Docket No: 50-277
50-278

PEACH BOTTOM ATOMIC POWER STATION UNITS 2 and 3

Annual Radiological Environmental Operating Report

Report #52

1 January Through 31 December 1994

Prepared By

PECO ENERGY
Nuclear Generation Group
965 Chesterbrook Blvd.
Wayne, PA 19087-5691

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I. Summary and Conclusions

This report on the Radiological Environmental Monitoring Program (REMP) conducted at the Peach Bottom Atomic Power Station (PBAPS) by PECO Energy covers the period 1 January 1994 through 31 December 1994. This report combines the results of the programs conducted by Teledyne Brown Engineering (TB) and Public Service Electric and Gas Company (PSE&G) laboratories. During this period 2,258 analyses were performed on 1,915 samples.

Surface water and drinking (potable) water samples were analyzed for concentrations of gross beta, gamma spectrometry, and tritium. Additionally, drinking water samples were analyzed for concentrations of Iodine-131. Results of these analyses showed no significant differences between control locations and potentially-affected stations. The values observed were within the ranges noted in the preoperational report.

The remaining sample media representing the aquatic environment included fish and sediment samples. These media were analyzed for concentrations of gamma emitters. Fish samples showed no measurable effects from the operation of PBAPS. Sediment Location 4J, located below the discharge, showed Mn-54 and Co-60 activity which was attributable to PBAPS operations. Cesium-137 activity was found at all locations and was consistent with data from previous years. The calculated dose to a teenager's skin from the sediment pathway was 1.73 E-03 mrem/yr which represents 0.01% of the allowable fraction of 10 CFR 50, Appendix I limits.

The atmospheric environment was divided into two parts for examination: airborne and terrestrial. Sample media for determining airborne effects included air particulates and air iodine samples. Analyses performed on air particulate samples included gross beta and gamma spectrometry. The results from both analyses were consistent with results from the previous years. Furthermore, no notable differences among results from on-site, intermediate, and distant locations in either analysis were observed. These findings indicate no measurable effects from the operation of PBAPS.

High sensitivity Iodine-131 analyses were performed on weekly air samples. All results were less than the minimum detectable activity.

Examination of the terrestrial environment was accomplished by analyzing milk samples for concentrations of Iodine-131 and gamma emitters. Results from all analyses were consistent with those from previous years and showed no indication of PBAPS effect.

Ambient gamma radiation levels were measured monthly and quarterly throughout the year. Most monthly and quarterly measurements were below 10 mR/std. month and consistent with those measured in previous years. The TLD results from location 50 for September were higher than historical values due radiography work being conducted on the nearby gas pipeline.

The operation of the Station had no measurable effect on the environs surrounding Peach Bottom.

II. Introduction

Peach Bottom Atomic Power Station (PBAPS) is located along the Susquehanna River between Holtwood and Conowingo Dams in Peach Bottom Township, York County, Pennsylvania. The initial loading of fuel into Unit 1, a 40 MWe (net) high temperature, gas-cooled reactor, began on 5 February 1966, and initial criticality was achieved on 3 March 1966. Shutdown of Peach Bottom Unit 1 for decommissioning was on 31 October 1974. For the purposes of the monitoring program, the beginning of the operational period for Unit 1 was considered to be 5 February 1966. A summary of the Unit 1 preoperational monitoring program was presented in a previous report [1]. PBAPS Units 2 and 3 are boiling water reactors each with a power output of approximately 3458 MWt and 3293 MWt, respectively. The first fuel was loaded into Peach Bottom Unit 2 on 9 August 1973. Criticality was achieved on 16 September 1973, and full power was reached on 16 June 1974. The first fuel was loaded into Peach Bottom Unit 3 on 5 July 1974. Criticality was achieved on 7 August 1974, and full power was first reached on 21 December 1974. Preoperational summary reports [2][3] for Units 2 and 3 have been previously issued and summarize the results of all analyses performed on samples collected from 5 February 1966 through 8 August 1973.

A. Objectives

The objectives of the REMP are:

1. To identify, measure, and evaluate existing radionuclides in the environs of PBAPS site and any fluctuations in radioactivity levels which may occur.

2. To monitor and evaluate ambient radiation levels.

3. To determine within the scope of the program, any measurable quantity of radioactivity introduced to the environment by the operation of PBAPS.

B. Implementation

Implementation of the stated objectives is accomplished by identifying significant exposure pathways, establishing baseline radiological data of media within those pathways, and monitoring those media during plant operation to assess plant effects (if any) on man and the environment.

In order to achieve the stated objectives, the current programs include the following analyses on samples collected:

1. Concentrations of beta emitters in surface and drinking water, and air particulates.

2. Concentrations of gamma emitters in surface and drinking water, air particulates, milk, sediment, and fish.

3. Concentrations of tritium in surface and drinking water.

4. Concentrations of Iodine-131 in drinking water, air, and milk.

5. Ambient gamma radiation levels at various site environs.

III. Program Description

A. Sample Collection

This section describes the collection methods used to obtain environmental samples for the PBAPS REMP in 1994. Samples for the PBAPS REMP were collected for PECO by Normandeau Associates, RMC Environmental Services Division. (RMC). Sample locations and descriptions can be found in Table B-1 and Figures B-1 through B-3, Appendix B.

Aquatic Environment

The aquatic environment was examined by analyzing samples of surface water, drinking water, fish, and sediment. Surface water from two locations (1LL and 1MM) and drinking water from two locations (4L and 6I) were collected weekly from a tank at each location and were composited into a monthly sample for analysis. Two quarts of water are removed from the tank each week and placed into a clean two-gallon polyethylene bottle to form a monthly composite. Two additional surface water locations (13A and 13B) were collected as monthly grab samples. Control locations were 1LL and 6I.

Fish samples comprising the flesh from two groups, catfish (bottom feeder) and smallmouth bass, largemouth bass, or bass (predator) were collected semiannually at two locations: 4 (indicator) and 6 (control) using several methods such as trapnet, seine or electroshocking.

Sediment samples composed of recently deposited substrate were collected semiannually at three locations: 4J, 4T (indicators), and 6F (control) using one of two methods, determined by the depth from which the sediment was obtained. In water greater than 4 feet deep, sediment was collected by either a Ponar or Ekman Grab with a surface area of 81 square inches. In shallow water (1-4 feet), sediment was collected by scooping up mud with a plastic bucket.

Atmospheric Environment

The atmospheric environment was examined by analyzing airborne and terrestrial samples. These consisted of air particulates, airborne iodine, and milk. Air particulate samples were collected and analyzed weekly from thirteen locations (1B, 1Z, 2, 3A, 4A, 5, 6E, 12D, 14, 15, 17, 32, and 38). Control locations were 4A, 6E, and 12D. Air iodine samples were collected from five locations (1B, 1Z, 2, 3A, and 12D). Control location was 12D. Air particulate and air iodine samples were obtained using a vacuum sampler, glass fiber and charcoal filters, respectively. The filters were replaced weekly and sent to the laboratory for analysis. The vacuum samplers were run continuously at approximately 1 cubic foot per minute.

Milk samples were collected from five locations (A, G, J, N, and O) monthly from December through March and biweekly April through November. Additionally, samples from six locations (B, C, D, E, L, and P) were collected quarterly. Locations A, B, C, and E were controls. Milk samples were obtained by removing two gallons from the dairyman's bulk tank after mixing. The sample from each location was therefore a composite of all the milk collected from the dairy herd (from 1 to 3 milkings). The milk was scooped from the agitated bulk tank and placed in new plastic containers.

Ambient Gamma Radiation

Direct radiation measurements were made using thermoluminescent dosimeters (TLDs) consisting of calcium sulfate ($CaSO_4$) doped with dysprosium (Dy). Samples were collected from forty-seven locations. The TLD locations were placed on and around the PBAPS site using a "three ring concept":

A site boundary ring consisting of thirteen locations (1B, 1C, 1D, 1E, 1F, 1G, 1H, 1J, 1L, 1M, 1NN, 2, and 40) near and within the site perimeter, representing fencepost doses (i.e., at locations where the doses will be greater than maximum annual off-site doses) from PBAPS releases;

A middle ring consisting of twenty-five locations (3A, 4K, 5, 6B, 14, 15, 17, 22, 23, 26, 27, 31A, 32, 33A, 38, 42, 43, 44, 45, 46, 47, 48, 49, 50, and 51) extending to approximately ten miles from the site, designed to measure possible exposures to close-in population;

An outer ring consisting of seven locations (12D, 16, 18, 19, 20, 21B, and 24) extending from approximately 10 to 60 miles from the site, and considered to be unaffected by station releases.

Two on-site locations (1A and 1I), designated as plant complex locations, are not included in any of the three rings.

The specific TLD locations were determined by the following criteria:

1. The presence of relatively dense population;

2. Site meteorological data taking into account distance and elevation for each of the 36 ten-degree sectors around the site, where estimated annual dose from PBAPS, if any, would be more significant;

3. On hills free from local obstructions and within sight of the vents (where practical);

4. Near the dwelling closest to the main stack in the prevailing down wind direction.

A TLD set was placed at each location in a locked formica "birdhouse" or polyethylene jar located approximately six feet above ground level. The TLD sets were exchanged monthly and quarterly, then sent to the laboratory for analysis.

B. Data Interpretation

Several factors are important in the interpretation of the data. These factors are discussed here to avoid undue repetition in the discussion of the results.

1. Minimum Detectable Level

The minimum detectable level (MDL) was defined as the smallest concentration of radioactive material in a sample that would yield a net count (above background) that would be detected with only a 5% probability of falsely concluding that a blank observation represents a "real" signal. The MDL was intended as a before the fact estimate of a system (including instrumentation, procedure and sample type) and not as an after the fact criteria for the presence of activity. All analyses were designed to achieve the required PBAPS detection capabilities for environmental sample analysis.

2. Net Activity Calculation and Reporting of Results

Net activity for a sample was calculated by subtracting background activity from the sample activity. Since the REMP measures extremely small changes in radioactivity in the environment, background variations will result in sample activity being lower than the background activity effecting a negative number. For a more detailed description of the results calculation, see Appendix E.

Teledyne Brown Engineering (TB) reported all analysis results except gamma spec results as Activity ± 2 Sigma. Public Service Electric & Gas (PSE&G) reported all analysis results except gamma spec as Activity ± 1.96 Sigma.

TB reported all gamma spec results as Activity ± 2 Sigma using two conventions (statistically significant and statistically non-significant activity). A Statistically Significant Activity was calculated activity that was greater than the individual sample's Minimum Detectable Activity and therefore most likely a "true positive result". A Statistically Non-significant Activity was calculated activity that was below the individual sample's Minimum Detectable Activity and therefore most likely not a "true positive result". Statistically Non-significant Activity includes calculated "negative activity".

PSE&G reported gamma spec and iodine-131 analyses as Activity ± 1.96 Sigma counting statistic when the activity was greater than or equal to the 1.96 sigma. When an activity was less than the 1.96 sigma, the result was reported as "< the 1.96 sigma value". PSE&G refers to the 1.96 sigma value as the individual sample MDA. For specific equations please see Appendix E.

Data reported in this report were generated using the convention of rounding the result to the same number of significant places as the first significant digit in the error term (i.e., 3.62 ± 1.23 rounds to 4 ± 1; 10.93 ± 0.96 rounds to 10.9 ± 1.0; -0.01 ± 0.1 rounds to 0.0 ± 0.1). Results for each type of sample were grouped according to the analyses performed. For gamma analyses, at least those nuclides required for each sample media and nuclides which had a significant positive occurrence were reported. Means and standard deviations of these results were calculated. These standard deviations represent the variability of measured results for different samples rather than single analysis uncertainty. For these calculations, all results reported as < MDA were considered to be at the MDA.

C. Program Exceptions

For 1994 the PBAPS REMP had a sample collection recovery rate of approximately 99%. The exceptions to this program are listed below:

1. Air particulate sample from location 5 was not available for week 29 due to a pump mechanical problem.

2. Air particulate sample from location 32 was not available for week 30 due to a pump mechanical problem.

3. Air particulate and air iodine samples from location 1B were not available for week 2 due to an electrical problem and from weeks 29, 30 and 33 due to a pump mechanical problem.

The specific dates for the above weeks may be found in Table C-IX.1, Appendix C.

4. Surface water sampler at location 1MM was out of service for the following dates: 03/02 to 03/23, 05/14 to 05/17, 06/01 to 06/29 and 08/24 to 08/25 due to pump malfunctions or electrical problems. Daily grab samples were taken.

5. Surface water sampler at location 1LL was out of service for the following dates: 05/14 to 05/17 and 06/01 to 06/29 due to pump malfunctions or electrical problems. Daily grab samples were taken.

6. Drinking water sampler at location 4L was out of service from 12/16 to 12/23 due to pump malfunction. A grab sample was taken.

7. Drinking water sampler at location 6I was out of service for the following dates: 01/14 to 01/22 and 03/11 to 03/18 due to pump malfunctions. Grab samples were taken.

8. The MDL for iodine-131 in milk was not met for a sample from location J from 07/04/94 because of a low chemical yield.

Each program exception was reviewed to understand the causes of the program exception. Sampling and maintenance errors were reviewed with the personnel involved to prevent a recurrence. Occasional equipment breakdowns and power outages were unavoidable. The overall sample recovery rate indicates that the appropriate procedures and equipment are in place to assure reliable program implementation.

D. Program Changes

The following are the changes for the 1994 PBAPS REMP:

1. RMC Environmental Services, Inc. was acquired by Normandeau Associates in August.

2. New composite water samplers were installed at the intake (1LL) and discharge (1MM) beginning with the July sampling.

IV. Results and Discussion

A. Aquatic Environment

1. Surface Water

Samples were collected from four locations monthly (1LL, 1MM, 13A and 13B). 1LL served as the control location. The following analyses were performed.

Gross Beta

Samples from all locations were analyzed for concentrations of gross beta in both insoluble and soluble fractions (Table C-I.1 and C-I.2 and Figures C-1 and C-2). The results from analysis of the insoluble portion of all samples from the surface water locations ranged from -0.2 to 20 pCi/1. The means of the indicator and control locations were 1.4 pCi/1 and 0.7 pCi/1, respectively. The results for the soluble fraction ranged from 1.8 to 9 pCi/1. The mean for the three indicator locations was 3.4 pCi/1, compared to the mean value of 2.7 pCi/1 from the control location.

Tritium

Samples from three locations (1LL, 1MM, 13A) were analyzed for concentrations of tritium (Table C-I.3). Results ranged from -100 to 100 pCi/1 and were within the range found during the preoperational period. Mean activity values from indicator and control locations were both 0 pCi/1, respectively.

Gamma Spectrometry

Samples from all locations were analyzed for concentrations of gamma emitters (Table C-I.4). Statistically significant activity for naturally occurring K-40 was found in 10 of 43 samples. Potassium-40 results ranged from -50 to 32 pCi/l. No statistically significant fission or activation products were found.

2. Drinking (Potable) Water

Samples were collected from two locations monthly (4L and 6I). 6I served as the control location. The following analyses were performed.

Gross Beta

Samples from both locations were analyzed for concentrations of gross beta activity in insoluble and soluble fractions (Tables C-II.1 and C-II.2 and Figures C-3 and C-4). Gross beta activity in the insoluble fraction ranged from -0.2 to

3.5 pCi/1. The values in the soluble fraction ranged from 1.8 to 4 pCi/1. No differences were observed between the means of the control and indicator stations. The values were generally below those seen in the preoperational period.

Iodine-131

Samples from both locations were analyzed monthly for I-131 concentrations (Table C-II.3). The values ranged from -0.08 to 0.1 for the indicator location and from -0.08 to 0.32 for the control location.

Tritium

Samples from both locations were analyzed for tritium concentration quarterly (Table C-II.4). The values for the indicator location ranged from 0 to 10 pCi/1 with a mean of 0 pCi/1. Control location values ranged from -30 to 60 pCi/1 with a mean of 30 pCi/1. The concentrations found were lower than the range found during the preoperational period.

Gamma Spectrometry

Samples from both locations were analyzed for concentrations of gamma emitters (Table C-II.5). Statistically significant activity for naturally occurring K-40 was found in 5 of 24 samples. Potassium-40 results ranged from -35 to 50 pCi/l. No statistically significant fission or activation products were found.

3. Fish

Samples were collected from two locations semi-annually (4 and 6). The control location was 6. The following analyses were performed.

Gamma Spectrometry

Statistically significant activity was observed only for the nuclide K-40 which ranged from 2800 to 3400 pCi/kg (wet) (Table C-III.1). No statistically significant fission or activation products were found. Figure C-5 illustrates the Cs-137 activity for indicator and control locations from the beginning of the operational period through the present.

4. Sediment

Samples were collected from three locations semi-annually (4J, 4T and 6F). The control location was 6F. The following analyses were performed.

Gamma Spectrometry

Samples from all locations were analyzed for concentrations of gamma emitters (Table C-IV.1). Statistically significant activity for K-40, Ra-226 and Th-228 was found at all locations. K-40 results ranged from 12,000 to 17,000 pCi/kg (dry).

Statistically significant activity for the Plant produced nuclides Mn-54 and Co-60 were found in one of the two samples from the indicator location 4J located downstream of the discharge. The Mn-54 results ranged from 10 to 30 pCi/kg (dry) for the indicator locations and 20 to 20 pCi/kg (dry) for the control location. The Co-60 results ranged from -10 to 80 pCi/kg (dry) for the indicator locations and -10 to 10 pCi/kg (dry) for the control location. Statistically significant activity from Cs-137 was found at all locations with a mean value of 220 pCi/kg (dry) for the indicator locations and 160 pCi/kg (dry) for the control location. The calculated dose from this pathway to a teenager's skin was 1.73 E-03 mrem/yr. This value is based upon the assumption the maximum concentration Mn-54, Co-60 and Cs-137 at the downstream location were present the entire year. This dose represents 0.01% of the allowable fraction of 10 CFR 50, Appendix I limits. The results were consistent with those from previous years. Figure C-6 illustrates the comparison of activities of Cs-137 detected at the control location and indicator locations from the preoperational period through the present.

B. Atmospheric Environment

1. Airborne

a. Air Particulates

Samples were collected from thirteen locations (1B, 1Z, 2, 3A, 4A, 5, 6E, 12D, 14, 15, 17, 32, and 38). Control locations were 4A, 6E, and 12D. The following analyses were performed.

Gross Beta

Samples from all locations were analyzed for concentrations of gross beta (Tables C-V.1 and C-V.2 and Figures C-7 and C-8). Air particulate locations were divided into three groups: Group I, consisting of 1B, 1Z, and 2, located on site at PBAPS; Group II, comprised of 3A, 5, 14, 15, 17, 32, 33A and 38, located at intermediate distances from PBAPS; and Group III, consisting of 4A, 6E and 12D, located at remote distance from PBAPS. Comparison of

results among these three groups aids in determining the effects, if any, resulting from the operation of PBAPS. The results from site location samples ranged from 7 to 32 E-3 pCi/m^3, with a mean of 16 E-3 pCi/m^3. The results from intermediate locations ranged from 5 to 44 E-3 pCi/m^3, with a mean of 18 E-3 pCi/m^3. The results from distant locations ranged from 6 to 34 E-3 pCi/m^3, with a mean of 18 E-3 pCi/m^3. Comparison of the values indicate no notable difference among the three groups suggesting no effects from operation of PBAPS (Figure C-7).

Gamma Spectrometry

Weekly samples from five locations (1B, 1Z, 2, 3A, and 12D) were composited and analyzed quarterly for the presence of gamma emitters (Table C-V.3). Naturally occurring Be-7 was found in all samples with activity values similar to those from the preoperational years. Potassium-40 was found in approximately half of the samples at or slightly above the detection limit. No Plant related nuclides were detected.

b. Airborne Iodine

Continuous air samples were collected weekly at five locations (1B, 1Z, 2, 3A, and 12D) and analyzed for I-131 (Table C-VI.1). No statistically significant I-131 was found.

2. Terrestrial

a. Milk

Samples were collected from eleven locations (A, B, C, D, E, G, J, L, N, 0 and P). Farms A, B, C, and E were control locations. The following analyses were performed.

Iodine-131

Samples from all locations were analyzed for concentrations of I-131 (Tables C-VII.1). The values ranged from -0.10 to 0.1 pCi/l and were at or below the minimum detectable activity. Both indicator and control farms had an average I-131 concentration of -0.01 pCi/l, respectively.

Gamma Spectrometry

Samples from five locations were analyzed quarterly for concentrations for gamma emitters (Table C-VII.2 and Figure C-9). Naturally occurring K-40

was found in all samples with values ranging from 1,200 to 1,600 pCi/l. All other nuclides searched for were less than the minimum detectable activity.

C. Ambient Gamma Radiation

Ambient gamma radiation levels were measured at forty-seven locations (as described in the program description section) using $CaSO_4$:Dy thermoluminescent dosimeters (Tables C-VIII.1 through C-VIII.4 and Figures C-10 and C-11). Most TLD readings were below 10 mR/std. month with a range of 3.2 to 15.2 mR/std. month for the monthly's and 3.10 to 9.0 mR/std. month for the quarterly's. The TLD reading from location 50 for the month of September was 15.2 mR/std. month. An investigation indicated that the elevated reading was due to radiography work being conducted on a gas pipeline located nearby. No notable differences were observed among site-boundary, middle, and outer ring measurements indicating that operation of PBAPS did not affect the existing ambient gamma radiation levels.

V. References

1. Preoperational Environs Radioactivity Survey Summary Report, March, 1960 through January, 1966. (September 1967).

2. In'erex Corporation, Peach Bottom Atomic Power Station Regional Environs Radiation Monitoring Program Preoperational Summary Report, Units 2 and 3, 5 February 1966 through 8 August 1973, June 1977, Natick, Massachusetts.

3. Radiation Management Corporation Publication, Peach Bottom Atomic Power Station Preoperational Radiological Monitoring Report for Unit 2 and 3, January, 1974, Philadelphia, Pennsylvania.

APPENDIX A

RADIOLOGICAL ENVIRONMENTAL MONITORING REPORT SUMMARY

APPENDIX A
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY

NAME OF FACILITY: PEACH BOTTOM ATOMIC POWER STATION
LOCATION OF FACILITY: YORK COUNTY, PA

DOCKET NO.: 50-277 & 50-278
REPORTING PERIOD: 1994

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPE OF ANALYSES PERFORMED	NUMBER OF ANALYSES PERFORMED	REQUIRED MINIMUM DETECTABLE LEVEL (MDL)	INDICATOR LOCATIONS MEAN (F) RANGE	CONTROL LOCATIONS MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: STATION # NAME DISTANCE & DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
SURFACE WATER (PCI/LITER)	GROSS BETA SOLUBLE	43	2.5	3.4 (31/31) (2.0/9.0)	2.7 (12/12) (1.8/3.2)	3.7 (12/12) (2.0/9.0)	13A (INDICATOR) CHESTER WATER INTAKE POND 2.51 MILES ESE OF SITE	0
	GROSS BETA INSOLUBLE	43	2.5	1.4 (31/31) (-0.2/20.0)	0.7 (12/12) (0.0/2.1)	3.8 (7/7) (-0.2/20.0)	13B (INDICATOR) CHESTER WATER INTAKE PUMP 2.51 MILES ESE OF SITE	0
	TRITIUM	12	1200	0 (8/8) (-60/40)	0 (4/4) (-40/60)	10 (4/4) (-30/40)	1MM (INDICATOR) CANAL DISCHARGE 1.04 MILES SE OF SITE	0
	GAMMA K-40	43	N/A	-3 (31/31) (-50/32)	-6 (12/12) (-29/10)	4 (12/12) (-20/32)	13A (INDICATOR) CHESTER WATER INTAKE POND 2.51 MILES ESE OF SITE	0
	MN-54		9	0.1 (31/31) (-0.7/0.5)	0.1 (12/12) (-0.2/0.3)	0.2 (7/7) (-0.2/0.5)	13B (INDICATOR) CHESTER WATER INTAKE PUMP 2.51 MILES ESE OF SITE	0
	CO-58		9	-0.1 (31/31) (-0.8/0.4)	0.0 (12/12) (-0.4/0.1)	0.0 (12/12) (-0.2/0.4)	1MM (INDICATOR) CANAL DISCHARGE 1.04 MILES SE OF SITE	0
	FE-59		18	0.1 (31/31) (-2.0/0.8)	0.3 (12/12) (-0.6/1.0)	0.3 (12/12) (-0.6/1.0)	1LL (CONTROL) UNITS 2 & 3 INTAKE 0.24 MILES ENE OF SITE	0
	CO-60		9	0.2 (31/31) (-0.3/0.7)	0.2 (12/12) (-0.2/0.5)	0.2 (12/12) (-0.3/0.7)	13A (INDICATOR) CHESTER WATER INTAKE POND 2.51 MILES ESE OF SITE	0
	ZN-65		18	0.3 (31/31) (-1.0/2.0)	0.4 (12/12) (-0.6/2.0)	0.5 (12/12) (-0.3/2.0)	1MM (INDICATOR) CANAL DISCHARGE 1.04 MILES SE OF SITE	0

MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY.
FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

APPENDIX A
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY

NAME OF FACILITY: PEACH BOTTOM ATOMIC POWER STATION
LOCATION OF FACILITY: YORK COUNTY, PA

DOCKET NO.: 50-277 & 50-278
REPORTING PERIOD: 1994

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPE OF ANALYSES PERFORMED	NUMBER OF ANALYSES PERFORMED	REQUIRED MINIMUM DETECTABLE LEVEL (MDL)	INDICATOR LOCATIONS MEAN (F) RANGE	CONTROL LOCATIONS MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: MEAN (F) RANGE	STATION # NAME DISTANCE & DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
	ZR-95		9	0.5 (31/31) (-1.0/3.0)	0.7 (12/12) (-0.3/2.0)	0.7 (12/12) (-0.5/3.0)	13A (INDICATOR) CHESTER WATER INTAKE POND 2.51 MILES ESE OF SITE	0
	NB-95		9	0.3 (31/31) (-0.4/0.7)	0.4 (12/12) (-0.2/1.0)	0.4 (12/12) (-0.2/1.0)	1LL (CONTROL) UNITS 2 & 3 INTAKE 0.24 MILES ENE OF SITE	0
	CS-134		9	-0.1 (31/31) (-1.0/0.9)	0.1 (12/12) (-0.3/0.5)	0.1 (12/12) (-0.2/0.9)	1MM (INDICATOR) CANAL DISCHARGE 1.04 MILES SE OF SITE	0
	CS-137		11	0.3 (31/31) (-0.7/0.9)	0.1 (12/12) (-0.2/0.5)	0.3 (7/7) (0.0/0.9)	13B (INDICATOR) CHESTER WATER INTAKE PUMP 2.51 MILES ESE OF SITE	0
	BA-140		9	1 (31/31) (-8/8)	1 (12/12) (-2/3)	1 (12/12) (-1/5)	1MM (INDICATOR) CANAL DISCHARGE 1.04 MILES SE OF SITE	0
	LA-140		9	-0.2 (31/31) (-4.0/2.0)	0.3 (12/12) (-0.6/2.0)	0.3 (12/12) (-0.6/2.0)	1LL (CONTROL) UNITS 2 & 3 INTAKE 0.24 MILES ENE OF SITE	0
DRINKING WATER (PCI/LITER)	GROSS BETA SOLUBLE	24	2.5	3.1 (12/12) (2.0/4.0)	2.7 (12/12) (1.8/4.0)	3.1 (12/12) (2.0/4.0)	4L (INDICATOR) CONOWINGO DAM 8.66 MILES SE OF SITE	0
	GROSS BETA INSOLUBLE	24	2.5	0.6 (12/12) (-0.2/2.3)	0.7 (12/12) (-0.2/3.5)	0.7 (12/12) (-0.2/3.5)	6I (CONTROL) HOLTWOOD STATION INTAKE 5.74 MILES NW OF SITE	0
	I-131 BY RADIOCHEMISTY	24		0.02 (12/12) (-0.08/0.10)	0.10 (12/12) (-0.08/0.32)	0.10 (12/12) (-0.08/0.32)	6I (CONTROL) HOLTWOOD STATION INTAKE 5.74 MILES NW OF SITE	0

MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY.
FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

APPENDIX A
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY

NAME OF FACILITY: PEACH BOTTOM ATOMIC POWER STATION
LOCATION OF FACILITY: YORK COUNTY, PA

DOCKET NO.: 50-277 & 50-278
REPORTING PERIOD: 1994

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPE OF ANALYSES PERFORMED	NUMBER OF ANALYSES PERFORMED	REQUIRED MINIMUM DETECTABLE LEVEL (MDL)	INDICATOR LOCATIONS MEAN (F) RANGE	CONTROL LOCATIONS MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: MEAN (F) RANGE	STATION # NAME DISTANCE & DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
	TRITIUM	8	1200	0 (4/4) (-40/20)	30 (4/4) (-30/60)	30 (4/4) (-30/60)	6I (CONTROL) HOLTWOOD STATION INTAKE 5.74 MILES NW OF SITE	0
	GAMMA	24						
	K-40		N/A	-4 (12/12) (-22/21)	-3 (12/12) (-35/50)	-3 (12/12) (-35/50)	6I (CONTROL) HOLTWOOD STATION INTAKE 5.74 MILES NW OF SITE	0
	MN-54		9	0.1 (12/12) (-0.6/0.4)	0.2 (12/12) (-0.4/0.5)	0.2 (12/12) (-0.4/0.5)	6I (CONTROL) HOLTWOOD STATION INTAKE 5.74 MILES NW OF SITE	0
	CO-58		9	0.0 (12/12) (-0.4/0.4)	-0.1 (12/12) (-0.5/0.1)	0.0 (12/12) (-0.4/0.4)	4L (INDICATOR) CONOWINGO DAM 8.66 MILES SE OF SITE	0
	FE-59		18	0.0 (12/12) (-0.8/0.6)	0.0 (12/12) (-1.0/1.0)	0.0 (12/12) (-1.0/1.0)	6I (CONTROL) HOLTWOOD STATION INTAKE 5.74 MILES NW OF SITE	0
	CO-60		9	0.2 (12/12) (0.0/0.5)	0.1 (12/12) (-0.3/0.5)	0.2 (12/12) (0.0/0.5)	4L (INDICATOR) CONOWINGO DAM 8.66 MILES SE OF SITE	0
	ZN-65		18	-0.1 (12/12) (-1.0/2.0)	0.1 (12/12) (-1.0/1.0)	0.1 (12/12) (-1.0/1.0)	6I (CONTROL) HOLTWOOD STATION INTAKE 5.74 MILES NW OF SITE	0
	ZR-95		9	0.5 (12/12) (-0.5/2.0)	0.4 (12/12) (-0.2/1.2)	0.5 (12/12) (-0.5/2.0)	4L (INDICATOR) CONOWINGO DAM 8.66 MILES SE OF SITE	0
	NB-95		9	0.5 (12/12) (0.1/1.3)	0.4 (12/12) (-0.1/0.8)	0.5 (12/12) (0.1/1.3)	4L (INDICATOR) CONOWINGO DAM 8.66 MILES SE OF SITE	0

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APPENDIX A
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY

NAME OF FACILITY: PEACH BOTTOM ATOMIC POWER STATION — DOCKET NO.: 50-277 & 50-278
LOCATION OF FACILITY: YORK COUNTY, PA — REPORTING PERIOD: 1994

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPE OF ANALYSES PERFORMED	NUMBER OF ANALYSES PERFORMED	REQUIRED MINIMUM DETECTABLE LEVEL (MDL)	INDICATOR LOCATIONS MEAN (F) RANGE	CONTROL LOCATIONS MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: STATION # NAME DISTANCE & DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
	CS-134		9	0.0 (12/12) (-0.5/0.7)	0.0 (12/12) (-0.4/0.4)	0.0 (12/12) (-0.4/0.4)	6I (CONTROL) HOLTWOOD STATION INTAKE 5.74 MILES NW OF SITE	0
	CS-137		11	0.2 (12/12) (-0.2/0.6)	0.2 (12/12) (-0.9/0.7)	0.2 (12/12) (-0.9/0.7)	6I (CONTROL) HOLTWOOD STATION INTAKE 5.74 MILES NW OF SITE	0
	BA-140		9	1 (12/12) (-1/3)	0 (12/12) (-2/2)	1 (12/12) (-1/3)	4L (INDICATOR) CONOWINGO DAM 8.66 MILES SE OF SITE	0
	LA-140		9	0.0 (12/12) (-1.0/1.0)	-0.2 (12/12) (-1.2/0.4)	0.0 (12/12) (-1.0/1.0)	4L (INDICATOR) CONOWINGO DAM 8.66 MILES SE OF SITE	0
PREDATOR (FISH) (PCI/KG WET)	GAMMA K-40	4	N/A	3200 (2/2) (3000/3300)	3300 (2/2) (3100/3400)	3300 (2/2) (3100/3400)	6 (CONTROL) HOLTWOOD POND HOLTWOOD POND	0
	MN-54	4	80	1 (2/2) (1/2)	2 (2/2) (1/2)	2 (2/2) (1/2)	6 (CONTROL) HOLTWOOD POND HOLTWOOD POND	0
	CO-58		80	4 (2/2) (0/7)	1 (2/2) (0/2)	4 (2/2) (0/7)	4 (INDICATOR) CONOWINGO POND CONOWINGO POND	0
	FE-59		160	0 (2/2) (0/0)	0 (2/2) (0/0)	0 (2/2) (0/0)	4 (INDICATOR) CONOWINGO POND CONOWINGO POND	0
	CO-60		80	3 (2/2) (-1/6)	1 (2/2) (-1/2)	3 (2/2) (-1/6)	4 (INDICATOR) CONOWINGO POND CONOWINGO POND	0

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APPENDIX A
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY

NAME OF FACILITY: PEACH BOTTOM ATOMIC POWER STATION
LOCATION OF FACILITY: YORK COUNTY, PA

DOCKET NO.: 50-277 & 50-278
REPORTING PERIOD: 1994

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPE OF ANALYSES PERFORMED	NUMBER OF ANALYSES PERFORMED	REQUIRED MINIMUM DETECTABLE LEVEL (MDL)	INDICATOR LOCATIONS MEAN (F) RANGE	CONTROL LOCATIONS MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: MEAN (F) RANGE	STATION # NAME DISTANCE & DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
	ZN-65		160	10 (2/2) (-10/20)	10 (2/2) (-10/20)	10 (2/2) (-10/20)	4 (INDICATOR) CONOWINGO POND CONOWINGO POND	0
	CS-134		90	0 (2/2) (0/1)	1 (2/2) (1/1)	1 (2/2) (1/1)	6 (CONTROL) HOLTWOOD POND HOLTWOOD POND	0
	CS-137		90	11 (2/2) (10/11)	5 (2/2) (0/11)	11 (2/2) (10/11)	4 (INDICATOR) CONOWINGO POND CONOWINGO POND	0
BOTTOM FEEDER (FISH) (PCI/KG WET)	GAMMA K-40	4	N/A	3000 (2/2) (2800/3100)	3200 (2/2) (3100/3300)	3200 (2/2) (3100/3300)	6 (CONTROL) HOLTWOOD POND HOLTWOOD POND	0
	MN-54		80	4 (2/2) (-2/10)	2 (2/2) (1/3)	4 (2/2) (-2/10)	4 (INDICATOR) CONOWINGO POND CONOWINGO POND	0
	CO-58		80	0 (2/2) (-5/5)	-2 (2/2) (-2/-1)	0 (2/2) (-5/5)	4 (INDICATOR) CONOWINGO POND CONOWINGO POND	0
	FE-59		160	0 (2/2) (-10/10)	0 (2/2) (-10/0)	0 (2/2) (-10/10)	4 (INDICATOR) CONOWINGO POND CONOWINGO POND	0
	CO-60		80	-2 (2/2) (-3/-1)	8 (2/2) (7/9)	8 (2/2) (7/9)	6 (CONTROL) HOLTWOOD POND HOLTWOOD POND	0
	ZN-65		160	0 (2/2) (-10/10)	20 (2/2) (10/20)	20 (2/2) (10/20)	6 (CONTROL) HOLTWOOD POND HOLTWOOD POND	0

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APPENDIX A
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY

NAME OF FACILITY: PEACH BOTTOM ATOMIC POWER STATION — DOCKET NO.: 50-277 & 50-278
LOCATION OF FACILITY: YORK COUNTY, PA — REPORTING PERIOD: 1994

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPE OF ANALYSES PERFORMED	NUMBER OF ANALYSES PERFORMED	REQUIRED MINIMUM DETECTABLE LEVEL (MDL)	INDICATOR LOCATIONS MEAN (F) RANGE	CONTROL LOCATIONS MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: STATION # NAME DISTANCE & DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
	CS-134		90	3 (2/2) (2/3)	0 (2/2) (-1/1)	3 (2/2) (2/3)	4 (INDICATOR) CONOWINGO POND CONOWINGO POND	0
	CS-137		90	0 (2/2) (-1/1)	8 (2/2) (7/9)	8 (2/2) (7/9)	6 (CONTROL) HOLTWOOD POND HOLTWOOD POND	0
SILT (PCI/KG DRY)	GAMMA BE-7	6	N/A	900 (4/4) (200/2000)	900 (2/2) (100/1700)	1600 (2/2) (1200/2000)	4T (INDICATOR) CONOWINGO POND NEAR DAM 7.92 MILES SE OF SITE	0
	K-40		N/A	14000 (4/4) (12000/17000)	13000 (2/2) (12000/14000)	17000 (2/2) (16000/17000)	4T (INDICATOR) CONOWINGO POND NEAR DAM 7.92 MILES SE OF SITE	0
	MN-54		N/A	20 (4/4) (10/30)	20 (2/2) (20/20)	20 (2/2) (20/20)	4T (INDICATOR) CONOWINGO POND NEAR DAM 7.92 MILES SE OF SITE	0
	CO-60		N/A	30 (4/4) (-10/80)	0 (2/2) (-10/10)	50 (2/2) (20/80)	4J (INDICATOR) CONOWINGO POND 1.39 MILES SE OF SITE	0
	CS-134		100	50 (4/4) (30/70)	50 (2/2) (50/50)	70 (2/2) (60/70)	4T (INDICATOR) CONOWINGO POND NEAR DAM 7.92 MILES SE OF SITE	0
	CS-137		100	220 (4/4) (180/290)	160 (2/2) (120/190)	240 (2/2) (180/290)	4J (INDICATOR) CONOWINGO POND 1.39 MILES SE OF SITE	0
	RA-226		N/A	1500 (4/4) (700/1900)	2400 (2/2) (2300/2400)	2400 (2/2) (2300/2400)	6F (CONTROL) HOLTWOOD DAM EAST SHORE 5.96 MILES NW OF SITE	0

MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY.
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NAME OF FACILITY: PEACH BOTTOM ATOMIC POWER STATION
LOCATION OF FACILITY: YORK COUNTY, PA

DOCKET NO.: 50-277 & 50-278
REPORTING PERIOD: 1994

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPE OF ANALYSES PERFORMED	NUMBER OF ANALYSES PERFORMED	REQUIRED MINIMUM DETECTABLE LEVEL (MDL)	INDICATOR LOCATIONS MEAN (F) RANGE	CONTROL LOCATIONS MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: STATION # NAME DISTANCE & DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
	TH-228		N/A	1030 (4/4) (590/1400)	1500 (2/2) (1300/1600)	1500 (2/2) (1300/1600)	6F (CONTROL) HOLTWOOD DAM EAST SHORE 5.96 MILES NW OF SITE	0
AIR PARTICULATE (E-3 PCI/CU. METER)	GROSS BETA	670	6	18 (514/514) (5/44)	18 (156/156) (6/34)	19 (52/52) (10/34)	12D (CONTROL) 2301 MARKET ST., PHILA 59.53 MILES ENE OF SITE	0
	GAMMA BE-7	20	N/A	77 (16/16) (59/91)	73 (4/4) (65/86)	82 (4/4) (73/89)	1B (INDICATOR) WEATHER STATION NO. 2 0.49 MILES NW OF SITE	0
	K-40		N/A	4 (16/16) (-1/19)	6 (4/4) (1/15)	6 (4/4) (2/10)	3A (INDICATOR) DELTA, PA SUBSTATION 3.62 MILES SW OF SITE	0
	CS-134		40	0.0 (16/16) (-0.3/0.4)	-0.1 (4/4) (-0.4/0.1)	0.0 (4/4) (-0.2/0.4)	1B (INDICATOR) WEATHER STATION NO. 2 0.49 MILES NW OF SITE	0
	CS-137		40	0.0 (16/16) (-0.3/0.3)	0.2 (4/4) (0.1/0.3)	0.2 (4/4) (0.1/0.3)	12D (CONTROL) 2301 MARKET ST., PHILA 59.53 MILES ENE OF SITE	0
	RA-226		N/A	-2 (16/16) (-7/2)	-3 (4/4) (-6/1)	0 (4/4) (-1/1)	2 (INDICATOR) SITE, 130 DEGREE SECTOR HILL 0.89 MILES SE OF SITE	0
	TH-228		N/A	-0.2 (16/16) (-0.7/0.1)	-0.1 (4/4) (-0.4/0.1)	-0.1 (4/4) (-0.4/0.1)	1Z (INDICATOR) WEATHER STATION NO. 1 0.26 MILES SE OF SITE	0
AIR IODINE (E-3 PCI/CU. METER)	I-131	256	40	0 (204/204) (-34/29)	1 (52/52) (-15/11)	1 (52/52) (-15/11)	12D (CONTROL) 2301 MARKET ST., PHILA 59.53 MILES ENE OF SITE	0

MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY.
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APPENDIX A
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY

NAME OF FACILITY: PEACH BOTTOM ATOMIC POWER STATION DOCKET NO.: 50-277 & 50-278
LOCATION OF FACILITY: YORK COUNTY, PA REPORTING PERIOD: 1994

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPE OF ANALYSES PERFORMED	NUMBER OF ANALYSES PERFORMED	REQUIRED MINIMUM DETECTABLE LEVEL (MDL)	INDICATOR LOCATIONS MEAN (F) RANGE	CONTROL LOCATIONS MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN: STATION # NAME DISTANCE & DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
MILK (PCI/LITER)	I-131 BY RADIOCHEMISTY	129	0.6	-0.01 (96/96) (-0.10/0.14)	-0.01 (33/33) (-0.06/0.05)	0.01 (4/4) (-0.03/0.03)	P (INDICATOR) INTERMEDIATE DISTANCE FARM 2.08 MILES ENE OF SITE	0
	GAMMA K-40	20	N/A	1400 (16/16) (1200/1500)	1500 (4/4) (1300/1600)	1500 (4/4) (1300/1600)	A (CONTROL) DISTANCE FARM 5.78 MILES WSW OF SITE	0
	CS-134		10	0 (16/16) (-3/1)	1 (4/4) (-1/2)	1 (4/4) (-1/2)	A (CONTROL) DISTANCE FARM 5.78 MILES WSW OF SITE	0
	CS-137		10	1 (16/16) (-3/4)	1 (4/4) (-1/3)	2 (4/4) (0/4)	O (INDICATOR) NEARBY FARM 2.32 MILES SW OF SITE	0
	BA-140		9	1 (16/16) (-7/10)	3 (4/4) (-1/8)	3 (4/4) (-1/8)	A (CONTROL) DISTANCE FARM 5.78 MILES WSW OF SITE	0
	LA-140		9	0 (16/16) (-5/2)	-1 (4/4) (-3/1)	0 (4/4) (-1/1)	O (INDICATOR) NEARBY FARM 2.32 MILES SW OF SITE	0
DIRECT RADIATION (MILLI-ROENTGEN / STD. MONTH)	TLD-MONTHLY	540	N/A	6.52 (456/456) (3.20-15.20)	6.17 (84/84) (4.50-8.60)	8.28 (12/12) (5.80-15.20)	50 (INDICATOR) TRANSCO PUMPING STATION 4.99 MILES W OF SITE	0
	TLD-QUARTERLY	180	N/A	5.65 (152/152) (3.10-9.00)	5.46 (28/28) (3.90-7.20)	7.33 (4/4) (6.50-9.00)	50 (INDICATOR) TRANSCO PUMPING STATION 4.99 MILES W OF SITE	0

MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY.
FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

APPENDIX B

SAMPLE DESIGNATION AND LOCATIONS

APPENDIX B: SAMPLE DESIGNATION AND LOCATIONS

LIST OF TABLES AND FIGURES

TABLE B-1: Sample Collection and Analysis Program for the Radiological Environmental Monitoring Program for Peach Bottom Atomic Power Station, 1994

Location	Location Description	Distance & Direction	Collection Method and Frequency	Analysis & Frequency Performed--Consultant
A. Surface Water				
1LL	Peach Bottom Units 2 and 3 Intake - Composite (Control)	0.24 miles ENE	Water is continuously collected in a 190 gallon tank. Each week 2 quarts are withdrawn from the tank prior to draining the tank and placed in a 2 gallon polyethylene bottle to form a monthly composite sample	Gross Beta (S&I) - monthly - TB Gamma Spec - monthly - TB Tritium - quarterly - TB Gross Beta (S&I) -quarterly - PSE&G* Gamma Spec - quarterly - PSE&G*
1MM	Peach Bottom Canal Discharge -Composite	1.04 miles SE	Same as location 1LL	Same as location 1LL
13A	Chester Water Intake (raw)	2.51 miles ESE	A 2 gallon grab sample is collected monthly from Conowingo Pond and placed in a polyethylene bottle	Gross Beta (S&I) - monthly - TB Gamma Spec - monthly - TB Tritium - quarterly - TB
13B	Chester Water Intake	2.51 miles ESE	At same location as 13A but sample is collected from intake header and only when water is used by the Chester County Water Authority.	Same as location 13A except no tritium analysis
B. Drinking (Potable) Water				
4L	Conowingo Dam EL 33' MSL - Composite	8.66 miles SE	Water is continuously sampled from a header which draws pond water from elevation 33' MSL and is collected in a 175 gallon tank. Each week 2 quarts are withdrawn from the tank prior to draining the tank and placed in a 2 gallon polyethylene bottle to form a monthly composite sample.	Gross Beta (S&I) - monthly - TB Gamma Spec - monthly - TB Tritium - quarterly - TB Gross Beta (S&I)- quarterly - PSE&G* Gamma Spec - quarterly - PSE&G*

TABLE B-1: Sample Collection and Analysis Program for the Radiological Environmental Monitoring Program for Peach Bottom Atomic Power Station, 1994

Location	Location Description	Distance & Direction	Collection Method and Frequency	Analysis & Frequency Performed--Consultant
6I	Holtwood Dam Hydroelectric Station - Composite (Control)	5.74 miles NW	Water is continuously sampled from the Holtwood Hydroelectric Station Intake and is collected in a 175 gallon tank. Each week 2 quarts are withdrawn from the tank and placed in a 2 gallon polyethene bottle to form a monthly composite.	Same as location 4L
C. Fish				
4	Conowingo Pond	Located in Conowingo Pond below the discharge	Fish from two groups representing predator and bottom feeder species collected by electrofishing or other fishery gear semiannually	Gamma Spec - semiannually - TB
6	Holtwood Pond (Control)	Located in Holtwood Pond	Same as location 4	Same as location 4
D. Sediment				
4J	Conowingo Pond near Berkins Run	1.39 miles SE	Recently deposited sediment collected below the waterline, semi-annually	Gamma Spec - semiannually - TB
4T	Conowingo Pond near Conowingo Dam	7.92 miles SE	Same as location 4D	Same as location 4D
6F	Holtwood Dam (Control)	5.96 miles NW	Same as location 4D	Same as location 4D

TABLE B-1: Sample Collection and Analysis Program for the Radiological Environmental Monitoring Program for Peach Bottom Atomic Power Station, 1994

Location	Location Description	Distance & Direction	Collection Method and Frequency	Analysis & Frequency Performed--Consultant

E. Air Particulate - Air Iodine

Location	Location Description	Distance & Direction	Collection Method and Frequency	Analysis & Frequency Performed--Consultant
1A	Weather Station #1	0.26 miles SE	About 1 cfm continuous flow through glass fiber filter (approx. 2" diameter) which is installed for a week and replaced	Gross beta - weekly - PSE&G* Gamma Spec - quarterly - PSE&G*
1B	Weather Station #2	0.49 miles NW	About 1 cfm continuous flow through glass fiber and charcoal filters (approx. 2" diameter) which are installed for a week and replaced	Gross beta - weekly - TB Gamma Spec - quarterly - TB I-131 - weekly - TB
1Z	Weather Station #1	0.26 miles SE	Same as location 1B	Same as location 1B
2	On-site - 130° Sector Hill	0.89 miles SE	Same as location 1B	Same as location 1B
3A	Delta, PA - Substation	3.62 miles SW	Same as location 1B	Same as location 1B
4A	Conowingo Dam - Power House Roof (Control)	8.61 miles SE	Same as location 1A	Gross Beta - weekly - TB Gamma Spec - quarterly - TB
4B	Conowingo Dam - Power House Roof	8.61 miles SE	Same as location 1A	Same as location 4A
5	Wakefield, PA	4.64 miles E	Same as location 1A	Same as location 4A
6E	Holtwood Dam - Power House Roof (Control)	5.74 miles NW	Same as location 1A	Same as location 4A
12D	2301 Market Stree Phila., PA - (Control)	59.53 miles ENE	Same as location 1B	Same as location 1B
14	Peters Creek	1.97 miles ESE	Same as location 1A	Same as location 4A

TABLE B-1: Sample Collection and Analysis Program for the Radiological Environmental Monitoring Program for Peach Bottom Atcmic Power S'ation, 1994

Location	Location Description	Distance & Direction	Collection Method and Frequency	Analysis & Frequency Performed--Consultant
15	Silver Spring Rd	3.68 miles N	Same as location 1A	Same as location 4A
17	Riverview Rd	4.07 miles ESE	Same as location 1A	Same as location 4A
32	Slate Hill Rd	2.75 miles ENE	Same as location 1A	Same as location 4A
38	Peach Bottom Rd	2.99 miles E	Same as location 1A	Same as location 4A
F. Milk				
A	(Control)	5.78 miles WSW	Two gallon grab sample is collected at each farm from a bulk tank containing milk biweekly while cows are on pasture, monthly other times	I-131 - biweekly, monthly** - TB Gamma Spec - quarterly - TB I-131 - quarterly - PSE&G* Gamma Spec - quarterly - PSE&G*
B	(Control)	10.58 miles S	Same as Farm A	I-131 - quarterly - TB
C	(Control)	9.54 miles NW	Same as Farm A	Same as Farm B
D		3.51 miles NE	Same as Farm A	Same as Farm B
E	(Control)	8.74 miles N	Same as Farm A	Same as Farm B
G		1.49 miles SSW	Same as Farm A	I-131 - biweekly, monthly** - TB Gamma Spec - quarterly - TB
J		0.97 miles W	Same as Farm A	Same as Farm A
L		2.12 miles NE	Same as Farm A	Same as Farm B
N		3.03 miles ESE	Same as Farm A	Same as Farm A
O		2.32 miles SW	Same as Farm A	Same as Farm B

TABLE B-1: Sample Collection and Analysis Program for the Radiological Environmental Monitoring Program for Peach Bottom Atomic Power Station, 1994

Location	Location Description	Distance & Direction	Collection Method and Frequency	Analysis & Frequency Performed--Consultant
P		2.08 miles ENE	Same as Farm A	Same as Farm B

G. <u>Environmental Dosimetry - TLD</u>

At each of the following locations there are two environmental dosimeters packets with four (4) TLD phosphors per package. One packet is relplaced monthly, and one quarterly.

Location	Location Description	Distance & Direction	Collection Method and Frequency	Analysis & Frequency Performed--Consultant
1A	Weather Station #1	0.26 miles SE	Procedure for collection is described in the placement procedure in Section III, A	TLD - monthly and quarterly - TB
1B	Weather Station #2	0.49 miles NW		Same as location 1A
1C	Peach Bottom South Substation	0.85 miles SSE		Same as location 1A
1D	Peach Bottom 140° Sector Site Boundary	0.55 miles SE		Same as location 1A
1E	Peach Bottom 350° Sector Hill	0.59 miles NNW		Same as location 1A
1F	Peach Bottom 200° Sector Hill	0.51 miles SSW		Same as location 1A
1G	Peach Bottom North Substation	0.60 miles WNW		Same as location 1A
1H	Peach Bottom 270° Sector Hill	0.59 miles W		Same as location 1A
1I	Peach Bottom South Substation	0.54 miles SSE		Same as location 1A
1J	Peach Bottom 180° Sector Hill	0.70 miles S		Same as location 1A

TABLE B-1: Sample Collection and Analysis Program for the Radiological Environmental Monitoring Program for Peach Bottom Atomic Power Station, 1994

Location	Location Description	Distance & Direction	Collection Method and Frequency	Analysis & Frequency Performed--Consultant
1L	Peach Bottom Unit 3 Intake	0.24 miles ENE		Same as location 1A
1M	Peach Bottom Canal Discharge	1.04 miles SE		Same as location 1A
1NN	Peach Bottom Site	0.48 miles WSW		Same as location 1A
2	Peach Bottom 130° Sector Hill	0.89 miles SE		Same as location 1A
3A	Delta, PA Substation	3.62 miles SW		Same as location 1A
4K	Conowing Dam Power House Roof	8.66 miles SE		Same as location 1A
5	Wakefield, PA	4.64 miles E		Same as location 1A
6B	Holtwood Dam Power House Roof	5.78 miles NW		Same as location 1A
12D	Philadelphia, PA 2301 Market St. (control)	59.53 miles ENE		Same as location 1A
14	Peters Creek	1.97 miles ESE		Same as location 1A
15	Silver Spring Rd	3.68 miles N		Same as location 1A
16	Nottingham, PA Substation (Control)	12.72 miles E		Same as location 1A
17	Riverview Rd	4.07 miles ESE		Same as location 1A

TABLE B-1: Sample Collection and Analysis Program for the Radiological Environmental Monitoring Program for Peach Bottom Atomic Power Station, 1994

Location	Location Description	Distance & Direction	Collection Method and Frequency	Analysis & Frequency Performed--Consultant
18	Fawn Grove, PA	9.86 miles W		Same as location 1A
19	Red Lion, PA (Control)	20.21 miles WNW		Same as location 1A
20	Bel Air, MD Area (Control)	15.33 miles SSW		Same as location 1A
21B	Lancaster, PA Area (Control)	18.91 miles NNW		Same as location 1A
22	Eagle Road	2.39 miles NNE		Same as location 1A
23	Peach Bottom 150° Sector Hill	1.01 miles SSE		Same as location 1A
24	Harrisville, MD Substation (Control)	10.91 miles ESE		Same as location 1A
26	Slab Road	4.23 miles NW		Same as location 1A
27	N. Cooper Road	2.68 miles S		Same as location 1A
31A	Eckman Rd	4.57 miles SE		Same as location 1A
32	Slate Hill Rd	2.75 miles ENE		Same as location 1A
33A	Fulton Weather Station	1.75 miles ENE		Same as location 1A
38	Peach Bottom Rd	2.99 miles E		Same as location 1A
40	Peach Bottom Site Area	1.46 miles SW		Same as location 1A
42	Muddy Run Envir. Laboratory	4.13 miles NNW		Same as location 1A

TABLE B-1: Sample Collection and Analysis Program for the Radiological Environmental Monitoring Program for Peach Bottom Atomic Power Station, 1994

Location	Location Description	Distance & Direction	Collection Method and Frequency	Analysis & Frequency Performed--Consultant
43	Drumore Township School	5.00 miles NNE		Same as location 1A
44	Goshen Mill Rd	5.07 miles NE		Same as location 1A
45	PB-Keeney Line	3.38 miles ENE		Same as location 1A
46	Broad Creek	4.47 miles SSE		Same as location 1A
47	Broad Creek Scout Camp	4.26 miles S		Same as location 1A
48	Macton Substation	4.99 miles SSW		Same as location 1A
49	PB-Conastone Line	4.05 miles WSW		Same as location 1A
50	TRANSCO Pumping Station	4.99 miles W		Same as location 1A
51	Fin Substation	3.98 miles WNW		Same as location 1A

* QC Laboratory

** Monthly from December through March when cows are off pasture.

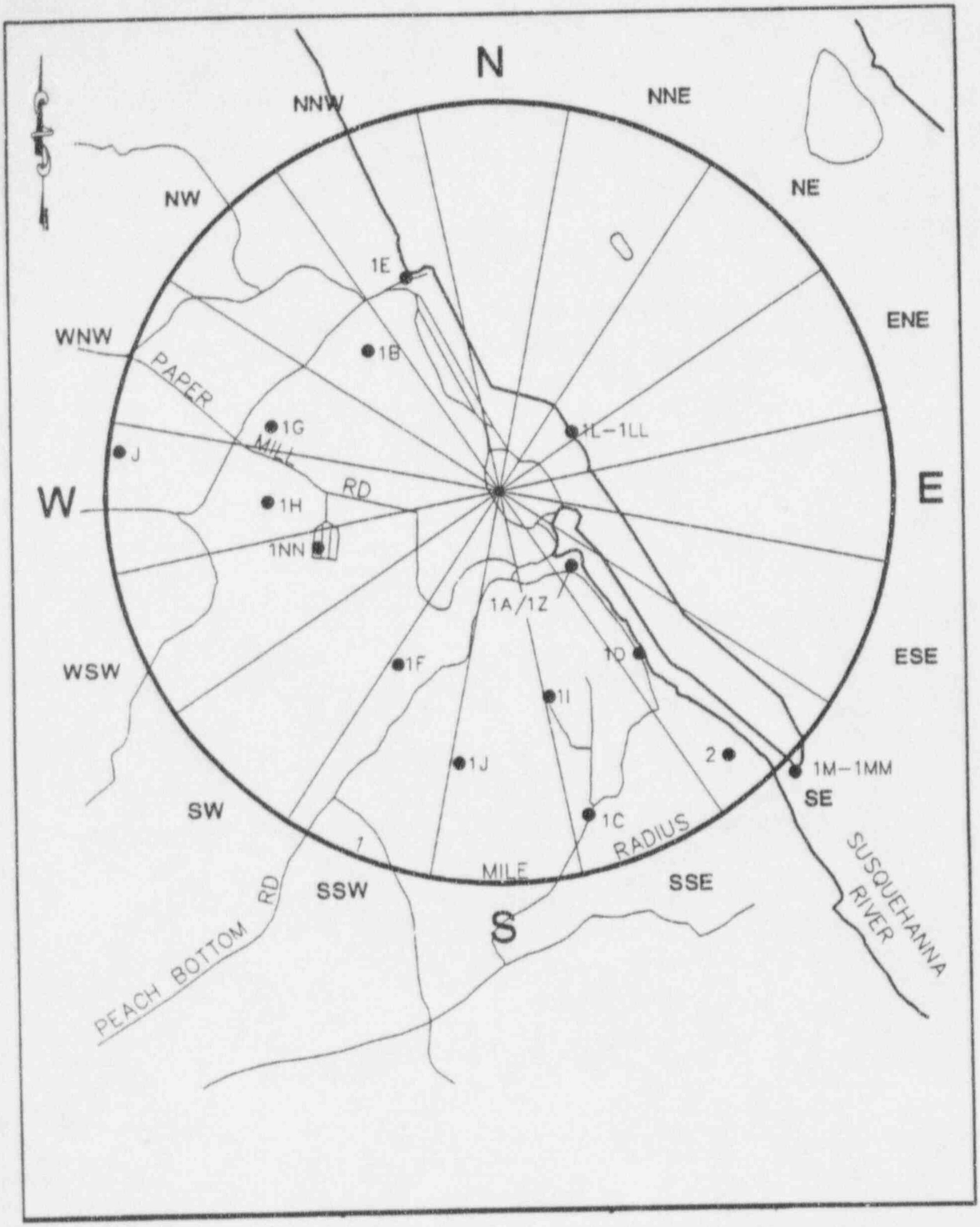


Figure B-1
Environmental Sampling Locations Within One Mile of the Peach Bottom Atomic Power Station, 1994

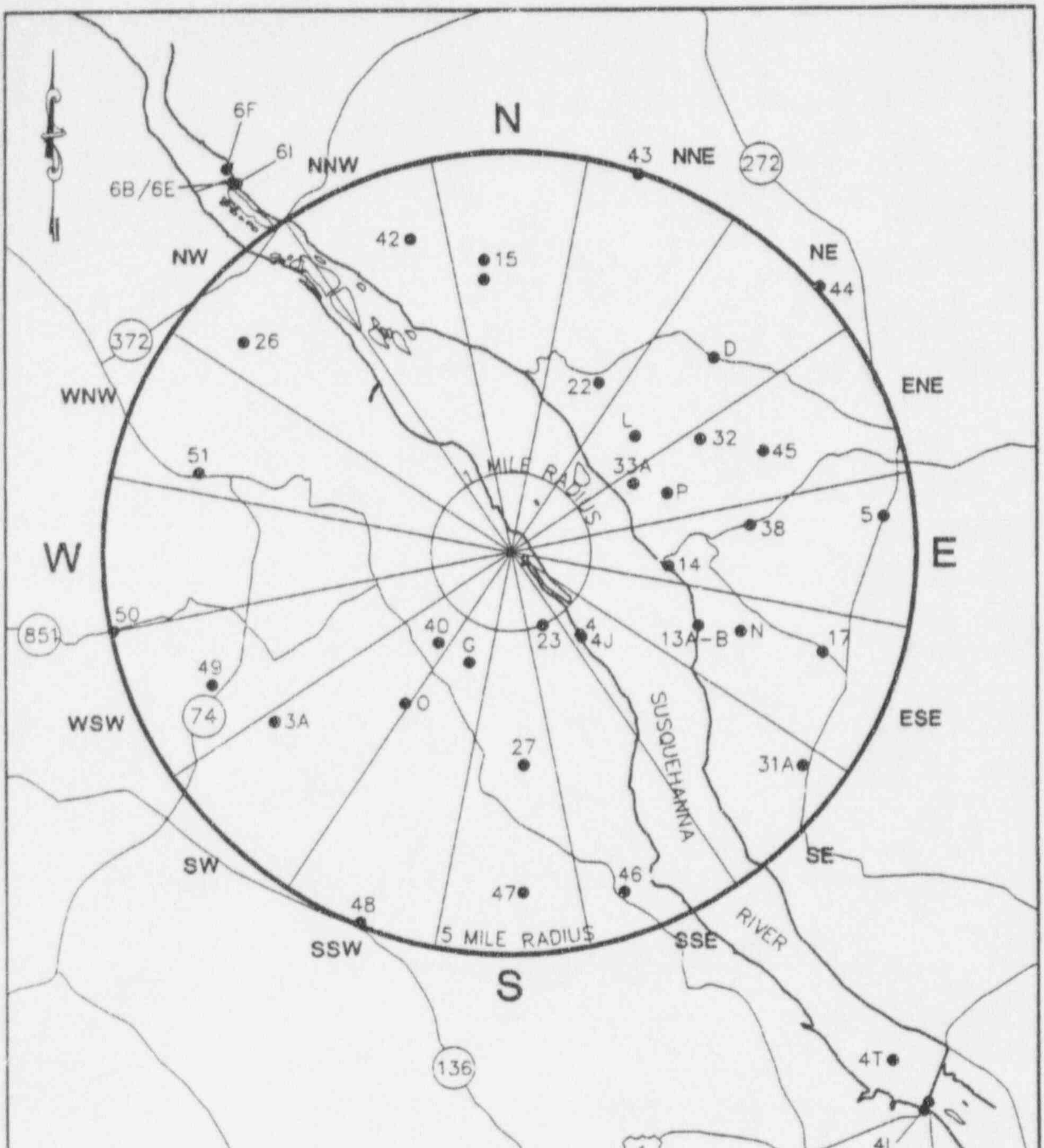


Figure B-2
Environmental Sampling Locations Between One and Five Miles from the Peach Bottom Atomic Power Station, 1994

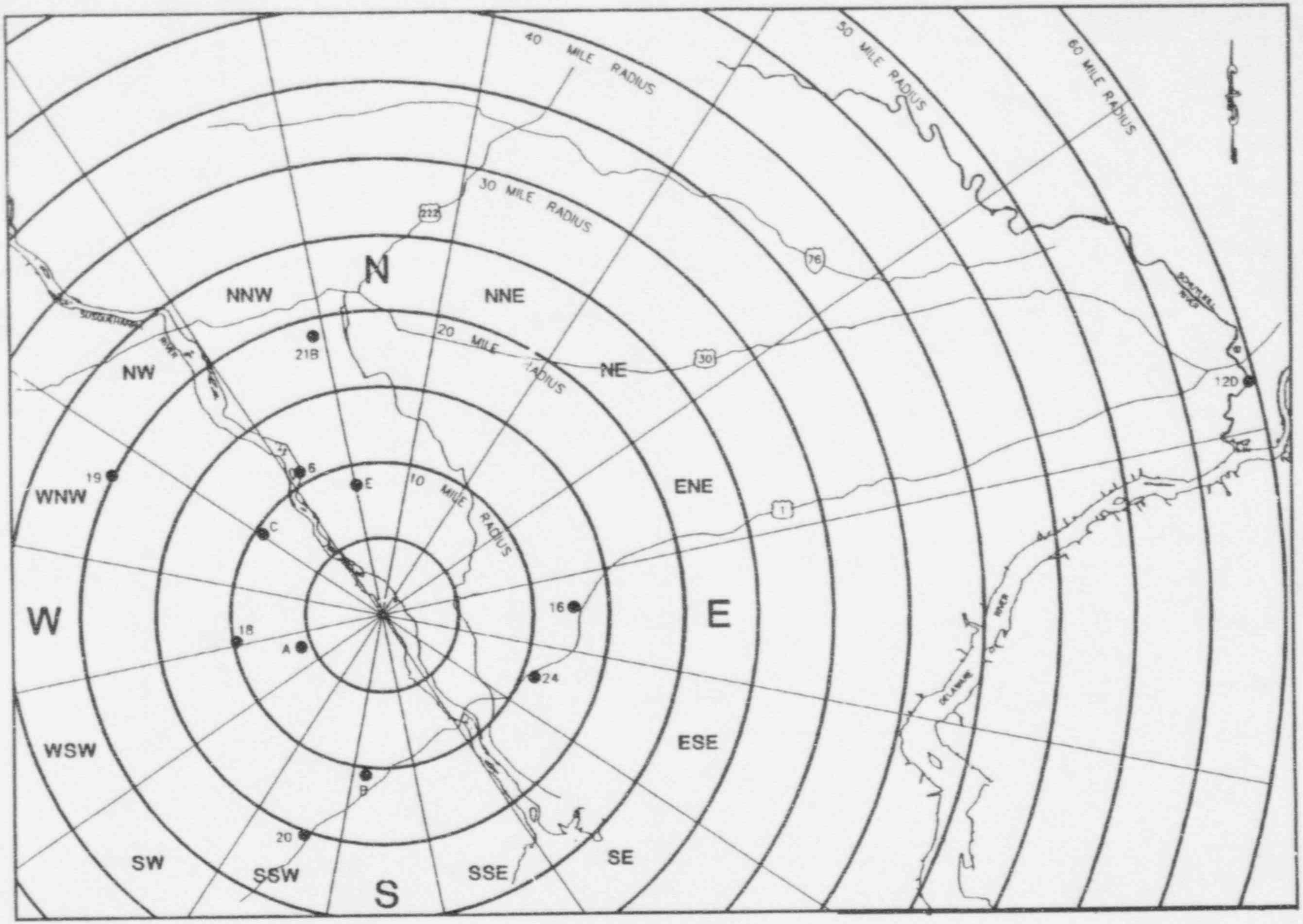


Figure B-3
Environmental Sampling Locations Greater Than
Five Miles from the Peach Bottom Atomic Power Station, 1994

APPENDIX C

DATA TABLES AND FIGURES
PRIMARY LABORATORY

APPENDIX C: DATA TABLES AND FIGURES - PRIMARY LABORATORY

TABLES

FIGURES

TABLE C-I.1 CONCENTRATIONS OF GROSS BETA INSOLUBLE IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	13A		13B		1LL		1MM	
JAN 94	0.1	± 0.6			0.4	± 0.7	0.1	± 0.6
FEB 94	4	± 10	20	± 10	0.8	± 0.7	1.7	± 0.7
MAR 94	1.5	± 0.5			1.6	± 0.6	2.0	± 0.6
APR 94	0.3	± 0.5			0.0	± 0.5	0.3	± 0.5
MAY 94	0.3	± 0.5	2.5	± 0.7	0.4	± 0.5	0.3	± 0.5
JUN 94	0.4	± 0.5	1.0	± 0.6	0.5	± 0.6	0.2	± 0.5
JUL 94	0.6	± 0.5	2.1	± 0.6	0.9	± 0.5	0.0	± 0.4
AUG 94	1.0	± 0.6	0.4	± 0.5	2.1	± 0.7	1.3	± 0.6
SEP 94	0.2	± 0.5	-0.2	± 0.4	0.3	± 0.5	0.6	± 0.5
OCT 94	0.2	± 0.5	0.4	± 0.5	0.6	± 0.5	0.1	± 0.5
NOV 94	0.7	± 0.5			0.6	± 0.5	0.5	± 0.5
DEC 94	0.5	± 0.5			0.6	± 0.5	1.1	± 0.5
MEAN	0.8	± 2.1	3.8	± 14.5	0.7	± 1.2	0.7	± 1.3

TABLE C-I.2 CONCENTRATIONS OF GROSS BETA SOLUBLE IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	13A		13B		1LL		1MM	
JAN 94	3	± 1			3	± 1	5	± 1
FEB 94	2	± 1	3	± 1	3	± 1	2	± 1
MAR 94	2.9	± 0.8			2.6	± 0.8	3.1	± 0.8
APR 94	2.2	± 0.8			2.4	± 0.8	2.9	± 0.8
MAY 94	3.0	± 1.0	3.0	± 1.0	3.2	± 0.9	3.0	± 0.9
JUN 94	2.5	± 0.9	3	± 1	3.0	± 1.0	2.2	± 0.9
JUL 94	3.2	± 0.9	2.2	± 0.8	3.0	± 0.9	3.7	± 0.9
AUG 94	2.8	± 0.9	4	± 1	3.2	± 0.9	3.5	± 0.9
SEP 94	7	± 2	3	± 1	2	± 1	3.1	± 0.9
OCT 94	4.0	± 1.0	4.0	± 1.0	2.8	± 0.9	3.0	± 1.0
NOV 94	9	± 1			2.8	± 0.9	3.0	± 1.0
DEC 94	2.2	± 0.8			1.8	± 0.7	3.7	± 0.8
MEAN	3.7	± 4.3	3.2	± 1.3	2.7	± 0.9	3.2	± 1.5

TABLE C-I.3 CONCENTRATIONS OF TRITIUM IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	13A		13B		1LL		1MM	
JAN-MAR 94	20	± 90			-40	± 90	40	± 90
APR-JUN 94	-100	± 100			0	± 100	0	± 100
JUL-SEP 94	0	± 100			100	± 100	0	± 100
OCT-DEC 94	0	± 100			0	± 100	40	± 100
MEAN	-10	± 90			0	± 90	10	± 60

TABLE C-I.4 CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65
13A	JAN 94	17 ± 8	0.4 ± 0.6	0.3 ± 0.7	-2 ± 1	0.6 ± 0.6	1 ± 1
	FEB 94	-10 ± 10	0.0 ± 0.6	0.1 ± 0.6	0 ± 1	0.2 ± 0.6	0 ± 1
	MAR 94	32 ± 7	0.2 ± 0.6	0.1 ± 0.6	0 ± 1	0.4 ± 0.6	2 ± 1
	APR 94	16 ± 7	-0.7 ± 0.6	0.2 ± 0.6	0 ± 1	0.7 ± 0.6	1 ± 1
	MAY 94	0 ± 10	0.3 ± 0.5	-0.7 ± 0.5	0 ± 1	-0.3 ± 0.5	0 ± 1
	JUN 94	7 ± 5	-0.1 ± 0.4	0.0 ± 0.4	0.3 ± 0.8	0.0 ± 0.4	0.4 ± 0.8
	JUL 94	-5 ± 6	0.2 ± 0.4	-0.6 ± 0.4	0 ± 1	0.3 ± 0.5	1 ± 1
	AUG 94	9 ± 4	0.4 ± 0.3	0.2 ± 0.3	0.8 ± 0.7	0.0 ± 0.3	0.4 ± 0.9
	SEP 94	-10 ± 10	0.2 ± 0.6	-0.7 ± 0.6	1 ± 2	0.2 ± 0.6	-1 ± 1
	OCT 94	-20 ± 10	0.1 ± 0.5	-0.8 ± 0.5	0 ± 1	0.2 ± 0.5	0 ± 1
	NOV 94	8 ± 7	0.4 ± 0.4	0.2 ± 0.5	1 ± 1	0.3 ± 0.4	1 ± 1
	DEC 94	10 ± 7	0.2 ± 0.6	-0.3 ± 0.7	0 ± 2	0.2 ± 0.6	0 ± 1
	MEAN	4 ± 29	0.1 ± 0.6	-0.2 ± 0.8	0.0 ± 1.5	0.2 ± 0.5	0.4 ± 1.5
13B	FEB 94	1 ± 7	0.1 ± 0.6	-0.1 ± 0.7	0 ± 2	0.0 ± 0.6	-1 ± 1
	MAY 94	-27 ± 9	0.3 ± 0.5	-0.4 ± 0.5	-1 ± 1	0.6 ± 0.5	0 ± 1
	JUN 94	2 ± 6	-0.2 ± 0.5	-0.1 ± 0.5	0 ± 1	0.1 ± 0.5	-1 ± 1
	JUL 94	-5 ± 6	0.5 ± 0.4	0.1 ± 0.5	1 ± 1	0.1 ± 0.4	0.1 ± 0.9
	AUG 94	-14 ± 9	0.1 ± 0.5	0.0 ± 0.5	0 ± 1	0.2 ± 0.5	0 ± 1
	SEP 94	-50 ± 10	0.5 ± 0.6	-0.1 ± 0.7	0 ± 2	-0.1 ± 0.5	0 ± 1
	OCT 94	-5 ± 6	0.2 ± 0.4	-0.6 ± 0.5	0 ± 1	-0.2 ± 0.5	0 ± 1
	MEAN	-14 ± 37	0.2 ± 0.5	-0.2 ± 0.5	0 ± 1	0.1 ± 0.5	-0.1 ± 0.9
1LL	JAN 94	-6 ± 6	-0.1 ± 0.4	0.1 ± 0.4	0.3 ± 0.9	-0.2 ± 0.4	0.9 ± 0.9
	FEB 94	-28 ± 7	0.3 ± 0.4	0.0 ± 0.4	1.0 ± 0.9	0.1 ± 0.4	-0.1 ± 0.8
	MAR 94	10 ± 5	0.1 ± 0.4	0.0 ± 0.4	0.2 ± 0.9	0.5 ± 0.4	0.2 ± 0.8
	APR 94	-29 ± 9	0.3 ± 0.5	-0.4 ± 0.5	0 ± 1	-0.1 ± 0.5	1 ± 1
	MAY 94	-5 ± 5	-0.2 ± 0.3	0.0 ± 0.4	0.5 ± 0.9	0.2 ± 0.4	0.2 ± 0.8
	JUN 94	-5 ± 6	-0.2 ± 0.4	0.1 ± 0.5	0 ± 1	0.3 ± 0.4	0.3 ± 0.9
	JUL 94	-8 ± 7	0.3 ± 0.5	-0.1 ± 0.6	1 ± 1	0.5 ± 0.5	0 ± 1
	AUG 94	-2 ± 6	0.3 ± 0.4	-0.1 ± 0.5	-1 ± 1	0.2 ± 0.5	0.4 ± 0.9
	SEP 94	0 ± 5	0.1 ± 0.4	0.0 ± 0.5	1 ± 1	0.5 ± 0.5	-1 ± 1
	OCT 94	-1 ± 5	0.2 ± 0.3	0.1 ± 0.4	0.0 ± 0.8	0.2 ± 0.3	0.2 ± 0.7
	NOV 94	-10 ± 10	0.3 ± 0.6	0.0 ± 0.7	0 ± 2	0.1 ± 0.6	2 ± 1
	DEC 94	1 ± 5	0.1 ± 0.5	-0.1 ± 0.5	1 ± 1	0.1 ± 0.5	1 ± 1
	MEAN	-6 ± 23	0.1 ± 0.4	0.0 ± 0.3	0.3 ± 1.1	0.2 ± 0.5	0.4 ± 1.3
1MM	JAN 94	2 ± 5	0.2 ± 0.3	-0.1 ± 0.4	0.0 ± 0.9	0.2 ± 0.4	0.9 ± 0.8
	FEB 94	-1 ± 7	0.1 ± 0.5	0.2 ± 0.6	0 ± 1	0.0 ± 0.5	1 ± 1
	MAR 94	0 ± 10	-0.5 ± 0.6	-0.2 ± 0.6	1 ± 1	0.0 ± 0.6	0 ± 1
	APR 94	8 ± 7	0.1 ± 0.6	-0.2 ± 0.7	0 ± 2	0.1 ± 0.6	1 ± 1
	MAY 94	-11 ± 5	0.1 ± 0.3	-0.1 ± 0.3	0.0 ± 0.8	0.4 ± 0.3	0.3 ± 0.7
	JUN 94	-3 ± 5	-0.1 ± 0.4	-0.2 ± 0.5	1 ± 1	0.3 ± 0.5	0 ± 1
	JUL 94	-30 ± 10	0.4 ± 0.5	-0.2 ± 0.6	-1 ± 1	0.5 ± 0.5	0 ± 1
	AUG 94	-5 ± 4	0.1 ± 0.4	0.2 ± 0.4	0.6 ± 0.9	-0.2 ± 0.4	0.5 ± 0.8
	SEP 94	0 ± 6	0.1 ± 0.4	0.1 ± 0.5	1 ± 1	-0.1 ± 0.4	0.1 ± 0.8
	OCT 94	-5 ± 5	0.4 ± 0.5	-0.1 ± 0.5	0 ± 1	0.0 ± 0.5	1 ± 1
	NOV 94	-20 ± 10	0.4 ± 0.6	0.4 ± 0.7	0 ± 2	0.2 ± 0.6	2 ± 1
	DEC 94	6 ± 4	0.1 ± 0.4	0.1 ± 0.5	1 ± 1	0.2 ± 0.4	0.9 ± 0.9
	MEAN	-5 ± 22	0.1 ± 0.5	0.0 ± 0.4	0.1 ± 1.1	0.1 ± 0.4	0.5 ± 1.3

TABLE C-I.4 CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	ZR-95	NB-95	CS-134	CS-137	BA-140	LA-140
13A	JAN 94	1 ± 1	0.5 ± 0.7	-0.1 ± 0.6	0.7 ± 0.6	-2 ± 4	-2 ± 2
	FEB 94	1 ± 1	0.1 ± 0.6	0.1 ± 0.7	0.7 ± 0.7	1 ± 3	0 ± 1
	MAR 94	1 ± 1	0.5 ± 0.6	-1.0 ± 0.6	0.3 ± 0.6	1 ± 3	0 ± 1
	APR 94	1 ± 1	0.5 ± 0.7	-0.2 ± 0.6	0.3 ± 0.6	0 ± 4	-1 ± 1
	MAY 94	0 ± 1	0.4 ± 0.6	-0.5 ± 0.5	0.0 ± 0.5	1 ± 3	-1 ± 1
	JUN 94	0.0 ± 0.8	0.4 ± 0.4	-0.2 ± 0.4	0.3 ± 0.3	0 ± 2	1 ± 1
	JUL 94	1 ± 1	0.4 ± 0.5	0.0 ± 0.5	0.3 ± 0.5	-1 ± 2	0 ± 1
	AUG 94	-0.2 ± 0.7	0.5 ± 0.3	0.2 ± 0.3	0.0 ± 0.3	0 ± 2	0.0 ± 0.7
	SEP 94	1 ± 1	-0.4 ± 0.7	0.1 ± 0.6	0.5 ± 0.6	2 ± 4	0 ± 2
	OCT 94	-1 ± 1	0.1 ± 0.5	-0.8 ± 0.5	0.5 ± 0.5	-1 ± 3	1 ± 1
	NOV 94	1 ± 1	0.7 ± 0.5	0.2 ± 0.5	0.2 ± 0.5	-1 ± 3	0 ± 1
	DEC 94	3 ± 1	0.0 ± 0.7	-0.5 ± 0.6	-0.1 ± 0.6	0 ± 5	2 ± 2
	MEAN	0.7 ± 1.8	0.3 ± 0.6	-0.2 ± 0.8	0.3 ± 0.5	0 ± 2	0.0 ± 1.9
13B	FEB 94	-1 ± 1	0.7 ± 0.7	-0.8 ± 0.6	0.7 ± 0.6	2 ± 6	-1 ± 2
	MAY 94	1 ± 1	0.5 ± 0.6	-0.5 ± 0.5	0.3 ± 0.5	1 ± 4	0 ± 2
	JUN 94	0 ± 1	0.4 ± 0.6	0.2 ± 0.5	0.0 ± 0.5	1 ± 4	0 ± 2
	JUL 94	-1 ± 1	0.2 ± 0.6	0.6 ± 0.4	0.3 ± 0.4	-10 ± 10	-3 ± 4
	AUG 94	1 ± 1	0.2 ± 0.5	-0.2 ± 0.5	0.2 ± 0.5	3 ± 3	-0.5 ± 0.9
	SEP 94	2 ± 2	0.2 ± 0.8	-0.3 ± 0.6	0.9 ± 0.6	10 ± 10	-4 ± 5
	OCT 94	-1 ± 1	0.2 ± 0.5	0.2 ± 0.5	0.0 ± 0.5	0 ± 4	1 ± 2
	MEAN	0 ± 2	0.3 ± 0.4	-0.1 ± 1.0	0.3 ± 0.7	1 ± 10	-1.1 ± 3.5
1LL	JAN 94	1.3 ± 0.9	0.6 ± 0.5	0.2 ± 0.4	-0.2 ± 0.4	0 ± 3	0 ± 1
	FEB 94	0.3 ± 0.9	0.3 ± 0.4	0.3 ± 0.4	0.3 ± 0.4	-1 ± 2	0.5 ± 0.9
	MAR 94	-0.3 ± 0.9	0.1 ± 0.4	0.1 ± 0.4	0.0 ± 0.4	1 ± 3	0 ± 1
	APR 94	1 ± 1	0.1 ± 0.5	-0.3 ± 0.5	-0.2 ± 0.5	2 ± 4	2 ± 1
	MAY 94	0.5 ± 0.8	0.5 ± 0.4	-0.3 ± 0.4	0.1 ± 0.4	0 ± 2	0 ± 1
	JUN 94	0 ± 1	0.5 ± 0.5	0.2 ± 0.4	0.3 ± 0.5	-2 ± 4	-1 ± 2
	JUL 94	1 ± 1	0.6 ± 0.6	0.1 ± 0.5	0.5 ± 0.5	-1 ± 3	0 ± 1
	AUG 94	2 ± 1	0.4 ± 0.5	0.5 ± 0.5	0.2 ± 0.5	1 ± 3	1 ± 1
	SEP 94	0 ± 1	0.4 ± 0.5	-0.1 ± 0.5	-0.1 ± 0.4	2 ± 3	1 ± 2
	OCT 94	-0.3 ± 0.8	0.6 ± 0.4	0.3 ± 0.3	-0.2 ± 0.3	-1 ± 3	-1 ± 1
	NOV 94	2 ± 2	1.0 ± 0.7	0.2 ± 0.7	0.4 ± 0.6	3 ± 5	-1 ± 2
	DEC 94	1 ± 1	-0.2 ± 0.5	-0.3 ± 0.5	0.3 ± 0.4	2 ± 4	0 ± 2
	MEAN	0.7 ± 1.6	0.4 ± 0.6	0.1 ± 0.5	0.1 ± 0.5	1 ± 3	0.3 ± 1.5
1MM	JAN 94	0.2 ± 0.7	0.2 ± 0.4	0.1 ± 0.4	0.2 ± 0.4	0 ± 2	0 ± 1
	FEB 94	0 ± 1	0.1 ± 0.6	0.9 ± 0.5	0.6 ± 0.6	3 ± 3	1 ± 1
	MAR 94	1 ± 1	0.2 ± 0.7	-0.1 ± 0.6	0.3 ± 0.6	-1 ± 4	0 ± 1
	APR 94	2 ± 2	0.1 ± 0.7	0.4 ± 0.7	0.4 ± 0.6	2 ± 5	0 ± 2
	MAY 94	-0.2 ± 0.7	0.0 ± 0.4	-0.1 ± 0.3	-0.1 ± 0.3	-1 ± 2	0.0 ± 0.9
	JUN 94	1 ± 1	0.2 ± 0.5	0.3 ± 0.5	0.5 ± 0.5	1 ± 4	-1 ± 2
	JUL 94	2 ± 1	0.4 ± 0.6	0.3 ± 0.6	0.2 ± 0.6	1 ± 3	1 ± 1
	AUG 94	0.9 ± 0.8	0.0 ± 0.4	0.0 ± 0.4	0.0 ± 0.4	1 ± 2	0 ± 1
	SEP 94	0.7 ± 0.9	0.3 ± 0.4	0.0 ± 0.4	0.2 ± 0.4	1 ± 4	1 ± 1
	OCT 94	0 ± 1	0.4 ± 0.5	-0.2 ± 0.4	0.0 ± 0.4	2 ± 4	0 ± 2
	NOV 94	-1 ± 1	0.0 ± 0.7	0.0 ± 0.6	-0.7 ± 0.6	5 ± 5	1 ± 2
	DEC 94	-0.5 ± 0.9	0.4 ± 0.5	0.1 ± 0.4	0.5 ± 0.4	0 ± 4	-1 ± 2
	MEAN	0.5 ± 1.7	0.2 ± 0.3	0.1 ± 0.6	0.2 ± 0.7	1 ± 3	0.2 ± 1.1

TABLE C-II.1 CONCENTRATIONS OF GROSS BETA INSOLUBLE IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	4L		6I	
JAN 94	0.0	± 0.6	0.9	± 0.7
FEB 94	0.7	± 0.6	0.9	± 0.6
MAR 94	2.3	± 0.6	3.5	± 0.7
APR 94	-0.2	± 0.4	0.2	± 0.5
MAY 94	0.4	± 0.5	0.2	± 0.5
JUN 94	0.2	± 0.5	-0.2	± 0.5
JUL 94	0.6	± 0.5	0.1	± 0.4
AUG 94	1.7	± 0.6	1.4	± 0.6
SEP 94	0.2	± 0.5	0.6	± 0.5
OCT 94	0.3	± 0.5	0.3	± 0.5
NOV 94	0.4	± 0.5	0.4	± 0.5
DEC 94	0.2	± 0.5	0.0	± 0.5
MEAN	0.6	± 1.5	0.7	± 2.0

TABLE C-II.2 CONCENTRATIONS OF GROSS BETA SOLUBLE IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	4L		6I	
JAN 94	4	± 1	3	± 1
FEB 94	3	± 1	2	± 1
MAR 94	2.0	± 0.7	2.3	± 0.8
APR 94	3.3	± 0.8	2.9	± 0.8
MAY 94	2.3	± 0.9	2.5	± 0.9
JUN 94	2.6	± 0.9	2.3	± 0.9
JUL 94	3.4	± 0.9	4.0	± 1.0
AUG 94	4	± 1	2.3	± 0.7
SEP 94	3.1	± 0.9	3.4	± 0.9
OCT 94	4.0	± 1.0	1.8	± 0.8
NOV 94	4.0	± 1.0	4.0	± 1.0
DEC 94	2.0	± 0.8	2.2	± 0.8
MEAN	3.1	± 1.5	2.7	± 1.5

TABLE C-II.3 CONCENTRATIONS OF I-131 BY RADIOCHEMISTY IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	4L		6I	
JAN 94	0.0	± 0.2	0.26	± 0.08
FEB 94	-0.05	± 0.07	0.32	± 0.09
MAR 94	-0.08	± 0.08	-0.08	± 0.08
APR 94	0.03	± 0.09	0.07	± 0.09
MAY 94	0.00	± 0.08	0.13	± 0.09
JUN 94	0.1	± 0.1	0.22	± 0.09
JUL 94	0.1	± 0.1	0.0	± 0.1
AUG 94	-0.04	± 0.08	0.04	± 0.07
SEP 94	0.00	± 0.08	0.1	± 0.2
OCT 94	0.05	± 0.05	0.09	± 0.08
NOV 94	0.06	± 0.07	0.03	± 0.10
DEC 94	0.0	± 0.1	0.1	± 0.1
MEAN	0.02	± 0.10	0.10	± 0.23

TABLE C-II.4 CONCENTRATIONS OF TRITIUM IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	4L		6I	
JAN-MAR 94	10	± 90	60	± 90
APR-JUN 94	0	± 100	0	± 100
JUL-SEP 94	0	± 100	0	± 100
OCT-DEC 94	0	± 100	-30	± 90
MEAN	0	± 50	30	± 80

TABLE C-II.5 CONCENTRATIONS OF GAMMA EMITTERS IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65
4L	JAN 94	-20 ± 10	0.1 ± 0.5	0.0 ± 0.5	0 ± 1	0.2 ± 0.5	1 ± 1
	FEB 94	-3 ± 7	0.2 ± 0.5	0.1 ± 0.5	0 ± 1	0.2 ± 0.5	0 ± 1
	MAR 94	-9 ± 6	0.2 ± 0.5	0.2 ± 0.5	0 ± 1	0.2 ± 0.5	0 ± 1
	APR 94	21 ± 7	-0.6 ± 0.6	0.4 ± 0.6	0 ± 1	0.5 ± 0.6	2 ± 1
	MAY 94	-9 ± 7	0.1 ± 0.4	-0.4 ± 0.4	-1 ± 1	0.1 ± 0.4	-0.4 ± 0.8
	JUN 94	-7 ± 7	0.0 ± 0.5	0.0 ± 0.6	1 ± 1	0.0 ± 0.5	-0.6 ± 0.9
	JUL 94	-9 ± 8	0.2 ± 0.4	-0.2 ± 0.4	0.3 ± 0.9	0.0 ± 0.4	-0.4 ± 0.9
	AUG 94	0 ± 10	0.3 ± 0.5	-0.1 ± 0.5	0 ± 1	0.5 ± 0.5	-1 ± 1
	SEP 94	-10 ± 9	-0.3 ± 0.5	-0.2 ± 0.5	-1 ± 1	0.4 ± 0.5	-1 ± 1
	OCT 94	6 ± 5	0.4 ± 0.4	0.1 ± 0.5	1 ± 1	0.0 ± 0.5	0 ± 1
	NOV 94	-2 ± 5	0.0 ± 0.4	-0.2 ± 0.5	0 ± 1	0.0 ± 0.5	0 ± 1
	DEC 94	-5 ± 8	0.1 ± 0.5	-0.2 ± 0.6	-1 ± 1	0.2 ± 0.6	-1 ± 1
	MEAN	-4 ± 21	0.1 ± 0.5	0.0 ± 0.4	0.0 ± 0.9	0.2 ± 0.4	-0.1 ± 1.6
6I	JAN 94	25 ± 5	0.3 ± 0.5	-0.2 ± 0.5	1 ± 1	0.4 ± 0.5	1 ± 1
	FEB 94	-35 ± 8	0.1 ± 0.5	-0.1 ± 0.5	0 ± 1	-0.1 ± 0.5	0 ± 1
	MAR 94	-2 ± 6	0.0 ± 0.4	-0.1 ± 0.4	1 ± 1	0.1 ± 0.5	-1 ± 1
	APR 94	0 ± 8	0.5 ± 0.5	0.0 ± 0.6	0 ± 1	0.3 ± 0.5	-1 ± 1
	MAY 94	-22 ± 7	-0.4 ± 0.4	-0.5 ± 0.4	-0.5 ± 0.9	-0.1 ± 0.4	-0.4 ± 0.9
	JUN 94	-28 ± 8	0.2 ± 0.4	-0.1 ± 0.5	1 ± 1	0.2 ± 0.4	0.1 ± 1.0
	JUL 94	8 ± 5	0.5 ± 0.4	-0.1 ± 0.5	0 ± 1	0.3 ± 0.4	-0.4 ± 0.8
	AUG 94	50 ± 7	0.5 ± 0.5	0.0 ± 0.5	0 ± 1	0.2 ± 0.5	1 ± 1
	SEP 94	-5 ± 7	-0.2 ± 0.5	0.1 ± 0.6	0 ± 1	0.5 ± 0.5	0 ± 1
	OCT 94	-6 ± 4	0.0 ± 0.4	0.0 ± 0.4	0.2 ± 0.9	0.1 ± 0.4	0.7 ± 0.8
	NOV 94	-1 ± 6	0.4 ± 0.4	-0.5 ± 0.4	-0.5 ± 0.9	-0.2 ± 0.4	0.9 ± 0.8
	DEC 94	-23 ± 9	0.3 ± 0.5	0.1 ± 0.6	-1 ± 1	-0.3 ± 0.5	1 ± 1
	MEAN	-3 ± 47	0.2 ± 0.6	-0.1 ± 0.4	0.0 ± 1.2	0.1 ± 0.5	0.1 ± 1.4

TABLE C-II.5 CONCENTRATIONS OF GAMMA EMITTERS IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	ZR-95		NB-95		CS-134		CS-137		BA-140		LA-140	
4L	JAN 94	1	± 1	1.0	± 0.6	-0.3	± 0.5	0.6	± 0.5	2	± 3	1	± 1
	FEB 94	1	± 1	0.4	± 0.6	-0.1	± 0.5	0.2	± 0.6	-1	± 3	-1	± 1
	MAR 94	0	± 1	0.1	± 0.6	0.2	± 0.5	0.4	± 0.6	0	± 3	1	± 1
	APR 94	1	± 1	1.3	± 0.7	-0.2	± 0.6	0.4	± 0.6	-1	± 4	-1	± 1
	MAY 94	0	± 1	0.7	± 0.5	0.1	± 0.5	0.1	± 0.4	1	± 3	0	± 1
	JUN 94	0	± 1	0.5	± 0.6	0.3	± 0.5	-0.2	± 0.5	1	± 4	-1	± 2
	JUL 94	0.3	± 0.9	0.4	± 0.4	-0.3	± 0.4	0.2	± 0.4	1	± 2	0.9	± 0.9
	AUG 94	2	± 1	0.4	± 0.5	-0.2	± 0.5	0.1	± 0.5	3	± 3	0	± 1
	SEP 94	0	± 1	0.1	± 0.5	-0.1	± 0.5	-0.1	± 0.5	2	± 4	0	± 1
	OCT 94	-1	± 1	0.3	± 0.5	0.7	± 0.5	0.3	± 0.5	0	± 3	0	± 1
	NOV 94	1	± 1	0.6	± 0.5	-0.5	± 0.5	0.3	± 0.4	1	± 3	0	± 1
	DEC 94	1	± 1	0.4	± 0.6	0.2	± 0.5	-0.1	± 0.6	1	± 4	0	± 2
	MEAN	0.5	± 1.3	0.5	± 0.7	0.0	± 0.7	0.2	± 0.5	1	± 2	0.0	± 1.3
6I	JAN 94	0	± 1	0.6	± 0.5	0.2	± 0.5	0.3	± 0.5	-1	± 2	-1	± 1
	FEB 94	0	± 1	0.8	± 0.5	0.2	± 0.5	0.5	± 0.5	-2	± 2	-0.3	± 0.9
	MAR 94	0.4	± 0.9	0.3	± 0.4	0.0	± 0.5	0.2	± 0.4	2	± 2	0	± 1
	APR 94	1	± 1	0.3	± 0.6	0.4	± 0.5	0.5	± 0.6	-1	± 3	-1	± 1
	MAY 94	1.2	± 0.9	0.4	± 0.4	-0.2	± 0.4	0.4	± 0.4	-1	± 2	0.1	± 0.9
	JUN 94	1	± 1	-0.1	± 0.5	-0.3	± 0.5	0.5	± 0.5	-1	± 3	0	± 1
	JUL 94	1	± 1	0.0	± 0.5	0.2	± 0.5	-0.9	± 0.5	0	± 3	0	± 1
	AUG 94	0	± 1	0.5	± 0.5	-0.1	± 0.5	0.2	± 0.5	-1	± 3	-1.2	± 0.9
	SEP 94	0	± 1	0.5	± 0.6	0.4	± 0.6	0.1	± 0.5	0	± 4	0	± 2
	OCT 94	0.0	± 0.8	0.2	± 0.4	-0.2	± 0.4	0.3	± 0.4	2	± 2	0	± 1
	NOV 94	-0.2	± 0.9	0.5	± 0.4	0.1	± 0.4	-0.1	± 0.4	1	± 2	-0.3	± 0.9
	DEC 94	0	± 1	0.8	± 0.6	-0.4	± 0.6	0.7	± 0.5	0	± 4	0	± 2
	MEAN	0.4	± 0.8	0.4	± 0.6	0.0	± 0.5	0.2	± 0.8	0	± 2	-0.2	± 1.0

TABLE C-III.1 CONCENTRATIONS OF GAMMA EMITTERS IN FISH SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/KG WET ± 2 SIGMA

STC		COLLECTION PERIOD	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	CS-134	CS-137
4	PREDATOR	06/15-06/15/94	3000 ± 300	2 ± 8	0 ± 9	0 ± 20	-1 ± 8	-10 ± 20	1 ± 9	11 ± 9
		10/12-10/12/94	3300 ± 300	1 ± 10	10 ± 10	0 ± 20	10 ± 10	20 ± 20	0 ± 10	10 ± 10
		MEAN	3200 ± 400	1 ± 2	4 ± 10	0 ± 10	3 ± 10	10 ± 40	0 ± 2	11 ± 1
	BOTTOM FEEDER	06/15-06/15/94	2800 ± 300	-2 ± 7	-5 ± 7	10 ± 20	-3 ± 8	-10 ± 20	3 ± 7	1 ± 7
		10/13-10/13/94	3100 ± 300	10 ± 10	10 ± 10	-10 ± 40	0 ± 10	10 ± 30	0 ± 10	0 ± 10
		MEAN	3000 ± 400	4 ± 17	0 ± 14	0 ± 30	-2 ± 4	0 ± 20	3 ± 1	0 ± 2
6	PREDATOR	06/14-06/14/94	3400 ± 300	2 ± 8	0 ± 9	0 ± 20	-1 ± 8	-10 ± 20	1 ± 9	11 ± 9
		10/14-10/14/94	3100 ± 300	1 ± 8	2 ± 9	0 ± 20	2 ± 8	20 ± 20	1 ± 9	0 ± 9
		MEAN	3300 ± 400	2 ± 1	1 ± 3	0 ± 10	1 ± 4	10 ± 40	1 ± 0	5 ± 16
	BOTTOM FEEDER	06/15-06/15/94	3100 ± 300	3 ± 8	-1 ± 9	-10 ± 20	9 ± 8	20 ± 20	0 ± 10	7 ± 9
		11/03-11/03/94	3300 ± 300	1 ± 5	-2 ± 7	0 ± 20	7 ± 5	10 ± 10	-1 ± 5	9 ± 6
		MEAN	3200 ± 300	2 ± 4	-2 ± 1	0 ± 10	8 ± 3	20 ± 10	0 ± 3	8 ± 3

TABLE C-IV.1 CONCENTRATIONS OF GAMMA EMITTERS IN SILT SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/KG DRY ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-60	CS-134	CS-137	RA-226	TH-228
4J	06/16-06/16/94	200 ± 100	12000 ± 1000	10 ± 10	20 ± 10	30 ± 10	180 ± 20	700 ± 300	590 ± 60
	09/29-09/29/94	200 ± 100	12000 ± 1000	30 ± 20	80 ± 20	30 ± 20	290 ± 30	1700 ± 400	730 ± 70
	MEAN	200 ± 0	12000 ± 0	20 ± 30	50 ± 80	30 ± 0	240 ± 160	1200 ± 1400	660 ± 200
4T	06/16-06/16/94	2000 ± 400	16000 ± 2000	20 ± 30	-10 ± 30	60 ± 30	210 ± 50	1900 ± 800	1400 ± 100
	09/29-09/29/94	1200 ± 400	17000 ± 2000	20 ± 30	20 ± 30	70 ± 40	210 ± 60	1800 ± 900	1400 ± 100
	MEAN	1600 ± 1100	17000 ± 1000	20 ± 0	10 ± 40	70 ± 10	210 ± 0	1900 ± 100	1400 ± 0
6F	06/16-06/16/94	100 ± 200	12000 ± 1000	20 ± 20	10 ± 20	50 ± 30	120 ± 40	2300 ± 700	1300 ± 100
	09/29-09/29/94	1700 ± 400	14000 ± 1000	20 ± 30	-10 ± 30	50 ± 30	190 ± 50	2400 ± 900	1600 ± 200
	MEAN	900 ± 2300	13000 ± 3000	20 ± 0	0 ± 20	50 ± 0	160 ± 100	2400 ± 100	1500 ± 400

TABLE C-V.1 CONCENTRATIONS OF GROSS BETA IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF E-3 PCI/CU. METER ± 2 SIGMA

GROUP I - ON-SITE LOCATIONS

WEEK	1B		1Z		2	
01	17	± 3	18	± 3	21	± 3
02		(1)	26	± 4	18	± 4
03	22	± 4	27	± 4	21	± 4
04	23	± 4	22	± 3	22	± 3
05	26	± 3	23	± 3	23	± 4
06	24	± 4	27	± 3	25	± 3
07	21	± 4	21	± 3	28	± 4
08	15	± 4	12	± 3	12	± 4
09	18	± 3	15	± 3	18	± 3
10	17	± 4	18	± 4	21	± 4
11	16	± 3	19	± 3	15	± 3
12	15	± 3	14	± 3	15	± 3
13	10	± 3	9	± 3	11	± 3
14	17	± 3	17	± 3	17	± 3
15	9	± 4	7	± 3	7	± 4
16	19	± 3	15	± 3	16	± 3
17	17	± 3	20	± 4	21	± 4
18	17	± 4	16	± 3	26	± 4
19	9	± 4	13	± 4	15	± 4
20	10	± 3	9	± 3	10	± 3
21	15	± 3	15	± 3	13	± 3
22	14	± 5	15	± 4	11	± 3
23	16	± 3	19	± 3	16	± 3
24	21	± 3	22	± 4	22	± 4
25	22	± 9	25	± 4	19	± 3
26	13	± 4	15	± 3	13	± 4
27	17	± 4	27	± 5	22	± 4
28	20	± 4	18	± 4	18	± 4
29		(1)	17	± 3	28	± 7
30		(1)	17	± 3	18	± 4
31	16	± 4	19	± 3	19	± 3
32	13	± 4	18	± 3	16	± 3
33		(1)	15	± 3	11	± 3
34	13	± 3	12	± 3	13	± 3
35	29	± 4	28	± 4	25	± 4
36	23	± 3	19	± 3	20	± 3
37	25	± 4	26	± 4	23	± 4
38	23	± 3	22	± 3	21	± 3
39	15	± 3	14	± 3	15	± 3
40	15	± 3	15	± 3	15	± 3
41	20	± 4	18	± 4	16	± 4
42	28	± 4	26	± 4	27	± 4
43	20	± 3	20	± 3	20	± 3
44	19	± 3	19	± 3	18	± 3
45	22	± 3	22	± 3	22	± 3
46	23	± 3	24	± 3	24	± 3
47	17	± 3	15	± 3	17	± 3
48	27	± 3	25	± 3	25	± 3
49	21	± 4	15	± 4	17	± 4
50	15	± 3	15	± 3	20	± 4
51	29	± 4	29	± 4	32	± 4
52	24	± 3	25	± 3	22	± 3
MEAN	19	± 10	19	± 11	19	± 10

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-V.1 CONCENTRATIONS OF GROSS BETA IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF E-3 PCI/CU. METER ± 2 SIGMA

GROUP II - INTERMEDIATE DISTANCE LOACATIONS

WEEK	3A		5		14		15		17		32		38	
01	19	± 3	24	± 3	17	± 2	18	± 2	19	± 3	20	± 3	19	± 3
02	22	± 4	19	± 4	21	± 5	23	± 5	14	± 4	20	± 5	20	± 4
03	20	± 3	25	± 3	44	± 6	22	± 3	30	± 5	36	± 5	25	± 3
04	24	± 4	19	± 3	21	± 3	15	± 3	18	± 3	16	± 3	21	± 3
05	24	± 3	26	± 3	28	± 3	23	± 3	24	± 3	25	± 3	27	± 3
06	25	± 3	20	± 3	24	± 3	27	± 3	18	± 3	22	± 3	27	± 3
07	18	± 3	24	± 4	22	± 4	25	± 4	25	± 4	24	± 4	20	± 3
08	11	± 3	12	± 3	11	± 3	10	± 4	10	± 3	8	± 3	10	± 3
09	17	± 3	14	± 3	18	± 3	19	± 3	19	± 3	16	± 3	19	± 3
10	15	± 4	16	± 3	16	± 3	18	± 4	17	± 3	14	± 3	19	± 3
11	15	± 3	16	± 3	17	± 3	17	± 3	19	± 3	14	± 3	17	± 3
12	15	± 3	17	± 3	16	± 3	15	± 3	14	± 3	14	± 3	16	± 3
13	10	± 3	12	± 3	12	± 3	9	± 3	11	± 3	12	± 3	13	± 3
14	17	± 3	15	± 3	16	± 3	16	± 3	14	± 3	14	± 3	17	± 3
15	8	± 4	9	± 4	8	± 4	5	± 4	7	± 4	10	± 4	10	± 4
16	15	± 3	18	± 3	17	± 3	16	± 3	15	± 3	18	± 3	16	± 3
17	21	± 4	21	± 3	21	± 3	16	± 3	16	± 3	24	± 3	17	± 3
18	18	± 3	24	± 4	15	± 4	12	± 4	18	± 4	15	± 4	30	± 4
19	8	± 4	9	± 4	16	± 4	10	± 4	9	± 4	8	± 3	11	± 4
20	9	± 3	9	± 3	9	± 3	7	± 3	8	± 3	9	± 3	8	± 3
21	15	± 3	15	± 3	15	± 3	15	± 3	10	± 3	16	± 3	19	± 3
22	13	± 3	11	± 3	13	± 3	11	± 3	10	± 3	13	± 3	14	± 3
23	15	± 3	17	± 4	18	± 3	14	± 3	17	± 3	16	± 3	18	± 3
24	22	± 4	17	± 4	16	± 3	17	± 3	19	± 3	22	± 4	18	± 3
25	21	± 8	20	± 3	22	± 3	17	± 3	18	± 3	18	± 3	20	± 3
26	16	± 4	15	± 4	19	± 3	12	± 2	16	± 3	11	± 4	18	± 3
27	20	± 8	22	± 5	23	± 5	24	± 5	29	± 5	20	± 6	29	± 6
28	13	± 5	13	± 5	18	± 3	15	± 3	11	± 3	19	± 4	16	± 4
29	30	± 10		(1)	16	± 3	17	± 3	17	± 3	17	± 3	21	± 3
30	19	± 8	17	± 3	19	± 3	16	± 3	17	± 3		(1)	16	± 3
31	20	± 10	17	± 3	18	± 3	30	± 10	17	± 3	12	± 9	20	± 3
32	15	± 3	12	± 5	21	± 4	14	± 3	18	± 4	18	± 3	18	± 3
33	13	± 3	12	± 3	13	± 3	11	± 3	13	± 3	20	± 9	14	± 3
34	12	± 3	15	± 3	14	± 3	12	± 3	12	± 3	13	± 3	17	± 3
35	26	± 4	23	± 3	23	± 3	22	± 3	22	± 3	22	± 3	25	± 3
36	19	± 3	21	± 4	20	± 4	18	± 4	20	± 4	22	± 4	21	± 4
37	24	± 4	23	± 4	25	± 4	20	± 3	22	± 4	24	± 4	24	± 4
38	19	± 3	20	± 3	17	± 3	18	± 3	19	± 3	18	± 3	21	± 3
39	15	± 3	9	± 6	14	± 3	14	± 3	14	± 3	13	± 3	16	± 3
40	16	± 3	13	± 3	17	± 3	11	± 3	13	± 3	13	± 3	18	± 3
41	15	± 4	14	± 3	17	± 4	15	± 4	18	± 4	16	± 4	18	± 4
42	24	± 3	24	± 3	26	± 3	21	± 3	24	± 4	28	± 4	26	± 4
43	19	± 3	16	± 3	21	± 3	19	± 3	17	± 3	20	± 3	20	± 3
44	16	± 3	21	± 3	19	± 3	17	± 3	20	± 3	21	± 3	16	± 3
45	21	± 3	26	± 4	20	± 3	19	± 3	21	± 4	20	± 3	21	± 3
46	24	± 3	22	± 3	22	± 3	19	± 3	23	± 3	20	± 3	21	± 3
47	17	± 3	17	± 3	14	± 3	17	± 3	15	± 3	16	± 3	15	± 3
48	26	± 3	24	± 3	25	± 3	20	± 3	24	± 3	23	± 3	24	± 3
49	17	± 4	14	± 4	15	± 4	13	± 4	13	± 4	13	± 4	15	± 4
50	18	± 4	17	± 3	16	± 3	16	± 4	16	± 4	20	± 4	16	± 4
51	30	± 4	33	± 4	33	± 4	29	± 4	30	± 4	30	± 4	29	± 4
52	21	± 3	26	± 3	25	± 3	21	± 3	22	± 3	21	± 3	24	± 3
MEAN	18	± 10	18	± 11	19	± 12	17	± 10	17	± 11	18	± 11	19	± 10

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-V.1 CONCENTRATIONS OF GROSS BETA IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF E-3 PCI/CU. METER ± 2 SIGMA

GROUP III - CONTROL LOACATIONS

WEEK	4A		6E		12D	
01	17	± 3	19	± 3	15	± 3
02	16	± 4	20	± 5	18	± 3
03	19	± 3	25	± 4	22	± 4
04	17	± 3	23	± 4	13	± 3
05	25	± 4	25	± 3	27	± 3
06	22	± 3	24	± 4	19	± 3
07	19	± 3	23	± 4	21	± 3
08	11	± 4	13	± 4	13	± 3
09	17	± 3	19	± 3	16	± 3
10	13	± 3	18	± 4	19	± 3
11	14	± 3	17	± 3	16	± 3
12	16	± 3	16	± 3	16	± 3
13	10	± 3	14	± 3	18	± 3
14	16	± 3	17	± 4	20	± 3
15	6	± 4	11	± 4	21	± 3
16	15	± 3	19	± 3	22	± 3
17	25	± 4	19	± 3	16	± 3
18	23	± 4	16	± 4	16	± 3
19	10	± 4	9	± 4	27	± 4
20	9	± 3	10	± 3	10	± 2
21	16	± 3	18	± 3	17	± 3
22	12	± 3	12	± 3	17	± 3
23	11	± 3	20	± 4	18	± 3
24	20	± 3	19	± 3	20	± 3
25	18	± 3	18	± 3	21	± 3
26	12	± 3	18	± 3	20	± 3
27	20	± 4	21	± 5	19	± 3
28	16	± 4	16	± 4	10	± 2
29	20	± 3	21	± 3	12	± 3
30	18	± 3	18	± 3	17	± 3
31	17	± 3	22	± 4	18	± 3
32	13	± 3	14	± 3	19	± 3
33	15	± 3	16	± 3	13	± 3
34	14	± 3	14	± 3	21	± 3
35	26	± 4	28	± 3	18	± 2
36	14	± 3	19	± 4	24	± 3
37	22	± 4	26	± 4	34	± 4
38	22	± 3	20	± 3	15	± 3
39	15	± 3	16	± 3	19	± 3
40	14	± 3	13	± 3	16	± 3
41	17	± 4	18	± 4	21	± 3
42	26	± 4	29	± 4	27	± 3
43	19	± 3	17	± 3	19	± 3
44	17	± 3	19	± 3	17	± 3
45	24	± 3	21	± 4	24	± 3
46	14	± 3	23	± 3	20	± 3
47	18	± 3	18	± 4	20	± 3
48	23	± 3	26	± 3	28	± 3
49	14	± 3	15	± 4	19	± 3
50	15	± 3	19	± 4	20	± 3
51	32	± 4	32	± 4	25	± 3
52	24	± 3	22	± 3	20	± 3
MEAN	17	± 10	19	± 9	19	± 9

TABLE C-V.2 MONTHLY AND YEARLY MEAN VALUES OF GROSS BETA CONCENTRATIONS (E-3 PCI/CU. METER) IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

GROUP I - ON-SITE LOCATIONS

COLLECTION PERIOD	MIN.	MAX.	MEAN ± 2 SD	
12/31/93-01/29/94	17	27	22	± 6
01/28/94-02/25/94	12	28	21	± 11
02/25/94-03/31/94	9	21	15	± 7
03/31/94-04/30/94	7	21	15	± 10
04/29/94-06/03/94	9	26	14	± 9
06/03/94-07/03/94	13	25	19	± 8
07/03/94-07/29/94	17	28	20	± 8
07/29/94-09/02/94	11	29	18	± 12
09/02/94-09/30/94	14	26	21	± 8
09/30/94-10/28/94	15	28	20	± 9
10/28/94-12/04/94	15	27	21	± 7
12/04/94-12/30/94	15	32	22	± 12
12/31/93-12/30/94	7	32	19	± 10

GROUP II - INTERMEDIATE DISTANCE LOCATIONS

COLLECTION PERIOD	MIN.	MAX.	MEAN ± 2 SD	
12/31/93-01/29/94	14	44	22	± 12
01/28/94-02/25/94	8	28	20	± 13
02/25/94-04/01/94	9	19	15	± 5
03/31/94-04/30/94	5	24	15	± 9
04/29/94-06/04/94	7	30	13	± 10
06/03/94-07/04/94	11	22	17	± 5
07/03/94-07/29/94	11	30	19	± 10
07/29/94-09/03/94	11	30	17	± 10
09/02/94-10/01/94	9	25	19	± 8
09/30/94-10/28/94	11	28	19	± 9
10/28/94-12/05/94	14	26	20	± 7
12/04/94-12/30/94	13	33	21	± 13
12/31/93-12/30/94	5	44	18	± 11

GROUP III - CONTROL LOCATIONS

COLLECTION PERIOD	MIN.	MAX.	MEAN ± 2 SD	
12/31/93-01/31/94	13	25	19	± 7
01/29/94-02/28/94	11	27	20	± 11
02/25/94-04/01/94	10	19	16	± 5
03/28/94-05/02/94	6	25	17	± 10
04/29/94-06/04/94	9	27	15	± 11
05/31/94-07/04/94	11	21	18	± 6
06/27/94-08/01/94	10	21	18	± 7
07/29/94-09/03/94	13	28	18	± 10
08/29/94-10/03/94	14	34	20	± 11
09/30/94-10/31/94	13	29	20	± 10
10/28/94-12/05/94	14	26	20	± 7
11/28/94-01/04/95	14	32	22	± 12
12/31/93-01/04/95	6	34	18	± 10

TABLE C-V.3 CONCENTRATIONS OF GAMMA EMITTERS IN AIR PARTICULATE SAMPLES
COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF E-3 PCI/CU. METER ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	CS-134	CS-137	RA-226	TH-228
1B	12/31-03/31/94	76 ± 8	6 ± 5	-0.2 ± 0.4	0.2 ± 0.3	0 ± 5	0.0 ± 0.4
	03/31-07/03/94	89 ± 9	8 ± 5	-0.1 ± 0.4	0.1 ± 0.4	2 ± 5	0.1 ± 0.5
	07/03-09/30/94	88 ± 9	1 ± 6	0.4 ± 0.4	0.0 ± 0.4	-1 ± 7	-0.3 ± 0.7
	09/30-12/30/94	73 ± 7	2 ± 4	0.0 ± 0.3	0.1 ± 0.3	-7 ± 5	-0.7 ± 0.5
	MEAN	82 ± 16	4 ± 7	0.0 ± 0.5	0.1 ± 0.1	-2 ± 8	-0.2 ± 0.7
1Z	12/31-03/31/94	65 ± 7	0 ± 5	0.0 ± 0.3	0.0 ± 0.3	-6 ± 6	0.1 ± 0.5
	03/31-07/03/94	85 ± 8	0 ± 4	-0.1 ± 0.2	-0.1 ± 0.2	-3 ± 4	-0.1 ± 0.3
	07/03-09/30/94	59 ± 6	19 ± 6	0.0 ± 0.4	0.0 ± 0.4	-1 ± 5	-0.4 ± 0.4
	09/30-12/30/94	79 ± 8	0 ± 4	0.1 ± 0.3	0.1 ± 0.3	-5 ± 6	0.1 ± 0.5
	MEAN	72 ± 24	5 ± 19	0.0 ± 0.2	0.0 ± 0.1	-4 ± 4	-0.1 ± 0.5
2	12/31-03/31/94	78 ± 8	-1 ± 4	-0.1 ± 0.3	-0.2 ± 0.3	-1 ± 6	0.1 ± 0.5
	03/31-07/03/94	91 ± 9	5 ± 4	0.0 ± 0.3	0.2 ± 0.3	1 ± 5	-0.4 ± 0.5
	07/03-09/30/94	73 ± 7	4 ± 4	-0.3 ± 0.3	0.1 ± 0.3	-1 ± 4	-0.1 ± 0.3
	09/30-12/30/94	78 ± 8	2 ± 4	0.1 ± 0.3	0.0 ± 0.2	-1 ± 3	0.0 ± 0.3
	MEAN	80 ± 15	3 ± 5	-0.1 ± 0.3	0.0 ± 0.3	0 ± 2	-0.1 ± 0.4
3A	12/31-03/31/94	70 ± 7	2 ± 4	0.2 ± 0.3	-0.3 ± 0.3	-2 ± 5	-0.7 ± 0.5
	03/31-07/03/94	86 ± 9	10 ± 4	-0.2 ± 0.2	-0.1 ± 0.2	0 ± 4	-0.1 ± 0.3
	07/03-09/30/94	72 ± 7	5 ± 4	0.0 ± 0.3	0.3 ± 0.3	0 ± 6	-0.1 ± 0.5
	09/30-12/30/94	69 ± 7	7 ± 4	0.0 ± 0.2	-0.1 ± 0.2	-4 ± 4	-0.2 ± 0.4
	MEAN	74 ± 16	6 ± 7	0.0 ± 0.3	-0.1 ± 0.5	-2 ± 4	-0.3 ± 0.6
12D	01/03-04/04/94	73 ± 7	1 ± 3	0.1 ± 0.3	0.1 ± 0.2	-6 ± 3	-0.1 ± 0.3
	04/04-07/05/94	86 ± 9	2 ± 4	0.0 ± 0.2	0.2 ± 0.2	-1 ± 4	-0.1 ± 0.4
	07/05-10/03/94	65 ± 6	5 ± 5	-0.1 ± 0.4	0.3 ± 0.4	-4 ± 5	-0.4 ± 0.5
	10/03-01/04/95	67 ± 7	15 ± 5	-0.4 ± 0.3	0.1 ± 0.4	1 ± 5	0.1 ± 0.4
	MEAN	73 ± 19	6 ± 13	-0.1 ± 0.4	0.2 ± 0.2	-3 ± 6	-0.1 ± 0.4

TABLE C-VI.1 CONCENTRATIONS OF I-131 IN AIR IODINE SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF E-3 PCI/CU. METER ± 2 SIGMA

	GROUP I						GROUP II		GROUP III	
WEEK	1B		1Z		2		3A		12D	
01	0	± 20	0	± 20	0	± 20	0	± 20	0	± 10
02	(1)		-20	± 20	-20	± 30	-20	± 30	0	± 9
03	10	± 10	10	± 10	10	± 20	10	± 10	6	± 9
04	0	± 20	(1)		0	± 20	0	± 20	-1	± 8
05	0	± 10	0	± 10	0	± 20	0	± 20	1	± 8
06	0	± 10	-3	± 8	-3	± 9	-3	± 8	5	± 8
07	0	± 20	0	± 20	0	± 20	0	± 20	-1	± 9
08	-30	± 20	-30	± 20	-30	± 20	-30	± 20	-15	± 8
09	0	± 10	10	± 10	10	± 10	10	± 10	4	± 8
10	10	± 30	10	± 20	10	± 20	10	± 20	0	± 10
11	10	± 10	10	± 10	10	± 20	10	± 10	3	± 7
12	10	± 20	10	± 20	10	± 20	10	± 20	2	± 10
13	0	± 20	0	± 20	-10	± 20	0	± 20	4	± 7
14	-10	± 20	-10	± 10	-10	± 10	-10	± 20	-4	± 8
15	10	± 20	10	± 20	10	± 20	10	± 20	6	± 8
16	0	± 20	0	± 20	0	± 20	0	± 20	1	± 8
17	0	± 10	0	± 20	0	± 20	0	± 20	1	± 8
18	-10	± 20	-10	± 20	-10	± 20	-10	± 20	-2	± 7
19	10	± 30	10	± 30	10	± 30	10	± 30	0	± 8
20	10	± 20	10	± 20	10	± 20	10	± 20	0	± 10
21	0	± 10	0	± 10	0	± 10	0	± 10	1	± 1
22	0	± 40	0	± 30	0	± 20	0	± 20	0	± 10
23	0	± 20	0	± 20	0	± 20	0	± 20	-10	± 10
24	20	± 20	20	± 20	20	± 20	20	± 20	11	± 10
25	-10	± 50	10	± 20	-10	± 20	-30	± 50	3	± 7
26	0	± 10	2	± 7	0	± 10	0	± 10	1	± 5
27	0	± 20	0	± 20	0	± 20	0	± 40	0	± 10
28	-20	± 10	-20	± 10	-20	± 10	-30	± 20	-1	± 6
29	(1)		10	± 20	20	± 50	30	± 90	0	± 7
30	(1)		-20	± 20	-20	± 20	-10	± 30	0	± 10
31	-10	± 10	-7	± 10	-7	± 10	-3	± 5	0	± 7
32	20	± 30	10	± 20	10	± 20	10	± 20	0	± 20
33	(1)		-10	± 20	-10	± 20	-10	± 20	-3	± 6
34	-7	± 9	-8	± 9	-8	± 9	-8	± 9	-2	± 5
35	10	± 20	10	± 20	10	± 20	10	± 20	3	± 9
36	0	± 10	0	± 20	0	± 10	0	± 10	-2	± 9
37	0	± 20	-10	± 20	-10	± 20	-10	± 20	-2	± 8
38	10	± 20	10	± 20	10	± 20	10	± 20	5	± 7
39	0	± 10	0	± 20	0	± 20	0	± 20	0	± 8
40	10	± 20	10	± 20	10	± 20	10	± 20	10	± 10
41	0	± 20	0	± 20	0	± 20	0	± 20	10	± 10
42	-10	± 20	-10	± 20	-10	± 20	-10	± 20	0	± 6
43	10	± 20	10	± 20	10	± 20	10	± 20	0	± 8
44	10	± 10	10	± 20	10	± 20	10	± 20	3	± 8
45	0	± 20	0	± 20	0	± 20	0	± 20	10	± 10
46	0	± 40	0	± 40	0	± 40	0	± 40	0	± 20
47	0	± 20	0	± 20	0	± 20	0	± 20	6	± 8
48	-10	± 10	-10	± 10	-10	± 20	-10	± 10	0	± 10
49	0	± 20	0	± 20	0	± 20	0	± 20	0	± 10
50	10	± 20	10	± 20	10	± 20	10	± 20	-2	± 8
51	0	± 10	0	± 10	0	± 10	0	± 10	0	± 5
52	-10	± 10	-10	± 10	-10	± 10	-10	± 10	3	± 8
MEAN	1	± 18	0	± 18	0	± 20	0	± 22	1	± 8

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-VII.1 CONCENTRATIONS OF I-131 IN MILK SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

	NEARBY FARMS			INTERMEDIATE DISTANCE FARMS				DISTANT FARMS			
COLLECTION DATE	G	J	O	D	L	N	P	A	B	C	E
01/10/94	-0.01 ± 0.04	-0.03 ± 0.04	-0.02 ± 0.04			0.01 ± 0.04		-0.04 ± 0.05			
02/06/94		-0.01 ± 0.04					0.03 ± 0.05	-0.04 ± 0.06			
02/07/94	-0.02 ± 0.04		-0.02 ± 0.04	-0.01 ± 0.04	0.00 ± 0.05	-0.01 ± 0.04			0.00 ± 0.04	-0.06 ± 0.04	-0.01 ± 0.05
03/07/94	0.00 ± 0.04	-0.02 ± 0.04	-0.02 ± 0.04			0.00 ± 0.05		-0.03 ± 0.04			
04/11/94	-0.04 ± 0.05	-0.09 ± 0.05	0.01 ± 0.05			0.00 ± 0.05		0.02 ± 0.05			
04/25/94	-0.02 ± 0.05	-0.04 ± 0.04	0.01 ± 0.05			0.02 ± 0.04		-0.01 ± 0.04			
05/09/94	0.04 ± 0.06	-0.02 ± 0.06	0.02 ± 0.07	-0.08 ± 0.06	0.01 ± 0.04	0.05 ± 0.05	0.03 ± 0.04	-0.01 ± 0.05	0.05 ± 0.05	-0.03 ± 0.05	0.00 ± 0.04
05/23/94	-0.01 ± 0.04	0.02 ± 0.05	-0.04 ± 0.06			0.04 ± 0.05		-0.03 ± 0.05			
06/06/94	0.04 ± 0.05	0.03 ± 0.05	-0.02 ± 0.05			0.00 ± 0.05		0.02 ± 0.05			
06/20/94	-0.02 ± 0.04	-0.04 ± 0.04	0.00 ± 0.04			0.00 ± 0.04		0.00 ± 0.04			
07/04/94	-0.1 ± 0.1	0.1 ± 0.2	0.03 ± 0.06			0.00 ± 0.05		0.03 ± 0.07			
07/18/94	-0.01 ± 0.06	0.02 ± 0.05	-0.02 ± 0.05			-0.01 ± 0.05		0.03 ± 0.05			
08/01/94	0.01 ± 0.05	-0.02 ± 0.04	-0.04 ± 0.05			0.03 ± 0.04		0.01 ± 0.05			
08/15/94	-0.02 ± 0.06	0.01 ± 0.06	-0.07 ± 0.05	-0.03 ± 0.06	-0.08 ± 0.06	-0.02 ± 0.06	0.01 ± 0.07	0.01 ± 0.06	-0.01 ± 0.05	0.03 ± 0.06	0.03 ± 0.07
08/29/94	-0.06 ± 0.05	-0.05 ± 0.04	-0.09 ± 0.04			0.00 ± 0.05		-0.01 ± 0.04			
09/12/94	0.02 ± 0.05	-0.05 ± 0.05	-0.06 ± 0.05			0.00 ± 0.06		-0.03 ± 0.07			
09/26/94	0.02 ± 0.05	0.00 ± 0.05	0.00 ± 0.05			0.04 ± 0.05		0.01 ± 0.05			
10/10/94	0.02 ± 0.06	-0.09 ± 0.05	0.03 ± 0.06			-0.04 ± 0.05		0.00 ± 0.05			
10/24/94	0.00 ± 0.06	-0.01 ± 0.05	0.03 ± 0.07			-0.02 ± 0.06		-0.05 ± 0.06			
11/07/94	-0.01 ± 0.04	-0.03 ± 0.04	-0.04 ± 0.03	-0.02 ± 0.05	-0.08 ± 0.04	0.02 ± 0.04	-0.03 ± 0.05	0.00 ± 0.04	-0.06 ± 0.04	-0.03 ± 0.04	0.02 ± 0.04
11/21/94	0.00 ± 0.06	0.01 ± 0.05	0.05 ± 0.05			-0.04 ± 0.07		0.01 ± 0.06			
12/12/94	0.01 ± 0.04	-0.01 ± 0.05	-0.10 ± 0.05			0.01 ± 0.06		-0.03 ± 0.05			
MEAN	-0.01 ± 0.05	-0.01 ± 0.10	-0.02 ± 0.08	-0.03 ± 0.07	-0.03 ± 0.10	0.00 ± 0.05	0.01 ± 0.05	-0.01 ± 0.05	0.00 ± 0.09	-0.02 ± 0.07	0.01 ± 0.04

TABLE C-VII.2 CONCENTRATIONS OF GAMMA EMITTERS IN MILK SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	K-40	CS-134	CS-137	BA-140	LA-140
A	02/06/94	1400 ± 100	1 ± 2	1 ± 2	8 ± 9	-1 ± 4
	06/20/94	1300 ± 100	1 ± 3	2 ± 3	0 ± 20	-3 ± 7
	08/15/94	1600 ± 200	-1 ± 3	3 ± 3	-1 ± 9	0 ± 4
	11/07/94	1500 ± 200	2 ± 2	-1 ± 2	4 ± 5	1 ± 2
	MEAN	1500 ± 300	1 ± 2	1 ± 3	3 ± 8	-1 ± 3
G	02/07/94	1500 ± 200	0 ± 2	2 ± 2	0 ± 7	0 ± 3
	06/20/94	1400 ± 100	0 ± 2	1 ± 2	10 ± 10	-1 ± 6
	08/15/94	1400 ± 100	1 ± 3	-3 ± 3	0 ± 10	-1 ± 4
	11/07/94	1500 ± 100	-1 ± 3	2 ± 3	1 ± 7	1 ± 3
	MEAN	1500 ± 100	0 ± 1	1 ± 5	2 ± 6	0 ± 2
J	02/06/94	1300 ± 100	1 ± 2	1 ± 2	6 ± 9	0 ± 4
	06/20/94	1400 ± 100	1 ± 2	2 ± 2	0 ± 10	0 ± 4
	08/15/94	1300 ± 100	0 ± 2	1 ± 2	-5 ± 8	2 ± 3
	11/07/94	1300 ± 100	-3 ± 2	0 ± 2	5 ± 6	-3 ± 2
	MEAN	1300 ± 100	0 ± 4	1 ± 2	1 ± 11	0 ± 4
N	02/07/94	1400 ± 100	1 ± 2	2 ± 2	3 ± 7	0 ± 2
	06/20/94	1300 ± 100	-2 ± 2	2 ± 2	10 ± 10	-5 ± 4
	08/15/94	1200 ± 100	1 ± 2	2 ± 2	-7 ± 8	-2 ± 3
	11/07/94	1300 ± 100	-1 ± 3	0 ± 3	-4 ± 9	2 ± 4
	MEAN	1300 ± 200	0 ± 3	1 ± 2	1 ± 15	-1 ± 6
O	02/07/94	1400 ± 100	-1 ± 2	3 ± 2	6 ± 8	-1 ± 3
	06/20/94	1400 ± 100	-1 ± 3	4 ± 3	0 ± 20	1 ± 6
	08/15/94	1300 ± 100	0 ± 2	0 ± 2	0 ± 10	0 ± 4
	11/07/94	1400 ± 100	0 ± 2	2 ± 2	1 ± 6	1 ± 3
	MEAN	1400 ± 100	0 ± 1	2 ± 3	0 ± 9	0 ± 2

TABLE C-VIII.1 MONTHLY TLD RESULTS FOR PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF MILLI-ROENTGEN/STD. MO. ± 2 S.D.

STATION CODE	MEAN ± 2 S.D. (1)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1A	6.0 ± 1.6	6.7 ± 1.0	5.5 ± 0.3	6.1 ± 0.3	4.9 ± 0.8	5.5 ± 0.4	5.7 ± 0.4	5.9 ± 0.7	5.9 ± 0.4	5.3 ± 0.3	5.7 ± 0.3	7.2 ± 0.5	7.6 ± 1.2
1B	5.7 ± 1.5	6.6 ± 0.3	5.5 ± 0.7	5.2 ± 0.5	4.4 ± 0.2	5.0 ± 0.6	5.5 ± 0.2	6.1 ± 0.4	5.9 ± 0.6	5.6 ± 0.3	6.1 ± 0.7	5.7 ± 0.9	7.2 ± 0.5
1C	6.8 ± 2.0	7.6 ± 0.5	5.9 ± 0.8	5.9 ± 1.0	5.0 ± 1.3	6.0 ± 0.4	6.9 ± 0.5	6.9 ± 0.5	7.0 ± 0.3	6.9 ± 0.4	7.3 ± 0.4	7.5 ± 0.3	8.8 ± 0.6
1D	6.2 ± 1.7	6.9 ± 1.1	5.5 ± 0.3	5.8 ± 0.9	4.4 ± 0.9	5.7 ± 0.2	5.9 ± 0.5	6.5 ± 0.4	6.6 ± 0.5	6.2 ± 0.6	6.5 ± 0.7	6.9 ± 0.6	7.6 ± 0.8
1E	6.2 ± 1.4	6.7 ± 0.7	5.7 ± 0.3	5.5 ± 0.2	5.0 ± 0.8	5.6 ± 0.3	6.0 ± 0.5	6.5 ± 0.4	6.5 ± 0.5	6.4 ± 0.5	6.5 ± 0.6	6.9 ± 0.5	7.6 ± 1.2
1F	7.5 ± 1.8	8.1 ± 1.0	6.2 ± 0.7	7.5 ± 1.0	5.6 ± 1.1	6.8 ± 0.3	7.4 ± 0.7	7.5 ± 0.7	7.7 ± 0.4	7.8 ± 0.6	8.0 ± 0.7	8.0 ± 0.5	8.9 ± 0.8
1G	5.1 ± 1.0	5.9 ± 0.4	5.2 ± 0.3	4.9 ± 0.4	4.0 ± 0.5	4.8 ± 0.4	4.8 ± 0.2	5.2 ± 0.3	5.3 ± 0.2	5.1 ± 0.4	5.2 ± 0.2	5.3 ± 0.4	6.0 ± 0.3
1H	6.6 ± 1.6	7.1 ± 0.3	6.2 ± 0.4	6.8 ± 0.9	4.5 ± 2.4	6.1 ± 0.3	6.5 ± 0.5	6.6 ± 0.3	7.0 ± 0.3	6.7 ± 0.4	6.6 ± 0.7	7.0 ± 0.0	7.8 ± 0.8
1I	5.5 ± 1.4	6.9 ± 0.4	5.2 ± 0.2	5.5 ± 1.0	4.0 ± 0.8	4.8 ± 0.4	5.3 ± 0.2	5.5 ± 0.6	5.6 ± 0.3	5.7 ± 0.2	5.6 ± 0.3	5.7 ± 0.8	6.4 ± 0.3
1J	7.2 ± 2.0	8.0 ± 0.6	5.8 ± 0.4	5.8 ± 0.7	5.9 ± 0.2	7.5 ± 1.1	7.1 ± 0.5	6.7 ± 1.1	7.7 ± 0.9	7.4 ± 0.5	7.7 ± 0.4	8.1 ± 0.6	8.9 ± 0.5
1L	5.1 ± 1.5	6.0 ± 0.4	5.6 ± 0.3	5.4 ± 0.5	3.8 ± 0.5	4.5 ± 0.4	4.9 ± 0.2	4.9 ± 0.3	5.0 ± 0.1	4.6 ± 0.2	4.6 ± 0.1	5.6 ± 0.2	6.7 ± 1.1
1M	4.3 ± 1.1	5.1 ± 0.3	4.6 ± 0.3	4.4 ± 0.5	3.2 ± 0.4	3.5 ± 0.4	4.0 ± 0.3	4.3 ± 0.3	4.0 ± 0.1	4.3 ± 0.1	4.3 ± 0.8	4.6 ± 0.3	5.1 ± 0.8
2	6.4 ± 1.4	7.6 ± 1.3	5.8 ± 0.4	6.1 ± 0.4	5.2 ± 0.7	5.8 ± 0.4	6.2 ± 0.3	6.6 ± 0.7	6.1 ± 0.7	6.6 ± 0.9	6.7 ± 0.7	6.7 ± 0.6	7.7 ± 1.0
3A	4.9 ± 1.5	6.1 ± 0.7	4.7 ± 0.4	4.9 ± 0.4	3.4 ± 0.6	4.2 ± 0.2	4.6 ± 0.4	4.8 ± 1.0	4.9 ± 0.2	5.2 ± 1.0	4.9 ± 0.1	5.3 ± 0.3	6.1 ± 0.7
4K	4.9 ± 1.6	6.6 ± 0.4	5.0 ± 0.4	4.9 ± 0.9	3.5 ± 0.5	4.0 ± 0.4	4.5 ± 0.7	4.8 ± 0.2	4.2 ± 0.3	4.9 ± 0.8	5.1 ± 0.7	5.3 ± 0.5	5.8 ± 0.3
5	6.1 ± 1.1	7.0 ± 0.9	6.1 ± 0.3	5.8 ± 0.2	4.8 ± 1.4	5.7 ± 0.4	6.0 ± 0.5	6.3 ± 0.2	6.3 ± 0.3	6.3 ± 0.3	6.3 ± 0.9	6.6 ± 0.4	6.2 ± 3.0
6B	5.5 ± 1.7	6.9 ± 0.4	6.0 ± 0.6	5.7 ± 0.3	4.0 ± 0.6	4.6 ± 0.2	4.9 ± 0.2	5.6 ± 0.2	5.0 ± 0.5	5.6 ± 0.5	5.7 ± 0.3	5.9 ± 0.3	6.7 ± 0.5
1NN	7.4 ± 1.6	8.1 ± 1.4	7.0 ± 0.8	7.3 ± 0.8	5.6 ± 0.8	6.9 ± 0.6	7.5 ± 0.4	7.0 ± 0.8	7.7 ± 0.7	7.3 ± 0.5	7.1 ± 0.6	8.1 ± 1.0	8.9 ± 2.0
14	6.7 ± 1.5	8.1 ± 0.6	6.7 ± 1.1	6.4 ± 0.4	5.4 ± 0.7	5.8 ± 0.5	6.5 ± 0.3	6.6 ± 0.4	6.3 ± 1.0	6.8 ± 0.6	6.7 ± 0.5	7.2 ± 0.3	7.8 ± 1.0
12D	5.2 ± 1.0	4.7 ± 0.7	4.6 ± 0.5	5.0 ± 0.3	5.2 ± 0.3	4.7 ± 0.1	5.3 ± 0.1	5.5 ± 0.3	4.5 ± 0.1	5.7 ± 0.2	5.9 ± 0.2	5.5 ± 0.2	5.9 ± 0.2
15	6.4 ± 1.4	7.4 ± 0.5	5.4 ± 0.2	6.0 ± 0.6	5.1 ± 0.5	6.6 ± 0.7	6.4 ± 0.3	6.7 ± 0.2	6.5 ± 0.4	6.7 ± 0.3	6.1 ± 1.1	7.2 ± 0.4	7.2 ± 2.8
16	6.5 ± 1.6	7.2 ± 0.5	6.7 ± 0.4	6.2 ± 0.2	5.3 ± 1.3	5.8 ± 0.4	5.5 ± 0.8	6.8 ± 1.1	6.8 ± 0.4	6.9 ± 0.4	6.4 ± 0.5	5.9 ± 0.2	8.1 ± 0.3
17	7.5 ± 1.8	8.1 ± 0.8	7.1 ± 0.3	6.5 ± 0.6	6.4 ± 0.9	6.9 ± 0.5	6.7 ± 1.0	7.5 ± 0.4	7.7 ± 1.0	7.7 ± 0.2	7.5 ± 1.0	8.2 ± 0.2	9.6 ± 0.9
18	6.8 ± 1.4	7.7 ± 0.7	7.2 ± 0.7	6.0 ± 0.5	5.6 ± 0.7	6.3 ± 0.5	6.1 ± 0.4	7.0 ± 0.4	6.8 ± 0.2	7.0 ± 0.3	7.0 ± 0.4	7.2 ± 0.4	7.9 ± 0.5

1. MEAN AND TWO TIMES THE STANDARD DEVIATION OF THE MONTHLY RESULTS.

TABLE C-VIII.1 MONTHLY TLD RESULTS FOR PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF MILLI-ROENTGEN/STD. MO. ± 2 S.D.

STATION CODE	MEAN ± 2 S.D. (1)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
19	6.8 ± 1.5	7.5 ± 0.8	7.1 ± 0.3	6.2 ± 0.8	5.6 ± 0.7	6.2 ± 1.0	6.4 ± 0.5	6.4 ± 0.4	6.7 ± 0.6	6.8 ± 0.6	6.7 ± 0.5	7.2 ± 0.5	8.6 ± 0.7
20	6.0 ± 1.7	7.4 ± 0.3	6.0 ± 0.7	5.7 ± 0.5	4.6 ± 0.8	5.2 ± 0.2	5.2 ± 0.3	6.3 ± 0.1	5.6 ± 0.1	6.1 ± 0.1	6.2 ± 0.5	6.2 ± 0.2	7.4 ± 0.2
21B	6.3 ± 1.6	7.0 ± 0.7	6.2 ± 0.3	5.6 ± 0.8	5.2 ± 0.7	5.7 ± 0.2	5.6 ± 0.1	6.7 ± 0.2	5.8 ± 1.1	6.4 ± 0.4	6.5 ± 0.1	6.8 ± 0.6	8.1 ± 0.8
22	6.9 ± 1.6	7.9 ± 0.6	7.0 ± 0.6	6.1 ± 0.7	5.8 ± 0.6	6.2 ± 0.5	7.0 ± 0.4	6.4 ± 0.7	6.8 ± 0.2	6.7 ± 0.3	6.8 ± 0.3	7.6 ± 0.3	8.7 ± 1.0
23	7.1 ± 1.7	8.1 ± 0.4	6.7 ± 0.7	6.6 ± 0.6	5.9 ± 1.0	6.6 ± 0.3	6.4 ± 1.6	7.1 ± 0.8	7.5 ± 1.0	7.2 ± 0.5	6.5 ± 1.0	7.8 ± 0.5	8.8 ± 0.7
24	5.6 ± 1.2	6.5 ± 0.9	5.9 ± 0.3	5.3 ± 0.6	5.1 ± 0.9	5.3 ± 0.7	5.5 ± 0.5	5.3 ± 0.9	5.2 ± 0.4	5.3 ± 0.6	5.5 ± 0.2	5.8 ± 0.1	7.1 ± 0.6
26	7.3 ± 1.5	7.6 ± 0.5	6.6 ± 0.5	6.8 ± 0.5	6.3 ± 0.6	6.8 ± 0.3	7.5 ± 0.5	7.6 ± 0.7	6.7 ± 1.1	7.4 ± 0.6	7.6 ± 0.4	7.8 ± 0.3	9.2 ± 0.6
27	7.1 ± 1.3	7.3 ± 0.9	6.7 ± 1.7	6.9 ± 0.8	6.1 ± 1.2	6.4 ± 0.6	7.0 ± 0.7	7.2 ± 0.2	7.1 ± 0.8	7.2 ± 0.5	7.1 ± 0.5	7.8 ± 1.0	8.6 ± 0.4
32	7.4 ± 1.8	8.5 ± 0.7	6.9 ± 0.8	7.7 ± 0.7	5.9 ± 0.5	6.8 ± 1.0	7.8 ± 0.4	7.1 ± 0.2	7.1 ± 0.5	7.2 ± 0.5	7.0 ± 1.1	7.3 ± 0.5	9.4 ± 1.3
31A	5.6 ± 1.6	6.7 ± 0.5	5.9 ± 0.3	5.3 ± 0.3	4.1 ± 1.2	4.9 ± 0.1	5.3 ± 0.2	5.5 ± 0.5	5.8 ± 0.4	5.3 ± 0.1	5.4 ± 0.1	6.8 ± 1.1	6.5 ± 0.9
33A	5.6 ± 1.6	6.7 ± 0.5	6.7 ± 0.4	4.8 ± 0.4	4.8 ± 0.4	4.7 ± 0.5	5.3 ± 0.3	5.4 ± 0.5	5.2 ± 0.1	5.4 ± 0.2	5.1 ± 0.3	5.6 ± 0.6	7.1 ± 0.4
38	6.9 ± 1.5	7.8 ± 0.9	6.3 ± 0.4	6.6 ± 1.1	5.9 ± 0.7	6.4 ± 0.3	7.0 ± 0.4	7.4 ± 0.4	6.9 ± 0.1	6.8 ± 0.8	6.2 ± 0.9	7.4 ± 0.2	8.6 ± 1.1
40	7.5 ± 1.4	8.1 ± 0.5	6.9 ± 1.3	7.2 ± 0.8	6.0 ± 0.9	7.0 ± 0.5	7.9 ± 0.4	7.6 ± 0.2	7.7 ± 0.3	7.4 ± 0.2	7.3 ± 0.2	8.0 ± 1.2	8.7 ± 0.4
42	5.9 ± 1.7	7.3 ± 1.0	6.0 ± 0.5	5.9 ± 0.7	4.5 ± 0.4	5.1 ± 0.4	5.6 ± 0.4	5.8 ± 0.1	6.1 ± 0.3	5.6 ± 0.2	5.5 ± 0.3	6.2 ± 0.2	7.5 ± 1.4
43	7.1 ± 1.9	7.4 ± 0.6	6.6 ± 0.5	6.3 ± 0.9	4.9 ± 0.5	6.8 ± 0.3	7.6 ± 1.0	7.7 ± 0.4	7.7 ± 0.5	7.2 ± 0.5	6.4 ± 1.0	7.9 ± 0.5	8.3 ± 1.4
44	6.3 ± 1.4	7.0 ± 0.7	6.5 ± 0.6	6.0 ± 0.3	4.5 ± 0.9	6.0 ± 0.4	6.4 ± 0.4	6.6 ± 0.5	6.3 ± 0.3	6.3 ± 0.4	6.1 ± 1.2	6.7 ± 0.4	7.5 ± 0.6
45	7.0 ± 1.6	7.5 ± 0.3	6.7 ± 1.2	6.8 ± 1.8	5.3 ± 0.6	6.2 ± 0.5	7.1 ± 0.6	6.9 ± 0.4	7.3 ± 0.5	7.1 ± 0.8	6.7 ± -	7.9 ± 0.6	8.3 ± 1.0
46	6.5 ± 1.5	7.2 ± 0.5	6.1 ± 0.4	6.3 ± 0.9	5.0 ± 0.8	5.8 ± 0.5	6.5 ± 0.4	6.7 ± 0.3	7.0 ± 0.6	6.6 ± 0.3	6.4 ± 0.3	7.0 ± 0.6	7.9 ± 1.0
47	7.8 ± 1.5	8.7 ± 1.1	7.9 ± 0.4	7.4 ± 0.6	6.2 ± 1.0	7.2 ± 0.5	7.7 ± 0.5	8.0 ± 0.3	8.1 ± 1.0	7.9 ± 0.5	7.2 ± 0.7	8.2 ± 0.5	9.0 ± 0.8
48	6.9 ± 1.8	7.8 ± 0.9	8.0 ± 0.8	6.7 ± 1.0	4.8 ± 0.7	6.2 ± 0.5	6.7 ± 0.2	6.7 ± 0.1	7.3 ± 0.6	6.7 ± 0.7	6.8 ± 0.2	7.3 ± 0.3	8.0 ± 0.7
49	6.9 ± 1.7	7.8 ± 0.6	6.3 ± 0.2	6.5 ± 0.2	5.2 ± 0.4	6.4 ± 0.3	7.0 ± 0.5	7.1 ± 0.3	7.6 ± 0.9	7.1 ± 0.2	6.5 ± 0.4	7.1 ± 0.2	8.4 ± 1.0
50	8.3 ± 4.8	8.1 ± 0.8	6.3 ± 0.6	7.5 ± 0.6	5.8 ± 0.9	6.9 ± 0.4	7.6 ± 0.7	8.6 ± 0.6	7.7 ± 1.1	15.2 ± 1.0	7.6 ± 0.6	8.7 ± 0.7	9.3 ± 0.3
51	7.0 ± 1.6	7.5 ± 0.9	6.9 ± 0.4	6.9 ± 0.4	5.1 ± 1.5	6.6 ± 0.2	7.3 ± 0.3	7.5 ± 0.5	7.1 ± 0.4	6.8 ± 0.6	7.2 ± 1.1	6.7 ± 0.8	8.7 ± 1.0

1. MEAN AND TWO TIMES THE STANDARD DEVIATION OF THE MONTHLY RESULTS.

TABLE C-VIII.2 QUARTERLY TLD RESULTS FOR PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF MILLI-ROENTGEN/STD. MO. ± 2 S.D.

STATION CODE	MEAN ± 2 S.D. (1)	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC
1A	5.1 ± 1.3	5.4 ± 0.2	4.3 ± 1.6	5.1 ± 0.3	5.8 ± 0.6
1B	5.0 ± 0.4	5.1 ± 0.3	4.7 ± 0.5	5.2 ± 0.3	5.0 ± 0.7
1C	6.2 ± 0.5	5.9 ± 0.2	6.1 ± 0.3	6.4 ± 0.4	6.4 ± 0.3
1D	5.3 ± 1.4	5.3 ± 0.3	4.3 ± 2.1	5.5 ± 0.5	5.9 ± 0.3
1E	5.5 ± 0.9	5.4 ± 0.2	5.2 ± 0.3	5.4 ± 0.3	6.2 ± 0.4
1F	6.8 ± 1.0	6.4 ± 0.5	6.4 ± 0.6	7.1 ± 0.1	7.4 ± 0.5
1G	4.3 ± 0.7	4.6 ± 0.3	3.9 ± 0.2	4.3 ± 0.1	4.6 ± 0.2
1H	5.9 ± 0.8	5.8 ± 0.1	5.5 ± 0.3	6.1 ± 0.2	6.4 ± 0.8
1I	4.9 ± 0.6	5.1 ± 0.2	4.5 ± 0.4	4.9 ± 0.1	5.1 ± 0.2
1J	6.4 ± 1.4	5.7 ± 0.4	6.0 ± 1.1	6.8 ± 0.4	7.2 ± 0.6
1L	4.5 ± 0.8	5.1 ± 0.4	4.2 ± 0.2	4.3 ± 0.0	4.3 ± 0.4
1M	3.8 ± 1.6	4.9 ± 0.1	3.1 ± 0.1	3.5 ± 0.1	3.5 ± 0.2
2	5.6 ± 0.8	5.5 ± 0.3	5.1 ± 0.5	5.7 ± 0.4	6.1 ± 0.2
3A	4.1 ± 0.7	4.5 ± 0.4	3.7 ± 0.4	4.2 ± 0.2	4.2 ± 0.4
4K	4.1 ± 1.1	4.9 ± 0.4	3.6 ± 0.2	4.1 ± 0.2	3.9 ± 0.1
5	5.4 ± 0.6	5.2 ± 0.4	5.1 ± 0.4	5.6 ± 0.1	5.7 ± 0.7
6B	4.8 ± 0.8	5.3 ± 0.3	4.3 ± 0.4	4.7 ± 0.3	4.9 ± 0.2
1NN	6.4 ± 0.4	6.4 ± 0.4	6.1 ± 0.4	6.6 ± 0.6	6.5 ± 0.3
14	5.8 ± 0.7	6.2 ± 0.2	5.4 ± 0.5	5.9 ± 0.3	5.6 ± 0.5
12D	4.3 ± 0.8	4.1 ± 0.2	3.9 ± 0.0	4.3 ± 0.2	4.8 ± 0.1
15	5.8 ± 0.5	5.5 ± 0.2	5.6 ± 0.5	5.9 ± 0.3	6.0 ± 0.2
16	6.1 ± 1.5	7.2 ± 0.4	5.5 ± 0.5	5.8 ± 0.4	6.0 ± 0.2
17	6.6 ± 1.2	6.6 ± 0.5	5.8 ± 0.9	6.6 ± 0.5	7.3 ± 1.2
18	6.1 ± 0.9	6.3 ± 0.2	5.4 ± 0.5	6.3 ± 0.2	6.4 ± 0.8

1. MEAN AND TWO TIMES THE STANDARD DEVIATION OF THE QUARTERLY RESULTS.

TABLE C-VIII.2 QUARTERLY TLD RESULTS FOR PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF MILLI-ROENTGEN/STD. MO. ± 2 S.D.

STATION CODE	MEAN ± 2 S.D. (1)	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC
19	6.1 ± 0.8	6.6 ± 0.8	6.0 ± 0.6	5.6 ± 0.8	6.2 ± 0.2
20	5.1 ± 0.5	5.5 ± 0.2	4.9 ± 0.5	5.0 ± 0.4	5.1 ± 0.5
21B	5.7 ± 0.5	5.5 ± 0.4	5.5 ± 0.8	5.9 ± 0.3	6.0 ± 0.4
22	6.2 ± 1.0	5.8 ± 0.3	5.8 ± 0.7	6.2 ± 0.3	6.9 ± 0.3
23	5.9 ± 0.8	5.4 ± 0.3	6.4 ± 0.7	6.0 ± 0.2	6.0 ± 0.2
24	4.8 ± 0.4	5.0 ± 0.1	4.5 ± 0.3	4.7 ± 0.2	4.9 ± 0.2
26	6.5 ± 0.8	5.9 ± 0.4	6.7 ± 1.5	6.6 ± 0.3	6.7 ± 0.6
27	6.0 ± 0.3	6.2 ± 0.7	5.9 ± 0.5	6.1 ± 0.1	6.0 ± 0.3
32	6.3 ± 0.5	6.1 ± 0.2	6.0 ± 0.3	6.4 ± 0.1	6.5 ± 0.1
31A	4.7 ± 0.4	4.9 ± 0.1	4.5 ± 0.1	4.6 ± 0.2	4.9 ± 0.8
33A	4.4 ± 0.7	4.9 ± 0.8	4.2 ± 0.4	4.2 ± 0.8	4.4 ± 0.4
38	6.1 ± 0.5	5.8 ± 0.4	6.2 ± 0.5	6.3 ± 0.2	6.3 ± 0.2
40	6.6 ± 0.4	6.4 ± 1.0	6.6 ± 0.6	6.9 ± 0.3	6.6 ± 0.3
42	4.9 ± 0.9	5.3 ± 0.3	4.3 ± 0.7	4.8 ± 0.3	5.1 ± 0.1
43	6.3 ± 0.6	6.1 ± 0.2	6.0 ± 0.6	6.2 ± 0.3	6.7 ± 0.3
44	5.2 ± 0.2	5.1 ± 0.3	5.2 ± 0.7	5.3 ± 0.1	5.3 ± 0.9
45	6.1 ± 0.8	5.7 ± 0.2	5.9 ± 0.6	6.4 ± 1.2	6.5 ± 0.4
46	5.6 ± 0.7	5.7 ± 0.1	5.1 ± 0.4	5.6 ± 0.2	5.9 ± 0.5
47	6.2 ± 0.7	5.9 ± 0.2	6.0 ± 0.4	6.4 ± 0.8	6.6 ± 0.5
48	6.0 ± 0.5	6.0 ± 0.2	5.7 ± 0.4	6.0 ± 0.1	6.3 ± 0.4
49	5.9 ± 0.7	5.6 ± 0.4	5.7 ± 0.4	6.1 ± 0.2	6.3 ± 0.2
50	7.3 ± 2.3	6.8 ± 0.5	6.5 ± 0.6	9.0 ± 0.6	7.0 ± 0.5
51	6.0 ± 0.5	5.7 ± 0.7	6.0 ± 1.0	6.1 ± 0.3	6.3 ± 0.2

1. MEAN AND TWO TIMES THE STANDARD DEVIATION OF THE QUARTERLY RESULTS.

TABLE C-VIII.3 1994 MEAN TLD RESULTS FROM PEACH BOTTOM ATOMIC POWER STATION FOR THE SITE BOUNDARY, MIDDLE, AND OUTER RINGS

RESULTS IN UNITS OF MILLI-ROENTGEN/STD. MO. ± 2 STANDARD DEVIATIONS OF THE STATION DATA

SAMPLE TYPE	EXPOSURE PERIOD	SITE	MIDDLE RING	OUTER RING
MONTHLY	JAN 1994	7.1 ± 1.9	7.5 ± 1.3	6.9 ± 2.1
	FEB 1994	5.8 ± 1.3	6.4 ± 1.5	6.2 ± 1.8
	MAR 1994	6.0 ± 1.9	6.3 ± 1.6	5.7 ± 0.9
	APR 1994	4.8 ± 1.7	5.1 ± 1.7	5.2 ± 0.7
	MAY 1994	5.8 ± 2.3	6.0 ± 1.8	5.6 ± 1.1
	JUN 1994	6.2 ± 2.3	6.5 ± 1.9	5.7 ± 0.9
	JUL 1994	6.3 ± 2.0	6.7 ± 1.9	6.3 ± 1.3
	AUG 1994	6.5 ± 2.4	6.6 ± 2.0	5.9 ± 1.8
	SEP 1994	6.3 ± 2.2	6.9 ± 3.8	6.3 ± 1.3
	OCT 1994	6.5 ± 2.3	6.4 ± 1.6	6.3 ± 1.0
	NOV 1994	6.8 ± 2.3	7.1 ± 1.8	6.4 ± 1.4
	DEC 1994	7.7 ± 2.4	8.0 ± 2.2	7.6 ± 1.8
QUARTERLY	JAN-MAR 1994	5.6 ± 1.2	5.6 ± 1.1	5.7 ± 2.1
	APR-JUN 1994	5.2 ± 2.2	5.4 ± 1.7	5.1 ± 1.4
	JUL-SEP 1994	5.7 ± 2.3	5.8 ± 2.1	5.4 ± 1.4
	OCT-DEC 1994	5.9 ± 2.3	5.9 ± 1.8	5.6 ± 1.3

TABLE C-VIII.4 SUMMARY OF THE 1994 AMBIENT DOSIMETRY PROGRAM FOR PEACH BOTTOM ATOMIC POWER STATION

RESULTS IN UNITS OF MILLI-ROENTGEN/STD. MO.

SAMPLE TYPE	LOCATION	NO. OF SAMPLES ANALYZED	PERIOD MINIMUM	PERIOD MAXIMUM	PERIOD MEAN ± 2 S.D.	PRE-OP MEAN ± 2 S.D. (1)
MONTHLY	SITE	156	3.2	8.9	6.3 ± 2.5	5.3 ± 2.2
	MIDDLE RING	300	3.4	15.2	6.6 ± 2.4	6.0 ± 2.0
	OUTER RING	84	4.5	8.6	6.2 ± 1.8	6.2 ± 1.4
QUARTERLY	SITE	52	3.1	7.4	5.6 ± 2.0	5.4 ± 1.7
	MIDDLE RING	100	3.6	9.0	5.7 ± 1.7	5.3 ± 1.3
	OUTER RING	28	3.9	7.2	5.5 ± 1.6	5.7 ± 1.8

(1) THE PRE-OPERATIONAL MEAN WAS CALCULATED FROM TLD READINGS 1/07/73 TO 8/05/73. STATIONS 1M, 31 AND 32 WERE ADDED TO THE PROGRAM 7/06/73 AND STATIONS 33A AND 38 WERE NOT IN THE PRE-OPERATIONAL PROGRAM. STATIONS 1NN AND 40 THROUGH 51 WERE ADDED TO THE PROGRAM ON 07/12/80.

SITE BOUNDARY RING STATIONS - 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1J, 1L, 1M, 1NN, 2, AND 40.

MIDDLE RING STATIONS - 3A, 4K, 5, 6B, 14, 15, 17, 22, 23, 26, 27, 31, 31A, 32, 33A, 38, 42, 43, 44, 45, 46,47, 48, 49, 50, 51.

OUTER RING STATIONS - 12D, 16, 18, 19, 20, 21B, 24.

TABLE C-IX.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

SURFACE AND DRINKING WATER (GROSS BETA AND GAMMA)

COLLECTION PERIOD	13A	13B	1LL	1MM	4L	6I
JAN 94	02/05-02/05		01/05-02/02	01/05-02/02	01/09-02/04	01/10-02/06
FEB 94	03/04-03/04	02/18-02/18	02/02-03/02	02/02-03/02	02/04-03/05	02/06-03/06
MAR 94	04/01-04/01		03/02-03/30	03/02-03/30	03/05-03/31	03/06-04/01
APR 94	04/30-04/30		03/30-04/27	03/30-04/27	03/31-04/29	04/01-04/30
MAY 94	06/04-06/04	06/01-06/01	04/27-06/01	04/27-06/01	04/29-06/03	04/30-06/04
JUN 94	07/04-07/04	06/14-06/14	06/01-06/29	06/01-06/29	06/03-07/03	06/04-07/04
JUL 94	08/06-08/06	07/05-07/05	06/29-08/03	06/29-08/03	07/03-08/05	07/04-08/05
AUG 94	09/03-09/03	08/12-08/12	08/03-08/31	08/03-08/31	08/05-09/02	08/05-09/03
SEP 94	10/01-10/01	09/09-09/09	08/31-09/28	08/31-09/28	09/02-09/30	09/03-10/01
OCT 94	11/05-11/05	10/03-10/03	09/28-11/02	09/28-11/02	09/30-11/04	10/01-11/05
NOV 94	12/05-12/05		11/02-11/30	11/02-11/30	11/04-12/04	11/05-12/05
DEC 94	12/30-12/30		11/30-12/28	11/30-12/28	12/04-12/30	12/05-12/30

SURFACE AND DRINKING WATER (TRITIUM)

COLLECTION PERIOD	13A	13B	1LL	1MM	4L	6I
JAN-MAR 94	02/05-04/01		01/02-03/30	01/05-03/30	01/09-03/31	01/10-04/01
APR-JUN 94	04/30-07/04		03/30-06/29	03/30-06/29	03/31-07/03	04/01-07/04
JUL-SEP 94	08/06-10/01		06/29-09/28	06/29-09/28	07/03-09/30	07/04-10/01
OCT-DEC 94	11/05-12/30		09/28-12/28	09/28-12/28	09/30-12/30	10/01-12/30

DRINKING WATER (IODINE - 131)

COLLECTION PERIOD	4L	6I
JAN 94	01/29-02/04	01/29-02/06
FEB 94	02/25-03/05	02/25-03/06
MAR 94	03/25-03/31	03/25-04/01
APR 94	04/22-04/29	04/22-04/30
MAY 94	05/27-06/03	05/27-06/04
JUN 94	06/24-07/03	06/24-07/04
JUL 94	07/29-08/05	07/29-08/05
AUG 94	08/26-09/02	08/26-09/03
SEP 94	09/23-09/30	09/23-10/01
OCT 94	10/28-11/04	10/28-11/05
NOV 94	11/25-12/04	11/25-12/05
DEC 94	12/23-12/30	12/23-12/30

TABLE C-IX.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

AIR PARTICULATE AND AIR IODINE

GROUP I - ON-SITE LOCATIONS

WEEK	1B	1Z	2
01	12/31-01/09	12/31-01/07	12/31-01/09
02		01/07-01/14	01/09-01/14
03	01/14-01/21	01/14-01/21	01/14-01/21
04	01/21-01/28	01/21-01/28	01/21-01/29
05	01/28-02/06	01/28-02/04	01/29-02/04
06	02/06-02/12	02/04-02/1[illegible]	02/04-02/12
07	02/12-02/19	02/12-02/19	02/12-02/19
08	02/19-02/25	02/19-02/25	02/19-02/25
09	02/25-03/06	02/25-03/05	02/25-03/05
10	03/06-03/11	03/05-03/11	03/05-03/11
11	03/11-03/19	03/11-03/19	03/11-03/19
12	03/19-03/25	03/19-03/25	03/19-03/25
13	03/25-03/31	03/25-03/31	03/25-03/31
14	03/31-04/08	03/31-04/08	03/31-04/08
15	04/08-04/15	04/08-04/15	04/08-04/15
16	04/15-04/22	04/15-04/22	04/15-04/22
17	04/22-04/30	04/22-04/29	04/22-04/29
18	04/30-05/06	04/29-05/06	04/29-05/06
19	05/06-05/13	05/06-05/13	05/06-05/13
20	05/13-05/20	05/13-05/20	05/13-05/20
21	05/20-05/27	05/20-05/27	05/20-05/27
22	05/27-06/03	05/27-06/03	05/27-06/03
23	06/03-06/10	06/03-06/10	06/03-06/10
24	06/10-06/17	06/10-06/17	06/10-06/17
25	06/17-06/24	06/17-06/24	06/17-06/24
26	06/24-07/03	06/24-07/03	06/24-07/03
27	07/03-07/09	07/03-07/09	07/03-07/09
28	07/09-07/15	07/09-07/15	07/09-07/15
29		07/15-07/22	07/15-07/22
30		07/22-07/29	07/22-07/29
31	07/29-08/05	07/29-08/05	07/29-08/05
32	08/05-08/12	08/05-08/12	08/05-08/12
33		08/12-08/19	08/12-08/19
34	08/19-08/26	08/19-08/26	08/19-08/26
35	08/26-09/02	08/26-09/02	08/26-09/02
36	09/02-09/09	09/02-09/09	09/02-09/09
37	09/09-09/16		09/09-09/16
38	09/16-09/23	09/16-09/23	09/16-09/23
39	09/23-09/30	09/23-09/30	09/23-09/30
40	09/30-10/08	09/30-10/08	09/30-10/08
41	10/08-10/14	10/08-10/14	10/08-10/14
42	10/14-10/21	10/14-10/21	10/14-10/21
43	10/21-10/28	10/21-10/28	10/21-10/28
44	10/28-11/04	10/28-11/04	10/28-11/04
45	11/04-11/11	11/04-11/11	11/04-11/11
46	11/11-11/18	11/11-11/18	11/11-11/18
47	11/18-11/25	11/18-11/25	11/18-11/25
48	11/25-12/04	11/25-12/04	11/25-12/04
49	12/04-12/10	12/04-12/10	12/04-12/10
50	12/10-12/16	12/10-12/16	12/10-12/16
51	12/16-12/23	12/16-12/23	12/16-12/23
52	12/23-12/30	12/23-12/30	12/23-12/30

TABLE C-IX.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

AIR PARTICULATE AND AIR IODINE

GROUP II - INTERMEDIATE DISTANCE LOACATIONS

WEEK	3A	5	14	15	17	32	38
01	12/31-01/07	12/31-01/09	12/31-01/10	12/31-01/10	12/31-01/09	12/31-01/10	12/31-01/09
02	01/07-01/14	01/09-01/14	01/10-01/14	01/10-01/14	01/09-01/14	01/10-01/14	01/09-01/14
03	01/14-01/21	01/14-01/22	01/14-01/22	01/14-01/22	01/14-01/22	01/14-01/22	01/14-01/22
04	01/21-01/28	01/22-01/29	01/22-01/29	01/22-01/29	01/22-01/29	01/22-01/29	01/22-01/29
05	01/28-02/04	01/29-02/05	01/29-02/05	01/29-02/05	01/29-02/05	01/29-02/05	01/29-02/05
06	02/04-02/12	02/05-02/12	02/05-02/12	02/05-02/12	02/05-02/12	02/05-02/12	02/05-02/12
07	02/12-02/19	02/12-02/19	02/12-02/19	02/12-02/19	02/12-02/19	02/12-02/19	02/12-02/19
08	02/19-02/25	02/19-02/25	02/19-02/25	02/19-02/25	02/19-02/25	02/19-02/25	02/19-02/25
09	02/25-03/05	02/25-03/04	02/25-03/04	02/25-03/06	02/25-03/04	02/25-03/04	02/25-03/04
10	03/05-03/11	03/04-03/11	03/04-03/11	03/06-03/11	03/04-03/11	03/04-03/11	03/04-03/11
11	03/11-03/19	03/11-03/18	03/11-03/18	03/11-03/18	03/11-03/18	03/11-03/18	03/11-03/18
12	03/19-03/25	03/18-03/25	03/18-03/25	03/18-03/25	03/18-03/25	03/18-03/25	03/18-03/25
13	03/25-03/31	03/25-04/01	03/25-04/01	03/25-04/01	03/25-04/01	03/25-04/01	03/25-04/01
14	03/31-04/08	04/01-04/08	04/01-04/08	04/01-04/08	04/01-04/08	04/01-04/08	04/01-04/08
15	04/08-04/15	04/08-04/15	04/08-04/15	04/08-04/15	04/08-04/15	04/08-04/15	04/08-04/15
16	04/15-04/22	04/15-04/22	04/15-04/22	04/15-04/22	04/15-04/22	04/15-04/22	04/15-04/22
17	04/22-04/29	04/22-04/30	04/22-04/30	04/22-04/30	04/22-04/30	04/22-04/30	04/22-04/30
18	04/29-05/06	04/30-05/06	04/30-05/06	04/30-05/06	04/30-05/06	04/30-05/06	04/30-05/06
19	05/06-05/13	05/06-05/13	05/06-05/13	05/06-05/13	05/06-05/13	05/06-05/13	05/06-05/13
20	05/13-05/20	05/13-05/20	05/13-05/20	05/13-05/20	05/13-05/20	05/13-05/20	05/13-05/20
21	05/20-05/27	05/20-05/27	05/20-05/27	05/20-05/27	05/20-05/27	05/20-05/27	05/20-05/27
22	05/27-06/03	05/27-06/04	05/27-06/04	05/27-06/04	05/27-06/04	05/27-06/04	05/27-06/04
23	06/03-06/10	06/04-06/10	06/04-06/10	06/04-06/10	06/04-06/10	06/04-06/10	06/04-06/10
24	06/10-06/17	06/10-06/17	06/10-06/17	06/10-06/17	06/10-06/17	06/10-06/17	06/10-06/17
25	06/17-06/24	06/17-06/24	06/17-06/24	06/17-06/24	06/17-06/24	06/17-06/24	06/17-06/24
26	06/24-07/03	06/24-07/04	06/24-07/04	06/24-07/04	06/24-07/04	06/24-07/04	06/24-07/04
27	07/03-07/09	07/04-07/09	07/04-07/09	07/04-07/09	07/04-07/09	07/04-07/09	07/04-07/09
28	07/09-07/15	07/09-07/15	07/09-07/15	07/09-07/15	07/09-07/15	07/09-07/15	07/09-07/15
29	07/15-07/22		07/15-07/22	07/15-07/22	07/15-07/22	07/15-07/22	07/15-07/22
30	07/22-07/29	07/22-07/29	07/22-07/29	07/22-07/29	07/22-07/29		07/22-07/29
31	07/29-08/05	07/29-08/06	07/29-08/06	07/29-08/06	07/29-08/06	07/29-08/06	07/29-08/06
32	08/05-08/12	08/06-08/12	08/06-08/12	08/06-08/12	08/06-08/12	08/06-08/12	08/06-08/12
33	08/12-08/19	08/12-08/19	08/12-08/19	08/12-08/19	08/12-08/19	08/12-08/19	08/12-08/19
34	08/19-08/26	08/19-08/26	08/19-08/26	08/19-08/26	08/19-08/26	08/19-08/26	08/19-08/26
35	08/26-09/02	08/26-09/03	08/26-09/03	08/26-09/03	08/26-09/03	08/26-09/03	08/26-09/03
36	09/02-09/09	09/03-09/09	09/03-09/09	09/03-09/09	09/03-09/09	09/03-09/09	09/03-09/09
37	09/09-09/16	09/09-09/16	09/09-09/16	09/09-09/16	09/09-09/16	09/09-09/16	09/09-09/16
38	09/16-09/23	09/16-09/23	09/16-09/23	09/16-09/23	09/16-09/23	09/16-09/23	09/16-09/23
39	09/23-09/30	09/23-10/01	09/23-10/01	09/23-10/01	09/23-10/01	09/23-10/01	09/23-10/01
40	09/30-10/08	10/02-10/08	10/01-10/08	10/01-10/08	10/01-10/08	10/01-10/08	10/01-10/08
41	10/08-10/14	10/08-10/14	10/08-10/14	10/08-10/14	10/08-10/14	10/08-10/14	10/08-10/14
42	10/14-10/21	10/14-10/21	10/14-10/21	10/14-10/21	10/14-10/21	10/14-10/21	10/14-10/21
43	10/21-10/28	10/21-10/28	10/21-10/28	10/21-10/28	10/21-10/28	10/21-10/28	10/21-10/28
44	10/28-11/04	10/28-11/05	10/28-11/05	10/28-11/05	10/28-11/05	10/28-11/05	10/28-11/05
45	11/04-11/11	11/05-11/11	11/05-11/11	11/05-11/11	11/05-11/11	11/05-11/11	11/05-11/11
46	11/11-11/18	11/11-11/18	11/11-11/18	11/11-11/18	11/11-11/18	11/11-11/18	11/11-11/18
47	11/18-11/25	11/18-11/25	11/18-11/25	11/18-11/25	11/18-11/25	11/18-11/25	11/18-11/25
48	11/25-12/04	11/25-12/05	11/25-12/05	11/25-12/05	11/25-12/05	11/25-12/05	11/25-12/05
49	12/04-12/10	12/05-12/10	12/05-12/10	12/05-12/10	12/05-12/10	12/05-12/10	12/05-12/10
50	12/10-12/16	12/10-12/16	12/10-12/16	12/10-12/16	12/10-12/16	12/10-12/16	12/10-12/16
51	12/16-12/23	12/16-12/23	12/16-12/23	12/16-12/23	12/16-12/23	12/16-12/23	12/15-12/23
52	12/23-12/30	12/23-12/30	12/23-12/30	12/23-12/30	12/23-12/30	12/23-12/30	12/23-12/30

TABLE C-IX.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

AIR PARTICULATE AND AIR IODINE

GROUP III - CONTROL LOACATIONS

WEEK	4A	6E	12D
01	12/31-01/09	12/31-01/10	01/03-01/10
02	01/09-01/14	01/10-01/14	01/10-01/18
03	01/14-01/21	01/14-01/22	01/18-01/24
04	01/21-01/29	01/22-01/29	01/24-01/31
05	01/29-02/04	01/29-02/06	01/31-02/07
06	02/04-02/12	02/06-02/12	02/07-02/14
07	02/12-02/19	02/12-02/19	02/14-02/22
08	02/19-02/25	02/19-02/25	02/22-02/28
09	02/25-03/05	02/25-03/06	02/28-03/07
10	03/05-03/11	03/06-03/11	03/07-03/14
11	03/11-03/19	03/11-03/18	03/14-03/21
12	03/19-03/25	03/18-03/25	03/21-03/28
13	03/25-03/31	03/25-04/01	03/28-04/04
14	03/31-04/08	04/01-04/08	04/04-04/11
15	04/08-04/15	04/08-04/15	04/11-04/18
16	04/15-04/22	04/15-04/22	04/18-04/25
17	04/22-04/29	04/22-04/30	04/25-05/02
18	04/29-05/06	04/30-05/06	05/02-05/09
19	05/06-05/13	05/06-05/13	05/09-05/16
20	05/13-05/20	05/13-05/20	05/16-05/23
21	05/20-05/27	05/20-05/27	05/23-05/31
22	05/27-06/03	05/27-06/04	05/31-06/06
23	06/03-06/10	06/04-06/10	06/06-06/13
24	06/10-06/17	06/10-06/17	06/13-06/20
25	06/17-06/24	06/17-06/24	06/20-06/27
26	06/24-07/03	06/24-07/04	06/27-07/05
27	07/03-07/09	07/04-07/09	07/05-07/11
28	07/09-07/15	07/09-07/15	07/11-07/18
29	07/15-07/22	07/15-07/22	07/18-07/25
30	07/22-07/29	07/22-07/29	07/27-08/01
31	07/29-08/05	07/29-08/05	08/01-08/08
32	08/05-08/12	08/05-08/12	08/08-08/15
33	08/12-08/19	08/12-08/19	08/15-08/22
34	08/19-08/26	08/19-08/26	08/22-08/29
35	08/26-09/02	08/26-09/03	08/29-09/06
36	09/02-09/09	09/03-09/09	09/06-09/12
37	09/09-09/16	09/09-09/16	09/12-09/19
38	09/16-09/23	09/16-09/23	09/19-09/26
39	09/23-09/30	09/23-10/01	09/26-10/03
40	09/30-10/08	10/01-10/08	10/03-10/10
41	10/08-10/14	10/08-10/14	10/10-10/17
42	10/14-10/21	10/14-10/21	10/17-10/24
43	10/21-10/28	10/21-10/28	10/24-10/31
44	10/28-11/04	10/28-11/05	10/31-11/07
45	11/04-11/11	11/05-11/11	11/07-11/14
46	11/11-11/18	11/11-11/18	11/14-11/21
47	11/18-11/25	11/18-11/25	11/21-11/28
48	11/25-12/04	11/25-12/05	11/28-12/05
49	12/04-12/10	12/05-12/10	12/05-12/12
50	12/10-12/16	12/10-12/16	12/12-12/19
51	12/16-12/23	12/16-12/23	12/19-12/27
52	12/23-12/30	12/23-12/30	12/27-01/04

TABLE C-IX.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

TLD - MONTHLY

STATION CODE	JAN 1994	FEB 1994	MAR 1994	APR 1994	MAY 1994	JUN 1994	JUL 1994	AUG 1994	SEP 1994	OCT 1994	NOV 1994	DEC 1994
1A	01/07-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
1B	01/09-02/06	02/06-03/06	03/06-03/31	03/31-04/30	04/30-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
1C	01/08-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
1D	01/07-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
1E	01/07-02/06	02/06-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
1F	01/07-02/04	02/04-03/06	03/06-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
1G	01/09-02/06	02/06-03/06	03/06-03/31	03/31-04/30	04/30-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
1H	01/09-02/06	02/06-03/06	03/06-03/31	03/31-04/30	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
1I	01/08-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
1J	01/09-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/06	08/06-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
1L	01/07-02/06	02/06-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
1M	01/07-02/06	02/06-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
2	01/09-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
3A	01/07-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/03
4K	01/09-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/03
5	01/09-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
6B	01/10-02/06	02/06-03/06	03/06-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/05	08/05-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
1NN	01/09-02/06	02/06-03/06	03/06-03/31	03/31-04/30	04/30-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
14	01/10-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
12D	01/05-02/01	02/01-03/01	03/01-04/05	04/05-05/03	05/03-06/07	06/07-07/05	07/05-08/01	08/01-09/08	09/08-10/04	10/04-10/31	10/31-12/05	12/05-01/04
15	01/10-02/05	02/05-03/06	03/06-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
16	01/08-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
17	01/09-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
18	01/08-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/04
19	01/08-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
20	01/08-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/03
21B	01/08-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
22	01/10-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
23	01/09-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
24	01/08-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
26	01/09-02/06	02/06-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/05	08/05-09/03	09/03-10/01	10/01-11/04	11/04-12/05	12/05-01/03
27	01/08-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
32	01/10-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
31A	01/09-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
33A	01/10-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
38	01/09-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
40	01/07-02/04	02/04-03/06	03/06-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/04
42	01/10-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
43	01/08-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
44	01/08-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
45	01/09-02/05	02/05-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/06	08/06-09/03	09/03-10/01	10/01-11/05	11/05-12/05	12/05-01/03
46	01/08-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/03
47	01/09-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/03
48	01/09-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/03
49	01/07-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/03
50	01/07-02/04	02/04-03/05	03/05-03/31	03/31-04/29	04/29-06/03	06/03-07/03	07/03-08/05	08/05-09/02	09/02-09/30	09/30-11/04	11/04-12/04	12/04-01/03
51	01/09-02/06	02/06-03/04	03/04-04/01	04/01-04/30	04/30-06/04	06/04-07/04	07/04-08/05	08/05-09/03	09/03-10/01	10/01-11/04	11/04-12/05	12/05-01/03

TABLE C-IX.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

TLD - QUARTERLY

STATION CODE	JAN-MAR 1994	APR-JUN 1994	JUL-SEP 1994	OCT-DEC 1994
1A	01/07-03/31	03/31-07/03	07/03-09/30	09/30-01/04
1B	01/09-03/31	03/31-07/03	07/03-09/30	09/30-01/04
1C	01/08-03/31	03/31-07/03	07/03-09/30	09/30-01/04
1D	01/07-03/31	03/31-07/03	07/03-09/30	09/30-01/04
1E	01/07-03/31	03/31-07/03	07/03-09/30	09/30-01/04
1F	01/07-03/31	03/31-07/03	07/03-09/30	09/30-01/04
1G	01/09-03/31	03/31-07/03	07/03-09/30	09/30-01/04
1H	01/09-03/31	03/31-07/03	07/03-09/30	09/30-01/04
1I	01/08-03/31	03/31-07/03	07/03-09/30	09/30-01/04
1J	01/09-03/31	03/31-07/03	07/03-09/30	09/30-01/04
1L	01/07-03/31	03/31-07/03	07/03-09/30	09/30-01/04
1M	01/07-03/31	03/31-07/03	07/03-09/30	09/30-01/04
2	01/09-03/31	03/31-07/03	07/03-09/30	09/30-01/04
3A	01/07-03/31	03/31-07/03	07/03-09/30	09/30-01/03
4K	01/09-03/31	03/31-07/03	07/03-09/30	09/30-01/03
5	01/09-04/01	04/01-07/04	07/04-10/01	10/01-01/03
6B	01/10-04/01	04/01-07/04	07/04-10/01	10/01-01/03
1NN	01/09-03/31	03/31-07/03	07/03-09/30	09/30-01/04
14	01/10-04/01	04/01-07/04	07/04-10/01	10/01-01/03
12D	01/05-04/05	04/05-07/05	07/05-10/04	10/04-01/04
15	01/10-04/01	04/01-07/04	07/04-10/01	10/01-01/03
16	01/08-04/01	04/01-07/04	07/04-10/01	10/01-01/03
17	01/09-04/01	04/01-07/04	07/04-10/01	10/01-01/03
18	01/08-04/01	04/01-07/04	07/04-10/01	10/01-01/04
19	01/08-04/01	04/01-07/04	07/04-10/01	10/01-01/03
20	01/08-03/31	03/31-07/03	07/03-09/30	09/30-01/03
21B	01/08-04/01	04/01-07/04	07/04-10/01	10/01-01/03
22	01/10-04/01	04/01-07/04	07/04-10/01	11/05-01/03
23	01/09-03/31	03/31-07/03	07/03-09/30	09/30-01/04
24	01/08-04/01	04/01-07/04	07/04-10/01	10/01-01/03
26	01/09-04/01	04/01-07/04	07/04-10/01	10/01-01/03
27	01/08-03/31	03/31-07/03	07/03-09/30	09/30-01/04
32	01/10-04/01	04/01-07/04	07/04-10/01	10/01-01/03
31A	01/09-04/01	04/01-07/04	07/04-10/01	10/01-01/03
33A	01/10-04/01	04/01-07/04	07/04-10/01	10/01-01/03
38	01/09-04/01	04/01-07/04	07/04-10/01	10/01-01/03
40	01/07-03/31	03/31-07/03	07/03-09/30	09/30-01/04
42	01/10-04/01	04/01-07/04	07/04-10/01	10/01-01/03
43	01/08-04/01	04/01-07/04	07/04-10/01	10/01-01/03
44	01/08-04/01	04/01-07/04	07/04-10/01	10/01-01/03
45	01/09-04/01	04/01-07/04	07/04-10/01	10/01-01/03
46	01/08-03/31	03/31-07/03	07/03-09/30	09/30-01/03
47	01/09-03/31	03/31-07/03	07/03-09/30	09/30-01/03
48	01/09-03/31	03/31-07/03	07/03-09/30	09/30-01/03
49	01/07-03/31	03/31-07/03	07/03-09/30	09/30-01/03
50	01/07-03/31	03/31-07/03	07/03-09/30	09/30-01/03
51	01/09-04/01	04/01-07/04	07/04-10/01	10/01-01/03

FIGURE C-1
MONTHLY INSOLUBLE GROSS BETA CONCENTRATIONS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1994

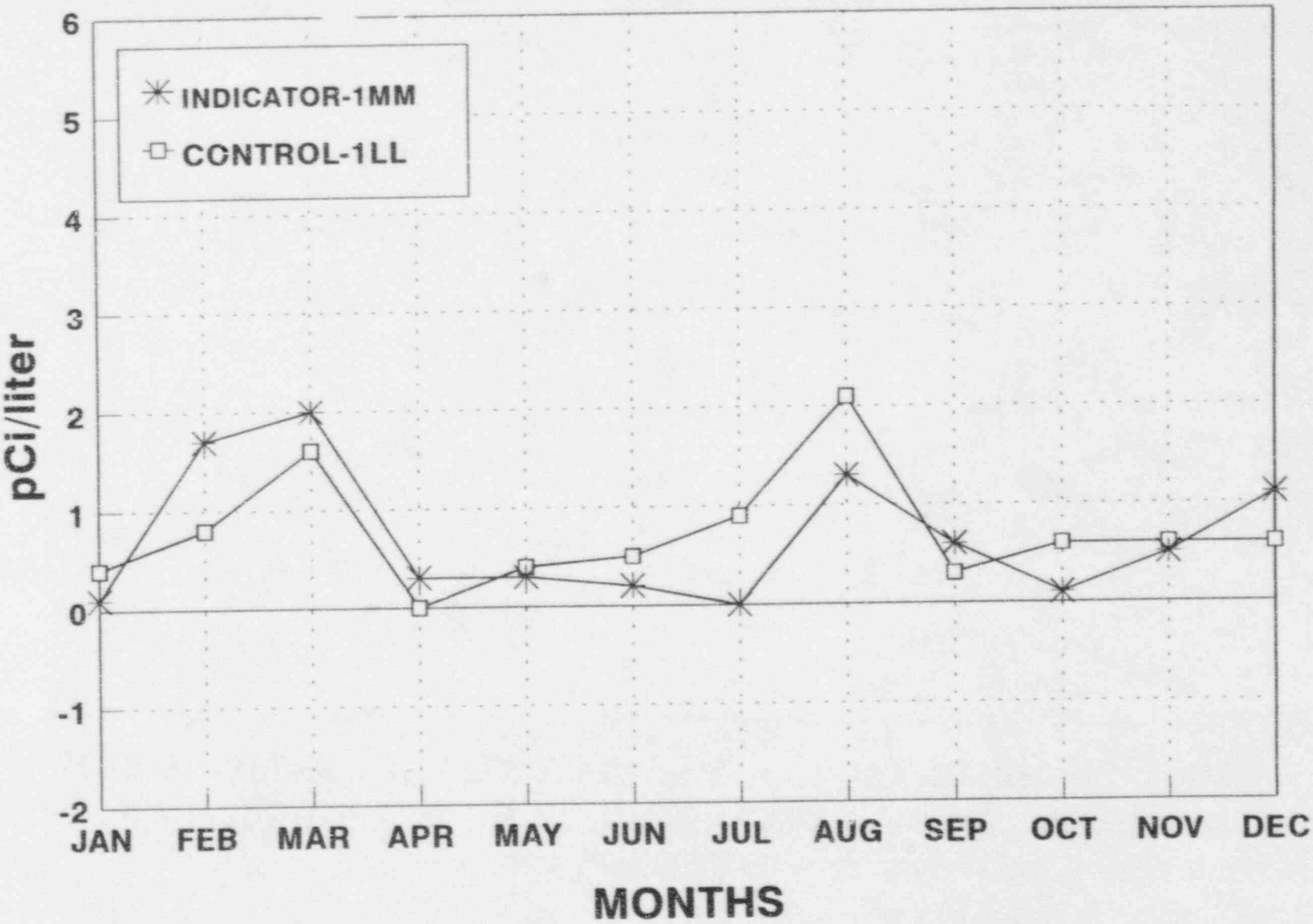


FIGURE C-2
MONTHLY SOLUBLE GROSS BETA CONCENTRATIONS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1994

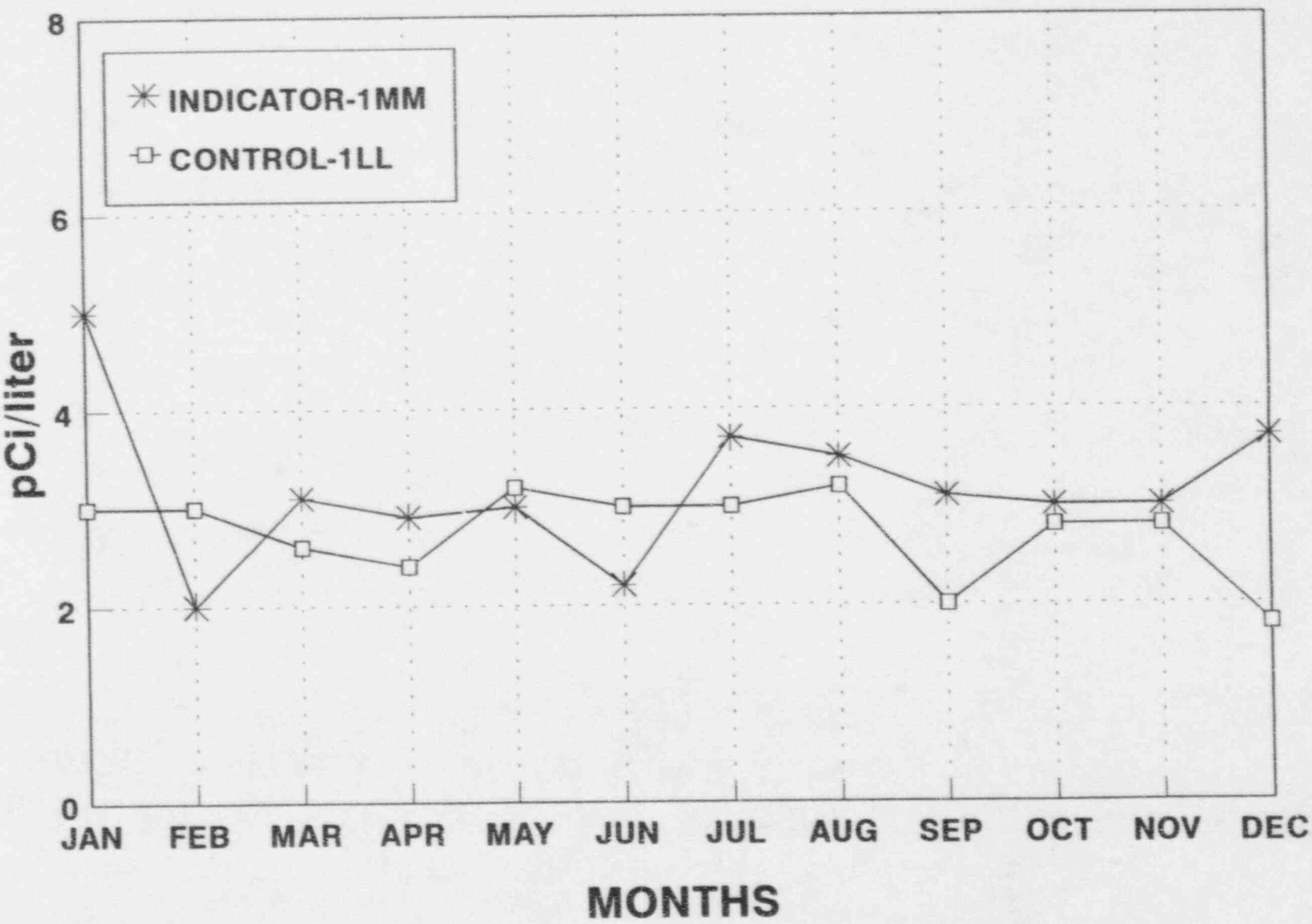


FIGURE C-3
MONTHLY INSOLUBLE GROSS BETA CONCENTRATIONS IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1994

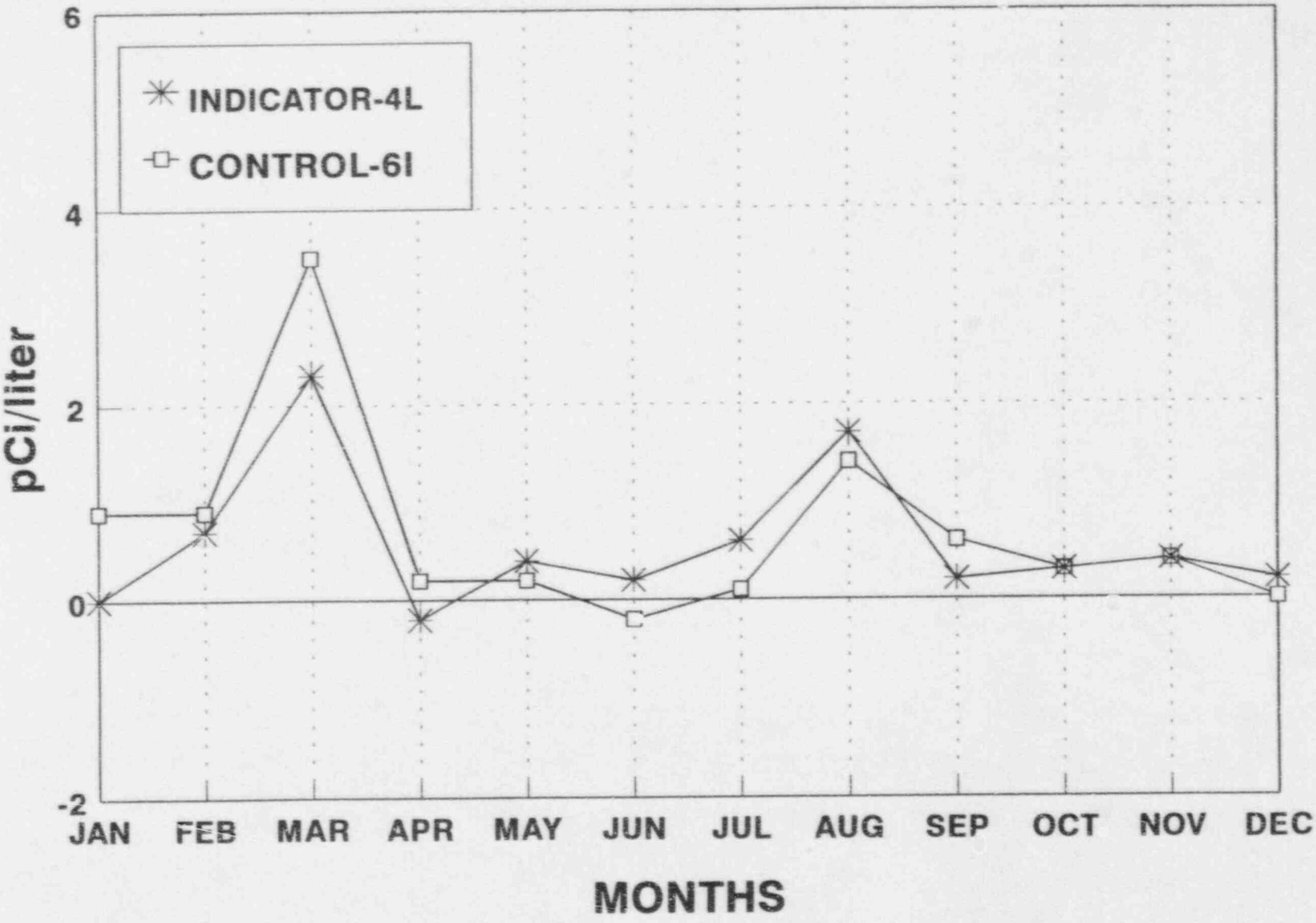


FIGURE C-4
MONTHLY SOLUBLE GROSS BETA CONCENTRATIONS IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1994

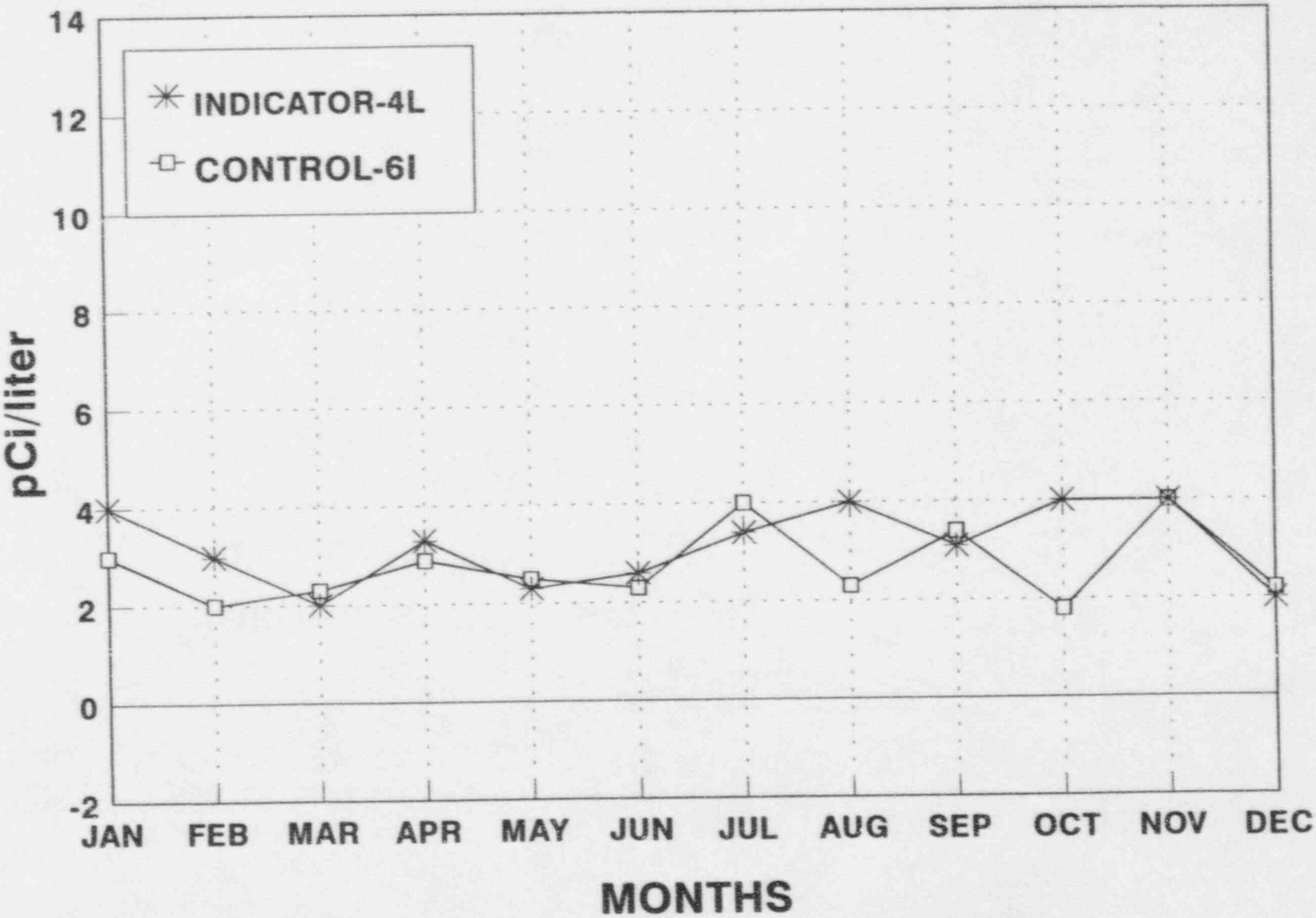


FIGURE C-5
MEAN ANNUAL CS-137 CONCENTRATIONS IN FISH SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1971 - 1994

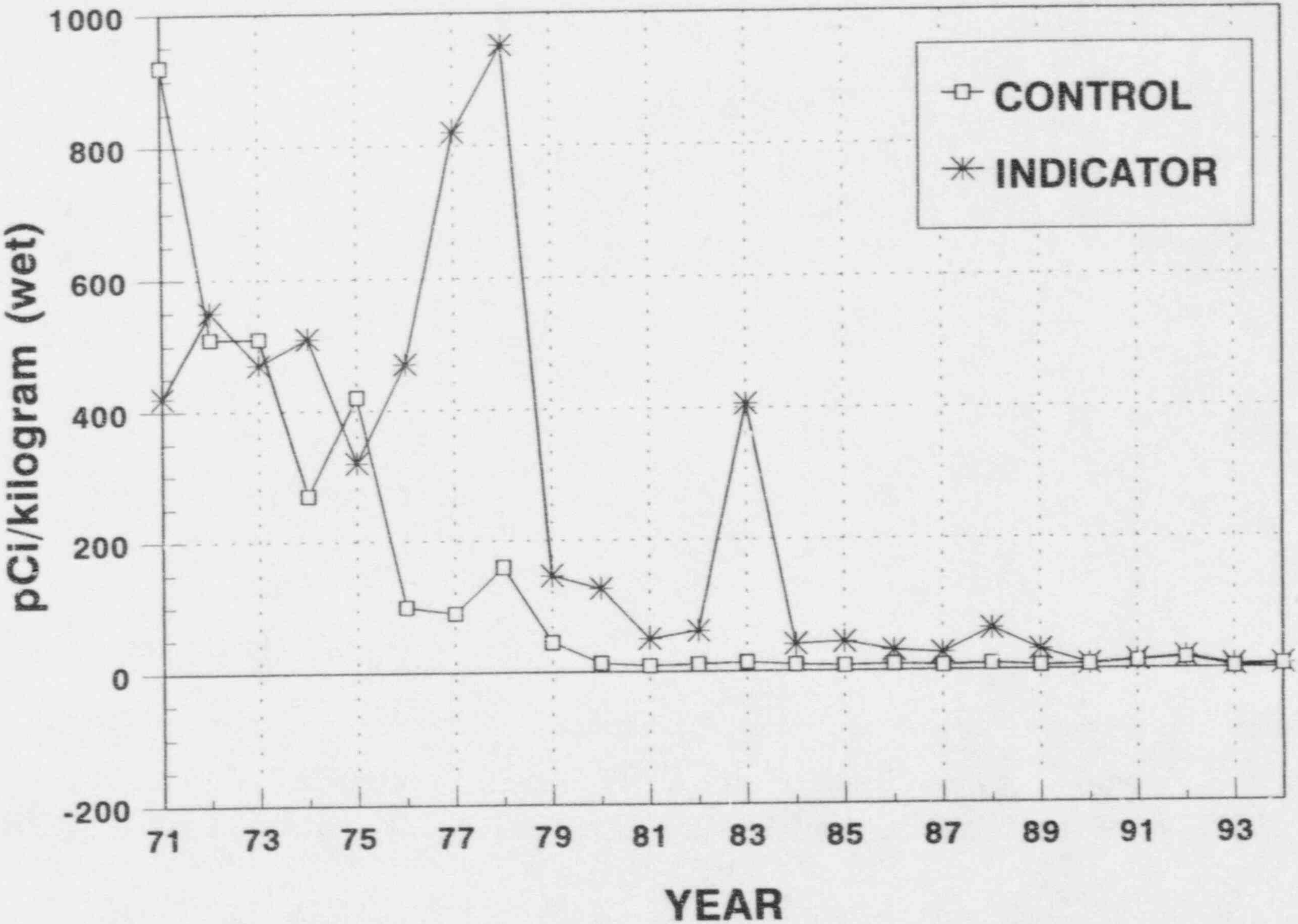
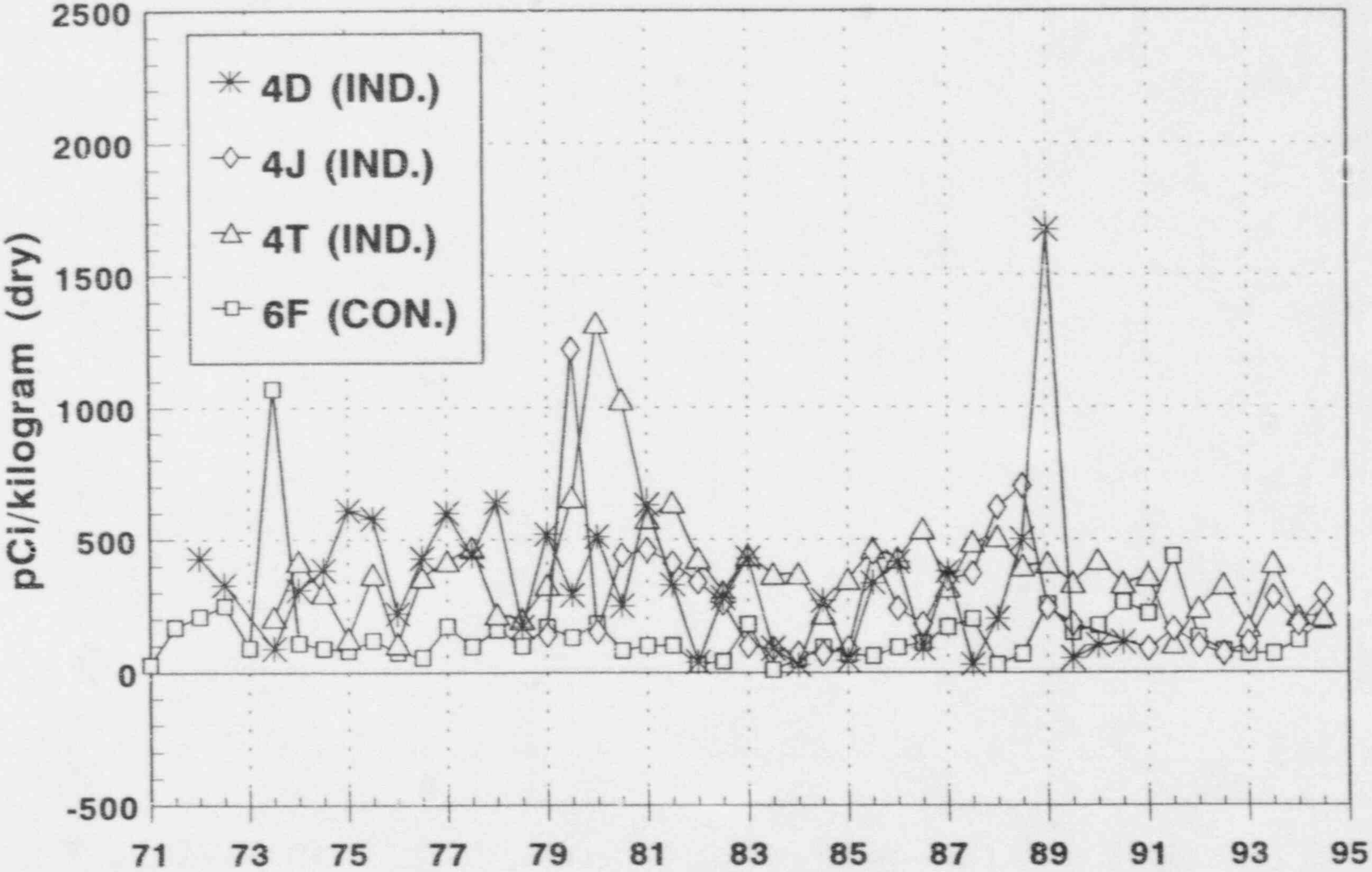


FIGURE C-6
SEMI-ANNUAL CS-137 CONCENTRATIONS IN SEDIMENT SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1971 - 1994



Station 4D discontinued beginning 1991, No sample collected from Station 4J in 1990

FIGURE C-7
MEAN WEEKLY GROSS BETA CONCENTRATIONS IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1994

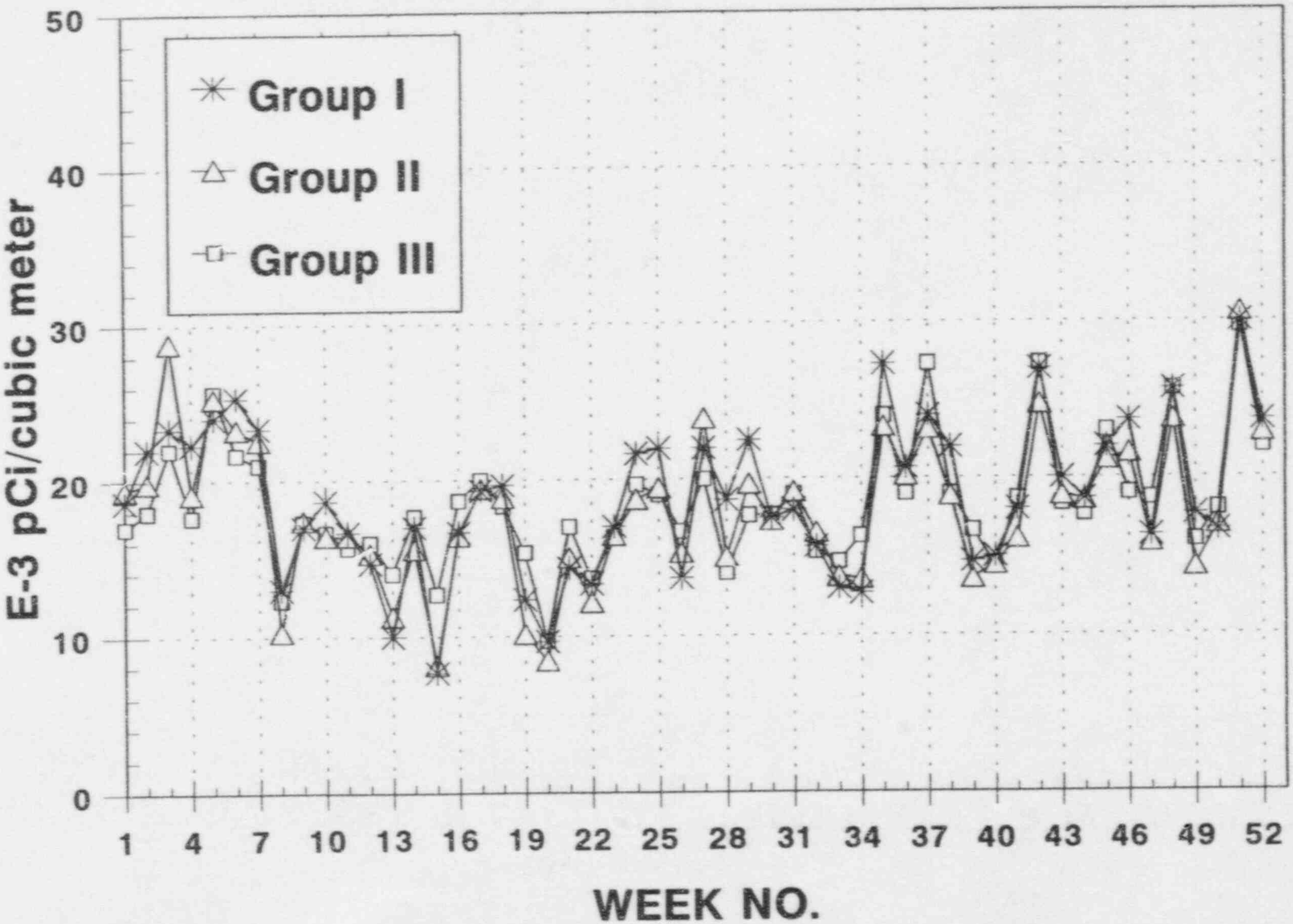


FIGURE C-8
MEAN MONTHLY GROSS BETA CONCENTRATIONS IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1970 - 1994

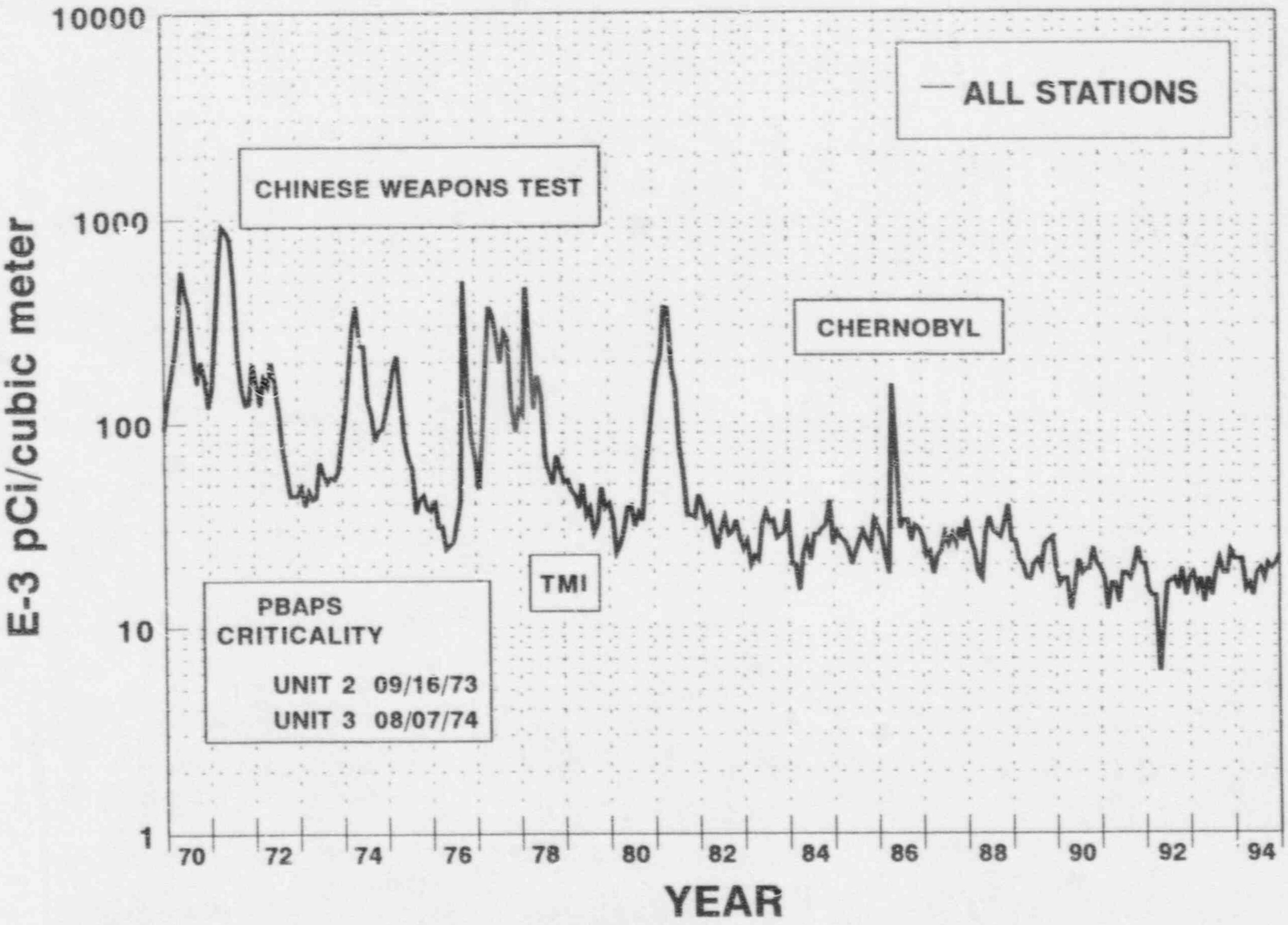


FIGURE C-9
MEAN ANNUAL CS-137 CONCENTRATIONS IN MILK SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1971 - 1994

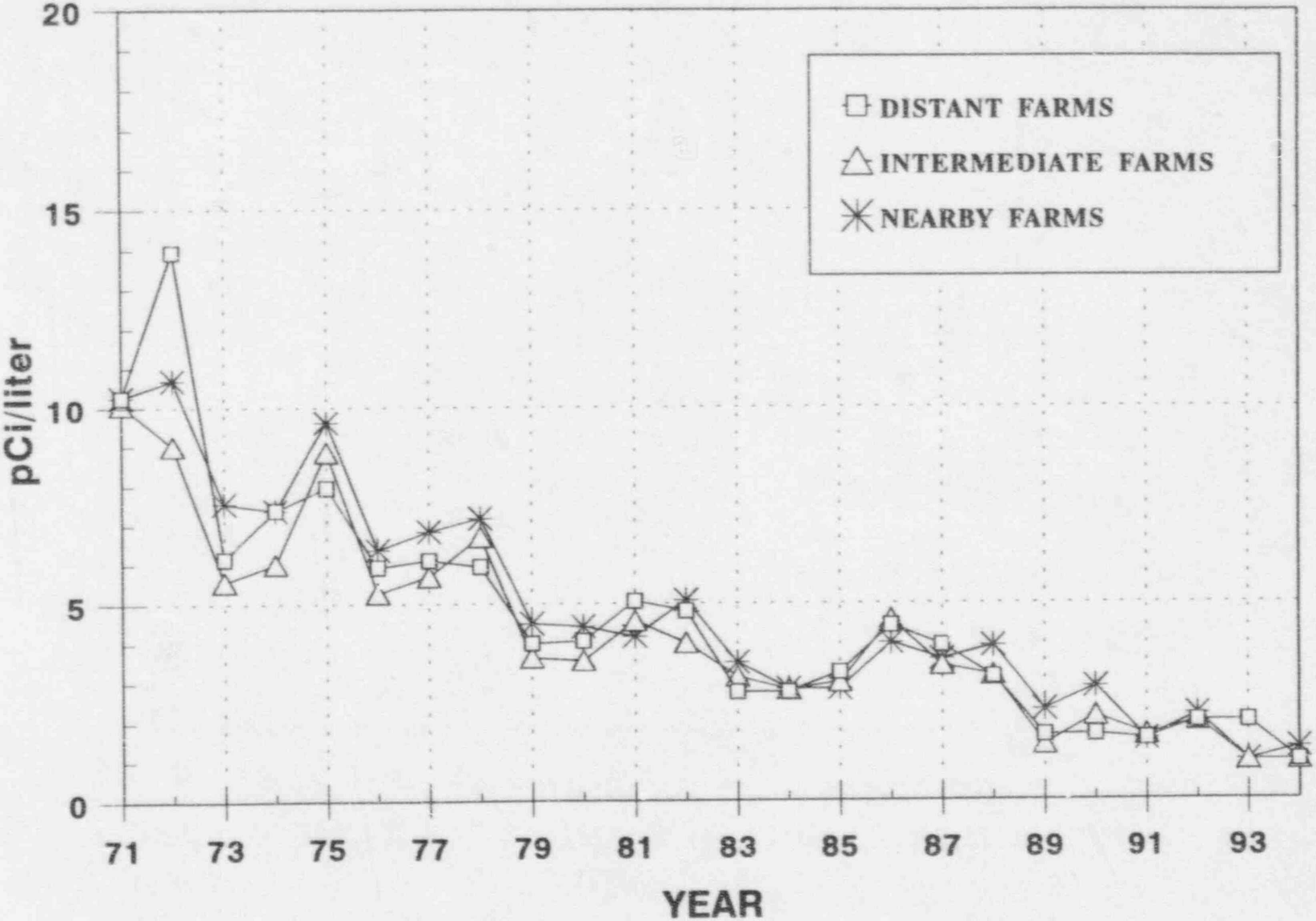


FIGURE C-10
MEAN MONTHLY AMBIENT GAMMA RADIATION (TLD) LEVELS IN THE VICINITY OF PBAPS, 1994

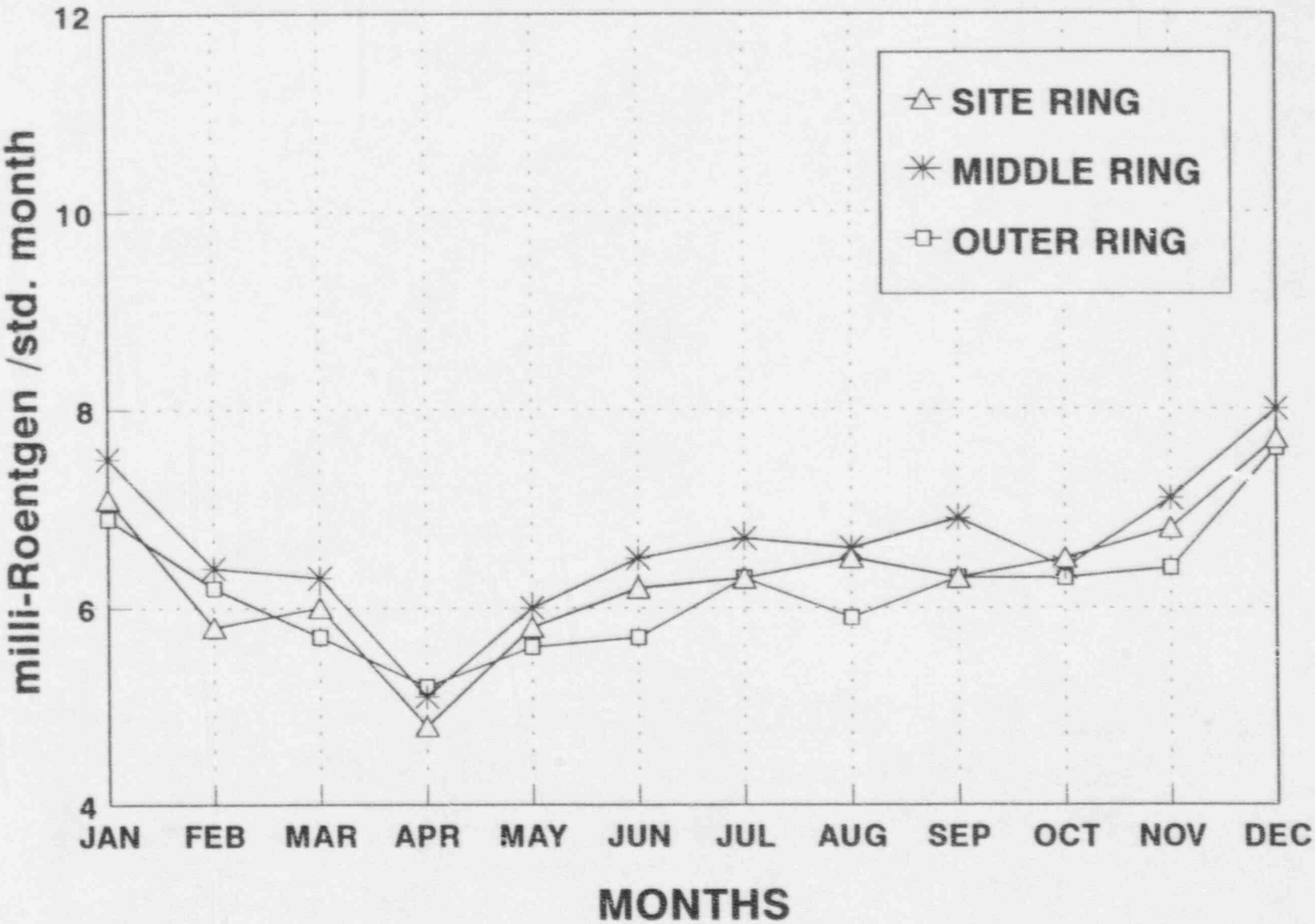
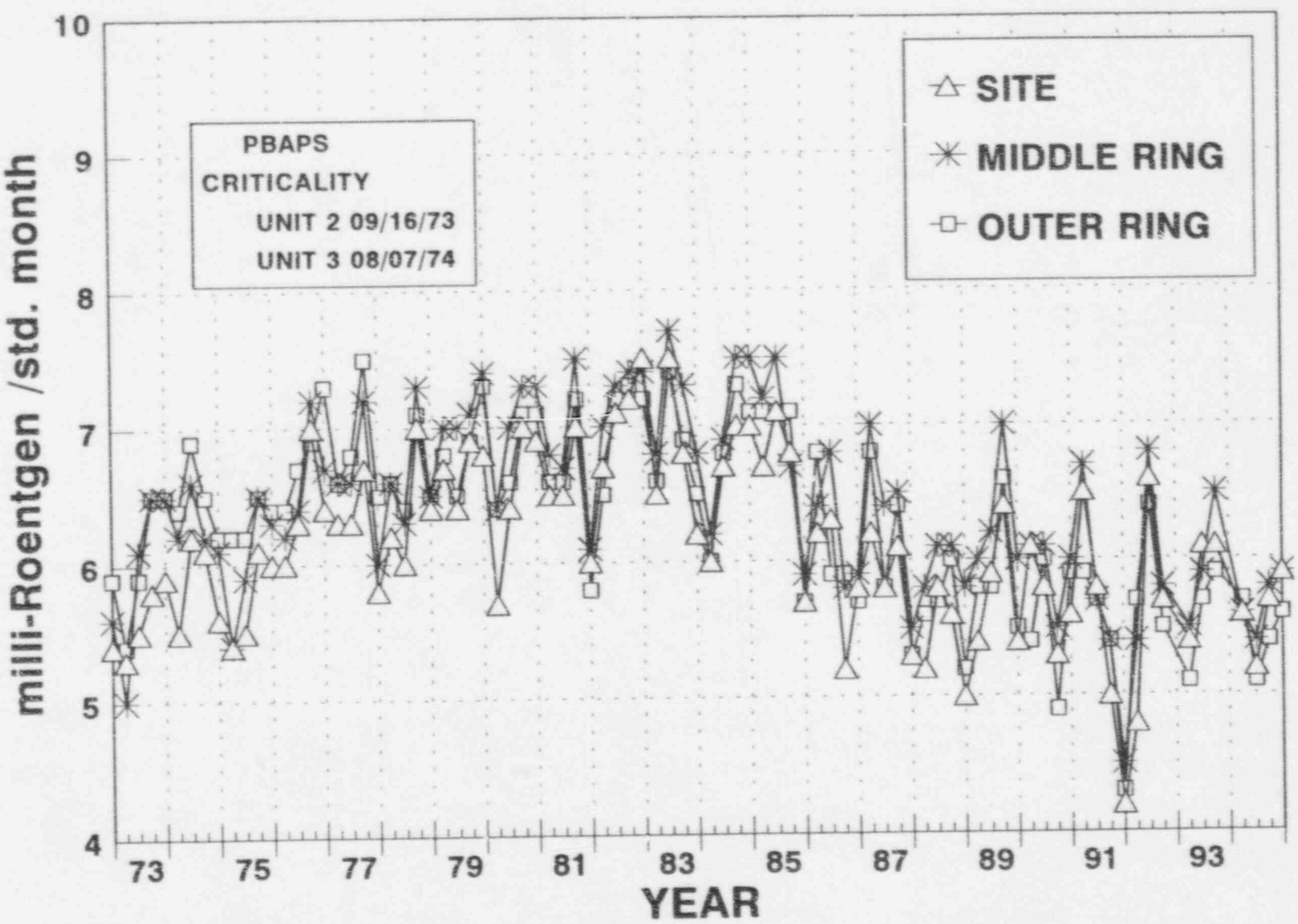


FIGURE C-11
MEAN QUARTERLY AMBIENT GAMMA RADIATION (TLD) LEVELS IN THE VICINITY OF PBAPS, 1973 - 1994



APPENDIX D

DATA TABLES AND FIGURES
COMPARISON LABORATORY

APPENDIX D: DATA TABLES AND FIGURES - COMPARISON LABORATORY

TABLES

FIGURES

The following section contains data and figures illustrating the analyses performed by the quality control laboratory. Duplicate samples were obtained from several locations and media and split between the primary laboratory, Teledyne Isotopes (TI) and the quality control laboratory, Public Service Electric & Gas (PSE&G). Comparison of the results for most media were within expected ranges, though occasional differences were seen:

PSE&G's results of gross beta insoluble and soluble in surface and drinking water samples (Table D-I.2) were generally lower than the results from Teledyne Isotopes (Tables C-I.1, C-I.2, C-II.1 and C-II.2, Appendix C). The differences were probably due to contrasts in the respective laboratory's analytical procedures. PSE&G ashes the sample prior to counting whereas, TI does not.

PSE&G's gross beta results for air particulate samples were higher than TI's results, but the trends were similar for both laboratories (Figures D-1 and D-2). PSE&G used Sr-90 as a calibration source whereas, TI used Cs-137.

TABLE D-I.1 CONCENTRATIONS OF GROSS BETA INSOLUBLE IN SURFACE AND DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	1LL		1MM		4L		6I	
FEB 94	0.6	± 0.4	0.4	± 0.4	0.2	± 0.4	0.5	± 0.4
MAY 94	0.2	± 0.3	0.3	± 0.3	0.3	± 0.3	0.2	± 0.3
AUG 94	1.0	± 0.4	1.0	± 0.4	0.6	± 0.4	1.1	± 0.4
NOV 94	0.3	± 0.3	0.2	± 0.3	0.3	± 0.3	0.1	± 0.3
MEAN	0.5	± 0.7	0.5	± 0.7	0.4	± 0.3	0.5	± 0.9

TABLE D-I.2 CONCENTRATIONS OF GROSS BETA SOLUBLE IN SURFACE AND DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	1LL		1MM		4L		6I	
FEB 94	2.4	± 0.6	2.2	± 0.6	1.6	± 0.5	2.1	± 0.6
MAY 94	1.3	± 0.4	1.1	± 0.4	1.5	± 0.4	1.3	± 0.4
AUG 94	2.8	± 0.5	2.7	± 0.5	2.2	± 0.4	2.1	± 0.4
NOV 94	2.3	± 0.5	2.4	± 0.5	3.5	± 0.5	2.2	± 0.4
MEAN	2.2	± 1.3	2.1	± 1.4	2.2	± 1.8	1.9	± 0.8

TABLE D-I.3 CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE AND DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65
1LL	FEB 94	60 ± 20	< 0.5	< 0.9	< 0.9	< 0.5	< 1
	MAY 94	< 40	< 2	< 0.9	< 3	< 1	< 1
	AUG 94	< 20	< 0.4	< 0.8	< 3	< 0.9	< 2
	NOV 94	< 10	< 0.7	< 0.8	< 0.9	< 0.6	< 0.8
	MEAN	30 ± 40	< 1.0	< 0.8	< 1.7	< 0.9	< 1.3
1MM	FEB 94	60 ± 20	< 0.9	< 0.9	< 1	< 0.5	< 2
	MAY 94	< 20	< 0.3	< 0.6	< 0.9	< 0.4	< 0.8
	AUG 94	50 ± 20	< 0.7	< 0.4	< 2	< 1.0	< 1
	NOV 94	< 20	< 1	< 0.7	< 0.8	< 0.9	< 1
	MEAN	30 ± 40	< 0.7	< 0.6	< 1.2	< 0.7	< 1.3
4L	FEB 94	50 ± 10	< 1.0	< 0.4	< 1	< 0.7	< 1
	MAY 94	< 10	< 0.9	< 0.7	< 0.9	< 0.4	< 2
	AUG 94	50 ± 20	< 0.8	< 0.5	< 1	< 1.0	< 0.7
	NOV 94	50 ± 20	< 0.9	< 1	< 3	< 1	< 1
	MEAN	40 ± 40	< 0.9	< 0.7	< 1.4	< 0.8	< 1.1
6I	FEB 94	< 10	< 0.8	< 0.7	< 1	< 0.7	< 2
	MAY 94	50 ± 10	< 0.7	< 0.8	< 0.6	< 0.8	< 0.9
	AUG 94	< 50	< 0.6	< 0.6	< 1	< 1	< 1
	NOV 94	< 50	< 1	< 0.4	< 2	< 0.8	< 1
	MEAN	40 ± 40	< 0.8	< 0.6	< 1.3	< 0.9	< 1.3

TABLE D-I.3 CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE AND DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	ZR-95	NB-95	CS-134	CS-137	BA-140	LA-140
1LL	FEB 94	< 1	< 0.7	< 0.8	< 0.5	< 3	< 20
	MAY 94	< 2	< 0.9	< 0.9	< 1	< 7	< 50
	AUG 94	< 2	< 0.7	< 0.6	< 0.7	< 5	< 20
	NOV 94	< 1	< 0.8	< 0.7	< 0.4	< 5	< 6
	MEAN	< 2	< 0.8	< 0.8	< 0.7	< 5	< 22
1MM	FEB 94	< 2	< 0.9	< 0.8	< 9	< 3	< 20
	MAY 94	< 2	< 0.8	< 0.4	< 1.0	< 4	< 20
	AUG 94	< 1	< 0.9	< 0.3	< 0.4	< 9	< 40
	NOV 94	< 2	< 0.7	< 0.3	< 1	< 3	< 20
	MEAN	< 2	< 0.8	< 0.5	< 2.9	< 5	< 30
4L	FEB 94	< 2	< 0.7	< 0.6	< 0.9	< 2	< 8
	MAY 94	< 3	< 1	< 1.0	< 0.6	< 4	< 10
	AUG 94	< 2	< 0.7	< 0.5	< 0.8	< 4	< 10
	NOV 94	< 1	< 0.8	< 0.6	< 2	< 5	< 3
	MEAN	< 2	< 0.9	< 0.7	< 1.0	< 4	< 8
6I	FEB 94	< 1	< 0.8	< 0.8	< 0.6	< 1	< 3
	MAY 94	< 0.7	< 0.4	< 0.6	< 0.8	< 2	< 4
	AUG 94	< 3	< 1	< 0.6	< 0.9	< 4	< 10
	NOV 94	< 2	< 0.5	< 0.8	< 1	< 3	< 3
	MEAN	< 1.6	< 0.7	< 0.7	< 0.8	< 3	< 6

TABLE D-II.1 CONCENTRATIONS OF GROSS BETA IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF E-3 PCI/CU. METER ± 2 SIGMA

WEEK	1A		4B	
01	23	± 3	19	± 2
02	29	± 3	23	± 4
03	31	± 3	34	± 3
04	35	± 3	32	± 3
05	29	± 3	29	± 3
06	34	± 3	30	± 3
07	31	± 3	26	± 3
08	16	± 3	19	± 3
09	21	± 3	27	± 4
10	25	± 3	25	± 3
11	21	± 3	15	± 2
12	26	± 3	21	± 3
13	18	± 3	18	± 3
14	24	± 3	23	± 3
15	19	± 3	18	± 3
16	23	± 3	18	± 3
17	21	± 3	20	± 3
18	21	± 3	15	± 3
19	18	± 3	15	± 3
20	11	± 2	9	± 2
21	19	± 3	17	± 3
22	19	± 4	19	± 3
23	14	± 3	18	± 3
24	31	± 3	25	± 3
25	34	± 7	21	± 3
26	23	± 3	22	± 2
27	28	± 3	21	± 3
28	25	± 4	22	± 3
29	34	± 4	23	± 3
30	29	± 3	27	± 3
31	26	± 3	22	± 3
32	21	± 3	23	± 3
33	17	± 3	20	± 3
34	21	± 3	18	± 3
35	34	± 3	34	± 3
36	28	± 3	26	± 3
37	37	± 3	37	± 3
38	32	± 3	28	± 3
39	22	± 3	22	± 3
40	21	± 3	20	± 2
41	22	± 3	22	± 3
42	37	± 3	34	± 3
43	28	± 3	31	± 3
44	23	± 3	21	± 3
45	33	± 3	32	± 3
46	32	± 3	29	± 3
47	25	± 3	24	± 3
48	35	± 3	33	± 3
50	22	± 3	25	± 3
51	42	± 3	42	± 3
52	31	± 3	29	± 3
MEAN	26	± 13	24	± 13

TABLE D-II.2 CONCENTRATIONS OF GAMMA EMITTERS IN AIR PARTICULATE SAMPLES
COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF E-3 PCI/CU. METER ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	CS-134	CS-137	RA-226	TH-228
1A	12/24-03/31/94	60 ± 5	< 1	< 0.1	< 0.1	< 0.4	< 2
	03/21-07/03/94	82 ± 7	13 ± 5	< 0.3	< 0.2	< 0.7	< 0.8
	07/03-09/30/94	75 ± 6	14 ± 5	< 0.1	< 0.3	< 0.6	1 ± 1
	09/30-12/30/94	77 ± 6	15 ± 5	< 0.3	< 0.1	1.2 ± 0.4	< 0.9
	MEAN	74 ± 19	11 ± 13	< 0.2	< 0.2	0.7 ± 0.7	1.2 ± 1.1
4B	12/24-03/31/94	65 ± 5	< 20	< 0.10	< 0.1	< 0.6	< 2
	03/31-07/03/94	79 ± 6	21 ± 5	< 0.2	< 0.1	< 0.6	< 4
	07/03-09/30/94	68 ± 9	19 ± 5	< 0.2	< 0.3	< 0.7	< 1
	09/30-12/30/94	80 ± 6	16 ± 5	< 0.1	< 0.1	< 0.6	< 1
	MEAN	73 ± 15	18 ± 6	< 0.15	< 0.2	< 0.6	< 2

TABLE D-III.1 CONCENTRATIONS OF GAMMA EMITTERS IN MILK SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	I-131	K-40	CS-134	CS-137	BA-140	LA-140
A	02/06/94	< 0.2	1390 ± 70	< 0.5	< 1	< 2	< 2
	05/09/94	< 0.2	< 2	< 2	< 1	< 1	< 2
	08/15/94	< 0.3	1360 ± 80	< 2	< 2	< 6	< 3
	11/07/94	< 0.3	1370 ± 90	< 1	< 0.9	< 4	< 3
	MEAN	< 0.3	1030 ± 1372	< 1.2	< 1.2	< 3	< 3
J	02/06/94	< 0.1	1430 ± 80	< 1	< 2	< 6	< 6
	05/09/94	< 0.3	< 6	< 6	< 7	< 8	< 8
	08/15/94	< 0.3	1300 ± 60	< 0.5	< 2	< 3	< 2
	11/07/94	< 0.3	1400 ± 100	< 2	< 5	< 7	< 5
	MEAN	< 0.3	1034 ± 1375	< 2.4	< 4	< 6	< 5
N	02/07/94	< 0.3	1390 ± 70	< 1	< 1	< 2	< 2
	05/09/94	< 0.3	< 3	< 2	< 2	< 1	< 2
	08/15/94	< 0.6	1300 ± 80	< 0.6	< 2	< 5	< 5
	11/07/94	< 0.3	1360 ± 60	< 0.5	< 0.8	< 4	< 3
	MEAN	< 0.4	1013 ± 1349	< 0.9	< 1.4	< 3	< 3

TABLE D-IV.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 1994

SURFACE AND DRINKING WATER

COLLECTION PERIOD	1LL	1MM	4L	6I
FEB 94	02/02-03/02	02/02-03/02	02/04-03/05	02/06-03/06
MAY 94	04/27-06/01	04/27-06/01	04/29-06/03	04/30-06/04
AUG 94	08/03-08/31	08/03-08/31	08/05-09/02	08/05-09/03
NOV 94	11/02-11/30	11/02-11/30	11/04-12/04	11/05-12/05

AIR PARTICULATE

WEEK	1A	4B	WEEK	1A	4B
01	12/31-01/07	12/31-01/09	27	07/03-07/09	07/03-07/09
02	01/07-01/14	01/09-01/14	28	07/09-07/15	07/09-07/15
03	01/14-01/21	01/14-01/21	29	07/15-07/22	07/15-07/22
04	01/21-01/28	01/21-01/29	30	07/22-07/29	07/22-07/29
05	01/28-02/04	01/29-02/04	31	07/29-08/05	07/29-08/05
06	02/04-02/12	02/04-02/12	32	08/05-08/12	08/05-08/12
07	02/12-02/19	02/12-02/19	33	08/12-08/19	08/12-08/19
08	02/19-02/25	02/19-02/25	34	08/19-08/26	08/19-08/26
09	02/25-03/05	02/25-03/05	35	08/26-09/02	08/26-09/02
10	03/05-03/11	03/05-03/11	36	09/02-09/09	09/02-09/09
11	03/11-03/19	03/11-03/19	37	09/09-09/16	09/09-09/16
12	03/19-03/25	03/19-03/25	38	09/16-09/23	09/16-09/23
13	03/25-03/31	03/25-03/31	39	09/23-09/30	09/23-09/30
14	03/31-04/08	03/31-04/08	40	09/30-10/08	09/30-10/08
15	04/08-04/15	04/08-04/15	41	10/08-10/14	10/08-10/14
16	04/15-04/22	04/15-04/22	42	10/14-10/21	10/14-10/21
17	04/22-04/29	04/22-04/29	43	10/21-10/28	10/21-10/28
18	04/29-05/06	04/29-05/06	44	10/28-11/04	10/28-11/04
19	05/06-05/13	05/06-05/13	45	11/04-11/11	11/04-11/11
20	05/13-05/20	05/13-05/20	46	11/11-11/18	11/11-11/18
21	05/20-05/27	05/20-05/27	47	11/18-11/25	11/18-11/25
22	05/27-06/03	05/27-06/03	48	11/25-12/04	11/25-12/04
23	06/03-06/10	06/03-06/10	49	12/04-12/10	12/04-12/10
24	06/10-06/17	06/10-06/17	50	12/10-12/16	12/10-12/16
25	06/17-06/24	06/17-06/24	51	12/16-12/23	12/16-12/23
26	06/24-07/03	06/24-07/03	52	12/23-12/30	12/23-12/30

FIGURE D-1
WEEKLY GROSS BETA CONCENTRATIONS IN AIR PARTICULATE SAMPLES COLLECTED FROM PBAPS LOCATIONS 1A AND 1Z, 1994

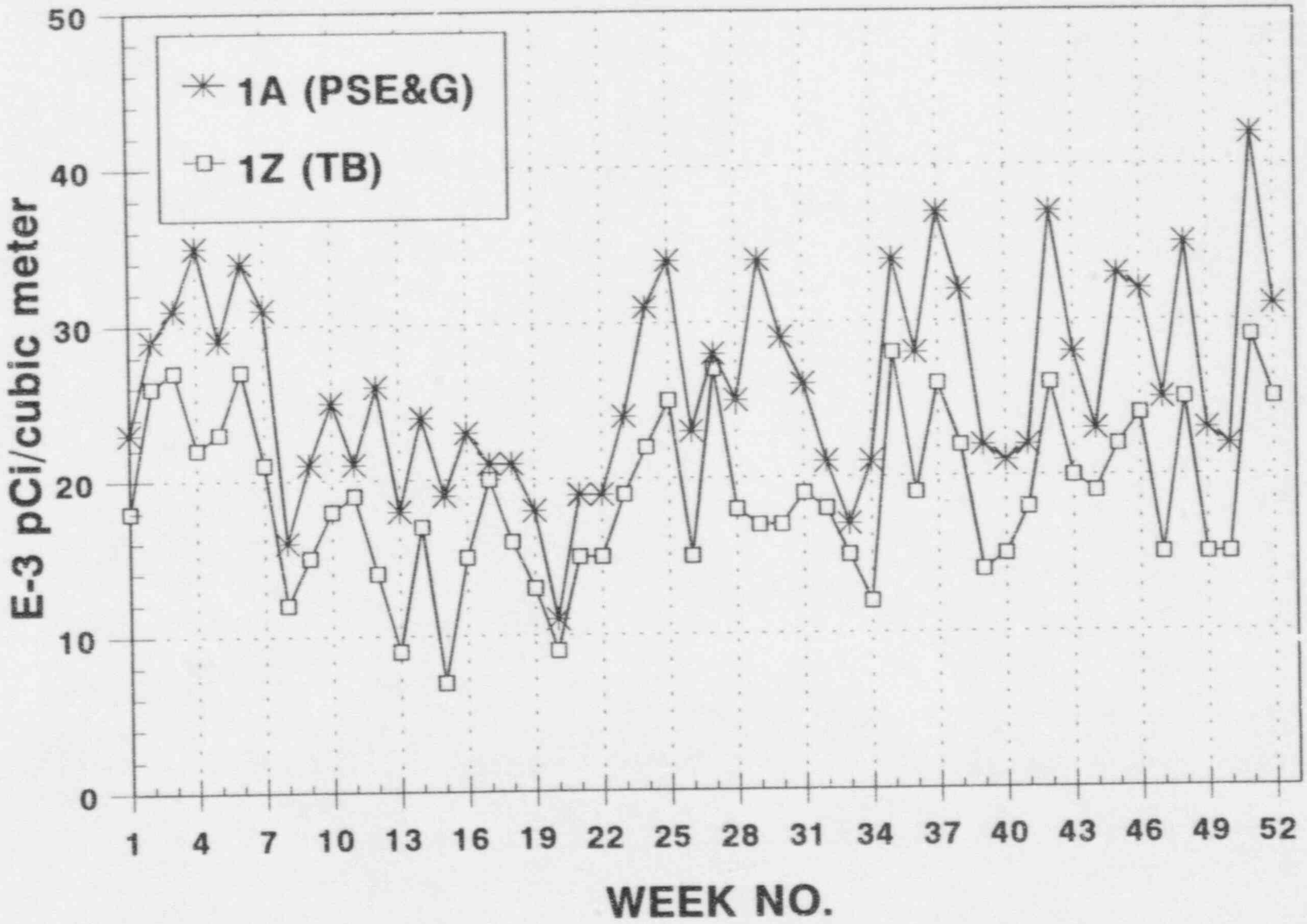
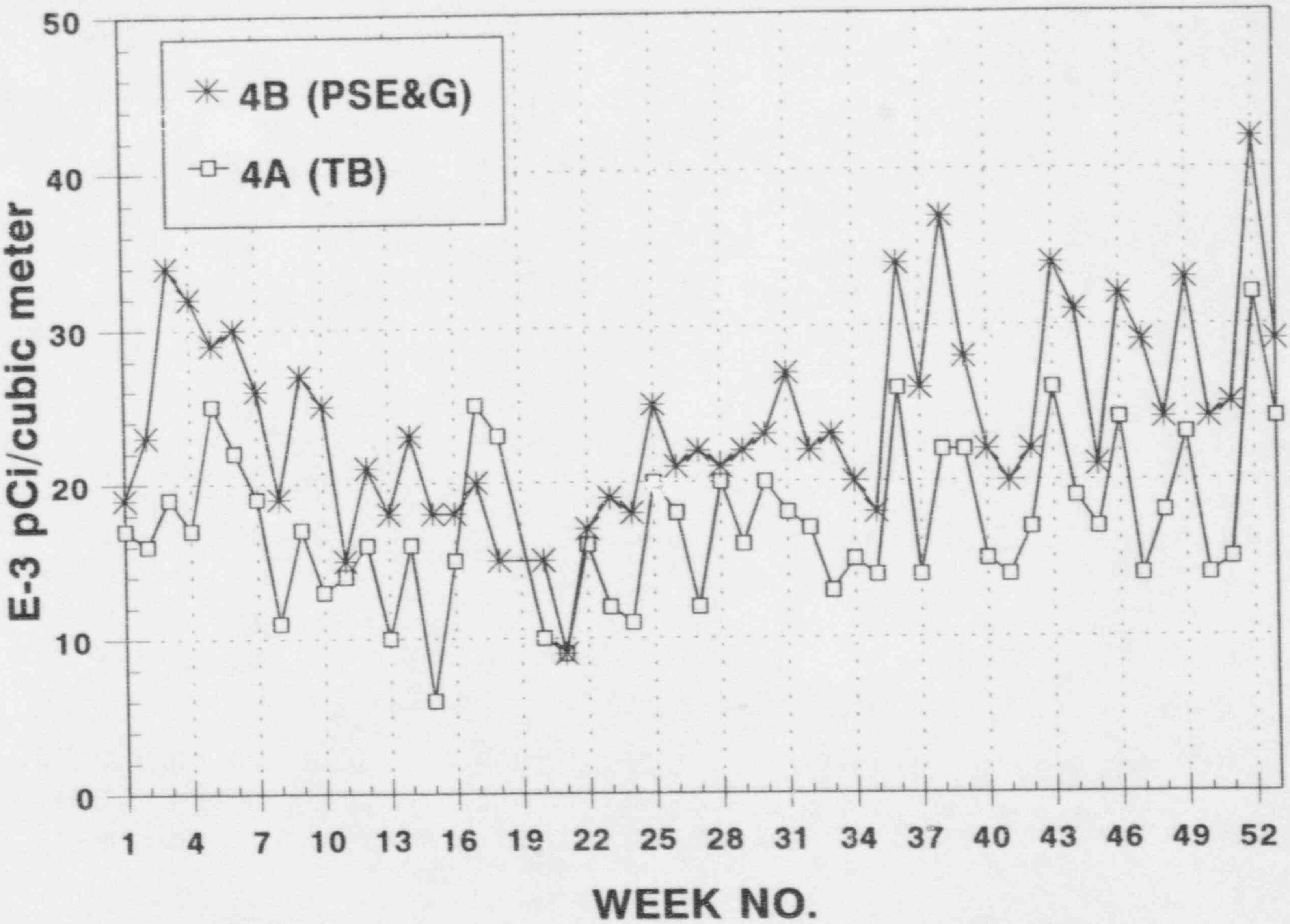


FIGURE D-2
WEEKLY GROSS BETA CONCENTRATIONS IN AIR PARTICULATE SAMPLES COLLECTED FROM PBAPS LOCATIONS 4B AND 4A, 1994



APPENDIX E

SYNOPSIS OF ANALYTICAL PROCEDURES

APPENDIX E: SYNOPSIS OF ANALYTICAL PROCEDURES

The following section contains a description of the analytical laboratory procedures along with an explanation of the analytical calculation methods used by Teledyne Brown Engineering and Public Service Electric & Gas to obtain the sample activities.

DETERMINATION OF GROSS BETA ACTIVITY IN WATER SAMPLES
(TOTAL SUSPENDED AND DISSOLVED FRACTIONS)

Teledyne Brown Engineering

This describes the process used to measure the radioactivity of water samples without identifying the radioactive species present. No chemical separation techniques are involved.

For surface and drinking water samples, one liter of the sample is filtered under vacuum through a 0.45 micron Millipore filter. This filter represents the insoluble portion of the sample. The filter is dried and mounted on a planchet. The filter which represents the soluble portion of the sample is evaporated on a hot plate, and the residue is transferred and dried on another planchet.

The planchets are counted for 50 minutes in a low-background gas flow proportional counter. Calculation of activity includes a self-absorption correction for counter efficiency based on the weight of residue on each planchet.

Calculation of Sample Activity and 2 Sigma Error:

$$\frac{Result}{(pCi/l)} = \frac{\frac{N}{t_s} - \beta}{(2.22)\,(v)\,(E)} \pm \frac{2\sqrt{\frac{N}{t_s^2} + \frac{\beta}{t_b}}}{(2.22)\,(v)\,(E)}$$

Net Activity Counting Error

where:

N	=	total counts from sample (counts)
t_s	=	counting time for sample (min)
ß	=	background rate of counter (cpm)
t_b	=	counting time for background (min)
2.22	=	dpm/pCi
v	=	volume in liters
E	=	efficiency of the counter
2	=	multiple of counting error

The MDL is defined as that value equal to the two sigma counting error of the result. Less than MDL is reported as the result when this value is greater than the measured result defined above.

DETERMINATION OF GROSS BETA ACTIVITY IN WATER SAMPLES (TOTAL SUSPENDED AND DISSOLVED FRACTIONS)

Public Service Electric & Gas

This describes the process used to measure the overall radioactivity of water samples without identifying the radioactive species present. No chemical separation techniques are involved.

The sample is mixed thoroughly. Then, a 1.0 liter portion is removed from the surface or drinking water container and filtered through a slow, hardened ashless filter paper mounted in a Buchner funnel. The filter paper is removed from the Buchner funnel, folded into a triangle, placed in a covered porcelain crucible and heated over a Bunsen burner until completely charred. The crucible is then ashed for at least 2 hours in a muffle furnace at 500° C. The cooled ash is then transferred to a tared stainless steel ribbed planchet using a rubber policeman with laboratory aerosol and reagent water.

The filtrate portion of the sample is evaporated on a hot plate until the volume approaches 20 to 25 ml. At that point, the filtrate is transferred to a tared stainless steel ribbed planchet. Both planchets are evaporated to dryness under an infrared heat lamp. They are subsequently cooled in a desiccator, weighed and counted using a low background gas proportional counter.

Calculation of Sample Activity and 1.96 Sigma Error:

$$\frac{Result}{(pCi/l)} = 100\frac{\frac{C_s}{T_s} - \frac{C_b}{T_b}}{2.22(v)(E)} \pm \frac{1.96\sqrt{\frac{C_s}{T_s^2} + \frac{C_b}{T_b^2}}}{2.22(v)(E)}$$

Net Activity　　　　Counting Error

where:

C_s	=	total gross sample counts (counts)
T_s	=	sample count time (min)
C_b	=	total background count (counts)
T_b	=	background count time (min)
E	=	counting efficiency based on Sr-90 for the weight of planchetted sample
v	=	aliquot size in liters
2.22	=	dpm per pCi
1.96	=	multiple of counting error

The MDL is defined as that value equal to the 1.96 sigma counting error of the result. Less than MDL is reported as the result when this value is greater than the net activity.

DETERMINATION OF TRITIUM IN WATER
BY LIQUID SCINTILLATION COUNTING

Teledyne Brown Engineering

Ten (10) milliliters of sample is directly pipetted into a 25 ml vial and mixed with liquid scintillation material and counted for a minimum of 100 minutes to determine its activity. The tritium activity is determined by measuring the count rate in the beta activity energy spectrum from 0 to 18 KeV. Eighteen to 100 KeV represents the carbon-14 energy region. If there is no count rate above background in the carbon-14 energy region, the sample has no contamination and the tritium activity may be calculated directly. If the net count rate in the carbon-14 energy channel is 10% of the tritium count rate or higher, the sample contains contamination that may affect the count rate in the tritium channel, and the sample must be purified by distillation before recounting.

Calculation of Sample Activity and 2 Sigma Error:

$$\frac{Result}{(pCi/l)} = \frac{\frac{N}{t_s} - \beta}{2.22(v)(E)} \pm \frac{2\sqrt{\frac{N}{t_s^2} + \frac{\beta}{t_b}}}{2.22(v)(E)}$$

Net Activity   Counting Error

where:

N	=	total counts from sample (counts)
t_s	=	counting time for sample (min)
ß	=	background rate of counter (cpm)
t_b	=	counting time for background (min)
2.22	=	dpm/pCi
v	=	sample volume (in liters)
E	=	efficiency of the counter tritium
2	=	multiples of counting error

The MDL is defined as that value equal to the two sigma counting error of the result. Less than MDL is reported as the result when this value is greater than the net activity.

DETERMINATION OF GROSS BETA ACTIVITY IN AIR PARTICULATE SAMPLES

Teledyne Brown Engineering

This describes the process used to measure the overall beta activity of air particulate filters without identifying the radioactive species present. No chemical separation techniques are involved. Each air particulate filter is placed directly on a 2-inch stainless steel planchet. The planchets are then counted for beta activity in a low-background gas flow proportional counter. Calculation of activity includes an empirical self-absorption correction curve which allows for the change in effective counting efficiency caused by the residue mass. Self-absorption is not considered in the case of air particulate filters because of the impracticality of accurately weighing the deposit and because the penetration depth of the deposit into the filter is unknown.

Calculation of Sample Activity and 2 Sigma Error:

$$\frac{Result}{(pCi/m^3)} = \frac{(\frac{N}{t_s}) - \beta}{2.22(v)(E)(.02832)} \pm \frac{2\sqrt{(\frac{N}{t_s^2}) + (\frac{\beta}{t_b})}}{2.22(v)(E)(.02832)}$$

Net Activity   Counting Error

where:

N	=	total counts from sample (counts)
t_s	=	counting time for sample (min)
ß	=	background rate of counter (cpm)
t_b	=	counting time for background (min)
2.22	=	dpm/pCi
v	=	volume of sample analyzed in cubic feet calculated from the elapsed time meter
E	=	efficiency of the counter
2	=	multiple of counting error
.02832	=	conversion to cubic meters

The MDL is defined as that value equal to the two sigma counting error of the result. Less than MDL is reported as the result when this value is greater than the net activity.

DETERMINATION OF GROSS BETA ACTIVITY IN AIR PARTICULATE SAMPLES

Public Service Electric & Gas

After allowing at least a three-day (extending from the sample stop date to the sample count time) period for the short-lived radionuclides to decay out, each air particulate filter paper is placed in a 2-inch diameter stainless steel planchet and counted using a gas proportional counter.

Calculation of Sample Activity and 1.96 Sigma Error:

$$\frac{Result}{(pCi/m^3)} = \frac{\frac{C_s}{T_s} - \frac{C_b}{T_b}}{2.22(v)(E)(.02832)} \pm \frac{1.96\sqrt{\frac{C_s}{T_s^2} + \frac{C_b}{T_b^2}}}{2.22(v)(E)(.02832)}$$

Net Activity Counting Error

where:

C_s	=	total gross sample counts (counts)
T_s	=	sample count time (min)
C_b	=	total background count (counts)
T_b	=	background count time (min)
E	=	counting efficiency based on Sr-90
v	=	sample volume in cubic feet calculated from the elapsed time meter readings and the flow rate
.02832	=	conversion to cubic meters
2.22	=	dpm/pCi
1.96	=	multiple of the counting error

The MDL is defined as that value equal to the 1.96 sigma counting error of the result. Less than MDL is reported as the result when this value is greater than the net activity.

Teledyne Brown Engineering

Two liters of sample are first equilibrated with stable iodide carrier. A batch treatment with anion exchange resin is used to remove iodide from the sample. The iodine is then stripped from the resin with sodium hypochlorite, reduced with hydroxylamine hydrochloride, and extracted into carbon tetrachloride as free iodine. It is then back-extracted as iodide into sodium bisulfite solution and is precipitated as palladium iodide. The precipitate is weighed for chemical yield and is mounted on a nylon planchet for low level beta counting. The chemical yield is corrected by measuring the stable iodide content of the milk or water with a specific ion electrode.

Calculation of the Sample Activity and 2 Sigma Error:

$$\frac{Result}{(pCi/l)} = \frac{\frac{N}{t_s} - \beta}{(2.22)(v)(E)(y)(\exp^{-\lambda\Delta t})} \pm \frac{2\sqrt{\frac{N}{t_s^2} + \frac{\beta}{t_b}}}{(2.22)(v)(E)(y)(\exp^{-\lambda\Delta t})}$$

Net Activity   Counting Error

where:

N	=	total counts from sample (counts)
t_s	=	counting time for sample (min)
ß	=	background rate of counter (cpm)
t_b	=	counting time for background (min)
2.22	=	dpm/pCi
v	=	volume of sample analyzed (liters)
y	=	chemical yield of the amount of sample counted
λ	=	is the radioactive decay constant for I-131 (0.693/8.05)
Δt	=	is the elapsed time between sample collection (or end of the sample collection) to the midcount time
2	=	multiple of the counting error
E	=	efficiency of the counter for I-131, corrected for self absorption effects by the formula:

$$E = E_s \frac{(\exp^{-0.0061M})}{(\exp^{-0.0061M_s})}$$

where:

E_s	=	efficiency of the counter determined from an I-131 standard mount
M	=	mass of PdI_2 on the sample mount (mg)
M_s	=	mass of PdI_2 on the standard mount (mg)

The MDL is defined as that value equal to the two sigma counting error of the result. Less than MDL is reported as the result when this value is greater than the net activity.

Public Service Electric & Gas

Stable iodine carrier is equilibrated in a 4-liter volume of raw milk before two separate 50 ml batches of anion exchange resin are introduced to extract iodine. After each batch has been stirred in the milk for an appropriate time, both are then transferred to an aluminum sample can where the resins are rinsed with demineralized water several times and any leftover rinse water removed with an aspirator stick. The can is hermetically sealed and then counted on a gamma detector.

Calculation of the Sample Activity and 1.96 Sigma Error:

$$\frac{Result}{(pCi/l)} = \frac{(\frac{C_s}{T_s} - \frac{C_b}{T_b})(1.05)}{(2.22)(v)(E)(y)(\exp^{-\lambda\Delta t})} \pm \frac{1.96\sqrt{\frac{C_s}{T_s^2} + \frac{C_b}{T_b^2}}\,(1.05)}{(2.22)(v)(E)(y)(\exp^{-\lambda\Delta t})}$$

Net Activity   Counting Error

where:

C_s	=	total gross sample counts (counts)
T_s	=	sample count time (min)
C_b	=	total background count time (counts)
T_b	=	background count time (min)
E	=	counting efficiency for I-131
v	=	aliquot analyzed (liters)
y	=	iodine yield
λ	=	is the radioactive decay constant for I-131 (0.693/8.05)
Δt	=	is the elapsed time between sample collection (or end of the sample collection) to the midcount time
1.05	=	Correction factor for protein-bound iodine
2.22	=	dpm/pCi
1.96	=	multiple of counting error

The MDL is defined as that value equal to the 1.96 sigma counting error of the result. Less than MDL is reported as the result when this value is greater than the net activity.

Teledyne Brown Engineering

Gamma emitting radioisotopes are determined with the use of a lithium drifted germanium (GeLi) and high purity germanium detectors with high resolution spectrometry in specific media; such as, air particulate filters, charcoal filters, milk and water. Each sample to be assayed is prepared and counted in standard geometries such as one liter wrap-around Marinelli containers, 300 ml or 150 ml bottles, or 2-inch filter paper source geometries.

Samples are counted on large (>55 cc volume) GeLi detectors connected to Nuclear Data 6620 data acquisition and computation systems. All resultant spectra are stored on magnetic tape.

The analysis of each sample consists of calculating the specific activities of all detected radionuclides or the detection limits from a standard list of nuclides. The GeLi systems are calibrated for each standard geometry using certified radionuclide standards traceable to the National Bureau of Standards.

Gamma Spectroscopy Statistically Significant Activity and 2 Sigma Error Calculation for the ND6620 and ND6700 Systems:

$$\frac{Activity}{\left(\frac{pCi}{unit\ mass}\right)} = \frac{AREA * DECAY}{LIVETIME(\text{sec.}) * ABN * EFF * 0.037 * (unit\ mass)}$$

Statistically Significant Activity

$$\pm\ 200 * \frac{\sqrt{2 * BKGND + AREA}}{AREA} * Activity$$

2 Sigma Counting Error

where:

AREA	=	Net Peak Area (from Nuclide Line Activity Report)
BKGND	=	Compton Background (from Nuclide Line Activity Report)
DECAY	=	Decay Correction Factor (from Minimum Detectable Activity Report) (Nuclide Half Life - Collection time to Mid Count time)
LIVE TIME	=	Elapsed Live Time (from Header Information)
ABN	=	Nuclide Abundance (from Nuclide Line Activity Report)
EFF	=	Detector Efficiency (from Nuclide Line Activity Report)
0.037	=	Conversion Factor (dps to picocuries)
unit mass	=	Sample weight or volume (from Header information)

Gamma Spectroscopy Statistically Non Significant Activity and 2 Sigma Error Calculation for the ND6620 and ND6700 Systems:

$$\frac{NetActivity}{(\frac{pCi}{unit\ mass})} = \frac{NET * DECAY}{LIVETIME(\text{sec.}) * (EFF * B.I.) * 0.037 * (unit\ mass)}$$

Statistically Non Significant Activity

$$\pm\ 200 * \frac{\sqrt{2 * BKGND + NET}}{NET} * Net\ Activity$$

2 Sigma Counting Error

where:

NET	=	Net Peak Area (from Minimum Detectable Activity Report)
BKGND	=	Compton Background (from Nuclide Line Activity Report)
DECAY	=	Decay Correction Factor (from Minimum Detectable Activity Report) (Nuclide Half Life - Collection time to Mid Count time)
LIVE TIME	=	Elapsed Live Time (from Header Information)
(EFF*B.I)	=	Efficiency * Abundance (from Minimum Detectable Activity Report)
0.037	=	Conversion Factor (dps to picocuries)
unit mass	=	Sample weight or volume (from Header Information)

Gamma Spectroscopy Minimum Detectable Activity Calculation for the ND6620 and ND6700 Systems:

$$\frac{MDA}{(\frac{pCi}{unit\ mass})} = \frac{2.83\sqrt{BKGN} * DECAY}{LIVETIME(\text{sec.}) * (EFF * B.I.) * 0.037 * (unit\ mass)}$$

where:

BKGN	=	Total Peak Background Area (from Minimum Detectable Activity Report)
DECAY	=	Decay Correction Factor (from Minimum Detectable Activity Report) (Nuclide Half Life - Collection time to Mid Count time)
LIVE TIME	=	Elapsed Live Time (from Header Information)
(EFF*B.I)	=	Efficiency * Abundance (from Minimum Detectable Activity Report)
0.037	=	Conversion Factor (dps to picocuries)
unit mass	=	Sample weight or volume (from Header Information)

Public Service Electric & Gas

The procedure for detection of gamma emitting radioisotopes generates high resolution gamma spectra which are used for quantitative determination and identification. Standard geometries have been established to maximize efficiency, for sample types: air particulate filters, water, and milk.

A description of the analytical methods, beginning with air particulates used for each sample type is presented, followed by the general formula used for calculation of the sample activities.

Air particulate: At the end of each calendar quarter, 13 weekly air filters from a given location are stacked in a two inch diameter Petri dish in chronological order, with the oldest filter at the bottom, nearest the detector, and the newest one on top. The Petri dish is closed and the sample counted.

Water and Milk: A well-mixed 3.5-liter sample is poured into a calibrated Marinelli beaker. The samples are brought to ambient temperature and counted.

Calculation of the Sample Activity and 1.96 Sigma Error:

$$\frac{Result}{\left(\frac{pCi}{vol - mass}\right)} = \frac{N_{(j)} - B_{(j)}}{(2.22)(v)(t)(E_{(j)})(BI_{(j)})(\exp^{-\lambda_{(j)}\Delta t})}$$

Net Activity

$$\pm \frac{1.96\sqrt{N_{(j)} + B_{(j)}}}{(2.22)(v)(t)(E_{(j)})(BI_{(j)})(\exp^{-\lambda_{(j)}\Delta t})}$$

Counting Error

where:

$N_{(j)}$ = area, in counts, of a special region containing a gamma emission of the nuclide of interest

NOTE: If the detector exhibits a peak in this region when counting a blank (i.e., from natural background (ß)(t) is subtracted from N before using the above equation. ß is the count rate of the blank, cpm, in the background peak.

$B_{(j)}$	=	background counts in the region of interest, calculated by fitting a straight line across the region connecting the two adjacent region.
1.96	=	multiple of counting error
2.22	=	dpm/pCi
v	=	volume or mass of sample analyzed
t	=	counting interval of sample, minutes
$E_{(j)}$	=	efficiency of counter at the energy region of interest
$BI_{(j)}$	=	branching intensity of the nuclide at the gamma emission energy under consideration (no. of photons per disintegration)
$\lambda_{(j)}$	=	is the radioactive decay constant for $nuclide_{(j)}$ (0.693/nuclide half life)
Δt	=	is the elapsed time between sample collection (or end of the sample collection) to the midcount time

The MDL is defined as that value equal to the two sigma counting error of the result. Less than MDL is reported as the result when this value is greater than the measured result defined above.

Teledyne Brown Engineering

Teledyne Brown Engineering dosimeters are rectangular teflon wafers impregnated with 25% $CaSO_4$:Dy phosphor. They are annealed in a hot air oven prior to use and are inserted into black polyethylene pouches. The filled pouches are labelled and placed in rectangular holders which contain copper shielding to filter out low energy radiation. After exposure in the environment, four separate areas of the dosimeter are read in a Teledyne Brown Engineering model 8300 TLD reader. The dosimeter is then re-irradiated by a standardized Cs-137 source and the four areas are read again. Calculation of the environmental exposure is performed by computer, using the re-irradiation readings to determine the sensitivity of each area of the dosimeter. The reading of control dosimeters are subtracted to allow for transit dose and system background.

A. For any given area of the dosimeter, the dose mR is calculated by the formula:

$$Dose = (R)\left(\frac{redose}{RR}\right) - (avcontrol)$$

where:

R	=	initial reading of the area
RR	=	second reading of the area (after re-irradiation)
redose	=	re-irradiation dose in mR
avcontrol	=	average of control values calculated as explained below. If no controls are used, avcontrol = 0 and gross exposures result

B. Each area of each control is calculated by the formula:

$$cdose = (cr)\left(\frac{credose}{crr}\right)$$

where:

cdose	=	control area dose in mR
cr	=	initial reading of the control area
crr	=	second reading of the control area (after re-irradiation)
credose	=	re-irradiation dose of the control dosimeter in mR

The average of control values is then calculated from all four areas of all controls by the formula:

$$avcontrol = \frac{\sum_{1}^{4N} cdose}{4N}$$

where:

N = total number of control dosimeters

C. The average and standard deviation of the area readings for each dosimeter are calculated by standard methods.

D. Using the criteria that if one standard deviation is greater than 10% of the average of the four readings and that if the value of one area is outside the range of 3 standard deviations of the average of the other three areas, then that area will be eliminated and the results will be based on the remaining areas.

APPENDIX F

QUALITY CONTROL
EPA INTER-LABORATORY COMPARISON PROGRAM

APPENDIX F: QUALITY CONTROL PROGRAM

Teledyne Brown Engineering (TB) and Public Service Electric & Gas (PSE&G) participate in the EPA Radiological Inter-laboratory Comparison (cross check) Program. This participation includes a number of analyses on various sample media as found in the Peach Bottom Atomic Power Station REMP. As a result of this participation, an objective measurement of analytical precision and accuracy as well as, a bias estimation of the results are obtained.

Examination of the data shows that the vast majority were within the EPA control limits. Each case of exceeding the control limits was investigated. There was no evidence to suggest systematic errors.

The results of TB's and PSE&G's participation in the EPA cross check program can be found in Tables F-1 and F-2, respectively.

TABLE F-1

USEPA
INTER-LABORATORY COMPARISONS - 1994
TELEDYNE BROWN ENGINEERING

Collection Date	Sequence No.	Media	Nuclide	EPA Results(a)	Teledyne Brown Results(b)	Normalized Deviation Grand Avg.	Normalized Deviation Known	All Participants Mean ± 2 s.d.	
01/14/94	638	Water	Sr-89	25.0 ± 8.66	24.0 ± 3.00	0.09	-0.35	23.74 ± 8.02	
			Sr-90	15.0 ± 8.66	15.67 ± 4.59	0.37	0.23	14.59 ± 4.34	
01/28/94	636	Water	Gr-Alpha	15.0 ± 8.66	21.67 ± 1.74	2.74	2.31	13.75 ± 8.50	(c)
			Gr-Beta	62.0 ± 17.32	73.33 ± 11.37	2.80	1.79	56.14 ± 28.30	
02/04/94	637	Water	I-131	119.0 ± 20.78	110.33 ± 0.00	-1.59	-1.30	120.99 ± 20.36	
03/04/94	639	Water	H-3	4936.0 ± 855.63	4833.33 ± 458.25	-0.04	-0.36	4844.97 ± 955.34	
04/19/94	642	Water	Gr-Beta	117.0 ± 31.18	102.67 ± 19.29	-0.40	-1.38	106.86 ± 30.94	
			Sr-89	20.0 ± 8.66	19.00 ± 3.00	0.18	-0.35	18.49 ± 7.38	
			Sr-90	14.0 ± 8.66	13.00 ± 0.00	-0.39	-0.35	14.13 ± 4.28	
			Co-60	20.0 ± 8.66	23.67 ± 9.63	1.23	1.27	20.12 ± 3.66	
			Cs-134	34.0 ± 8.66	34.00 ± 5.19	0.88	0.00	31.45 ± 5.44	
			Cs-137	29.0 ± 8.66	34.00 ± 7.95	0.98	1.73	31.17 ± 4.80	
			Gr-Alpha	86.0 ± 38.11	78.00 ± 9.00	-0.50	-0.53	84.40 ± 29.26	
06/10/94	643	Water	Co-60	50.0 ± 8.66	43.00 ± 6.00	-2.34	-2.42	49.77 ± 7.64	(d)
			Zn-65	134.0 ± 22.52	13.33 ± 1.74	-16.96	-16.08	140.62 ± 19.16	(e)
			Ru-106	252.0 ± 43.30	201.33 ± 27.87	-1.05	-3.51	216.56 ± 57.04	(f)
			Cs-134	40.0 ± 8.66	29.33 ± 11.37	-2.65	3.70	36.99 ± 6.28	(g)
			Cs-137	49.0 ± 8.66	49.67 ± 4.59	-0.94	0.23	52.38 ± 7.22	
			Ba-133	98.0 ± 17.32	85.00 ± 9.00	-0.25	-2.25	86.46 ± 16.62	(h)
07/15/94	647	Water	Sr-89	30.0 ± 8.66	26.00 ± 5.19	-0.99	-1.39	28.84 ± 12.12	
			Sr-90	20.0 ± 8.66	19.00 ± 0.00	0.07	-0.35	18.80 ± 5.60	
07/22/94	645	Water	Gr-Alpha	32.0 ± 13.86	25.33 ± 8.67	-0.95	-1.44	29.74 ± 20.22	
			Gr-Beta	10.0 ± 8.66	16.00 ± 0.00	0.38	2.08	14.91 ± 7.48	(i)
08/05/94	646	Water	H-3	9951.0 ± 1723.39	9700.00 ± 300.12	0.08	-0.44	9651.86 ± 1393.24	
08/26/94	648	Air Filter	Gr-Alpha	35.0 ± 15.59	31.33 ± 6.24	-1.07	-0.71	36.89 ± 13.24	
			Gr-Beta	56.0 ± 17.32	59.33 ± 9.63	0.04	0.58	59.08 ± 14.46	
			Sr-90	20.0 ± 8.66	18.00 ± 3.00	-0.54	-0.69	19.57 ± 5.52	
			Cs-137	15.0 ± 8.66	17.00 ± 5.19	0.14	0.69	16.59 ± 4.84	
10/07/94	650	Water	I-131	79.0 ± 13.86	71.00 ± 9.00	-1.92	-1.73	79.89 ± 13.58	
09/30/94	651	Milk	Sr-89	25.0 ± 8.66	24.33 ± 7.56	0.74	-0.23	22.19 ± 10.22	
			Sr-90	15.0 ± 8.66	17.67 ± 4.59	0.87	0.92	15.15 ± 4.96	
			I-131	75.0 ± 13.86	81.67 ± 17.58	1.47	1.44	74.69 ± 11.16	(j)
			Cs-137	59.0 ± 8.66	70.33 ± 13.86	2.75	3.93	62.39 ± 7.44	
			K	1715.0 ± 148.96	1740.00 ± 461.85	0.79	0.50	1700.90 ± 218.00	
10/28/94	652	Water	Gr-Alpha	57.0 ± 24.24	47.00 ± 9.00	-0.66	-1.24	52.30 ± 27.98	
			Gr-Beta	23.0 ± 8.66	25.33 ± 4.59	-0.63	0.81	27.16 ± 10.46	
10/18/94	653	Water	Gr. Beta	142.0 ± 36.37	120.00 ± 0.00	-0.46	-1.81	125.57 ± 27.84	
			Sr-89	25.0 ± 8.66	24.67 ± 6.24	0.58	-0.12	22.99 ± 8.32	
			Sr-90	15.0 ± 8.66	14.33 ± 3.45	-0.20	-0.23	14.92 ± 4.54	

TABLE F-1

USEPA
INTER-LABORATORY COMPARISONS - 1994
TELEDYNE BROWN ENGINEERING

Collection Date	Sequence No.	Media	Nuclide	EPA Results(a)	Teledyne Brown Results(b)	Normalized Deviation Grand Avg.	Normalized Deviation Known	All Participants Mean ± 2 s.d.	
			Co-60	40.0 ± 8.66	41.00 ± 3.00	0.55	0.35	39.43 ± 5.30	
			Cs-134	20.0 ± 8.66	21.67 ± 4.59	1.11	0.58	18.45 ± 3.56	
			Cs-137	39.0 ± 8.66	41.67 ± 6.93	-0.02	0.92	41.73 ± 5.32	
			Gr-Alpha	57.0 ± 24.25	51.33 ± 4.59	-0.66	-0.70	56.68 ± 19.66	
11/04/94	654	Water	Co-60	59.0 ± 8.66	52.00 ± 0.00	-2.38	-2.42	58.87 ± 9.18	(k)
			Zn-65	100.0 ± 17.32	81.33 ± 21.06	-4.04	-3.23	104.68 ± 15.90	(k)
			Cs-134	24.0 ± 8.66	19.67 ± 7.54	-1.14	-1.50	22.95 ± 4.54	
			Cs-137	49.0 ± 8.66	54.33 ± 6.93	0.84	1.85	51.92 ± 7.22	
			Ba-133	73.0 ± 12.12	58.33 ± 8.67	-3.09	-3.63	70.81 ± 12.26	(k)

Footnotes:

(a) EPA Results - Expected laboratory precision (3 sigma). Units are pCi/l for water and milk except K is in mg/l.

(b) Teledyne Results - Average ± 3 sigma. Units are pCi/l for water and milk except K is in mg/l. Units are total pCi for air particulate filters.

(c) There appears to be variation in self-absorption matrix. The EPA confirms that the composition of their tap water from Lake Mead, varies seasonally which can cause variation in alpha, beta results. No corrective action required at this time since results are within ± 3 sigma control limits.

(d) A second aliquot was analyzed, paying particular attention to volume aliquoted. The result, 52 pCi/l, was in good agreement with the EPA. The three original results, each counted on a different detector, showed good precision. The measurement of Co-60 has not been a problem. Future EPA cross-checks will be weighed and results followed to check for a possible trend "out of control".

(e) The average value of three analyses on the "Report of Analysis" was 133 pCi/liter which is in good agreement with the EPA. Apparently, incorrect results were entered into the EPA computer. Future data will be printed from the computer screen to check entries.

(f) The EPA has indicated that the Radiation Quality Assurance Program has been experiencing problems with the ruthenium-106 analysis.

(g) The first aliquot, prepared according to EPA dilution instructions was counted on four detectors in the 1 liter Marinelli geometry with Cs-134 results (based on the 796 KeV peak) in pCi/l of 32.0, 25.1, 31.7, and 30.8. The 31.7 result was not reported. Had that been reported instead of 25.1, the average would have been 31.5 and the normalized deviation would have been -2.94 instead of -3.70. A second aliquot was prepared and a single measurement was made with the result of 31.1 pCi/l. An undiluted aliquot was measured in a 150 ml geometry with

Collection Date	Sequence No.	Media	Nuclide	EPA Results(a)	Teledyne Brown Results(b)	Normalized Deviation Grand Avg.	Normalized Deviation Known	All Participants Mean ± 2 s.d.

the result of 33.5 pCi/l. That result is comparable with the Marinelli results. Thus none of : sample preparation (dilution, volume determination, maintaining correct pH, etc.), sample geometry, or detector efficiency seem to be the cause of the low results.

(h) There is no apparent reason for the low result, however the average value, 85 pCi/l is in good agreement to the grand average (86.46). No corrective action planned.

(i) EPA results for gross beta in water were corrected for 20% crosstalk into the beta channel from the Th-230 alpha spike. Recent measurements show that the crosstalk can be much higher (37% for gamma products counter #1). The normalized deviation from the grand average was only 0.38. Future results will be corrected with specific crosstalk values determined by counting Th-230 standards.

(j) The milk sample was counted four times. The reported Cs-137 values were based on one aliquot of 1 liter volume and an aliquot of 0.865 liter counted two times. It is suspected that the 0.865 liter volume was incorrectly determined. If 1 liter (the usual volume for counting milk samples) is used in the calculation, then the average of three results equals 63.6 pCi/l which gives a normalized deviation to the Known of 1.59. The fourth count (a 1 liter aliquot) had a Cs-137 equal to 64.2 pCi/l which is in good agreement with the average of the other three. Teledyne will set up a log for recording aliquots used for EPA samples and record how the aliquot volume was determined.

(k) The EPA requires that water samples be diluted before gamma analysis. That imposes a feature not appropriate for the handling of environmental samples. As in the 06/10/94 water sample, it appears that the first aliquot may not have been accurately prepared. A second aliquot was prepared and counted three times with results in pCi/l and normalized deviation of:

Co-60	60.6	0.55
Zn-65	100.0	0.00
Cs-134	22.9	-0.38
Cs-137	58.5	3.29
Ba-133	69.8	-0.79

Four of the five are now in good agreement with the EPA results. The Cs-137 is high, but within the control limits when compared to the grand average deviation of all laboratories of 2.89. The grand average was 51.9 pCi/l. For future samples of this type we will have two technicians each prepare an aliquot and compare the counting results to check for preparation technique differences.

TABLE F-2
USEPA ENVIRONMENTAL RADIOACTIVITY LABORATORY
INTERCOMPARISON STUDY PROGRAM
PSE&G

Gross Alpha and Gross Beta Analysis
of Water (pCi/L) and Air Particulate (pCi/filter)

DATE MM-YY	ENV SAMPLE CODE	MEDIUM	ANALYSIS	* PSE&G Mean ± s.d.	** EPA Known
01-94	EPA-WAT-AB374	Water	Alpha	24±1.2	15±5
			Beta	61±4.2	62±10
04-94	EPA-WAT-P377	Water	Alpha	80±2.6	86±33
			Beta	118±1.7	117±18
08-94	EPA-WAT-GABS382	APT	Alpha	39±1.2	35±9
			Beta	58±0.6	56±10
10-94	EPA-APT-P385	Water	Alpha	60±2.1	57±14
			Beta	140±2.5	142±21
10-94	EPA-WAT-P387	Water	Alpha	64±2.9	57±14
			Beta	26±1.5	23±5

* s.d. - one standard deviation of three individual analytical results
** known value plus or minus one sigma as reported by EPA

TABLE F-2
USEPA ENVIRONMENTAL RADIOACTIVITY LABORATORY
INTERCOMPARISON STUDY PROGRAM
PSE&G

Gamma Analysis of Milk, Water (pCi/L) and
Air Particulate (pCi/filter)

DATE MM-YY	ENV SAMPLE CODE	MEDIUM	ANALYSIS	* PSE&G Mean ± s.d.	** EPA Known
04-94	EPA-WAT-P377	Water	Cs-134	31±1.0	34±5
			Cs-137	30±1.2	29±5
			Co-60	21±1.5	20±5
06-94	EPA-WAT-G378	Water	Ba-133	97±6.4	98±10
			Co-60	48±0.6	50±5
			Zn-65	134±2.5	134±13
			Ru-106	226±12	252±25
			Cs-134	37±1.7	40±5
			Cs-137	50±0.6	49±5
08-94	EPA-APT-GABS382	APT	Cs-137	14±0.6	15±5
09-94	EPA-MLK-GS383	Milk	Cs-137	60±1.2	59±5
			K(1)	1676±31	1715±86
			I-131	75±2.0	75±8
10-94	EPA-WAT-P385	Water	Co-60	38±2.0	40±5
			Cs-134	20±1.0	30±5
			Cs-137	40±2.0	39±5
11-94	EPA-WAT-G386	Water	Co-60	58±2.6	59±5
			Zn-65	99±1.0	100±10
			Cs-134	25±1.0	24±5
			Cs-137	51±1.2	49±5
			Ba-133	76±7.1	73±7

(1) Reported as mg/l of Potassium

* s.d. - one standard deviation of three individual analytical results
** known value plus or minus one sigma as reported by EPA

TABLE F-2
USEPA ENVIRONMENTAL RADIOACTIVITY LABORATORY
INTERCOMPARISON STUDY PROGRAM
PSE&G

Tritium Analysis of Water (pCi/L)

DATE MM-YY	ENV SAMPLE CODE	MEDIUM	ANALYSIS	* PSE&G Mean ± s.d.	** EPA Known
03-94	EPA-WAT-H376	Water	H-3	4603±42	4936±494
08-94	EPA-WAT-H381	Water	H-3	9480±102	9951±995

* s.d. - one standard deviation of three individual analytical results
** known value plus or minus one sigma as reported by EPA

TABLE F-2
USEPA ENVIRONMENTAL RADIOACTIVITY LABORATORY
INTERCOMPARISON STUDY PROGRAM
PSE&G

Iodine Analysis of Water (pCi/L)

DATE MM-YY	ENV SAMPLE CODE	MEDIUM	ANALYSIS	* PSE&G Mean ± s.d.	** EPA Known
02-94	EPA-WAT-I375	Water	I-131	113±2.3	119±12
10-94	EPA-WAT-I384	Water	I-131	82±2.1	79±8

* s.d. - one standard deviation of three individual analytical results
** known value plus or minus one sigma as reported by EPA

TABLE F-2
USEPA ENVIRONMENTAL RADIOACTIVITY LABORATORY
INTERCOMPARISON STUDY PROGRAM
PSE&G

Strontium-89 and Strontium-90 Analysis of
Air Particulates (pCi/filter),
Milk (pCi/L) and Water (pCi/L)

DATE MM-YY	ENV SAMPLE CODE	MEDIUM	ANALYSIS	* PSE&G Mean ± s.d.	** EPA Known
01-94	EPA-WAT-S373	Water	Sr-89	26±2	25±5
			Sr-90	14±0.6	15±5
04-94	EPA-WAT-P377	Water	Sr-89	19±1	20±5
			Sr-90	14±0.6	14±5
07-94	EPA-WAT-S379	Water	Sr-89	32±7.5	30±5
			Sr-90	18±3	20±5
08-94	EPA-APT-GABS382	APT	Sr-90	19±0.6	20±5
09-94	EPA-MLK-GS383	Milk	Sr-89	20±3.1	25±5
			Sr-90	15±0.6	15±5
10-94	EPA-WAT-P385	Water	Sr-89	31±3	25±5
			Sr-90	15±0.6	15±5

* s.d. - one standard deviation of three individual analytical results
** known value plus or minus one sigma as reported by EPA

APPENDIX G

PBAPS SURVEY

APPENDIX G: PBAPS SURVEYS

A Land Use Census around the Peach Bottom Atomic Power Station (PBAPS) was conducted by RMC Environmental Services for PECO Energy to comply with Section 3/4.8.E.2 of PBAPS's Technical Specifications. The survey was conducted during the May to October 1994 growing season. The results of this survey are summarized in Table G-1.

There were no changes required to the PBAPS REMP as a result of this survey.

TABLE G-1 LOCATION OF THE NEAREST MILK PRODUCING ANIMAL WITHIN A FIVE MILE RADIUS OF PBAPS, 1994

Sector	Distance (ft.) from Vents
N	14,900
NNE	10,700
NE	10,900
ENE	10,200
E	15,200
ESE	15,700
SE	25,500
SSE	-
S	-
SSW	6,900
SW	11,600
WSW	5,000
W	4,500
WNW	9,700
NW	17,000
NNW	-

\- INDICATES NO MILK ANIMALS LOCATED