-Migratory Marine Animals Analysis (Flesh Type)

Control Location: C

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(Nb
369	02/07/83	bay mussel	B	1.90	0.20	0	0.05	0	0.009	0	0.009	
370	02/16/83	black perch	A	2.50	0.20	0	0.05	0	0.010	0	0.010	
371	02/18/83	rock crab	A	2.40	0.20	0	0.05	0	0.010	0	0.010	
372	02/18/83	rock crab	B	2.90	0.20	0	0.05	0	0.010	0	0.010	
373	05/02/83	sheepshead	C	3.60	0.20	0	0.05	0	0.010	0	0.010	
374	05/02/83	black perch	C	3.00	0.20	0	0.05	0	0.009	0	0.009	
375	05/02/83	keyhole limpet	C	1.10	0.06	0	0.04	0	0.007	0	0.007	
376	05/03/83	spiney lobster	C	3.20	0.20	0	0.06	0	0.010	0	0.010	

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 sig
369	02/07/83	0.02	0.000	0.0090	0	0.009	0	5	0	0.05	0.000	0.01
370	02/16/83	0.02	0.007	0.0010	0	0.010	0	5	0	0.05	0.000	0.02
371	02/18/83	0.02	0.008	0.0010	0	0.010	0	5	0	0.05	0.070	0.02
372	02/18/83	0.03	0.007	0.0020	0	0.010	0	5	0	0.05	0.053	0.00
373	05/02/83	0.03	0.007	0.0010	0	0.010	0	9	0	0.05	0.000	0.00
374	05/02/83	0.02	0.007	0.0010	0	0.009	0	5	0	0.05	0.000	0.00
375	05/02/83	0.02	0.003	0.0009	0	0.007	0	4	0	0.04	0.000	0.00
376	05/03/83	0.03	0.005	0.0010	0	0.010	0	6	0	0.06	0.000	0.00

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	-60	Co-60 (2 sigma)
369	02/07/83	0	0.020	0	0.05	0	0.05	0	0.070	0.000	0.020	0.037	0.002
370	02/16/83	0	0.020	0	0.05	0	0.05	0	0.050	0.000	0.020	0.012	0.004
371	02/18/83	0	0.020	0	0.05	0	0.05	0	0.100	0.060	0.010	0.310	0.030
372	02/18/83	0	0.020	0	0.05	0	0.05	0	0.080	0.015	0.008	0.260	0.010
373	05/02/83	0	0.020	0	0.05	0	0.05	0	0.060	0.000	0.020	0.000	0.005
374	05/02/83	0	0.020	0	0.05	0	0.05	0	0.050	0.000	0.020	0.000	0.005
375	05/02/83	0	0.010	0	0.04	0	0.04	0	0.040	0.000	0.020	0.000	0.004
376	05/03/83	0	0.020	0	0.06	0	0.06	0	0.060	0.000	0.020	0.000	0.007

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueous (2 siga
369	02/07/83	0.000	0.009	0.000	0.030	0	0.10	0.0	0.5	0.00	0.010
370	02/16/83	0.000	0.010	0.000	0.020	0	0.10	0.0	0.5	0.00	0.010
371	02/18/83	0.082	0.007	0.080	0.010	0	0.10	0.0	0.5	0.02	0.010
372	02/18/83	0.060	0.010	0.200	0.010	0	0.10	0.0	0.5	0.04	[illegible]
373	05/02/83	0.000	0.006	0.000	0.020	0	0.10	0.0	0.5	[illegible]	
374	05/02/83	0.000	0.005	0.000	0.020	0	0.10	0.0	0.5	0	
375	05/02/83	0.000	0.040	0.037	0.007	0	0.09	0.0	0.5	[illegible]	[illegible]
376	05/03/83	0.000	0.006	0.000	0.020	0	0.10	0.0	0.6	0.00	0.020

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mona Sanders, Ph.D. Date: March 27, 1984

Table 12a: Quarterly Non-Migratory Marine Animals Analysis (Flesh Type)

Control Location: C

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(
377	05/04/83	bay mussel	B	1.42	0.07	0	0.03	0	0.005	0	0.005	
378	05/06/83	rock crab	A	2.90	0.10	0	0.04	0	0.008	0	0.008	
379	05/06/83	spiney lobster	B	3.00	0.10	0	0.06	0	0.010	0	0.010	
380	05/17/83	sheepshead	B	3.40	0.20	0	0.05	0	0.010	0	0.010	
381	05/17/83	black perch	B	2.90	0.10	0	0.05	0	0.009	0	0.009	
382	05/18/83	sea hare	A	1.85	0.09	0	0.03	0	0.005	0	0.005	
383	06/16/83	sheepshead	A	3.60	0.20	0	0.05	0	0.010	0	0.010	
384	06/16/83	black perch	A	3.40	0.20	0	0.05	0	0.009	0	0.009	

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 si
377	05/04/83	0.01	0.000	0.003	0	0.005	0	3	0	0.03	0.000	0.0
378	05/06/83	0.02	0.005	0.001	0	0.008	0	4	0	0.04	0.010	0.0
379	05/06/83	0.03	0.005	0.002	0	0.010	0	6	0	0.06	0.000	0.0
380	05/17/83	0.03	0.013	0.001	0	0.010	0	5	0	0.05	0.000	0.0
381	05/17/83	0.02	0.007	0.001	0	0.009	0	5	0	0.05	0.000	0.0
382	05/18/83	0.01	0.000	0.001	0	0.005	0	3	0	0.03	0.034	0.0
383	06/16/83	0.03	0.021	0.001	0	0.010	0	5	0	0.05	0.000	0.0
384	06/16/83	0.02	0.011	0.001	0	0.009	0	5	0	0.05	0.000	0.0

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)
377	05/04/83	0	0.010	0	0.03	0	0.03	0	0.030	0.000	0.010	0.006	0.001
378	05/06/83	0	0.020	0	0.04	0	0.04	0	0.004	0.000	0.020	0.111	0.006
379	05/06/83	0	0.020	0	0.06	0	0.06	0	0.060	0.000	0.020	0.013	0.003
380	05/17/83	0	0.020	0	0.05	0	0.05	0	0.050	0.000	0.020	0.000	0.005
381	05/17/83	0	0.020	0	0.05	0	0.05	0	0.050	0.000	0.020	0.000	0.005
382	05/18/83	0	0.010	0	0.03	0	0.03	0	0.030	0.070	0.010	0.280	0.010
383	06/16/83	0	0.020	0	0.05	0	0.05	0	0.050	0.000	0.020	0.039	0.003
384	06/16/83	0	0.020	0	0.05	0	0.05	0	0.050	0.000	0.020	0.008	0.002

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueous (2 sig
377	05/04/83	0.000	0.003	0.000	0.010	0	0.06	0.0	0.3	0	0.00
378	05/06/83	0.039	0.009	0.000	0.020	0	0.10	0.0	0.4	0	0.01
379	05/06/83	0.017	0.006	0.000	0.020	0	0.10	0.0	0.6	0	0.01
380	05/17/83	0.000	0.006	0.000	0.020	0	0.10	0.0	0.5	0	0.01
381	05/17/83	0.000	0.005	0.000	0.020	0	0.10	0.0	0.5	0	0.01
382	05/18/83	0.024	0.007	0.091	0.006	0	0.06	0.0	0.3	0	0.00
383	06/16/83	0.000	0.005	0.000	0.020	0	0.10	0.0	0.5	0	0.01
384	06/16/83	0.000	0.005	0.000	0.020	0	0.10	0.0	0.5	0	0.01

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: M. [illegible], Ph.D. Date: March 07, 1984

Table 12a: Quarterly Non-Migratory Marine Animals Analysis (Flesh Type)

Control Location: C

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(Nb
385	08/03/83	sheepshead	C	3.20	0.20	0	0.05	0	0.009	0	0.009	0
386	08/03/83	BLACK PERCH	C	2.60	0.10	0	0.05	0	0.010	0	0.010	0
387	08/03/83	spiney lobster	C	2.90	0.10	0	0.05	0	0.009	0	0.009	0
388	08/03/83	keyhole limpet	C	1.27	0.06	0	0.04	0	0.008	0	0.008	0
389	08/04/83	sheepshead	B	3.60	0.20	0	0.05	0	0.010	0	0.010	0
390	08/04/83	black perch	B	2.60	0.10	0	0.05	0	0.009	0	0.009	0
391	08/04/83	bay mussel	B	1.27	0.07	0	0.04	0	0.008	0	0.008	0
392	08/11/83	sea hare	A	1.42	0.07	0	0.02	0	0.005	0	0.005	0

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 sig
385	08/03/83	0.02	0.007	0.001	0	0.009	0	5	0	0.05	0.000	0.00
386	08/03/83	0.02	0.007	0.001	0	0.010	0	5	0	0.05	0.000	0.00
387	08/03/83	0.02	0.005	0.001	0	0.009	0	5	0	0.05	0.000	0.00
388	08/03/83	0.02	0.000	0.004	0	0.008	0	4	0	0.04	0.000	0.00
389	08/04/83	0.03	0.010	0.001	0	0.010	0	5	0	0.05	0.000	0.00
390	08/04/83	0.02	0.006	0.001	0	0.009	0	5	0	0.05	0.000	0.00
391	08/04/83	0.02	0.000	0.005	0	0.008	0	4	0	0.04	0.013	0.00
392	08/11/83	0.01	0.000	0.004	0	0.005	0	2	0	0.02	0.025	0.00

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)
385	08/03/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.000	0.006
386	08/03/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.000	0.005
387	08/03/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.000	0.007
388	08/03/83	0	0.020	0	0.04	0	0.04	0	0.04	0.000	0.020	0.000	0.005
389	08/04/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.000	0.005
390	08/04/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.000	0.005
391	08/04/83	0	0.020	0	0.04	0	0.04	0	0.04	0.000	0.020	0.015	0.002
392	08/11/83	0	0.009	0	0.02	0	0.02	0	0.03	0.040	0.010	0.062	0.003

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueous (2 sigm
385	08/03/83	0.000	0.005	0.000	0.020	0	0.10	0.0	0.5	0	0.010
386	08/03/83	0.000	0.005	0.000	0.020	0	0.10	0.0	0.5	0	0.010
387	08/03/83	0.000	0.006	0.000	0.020	0	0.10	0.0	0.5	0	0.010
388	08/03/83	0.000	0.005	0.000	0.020	0	0.09	0.0	0.4	0	0.009
389	08/04/83	0.000	0.005	0.000	0.020	0	0.10	0.0	0.5	0	0.010
390	08/04/83	0.000	0.005	0.000	0.020	0	0.10	0.0	0.5	0	0.010
391	08/04/83	0.000	0.005	0.083	0.008	0	0.10	0.0	0.4	0	0.010
392	08/11/83	0.000	0.005	0.150	0.010	0	0.06	0.9	0.2	0	0.006

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Chaudhry, Ph.D. Date: March 27, 1984

Table 12a: Quarterly Non-Migratory Marine Animals Analysis (Flesh Type)

Control Location: C

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr
393	08/17/83	sheepshead	A	3.40	0.20	0	0.05	0	0.009	0	0.009	
394	08/17/83	black perch	A	2.70	0.10	0	0.05	0	0.009	0	0.009	
395	08/17/83	spiney lobster	A	2.30	0.1[illegible]	0	0.05	0	0.010	0	0.010	
396	08/17/83	spiney lobster	B	2.70	0.20	0	0.05	0	0.010	0	0.010	
397	11/07/83	black perch	C	5.00	0.30	0	0.05	0	0.010	0	0.010	
398	11/07/83	keyhole limpet	C	1.26	0.06	0	0.03	0	0.007	0	0.007	
399	11/08/83	sheepshead	C	2.50	0.10	0	0.05	0	0.010	0	0.010	
400	11/08/83	spiney lobster	C	2.90	0.1[illegible]	0	0.04	0	0.009	0	0.009	

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-5 (2 s
393	08/17/83	0.02	0.014	0.001	0	0.009	0	5	0	0.05	0.000	0.
394	08/17/83	0.02	0.008	0.001	0	0.009	0	5	0	0.05	0.000	0.
395	08/17/83	0.03	0.005	0.001	0	0.010	0	5	0	0.05	0.000	0.
396	08/17/83	0.03	0.000	0.010	0	0.010	0	5	0	0.05	0.009	0.
397	11/07/83	0.03	0.006	0.001	0	0.010	0	5	0	0.05	0.000	0.
398	11/07/83	0.02	0.000	0.002	0	0.007	0	3	0	0.03	0.000	0.
399	11/08/83	0.03	0.007	0.001	0	0.010	0	5	0	0.05	0.000	0.
400	11/08/83	0.02	0.004	0.001	0	0.009	0	4	0	0.04	0.000	0.

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)
393	08/17/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.000	0.005
394	08/17/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.000	0.006
395	08/17/83	0	0.020	0	0.05	0	0.05	0	0.07	0.000	0.020	0.007	0.002
396	08/17/83	0	0.020	0	0.05	0	0.05	0	0.07	0.000	0.020	0.012	0.002
397	11/07/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.000	0.005
398	11/07/83	0	0.010	0	0.03	0	0.03	0	0.03	0.000	0.010	0.000	0.003
399	11/08/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.000	0.005
400	11/08/83	0	0.020	0	0.04	0	0.04	0	0.04	0.000	0.020	0.000	0.004

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueou (2 si
393	08/17/83	0.000	0.005	0	0.020	0	0.10	0	0.5	0	0.0
394	08/17/83	0.000	0.005	0	0.020	0	0.10	0	0.5	0	0.0
395	08/17/83	0.012	0.002	0	0.020	0	0.10	0	0.5	0	0.0
396	08/17/83	0.016	0.003	0	0.020	0	0.10	0	0.5	0	0.0
397	11/07/83	0.000	0.005	0	0.020	0	0.10	0	0.5	0	0.0
398	11/07/83	0.004	0.002	0	0.010	0	0.09	0	0.4	0	0.0
399	11/08/83	0.000	0.005	0	0.020	0	0.10	0	0.5	0	0.0
400	11/08/83	0.000	0.004	0	0.020	0	0.10	0	0.6	0	0.0

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: N. Luna Cortez, Ph.D. Date: March 27, 1984

Table 12a: Quarterly Non-Migratory Marine Animals Analysis (Flesh Type)

Control Location: C

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(N
401	11/09/83	sea hare	A	2.10	0.10	0	0.03	0	0.006	0	0.006	
402	11/09/83	sheepshead	A	2.90	0.10	0	0.04	0	0.009	0	0.009	
403	11/09/83	spiney lobster	A	2.90	0.10	0	0.05	0	0.009	0	0.009	
404	11/09/83	sheepshead	B	3.60	0.20	0	0.05	0	0.009	0	0.009	
405	11/09/83	black perch	B	2.70	0.10	0	0.05	0	0.010	0	0.010	
406	11/09/83	bay mussel	B	0.89	0.04	0	0.02	0	0.004	0	0.004	
407	11/09/83	sheepcrab	B	1.60	0.10	0	0.09	0	0.020	0	0.020	
408	11/14/83	black perch	A	3.30	0.20	0	0.05	0	0.010	0	0.010	

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 sig
401	11/09/83	0.02	0.000	0.004	0	0.006	0	3	0	0.03	0.007	0.00
402	11/09/83	0.02	0.007	0.001	0	0.009	0	5	0	0.04	0.000	0.00
403	11/09/83	0.02	0.005	0.001	0	0.009	0	5	0	0.05	0.000	0.00
404	11/09/83	0.02	0.011	0.001	0	0.009	0	5	0	0.05	0.000	0.00
405	11/09/83	0.02	0.007	0.001	0	0.010	0	5	0	0.05	0.000	0.00
406	11/09/83	0.01	0.000	0.002	0	0.004	0	2	0	0.02	0.003	0.00
407	11/09/83	0.05	0.000	0.010	0	0.020	0	9	0	0.09	0.000	0.01
408	11/14/83	0.03	0.006	0.001	0	0.010	0	5	0	0.05	0.000	0.00

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)
401	11/09/83	0	0.010	0	0.03	0	0.03	0	0.03	0.024	0.006	0.069	0.003
402	11/09/83	0	0.020	0	0.04	0	0.04	0	0.04	0.000	0.020	0.000	0.004
403	11/09/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.008	0.003
404	11/09/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.000	0.006
405	11/09/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.000	0.005
406	11/09/83	0	0.008	0	0.02	0	0.02	0	0.02	0.000	0.008	0.004	0.001
407	11/09/83	0	0.040	0	0.10	0	0.09	0	0.09	0.000	0.040	0.000	0.009
408	11/14/83	0	0.020	0	0.05	0	0.05	0	0.05	0.000	0.020	0.000	0.006

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueous (2 sig
401	11/09/83	0.004	0.002	0	0.030	0	0.08	0	0.4	0	0.00
402	11/09/83	0.000	0.004	0	0.020	0	0.10	0	0.4	0	0.01
403	11/09/83	0.010	0.003	0	0.020	0	0.10	0	0.5	0	0.01
404	11/09/83	0.000	0.005	0	0.020	0	0.10	0	0.5	0	0.02
405	11/09/83	0.000	0.005	0	0.020	0	0.10	0	0.5	0	0.01
406	11/09/83	0.000	0.002	0	0.008	0	0.05	0	0.3	0	0.00
407	11/09/83	0.000	0.009	0	0.040	0	0.20	*	*	*	*
408	11/14/83	0.000	0.006	0	0.020	0	0.10	0	0.7	0	0.01

N=48

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Alma Powers, Ph.D. Date: March 27, 1984

Table 12b: Quarterly Non-Migratory Marine Animals Analysis (Bone Type)

Control Location: C

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr
290	02/01/83	sheepshead	C	1.10	0.10	0	0.10	0	0.020	0.000	0.020	
291	02/01/83	black perch	C	1.20	0.20	0	0.10	0	0.020	0.000	0.020	
292	02/01/83	spiney lobster	C	1.70	0.10	0	0.10	0	0.020	0.040	0.030	
293	02/01/83	keyhole limpet	C	0.00	0.10	0	0.10	0	0.020	0.000	0.020	
294	02/07/83	sheepshead	A	0.60	0.20	0	0.10	0	0.030	0.000	0.030	
295	02/07/83	sheepshead	B	0.80	0.20	0	0.10	0	0.020	0.000	0.020	
296	02/07/83	black perch	B	1.20	0.10	0	0.10	0	0.020	0.000	0.020	
297	02/07/83	bay mussel	B	3.50	0.20	0	0.10	0	0.020	0.021	0.007	

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-5 (2 s
290	02/01/83	0.06	0.0000	0.0080	0	0.020	0	100	0	0.10	0.000	0.
291	02/01/83	0.06	0.0000	0.0300	0	0.020	0	400	0	0.10	0.000	0.
292	02/01/83	0.06	0.0130	0.0040	0	0.020	0	10	0	0.10	0.040	0.
293	02/01/83	0.05	0.0000	0.0100	0	0.020	0	10	0	0.10	0.000	0.
294	02/07/83	0.06	0.0000	0.0300	0	0.030	0	30	0	0.10	0.000	0.
295	02/07/83	0.06	0.0000	0.0200	0	0.020	0	20	0	0.10	0.000	0.
296	02/07/83	0.05	0.0000	0.0100	0	0.020	0	30	0	0.10	0.000	0.
297	02/07/83	0.05	0.0000	0.0200	0	0.020	0	10	0	0.10	0.000	0.

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)
290	02/01/83	0	0.05	0	0.10	0	0.10	0	0.10	0	0.04	0.000	0.010
291	02/01/83	0	0.05	0	0.10	0	0.10	0	0.20	0	0.05	0.000	0.030
292	02/01/83	0	0.04	0	0.10	0	0.10	0	0.10	0	0.04	0.170	0.020
293	02/01/83	0	0.04	0	0.10	0	0.10	0	0.10	0	0.04	0.000	0.030
294	02/07/83	0	0.05	0	0.10	0	0.10	0	0.20	0	0.07	0.000	0.030
295	02/07/83	0	0.04	0	0.10	0	0.10	0	0.20	0	0.04	0.000	0.020
296	02/07/83	0	0.04	0	0.10	0	0.10	0	0.10	0	0.04	0.000	0.010
297	02/07/83	0	0.04	0	0.10	0	0.10	0	0.20	0	0.08	0.012	0.007

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueou (2 si
290	02/01/83	0.000	0.010	0.00	0.04	0	0.30	*	*	*	*
291	02/01/83	0.000	0.030	0.00	0.05	0	0.70	*	*	*	*
292	02/01/83	0.040	0.020	0.00	0.04	0	0.30	*	*	*	*
293	02/01/83	0.000	0.020	0.00	0.04	0	0.20	*	*	*	*
294	02/07/83	0.000	0.030	0.00	0.05	0	0.30	*	*	*	*
295	02/07/83	0.000	0.020	0.00	0.04	0	0.30	*	*	*	*
296	02/07/83	0.000	0.010	0.00	0.04	0	0.30	*	*	*	*
297	02/07/83	0.200	0.100	0.11	0.03	0	0.50	*	*	*	*

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Goeters, Ph.D. Date: March 27, 1984

Table 12b: Quarterly Non-Migratory Marine Animals Analysis (Bone Type)

Control Location: C

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(N
298	02/16/83	black perch	A	0.40	0.20	0	0.10	0	0.020	0.000	0.030	
299	02/16/83	rock crab	A	3.40	0.20	0	0.10	0	0.020	0.020	0.010	
300	02/18/83	rock crab	B	1.80	0.20	0	0.10	0	0.020	0.000	0.020	
301	05/02/83	sheepshead	C	0.80	0.10	0	0.10	0	0.020	0.000	0.020	
302	05/02/83	black perch	C	0.55	0.09	0	0.10	0	0.020	0.000	0.020	
303	05/02/83	keyhole limpet	C	0.00	0.20	0	0.10	0	0.020	0.000	0.020	
304	05/03/83	spiney lobster	C	2.80	0.20	0	0.09	0	0.020	0.000	0.020	
305	05/04/83	bay mussel	B	0.09	0.06	0	0.09	0	0.020	0.000	0.020	

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 si
298	02/16/83	0.05	0.0000	0.0200	0	0.020	0	10	0	0.10	0.000	0.0
299	02/16/83	0.05	0.0000	0.0060	0	0.020	0	10	0	0.10	0.043	0.0
300	02/18/83	0.06	0.0000	0.0060	0	0.020	0	10	0	0.10	0.029	0.0
301	05/02/83	0.05	0.0000	0.0200	0	0.020	0	20	0	0.10	0.000	0.0
302	05/02/83	0.05	0.0000	0.0100	0	0.020	0	10	0	0.10	0.000	0.0
303	05/02/83	0.05	0.0000	0.0100	0	0.020	0	10	0	0.10	0.000	0.0
304	05/03/83	0.04	0.0000	0.0070	0	0.020	0	9	0	0.09	0.000	0.0
305	05/04/83	0.05	0.0000	0.0090	0	0.020	0	9	0	0.09	0.000	0.0

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)
298	02/16/83	0	0.04	0	0.10	0	0.10	0	0.20	0	0.05	0.000	0.030
299	02/16/83	0	0.05	0	0.10	0	0.10	0	0.10	0	0.05	0.250	0.030
300	02/18/83	0	0.05	0	0.10	0	0.10	0	0.10	0	0.05	0.120	0.010
301	05/02/83	0	0.04	0	0.10	0	0.10	0	0.10	0	0.04	0.000	0.020
302	05/02/83	0	0.04	0	0.10	0	0.10	0	0.10	0	0.04	0.000	0.010
303	05/02/83	0	0.04	0	0.10	0	0.10	0	0.10	0	0.04	0.000	0.010
304	05/03/83	0	0.03	0	0.09	0	0.09	0	0.10	0	0.03	0.000	0.009
305	05/04/83	0	0.04	0	0.09	0	0.09	0	0.09	0	0.04	0.000	0.020

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueous (2 sig
298	02/16/83	0.000	0.020	0	0.04	0	0.30	*	*	*	*
299	02/16/83	0.030	0.020	0	0.05	0	0.30	*	*	*	*
300	02/18/83	0.040	0.020	0	0.05	0	0.30	*	*	*	*
301	05/02/83	0.000	0.020	0	0.04	0	0.30	*	*	*	*
302	05/02/83	0.000	0.010	0	0.04	0	0.30	*	*	*	*
303	05/02/83	0.000	0.010	0	0.04	0	0.20	*	*	*	*
304	05/03/83	0.000	0.009	0	0.03	0	0.20	*	*	*	*
305	05/04/83	0.000	0.009	0	0.04	0	0.20	*	*	*	*

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Cooper, Ph.D. Date: March 29, 1984

Table 12b: Quarterly Non-Migratory Marine Animals Analysis (Bone Type)

Control Location: C

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr
306	05/06/83	rock crab	A	1.72	0.09	0	0.10	0	0.020	0.000	0.020	
307	05/06/83	spiney lobster	B	2.20	0.10	0	0.09	0	0.020	0.000	0.020	
308	05/17/83	sheepshead	B	1.00	0.10	0	0.10	0	0.020	0.000	0.020	
309	05/17/83	black perch	B	0.50	0.20	0	0.10	0	0.020	0.000	0.020	
310	06/16/83	sheepshead	A	0.74	0.06	0	0.10	0	0.020	0.000	0.020	
311	06/16/83	black perch	A	0.50	0.10	0	0.08	0	0.020	0.000	0.020	
312	08/03/83	sheepshead	C	0.90	0.20	0	0.10	0	0.030	0.000	0.030	
313	08/03/83	black perch	C	0.80	0.20	0	0.10	0	0.020	0.000	0.020	

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-[illegible] (2 [illegible]
306	05/06/83	0.06	0.0120	0.0030	0	0.020	0	10	0	0.10	0.000	0
307	05/06/83	0.04	0.0040	0.0020	0	0.020	0	9	0	0.09	0.000	0
308	05/17/83	0.06	0.0000	0.0200	0	0.020	0	10	0	0.10	0.000	0
309	05/17/83	0.06	0.0000	0.0200	0	0.020	0	10	0	0.10	0.000	0
310	06/16/83	0.05	0.0000	0.0100	0	0.020	0	10	0	0.10	0.000	0
311	06/16/83	0.04	0.0000	0.0100	0	0.020	0	8	0	0.08	0.000	0
312	08/03/83	0.06	0.0000	0.0300	0	0.020	0	10	0	0.10	0.000	0
313	08/03/83	0.05	0.0000	0.0200	0	0.020	0	10	0	0.10	0.000	0

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)
306	05/06/83	0	0.04	0	0.10	0	0.10	0	0.10	0	0.04	0.061	0.007
307	05/06/83	0	0.03	0	0.09	0	0.09	0	0.09	0	0.03	0.015	0.005
308	05/17/83	0	0.05	0	0.10	0	0.10	0	0.10	0	0.05	0.000	0.030
309	05/17/83	0	0.04	0	0.10	0	0.10	0	0.10	0	0.04	0.000	0.020
310	06/16/83	0	0.04	0	0.10	0	0.10	0	0.10	0	0.04	0.023	0.009
311	06/16/83	0	0.03	0	0.08	0	0.08	0	0.09	0	0.03	0.000	0.020
312	08/03/83	0	0.05	0	0.10	0	0.10	0	0.30	0	0.07	0.000	0.030
313	08/03/83	0	0.04	0	0.10	0	0.10	0	0.20	0	0.04	0.000	0.030

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueo[illegible] (2 s[illegible]
306	05/06/83	0.110	0.060	0	0.04	0	0.30	*	*	*	[illegible]
307	05/06/83	0.030	0.010	0	0.03	0	0.20	*	*	*	[illegible]
308	05/17/83	0.000	0.020	0	0.05	0	0.30	*	*	*	[illegible]
309	05/17/83	0.000	0.020	0	0.04	0	0.30	*	*	*	[illegible]
310	06/16/83	0.000	0.010	0	0.04	0	0.30	*	*	*	[illegible]
311	06/16/83	0.000	0.010	0	0.03	0	0.20	*	*	*	[illegible]
312	08/03/83	0.000	0.030	0	0.05	0	0.30	*	*	*	[illegible]
313	08/03/83	0.000	0.020	0	0.04	0	0.30	*	*	*	[illegible]

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Marina Gaudersen, Ph.D. Date: March 27, 1984

Table 12b: Quarterly Non-Migratory Marine Animals Analysis (Bone Type)

Control Location: C

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr
314	08/03/83	spiney lobster	C	1.90	0.10	0	0.08	0	0.020	0.000	0.020	
315	08/03/83	keyhole limpet	C	0.20	0.10	0	0.10	0	0.020	0.000	0.020	
316	08/04/83	sheepshead	B	0.80	0.20	0	0.10	0	0.030	0.000	0.030	
317	08/04/83	black perch	B	0.70	0.10	0	0.10	0	0.020	0.000	0.020	
318	08/04/83	bay mussel	B	0.14	0.06	0	0.08	0	0.020	0.000	0.020	
319	08/17/83	black perch	A	1.20	0.20	0	0.10	0	0.020	0.000	0.020	
320	08/17/83	sheepshead	A	1.20	0.20	0	0.10	0	0.020	0.000	0.030	
321	08/17/83	spiney lobster	B	3.00	0.20	0	0.08	0	0.020	0.000	0.020	

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-5 (2 s
314	08/03/83	0.04	0.0000	0.0080	0	0.020	0	8	0	0.08	0.000	0.
315	08/03/83	0.05	0.0000	0.0200	0	0.020	0	10	0	0.10	0.000	0.
316	08/04/83	0.06	0.0000	0.0300	0	0.020	0	10	0	0.10	0.000	0.
317	08/04/83	0.05	0.0000	0.0200	0	0.020	0	10	0	0.10	0.000	0.
318	08/04/83	0.04	0.0000	0.0080	0	0.020	0	8	0	0.08	0.000	0.
319	08/17/83	0.06	0.0000	0.0200	0	0.020	0	10	0	0.10	0.000	0.
320	08/17/83	0.06	0.0000	0.0300	0	0.020	0	10	0	0.10	0.000	0.
321	08/17/83	0.04	0.0000	0.0060	0	0.020	0	8	0	0.08	0.020	0.

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)
314	08/03/83	0	0.03	0	0.08	0	0.08	0	0.08	0	0.03	0.000	0.010
315	08/03/83	0	0.04	0	0.10	0	0.10	0	0.10	0	0.04	0.000	0.020
316	08/04/83	0	0.05	0	0.10	0	0.10	0	0.30	0	0.07	0.000	0.070
317	08/04/83	0	0.04	0	0.10	0	0.10	0	0.20	0	0.04	0.000	0.020
318	08/04/83	0	0.03	0	0.08	0	0.08	0	0.08	0	0.03	0.000	0.020
319	08/17/83	0	0.04	0	0.10	0	0.10	0	0.20	0	0.04	0.000	0.020
320	08/17/83	0	0.05	0	0.10	0	0.10	0	0.20	0	0.05	0.000	0.030
321	08/17/83	0	0.03	0	0.08	0	0.08	0	0.08	0	0.03	0.020	0.004

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueou (2 s
314	08/03/83	0.000	0.008	0	0.03	0	0.20	*	*	*	
315	08/03/83	0.000	0.020	0	0.04	0	0.20	*	*	*	
316	08/04/83	0.000	0.030	0	0.06	0	0.30	*	*	*	
317	08/04/83	0.000	0.020	0	0.04	0	0.30	*	*	*	
318	08/04/83	0.000	0.008	0	0.03	0	0.20	*	*	*	
319	08/17/83	0.000	0.020	0	0.04	0	0.30	*	*	*	
320	08/17/83	0.000	0.020	0	0.05	0	0.30	*	*	*	
321	08/17/83	0.025	0.007	0	0.03	0	0.20	*	*	*	

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Coulters, Ph.D. Date: March 27, 1984

Table 12b: Quarterly Non-Migratory Marine Animals Analysis (Bone Type)

Control Location: C

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)
322	08/18/83	spiney lobster	A	2.80	0.10	0	0.08	0	0.020	0.000	0.020
323	11/04/83	sheepshead	B	0.62	0.06	0	0.08	0	0.020	0.000	0.020
324	11/04/83	black perch	B	0.73	0.09	0	0.09	0	0.020	0.000	0.020
325	11/04/83	bay mussel	B	0.16	0.05	0	0.09	0	0.020	0.000	0.020
326	11/07/83	black perch	C	0.82	0.08	0	0.10	0	0.020	0.000	0.020
327	11/07/83	keyhole limpet	C	0.00	0.20	0	0.09	0	0.020	0.000	0.020
328	11/08/83	sheepshead	C	0.80	0.20	0	0.10	0	0.020	0.000	0.020
329	11/08/83	spiney lobster	C	1.65	0.08	0	0.07	0	0.010	0.000	0.010

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co- (2
322	08/18/83	0.04	0.0000	0.0090	0	0.020	0	8	0	0.08	0.000	
323	11/04/83	0.04	0.0000	0.0070	0	0.020	0	8	0	0.08	0.000	
324	11/04/83	0.04	0.0000	0.0100	0	0.020	0	9	0	0.09	0.000	
325	11/04/83	0.05	0.0000	0.0090	0	0.020	0	9	0	0.09	0.000	
326	11/07/83	0.06	0.0000	0.0100	0	0.020	0	10	0	0.10	0.000	
327	11/07/83	0.04	0.0000	0.0090	0	0.020	0	9	0	0.09	0.000	
328	11/08/83	0.05	0.0000	0.0200	0	0.020	0	10	0	0.10	0.000	
329	11/08/83	0.04	0.0000	0.0050	0	0.010	0	7	0	0.07	0.000	

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)
322	08/18/83	0	0.03	0	0.08	0	0.08	0	0.08	0	0.03	0.008	0.004
323	11/04/83	0	0.03	0	0.08	0	0.08	0	0.08	0	0.03	0.000	0.009
324	11/04/83	0	0.04	0	0.09	0	0.09	0	0.09	0	0.04	0.000	0.010
325	11/04/83	0	0.04	0	0.09	0	0.09	0	0.09	0	0.04	0.000	0.010
326	11/07/83	0	0.05	0	0.10	0	0.10	0	0.10	0	0.05	0.000	0.010
327	11/07/83	0	0.04	0	0.09	0	0.09	0	0.09	0	0.04	0.000	0.009
328	11/08/83	0	0.04	0	0.10	0	0.10	0	0.10	0	0.04	0.000	0.020
329	11/08/83	0	0.03	0	0.07	0	0.07	0	0.07	0	0.03	0.000	0.007

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aque (2
322	08/18/83	0.019	0.005	0	0.03	0	0.20	*	*	*	
323	11/04/83	0.000	0.008	0	0.03	0	0.20	*	*	*	
324	11/04/83	0.000	0.009	0	0.04	0	0.20	*	*	*	
325	11/04/83	0.000	0.009	0	0.04	0	0.20	*	*	*	
326	11/07/83	0.000	0.010	0	0.05	0	0.30	*	*	*	
327	11/07/83	0.000	0.009	0	0.04	0	0.20	*	*	*	
328	11/08/83	0.000	0.020	0	0.04	0	0.30	*	*	*	
329	11/08/83	0.000	0.007	0	0.03	0	0.20	*	*	*	

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Cooley, Ph.D. Date: March 27, 1984

Table 12b: Quarterly Non-Migratory Marine Animals Analysis (Bone Type)

Control Location: C

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(Nb)-95
330	11/09/83	sheepshead	A	0.92	0.08	0	0.10	0	0.020	0.000	0.020	0
331	11/09/83	spiney lobster	A	2.20	0.10	0	0.08	0	0.020	0.000	0.020	0
332	11/09/83	sheepcrab	B	1.70	0.08	0	0.03	0	0.007	0.008	0.006	0
333	11/14/83	black perch	A	0.40	0.10	0	0.10	0	0.020	0.000	0.030	0

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 sigma)
330	11/09/83	0.05	0.0000	0.0100	0	0.020	0	10	0	0.10	0.000	0.020
331	11/09/83	0.04	0.0000	0.0070	0	0.020	0	8	0	0.08	0.000	0.010
332	11/09/83	0.02	0.0032	0.0008	0	0.007	0	3	0	0.03	0.004	0.003
333	11/14/83	0.05	0.0000	0.0300	0	0.020	0	10	0	0.10	0.000	0.030

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)
330	11/09/83	0	0.04	0	0.10	0	0.10	0	0.10	0	0.04	0.000	0.020
331	11/09/83	0	0.03	0	0.08	0	0.08	0	0.09	0	0.03	0.013	0.004
332	11/09/83	0	0.01	0	0.03	0	0.03	0	0.03	0	0.01	0.009	0.002
333	11/14/83	0	0.04	0	0.10	0	0.10	0	0.20	0	0.04	0.000	0.020

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueous H-3 (2 sigma)
330	11/09/83	0.000	0.010	0	0.04	0	0.20	*	*	*	*
331	11/09/83	0.012	0.004	0	0.03	0	0.20	*	*	*	*
332	11/09/83	0.000	0.006	0	0.02	0	0.08	*	*	*	*
333	11/14/83	0.000	0.020	0	0.04	0	0.20	*	*	*	*

N=44

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Cordova, Ph.D. Date: March 27, 1984

Table 13a: Semi-Annual Local Crops Gamma Spectral Analysis

Control Location: 82

Observation Number	Calendar Date	Sample Type	Location	Be-7	Be-7 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-134	Cs-134 (2 sigma)
67	06/29/83	tomato	1	0.00	0.02	0	0.005	0	0.003
68	06/29/83	cucumber	1	0.00	0.01	0	0.004	0	0.002
69	06/29/83	tomato	2	0.00	0.02	0	0.006	0	0.003
70	08/15/83	kale	2	0.08	0.04	0	0.010	0	0.006
71	09/28/83	tomato	1	0.00	0.01	0	0.005	0	0.002
72	09/28/83	cucumber	1	0.00	0.01	0	0.004	0	0.002
73	09/28/83	tomato	2	0.00	0.01	0	0.005	0	0.002
74	09/28/83	kale	2	0.00	0.03	0	0.009	0	0.005

Observation Number	Calendar Date	K-40	K-40 (2 sigma)	Ru-103	Ru-103 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-58	Co-58 (2 sigma)	Ag-110m
67	06/29/83	2.30	0.10	0	0.005	0.000	0.0010	0	0.003	0
68	06/29/83	1.57	0.08	0	0.004	0.000	0.0010	0	0.002	0
69	06/29/83	2.60	0.10	0	0.006	0.000	0.0010	0	0.003	0
70	08/15/83	3.10	0.20	0	0.010	0.040	0.0060	0	0.006	0
71	09/28/83	2.10	0.10	0	0.005	0.000	0.0009	0	0.002	0
72	09/28/83	1.70	0.08	0	0.004	0.000	0.0010	0	0.002	0
73	09/28/83	2.15	0.09	0	0.005	0.000	0.0009	0	0.002	0
74	09/28/83	1.79	0.09	0	0.009	0.004	0.0020	0	0.005	0

Observation Number	Calendar Date	Ag-110m (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-60	Co-60 (2 sigma)	I-131	I-131 (2 sigma)	Ce-144	Ce-144 (2 sigma)
67	06/29/83	0.005	0	0.005	0	0.003	0	0.002	0	0.010
68	06/29/83	0.004	0	0.004	0	0.002	0	0.001	0	0.008
69	06/29/83	0.006	0	0.006	0	0.003	0	0.002	0	0.010
70	08/15/83	0.010	0	0.010	0	0.006	0	0.004	0	0.020
71	09/28/83	0.005	0	0.005	0	0.002	0	0.001	0	0.009
72	09/28/83	0.004	0	0.004	0	0.002	0	0.001	0	0.007
73	09/28/83	0.005	0	0.005	0	0.002	0	0.001	0	0.009
74	09/28/83	0.009	0	0.009	0	0.005	0	0.003	0	0.020

N=8

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Qadars, Ph.D. Date: March 27, 1984

Table 13b: Semi-Annual Local Crops Tritium and Strontium Activities

Control Location: 82

Observation Number	Calendar Date	Sample Type	Location	Sr-89	Sr-89 (2 sigma)	Sr-90	Sr-90 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueous H-3 (2 sigma)
126	06/29/83	tomato	1	*	*	0.000	0.002	0	0.20	0	0.003
127	06/29/83	cucumber	1	*	*	0.000	0.002	0	0.10	0	0.002
128	06/29/83	tomato	2	*	*	0.000	0.002	0	0.10	0	0.003
129	08/15/83	kale	2	*	*	0.026	0.005	0	0.20	0	0.006
130	09/28/83	tomato	1	*	*	0.000	0.002	0	0.09	0	0.002
131	09/28/83	cucumber	1	*	*	0.000	0.001	0	0.07	0	0.002
132	09/28/83	tomato	2	*	*	0.000	0.002	0	0.09	0	0.002
133	09/28/83	kale	2	*	*	0.018	0.004	0	0.20	0	0.005

N=8

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Enders, Ph.D. Date: March 27, 1984

Table 14: Annual Soil Analysis

Control Location: 84

Observation Number	Calendar Date	Location	Be-7	Be-7 (2 sigma)	Zr(Nb)-95	Zr(Nb)-95 (2 sigma)	Cs-134	Cs-134 (2 sigma)	K-40	K-40 (2 sigma)	Ru-103
40	12/15/83	1	0	0.3	0	0.1	0	0.05	20.0	1.0	0
41	12/15/83	2	0	0.3	0	0.1	0	0.05	6.6	0.3	0
42	12/15/83	3	0	0.3	0	0.1	0	0.05	12.0	0.6	0
43	12/15/83	4	0	0.3	0	0.1	0	0.05	22.0	1.0	0
44	12/15/83	5	0	0.3	0	0.1	0	0.05	16.6	0.8	0

Observation Number	Calendar Date	Ru-103 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-58	Co-58 (2 sigma)	Ag-110m	Ag-110m (2 sigma)	Ce-141	Ce-141 (2 sigma)
40	12/15/83	0.1	0.05	0.02	0	0.05	0	0.1	0	0.1
41	12/15/83	0.1	0.00	0.02	0	0.05	0	0.1	0	0.1
42	12/15/83	0.1	0.00	0.02	0	0.05	0	0.1	0	0.1
43	12/15/83	0.1	0.07	0.02	0	0.05	0	0.1	0	0.1
44	12/15/83	0.1	0.00	0.02	0	0.05	0	0.1	0	0.1

Observation Number	Calendar Date	Co-60	Co-60 (2 sigma)	I-131	I-131 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Sr-89	Sr-89 (2 sigma)	Sr-90	Sr-90 (2 sigma)
40	12/15/83	0	0.02	0	0.5	0	0.2	*	*	0.02	0.01
41	12/15/83	0	0.02	0	0.5	0	0.2	*	*	0.03	0.01
42	12/15/83	0	0.02	0	0.5	0	0.2	*	*	0.00	0.01
43	12/15/83	0	0.02	0	0.5	0	0.2	*	*	0.00	0.01
44	12/15/83	0	0.02	0	0.5	0	0.2	*	*	0.00	0.01

N=5

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Goodarz, Ph.D. Date: March 27, 1984

Table 15: Semi-Annual Kelp Analysis

Control Location: D

Observation Number	Calendar Date	Sample Type	Location	K-40	K-40 (2 sigma)	Zn-65	Zn-65 (2 sigma)	Cs-134	Cs-134 (2 sigma)	Mn-54	Mn-54 (2 sigma)	Zr(Nb)-95
75	05/02/83	macrocystis p.	A	4.6	0.5	0	0.02	0	0.004	0	0.004	0
76	05/02/83	macrocystis p.	B	7.2	0.4	0	0.02	0	0.005	0	0.005	0
77	05/02/83	macrocystis p.	C	6.5	0.3	0	0.02	0	0.004	0	0.004	0
78	05/02/83	macrocystis p.	D	6.3	0.3	0	0.03	0	0.005	0	0.005	0
79	11/15/83	macrocystis p.	A	6.7	0.3	0	0.02	0	0.004	0	0.004	0
80	11/15/83	macrocystis p.	B	4.7	0.2	0	0.02	0	0.004	0	0.004	0
81	11/15/83	macrocystis p.	C	4.6	0.2	0	0.02	0	0.005	0	0.005	0
82	11/15/83	macrocystis p.	D	4.7	0.2	0	0.02	0	0.004	0	0.004	0

Observation Number	Calendar Date	Zr(Nb)-95 (2 sigma)	Cs-137	Cs-137 (2 sigma)	Co-57	Co-57 (2 sigma)	Mo(Tc)-99	Mo(Tc)-99 (2 sigma)	Ce-141	Ce-141 (2 sigma)	Co-58	Co-58 (2 sigma)
75	05/02/83	0.010	0.0037	0.0005	0	0.004	0	2	0	0.02	0	0.003
76	05/02/83	0.010	0.0041	0.0006	0	0.005	0	2	0	0.02	0	0.004
77	05/02/83	0.009	0.0053	0.0005	0	0.004	0	2	0	0.02	0	0.003
78	05/02/83	0.010	0.0038	0.0007	0	0.005	0	3	0	0.03	0	0.004
79	11/15/83	0.009	0.0037	0.0005	0	0.004	0	2	0	0.02	0	0.003
80	11/15/83	0.010	0.0035	0.0005	0	0.004	0	2	0	0.02	0	0.003
81	11/15/83	0.010	0.0034	0.0006	0	0.005	0	2	0	0.02	0	0.004
82	11/15/83	0.009	0.0029	0.0004	0	0.004	0	2	0	0.02	0	0.003

Observation Number	Calendar Date	Ru-103	Ru-103 (2 sigma)	Ce-144	Ce-144 (2 sigma)	Fe-59	Fe-59 (2 sigma)	Ru-106	Ru-106 (2 sigma)	Ra-226	Ra-226 (2 sigma)	Co-60	Co-60 (2 sigma)
75	05/02/83	0	0.009	0	0.02	0	0.02	0	0.02	0	0.009	0	0.003
76	05/02/83	0	0.010	0	0.02	0	0.02	0	0.02	0	0.010	0	0.004
77	05/02/83	0	0.007	0	0.02	0	0.02	0	0.02	0	0.007	0	0.003
78	05/02/83	0	0.010	0	0.03	0	0.03	0	0.03	0	0.010	0	0.004
79	11/15/83	0	0.007	0	0.02	0	0.02	0	0.02	0	0.007	0	0.003
80	11/15/83	0	0.008	0	0.02	0	0.02	0	0.02	0	0.008	0	0.002
81	11/15/83	0	0.009	0	0.02	0	0.02	0	0.02	0	0.009	0	0.002
82	11/15/83	0	0.007	0	0.02	0	0.02	0	0.02	0	0.007	0	0.002

Observation Number	Calendar Date	Ag-110m	Ag-110m (2 sigma)	Th-228	Th-228 (2 sigma)	I-131	I-131 (2 sigma)	Bound H-3	Bound H-3 (2 sigma)	Aqueous H-3	Aqueous H-3 (2 sigma)
75	05/02/83	0	0.002	0	0.009	0.053	0.005	0	0.2	0	0.005
76	05/02/83	0	0.002	0	0.010	0.049	0.006	0	0.2	0	0.006
77	05/02/83	0	0.002	0	0.007	0.027	0.005	0	0.2	0	0.005
78	05/02/83	0	0.003	0	0.010	0.025	0.007	0	0.4	0	0.006
79	11/15/83	0	0.002	0	0.007	0.033	0.005	0	0.2	0	0.005
80	11/15/83	0	0.002	0	0.008	0.020	0.005	0	0.2	0	0.006
81	11/15/83	0	0.002	0	0.009	0.015	0.006	0	0.2	0	0.006
82	11/15/83	0	0.002	0	0.007	0.025	0.004	0	0.2	0	0.005

N=8

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: Mina Goeders, MD Date: March 27, 1984

Table 16: Semi-Annual Jackrabbit Analysis (pCi/g)

Observation Number	Calendar Date	Sample Type	Location	Sr-89	Sr-89 (2Sigma)	Sr-90	Sr-90 (2Sigma)	I-131	I-131 (2Sigma)
1	6/28/83	Rabbit Femur	1	0	2	14	2	*	*
2	11/27/83	Rabbit Femur	1	0	3	0	2	*	*
1	6/28/83	Rabbit Thyroid	1	*	*	*	*	0	10
2	11/27/83	Rabbit Thyroid	1	*	*	*	*	0	5

Observation Number	Calendar Date	Sample Type	Location	Be-7	Be-7 (2Sigma)	Co-58	Co-58 (2Sigma)	Co-60	Co-60 (2Sigma)	Zr-Nb-95	Zr-Nb-95 (2Sigma)	Ru-103	Ru-103 (2Sigma)
1	6/28/83	Rabbit Flesh	1	0	0.3	0	0.05	0	0.05	0	0.1	0	0.1
2	11/27/83	Rabbit Flesh	1	0	0.3	0	0.05	0	0.05	0	0.1	0	0.1

Ag-110m	Ag-110m (2Sigma)	I-131	I-131 (2Sigma)	Cs-134	Cs-134 (2Sigma)	Cs-137	Cs-137 (2Sigma)	Ce-141	Ce-141 (2Sigma)	Ce-144	Ce-144 (2Sigma)
0	0.1	0	0.05	0	0.06	0	0.06	0	0.2	0	0.2
0	0.1	0	0.05	0	0.06	0	0.06	0	0.2	0	0.2

APPENDIX I

ERRATA

APPENDIX I

ERRATA

1981 ANNUAL OPERATING REPORT: RADIOLOGICAL ENVIRONMENTAL MONITORING (SONGS UNIT 1)

Barn Kelp Bed Sampling

The reports indicated, in error, that two semiannual samples each year of kelp were obtained from the Barn kelp bed. In fact, commencing with the second semiannual sampling, the kelp was obtained from the Carlsbad kelp bed (22 miles south-southeast of the Station). The substitution was made because the Barn kelp bed had atrophied to a non-harvestable condition. Data identifed as being Barn kelp was acutally Carlsbad kelp data.

1982 ANNUAL OPERATING REPORT: RADIOLOGICAL ENVIRONMENTAL MONITORING (SONGS UNIT 1)

Barn Kelp Bed Sampling

See analogous note above.

Typographical Error

Line 5, Page E, of Appendix E, should be changed from Figure 14 to Figure 8.

Rabbit Sampling

Line 1, Part II-A.10 (Page 8) of the report, Results and Discussion, reads: "Rabbits were caught north and northeast of the site...." It should be corrected to read: "Rabbits were caught east of the site...."

Raw Data Tables

The bottom of page H-0, Appendix H should include the following:

"LEGEND"

Asterisks (*) in the data tables indicate analyses not performed or not required.

Missing Raw Data

Results of jackrabbit sampling data, although evaluated and summarized in Part II-A.10 (page 8) of the report were not included in the Program Data Summary (Appendix A), and in the Raw Data section (Appendix H). Those data are included in this Appendix for reference.

ERRATA

1983 ANNUAL OPERATING REPORT: RADIOLOGICAL ENVIRONMENTAL MONITORING (SONGS UNIT 1)

Appendix A and Appendix H

In tables 9a, 9e and 9f of these two appendices, the location assignment is as follows:

Numerical Code	Location
1	Huntington Beach
2	Tri Cities Municipal Water District Reservoir
3	San Clemente Golf Course Well

In all other tables, the location assignments remain as defined in Appendix B.

Southern California Edison Company Environmental Monitoring Program Database Listings

Verified by: [illegible] Date: 10/20/83

Table 16: Semi-Annual Jackrabbit Analysis (pCi/g)

Observation Number	Calendar Date	Sample Type	Location	Sr-89	Sr-89 (Sigma)	Sr-90	Sr-90 (Sigma)	I-131	I-131 (Sigma)
1	5/20/82	Rabbit Femur	1	0	2	0	2	*	*
2	12/27/82	Rabbit Femur	1	0	2	0	2	*	*
1	5/20/82	Rabbit Thyroid	1	*	*	*	*	0	2
2	12/27/82	Rabbit Thyroid	1	*	*	*	*	0	5

Observation Number	Calendar Date	Sample Type	Location	Be-7	Be-7 (Sigma)	Co-58	Co-58 (Sigma)	Co-60	Co-60 (Sigma)	Zr-Nb-95	Zr-Nb-95 (Sigma)	Ru-103	Ru-1 (Sigm
1	5/20/82	Rabbit Flesh	1	0	0.3	0	0.06	0	0.06	0	0.1	0	0.
2	12/27/82	Rabbit Flesh	1	0	0.3	0	0.06	0	0.06	0	0.1	0	0.

Ag-110m	Ag-110m (Sigma)	I-131	I-131 (Sigma)	Cs-134	Cs-134 (Sigma)	Cs-137	Cs-137 (Sigma)	Ce-141	Ce-141 (Sigma)	Ce-144	Ce-14 (Sign
0	0.06	0	0.05	0	0.06	0	0.06	0	0.2	0	0.2
0	0.06	0	0.05	0	0.06	0	0.06	0	0.2	0	0.2

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
SAN ONOFRE NUCLEAR GENERATING STATION

Docket No. 50-206
San Diego County, California

Reporting period: January 1, 1982 to December 31, 1982

Medium or Pathway (Unit of Measurement)	Type and Total Number of Analyses Performed		Lower Limit of Detection (LLD)	All Indicator Locations Means (f) Range	Location with Highest Annual Mean Name, Distance and Direction	Mean (f) Range	Control Locations Mean (f) Range	Number of Nonroutine Reported Measurements
Table 16 Jackrabbit (pCi/g)								
Femur	Sr-89	2	(3)	<LLD (2/2)	All <LLD	----	----	0
	Sr-90	2	(2)	<LLD (2/2)	All <LLD	----	----	0
Thyroid	I-131	2	(5)	<LLD (2/2)	All <LLD	----	----	0
Flesh	Be 7	2	(0.3)	<LLD (2/2)	All <LLD	----	----	0
	Co-58	2	(0.06)	<LLD (2/2)	All <LLD	----	----	0
	Co-60	2	(0.06)	<LLD (2/2)	All <LLD	----	----	0
	Zr-Nb-95	2	(0.1)	<LLD (2/2)	All <LLD	----	----	0
	Ru-103	2	(0.06)	<LLD (2/2)	All <LLD	----	----	0
	Ag-110m	2	(0.06)	<LLD (2/2)	All <LLD	----	----	0
	I-131	2	(0.05)	<LLD (2/2)	All <LLD	----	----	0
	Cs-134	2	(0.06)	<LLD (2/2)	All <LLD	----	----	0
	Cs-137	2	(0.06)	<LLD (2/2)	All <LLD	----	----	0
	Ce-141	2	(0.2)	<LLD (2/2)	All <LLD	----	----	0