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May 24, 2006

U.S. Nuclear Regulatory Commission
Document Control Desk
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Peach Bottom Atomic Power Station Unit Nos. 2 and 3
Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-277 and 50-278

SUBJECT: Annual Radiological Environmental Operating Report No. 63
January 1, 2005 through December 31, 2005

In accordance with the requirements of Section 5.6.2 of the Peach Bottom Atomic Power Station, Units 2 and 3 Technical Specifications, this letter submits the Annual Radiological Environmental Operating Report No. 63. This report provides the 2005 results for the Radiological Environmental Monitoring Program (REMP) as called for in the Offsite Dose Calculation Manual.

In assessing the data collected for the REMP, we have concluded that the operation of PBAPS, Units 2 and 3, had no adverse impact on the environment. Co-60 and Mn-54 were found at the nearest downstream sediment sampling location. Calculated doses were at small fractions of 10CFR50 limits.

There are no commitments contained in this letter.

If you have any questions or require additional information, please do not hesitate to contact us.

Sincerely,

Robert C. Braun
Site Vice President,
Peach Bottom Atomic Power Station

RCB/JPG/FLJ/DLO/bcb

Enclosure

ccn 06-14040

cc: S. J. Collins, Administrator, Region I, US NRC
T. Valentine, Project Manager, US NRC
F. Bower, US NRC Senior Resident Inspector, PBAPS A4

IE25

Docket No: 50-277
50-278

PEACH BOTTOM ATOMIC POWER STATION
UNITS 2 and 3

Annual Radiological
Environmental Operating Report

Report No. 63

1 January Through 31 December 2005

Prepared By

Nuclear

Peach Bottom Atomic Power Station
Delta, PA 17314

May 2006

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Appendices

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I. Executive Summary

This report on the Radiological Environmental Monitoring Program conducted for the Peach Bottom Atomic Power Station (PBAPS) by Exelon Nuclear covers the period 1 January 2005 through 31 December 2005. During that time period, 1,070 analyses were performed on 910 samples.

Surface water samples were analyzed for concentrations of tritium and gamma emitting nuclides. No tritium, fission or activation products were found.

Drinking water samples were analyzed for concentrations of gross beta, tritium, and gamma emitting nuclides. No fission or activation products were found. Gross beta and tritium activities detected were consistent with those observed in previous years.

The remaining sample media representing the aquatic environment included fish and sediment samples. These media were analyzed for concentrations of gamma emitting nuclides. Fish samples showed no detectable fission or activation products from the operation of PBAPS. Cesium-137 activity was found at most sediment locations and was consistent with data from previous years. Co-60 and Mn-54 were found at the nearest downstream sediment sampling location. The dose to a teenager's skin from the sediment pathway was calculated to be 1.94 E–03 mrem/year, which represents 0.010% of the allowable fraction of 10 CFR 50, Appendix I limits. The dose to a teenager's whole body from the sediment pathway was calculated to be 1.65 E-03 mrem/year, which represents 0.027% 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. No fission or activation products were found. The gross beta results were consistent with results from the previous years. Furthermore, no notable differences between control and indicator locations 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 and food product samples. Milk samples were analyzed for low level concentrations of Iodine-131 and gamma emitting nuclides. No activation or fission products were found. Food product samples were analyzed for concentrations of gamma emitting nuclides. Concentrations of naturally occurring Be-7 and K-40 were detected. No activation or fission products were detected.

Ambient gamma radiation levels were measured quarterly throughout the year. All measurements were below 10 mR/standard month and the results were consistent with those measured in previous years.

The results of the TLD monitoring program were used to determine if the Independent Spent Fuel Storage Installation (ISFSI) had any measurable impact on the dose rate in the environs. One on-site location showed an increase dose of 0.5 to 1 mR per standard month. No increase in dose was evident at the nearest residence.

The control milk farm A in the WSW sector at 30,493 feet went out of the milking business. The control farm was replaced by farm T in the W sector at 34,581 feet. No milk samples were missed as a result of the change of milk farms.

TLD 1K was added in the SW sector at 4,604 feet. The TLD was added to comply with ODCMS Table 4.8.E.1.1 requirement for TLD stations in the general area of the SITE BOUNDARY and a residence at the location.

Food products were sampled on Oct. 6, 2005 at three locations:

55 at about 9.9 miles in the NE sector
2B at about 0.7 miles in the SSE sector
1Q at about 0.8 miles in the WNW sector

In assessing all the data gathered for this report and comparing these results with preoperational data, it was evident that the operation of PBAPS had no adverse radiological impact on the environment.

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 1170 MWe. 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 Radiological Environmental Monitoring Program (REMP) for PBAPS was initiated in 1966. This report covers those analyses performed by Teledyne Brown Engineering (TBE), Global Dosimetry, and Environmental Inc. (Midwest Labs) on samples collected during the period 01 January 2005 through 31 December 2005.

A. Objectives

The objectives of the REMP are:

1. Provide data on measurable levels of radiation and radioactive materials in the site environs.

2. Evaluate the relationship between quantities of radioactive material released from the plant and resultant radiation doses to individuals from principal pathways of exposure.

B. Implementation of the Objectives

Implementation of the objectives is accomplished by:

1. Identifying significant exposure pathways.

2. Establishing baseline radiological data of media within those pathways.

3. Continuously monitoring those media before and during plant Station operation to assess Station radiological effects (if any) on man and the environment.

III. Program Description

A. Sample Collection

Normandeau Associates Inc., (NAI), collected samples for the PBAPS REMP for Exelon Nuclear. This section describes the general collection methods used by NAI to obtain environmental samples for the PBAPS REMP in 2005. Sample locations and descriptions can be found in Table B-1, and Figures B-1 through B-3, Appendix B. The collection procedures used by NAI are listed in Table B-2, Appendix B.

Aquatic Environment

The aquatic environment was evaluated by performing radiological analyses on 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 by automatic sampling equipment. Weekly samples from each of the surface and drinking water locations were composited into a separate monthly sample for analysis. Approximately, two quarts of water were removed from the weekly sample container and placed into a clean two-gallon polyethylene bottle to form a monthly composite. Control locations were 1LL and 6I. Fish samples comprising the flesh from two groups: Bottom Feeder (catfish) and Predator (smallmouth bass, largemouth bass, or bass) were collected semiannually from two locations: 4 and 6 (control). Sediment samples composed of recently deposited substrate were collected semiannually at three locations: 4J, 4T and 6F (control). An additional set of sediment samples was collected in December to validate results.

Atmospheric Environment

The atmospheric environment was evaluated by performing radiological analyses on air particulate, airborne iodine and milk samples. Air particulate and air iodine samples were collected and analyzed weekly from five locations (1B, 1Z, 1C, 3A, and 5H2). The control location was 5H2. Airborne iodine and particulate samples were obtained at each location using a vacuum pump with charcoal and glass fiber filters attached. The pumps were run continuously and sampled air at the rate of approximately 1 cubic

foot per minute. The filters were replaced weekly and sent to the laboratory for analysis.

Milk samples were collected biweekly at six locations (A (T), J, O, R, and S) from April through November and monthly from December through March. Seven additional locations (B, C, D, E, L, and P) were sampled quarterly. Locations A, B, C, E and T were controls. All samples were collected in new unused two gallon plastic bottles from the bulk tank at each location, preserved with sodium bisulfite, and shipped promptly to the laboratory.

Food product samples were collected annually at three locations (1Q, 2B, and 55) in October. All samples were collected in new unused plastic bags and shipped promptly to the laboratory.

Ambient Gamma Radiation

Direct radiation measurements were made using Panasonic 814 calcium sulfate ($CaSO_4$) thermoluminescent dosimeters (TLD). The TLD locations were placed on and around the PBAPS site as follows:

A site boundary ring, consisting of 19 locations (1L, 1P, 1A, 1Q, 1D, 2, 1M, 1R, 1I, 1C, 1J, 1K, 1F, 40, 1NN, 1H, 1G, 1B, and 1E), near and within the site perimeter representing fence post doses (i.e., at locations where the doses will be potentially greater than maximum annual off-site doses) from PBAPS releases.

An intermediate distance ring, consisting of 19 locations (15, 22, 44, 32, 45, 14, 17, 31A, 4K, 23, 27, 48, 3A, 49, 50, 51, 26, 6B, and 42), extending to approximately 5 miles from the site and designed to measure possible exposures to close-in population.

The balance of nine locations (2B, 43, 5, 16, 24, 46, 47, 18, and 19) representing control and special interests areas such as population centers, schools, etc.

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. And near the dwelling closest to the vents in the prevailing down wind direction.

Two TLDs – each comprised of three $CaSO_4$ themoluminescent phosphors enclosed in plastic – were placed at each location in a Formica "birdhouse" or polyethylene jar located approximately six feet above ground level. The TLD sets were exchanged quarterly, then sent to the laboratory for analysis.

B. Sample Analysis

This section describes the general analytical methods used by Teledyne Brown Engineering and Environmental Inc. to analyze the environmental samples for radioactivity for the PBAPS REMP in 2005. The analytical procedures used by the laboratories are listed in Table B-2, Appendix B.

In order to achieve the stated objectives, the current program includes the following analyses:

1. Concentrations of beta emitters in drinking water and air particulates.
2. Concentrations of gamma emitting nuclides in surface and drinking water, air particulates, milk, fish, sediment and food products.
3. Concentrations of tritium in surface and drinking water.
4. Concentrations of I-131 in air and milk.
5. Ambient gamma radiation levels at various site environs.

C. Data Interpretation

The radiological and direct radiation data collected prior to PBAPS becoming operational was used as a baseline with which these operational data were compared. For the purpose of this report, PBAPS was considered operational at initial critically. In addition, data were compared to previous years' operational data for consistency and trending. Several factors are important in the interpretation of the data. These factors were important in the interpretation of the data:

1. Lower Limit of Detection and Minimum Detectable Concentration

The lower limit of detection (LLD) 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 LLD 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.

The minimum detectable concentration (MDC) is defined above with the exception that the measurement is an after the fact estimate of the presence of activity.

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. An MDC was reported in all cases where positive activity was not detected.

Gamma spectroscopy results for each type of sample were grouped as follows:

For surface and drinking 12 nuclides, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Zr-95, Nb-95, I-131, Cs-134, Cs-137, Ba-140, and La-140 were reported.

For fish eight nuclides, K-40, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Cs-134, and Cs-137 were reported.

For sediment six nuclides, K-40, Mn-54, Co-58, Co-60, Cs-134, and Cs-137 were reported.

For air particulate six nuclides, Be-7, Mn-54, Co-58, Co-60, Cs-134, and Cs-137 were reported.

For milk five nuclides, K-40, Cs-134, Cs-137, Ba-140, and La-140 were reported.

For food product seven nuclides, Be-7, Mn-54, Co-58, Co-60, I-131, Cs-134, and Cs-137 were reported.

Means and standard deviations of the results were calculated. The standard deviations represent the variability of measured results for different samples rather than single analysis uncertainty.

D. Program Exceptions

For 2005 the PBAPS REMP had a sample collection recovery rate of better than 99%. The exceptions to this program are listed below:

1. The air particulate and iodine sampler 5H2 (control) had a loss of power due to a transformer failure. The transformer was repaired prior to the next period as required by the ODCM.

2. Air particulate and iodine sampler 1C had a pump performance issue. The pump was repaired prior to the next sample period as required by the ODCM.

3. A NRC non-cited violation was issued for failure to sample food products in the highest D/Q sectors if milk sampling was not performed in the highest D/Q sectors. Food products were sampled on October 6, 2005 at three locations.

   55 at about 9.9 miles in the N sector
   2B at about 0.7 miles in the SSE sector
   1Q at about 0.8 miles in the WNW sector

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.

E. Program Changes

Drinking water analysis of soluble and insoluble fractions was discontinued in December 2004. Drinking water is being analyzed for total gross beta. The drinking water data for the soluble and insoluble fractions was combined to create the total gross beta graph in Appendix C, Figure C-1. The previous data included summation of the less than values.

Milk farm A (control) went out of the milking business and was replaced by farm T at about 5.7 miles in the W sector.

TLD station 1K was added 10/07/05.

Food products were added to the PBAPS program in October 2005.

IV. Results and Discussion

A. Aquatic Environment

1. Surface Water

Samples were taken from a continuous sampler at two locations (1LL and 1MM) on a monthly schedule. Of these locations, 1MM located downstream, could be affected by Peach Bottom's effluent releases. The following analyses were performed:

Tritium

Monthly samples from both locations were composited quarterly and analyzed for tritium activity (Table C-I.1, Appendix C). No tritium activity was detected. Results ranged from <155 to <198 pCi/l and averaged 176 pCi/l at the control location and 166 pCi/l at the indicator location.

Gamma Spectrometry

Samples from both locations were analyzed for gamma emitting nuclides (Table C-I.2, Appendix C). All nuclides were less than the MDC.

2. Drinking Water

Monthly samples were collected from continuous water samplers at two locations (4L and 6I). One location (4L) could be affected by Peach Bottom's effluent releases. The following analyses were performed:

Gross Beta

Samples from both locations were analyzed for concentrations of total gross beta activity (Tables C-II.1 and Figures C-1 Appendix C). The values ranged from <2.2 to 8.8 pCi/l. Concentrations detected were generally below those detected in previous years.

Tritium

Monthly samples from both locations were composited quarterly and analyzed for tritium activity (Table C-II.2, Appendix C). Positive tritium activity was detected in two of eight samples. The concentrations detected, 187 and 191 pCi/L, were from downstream and upstream

sample points respectively. The tritium came from upstream and not from Peach Bottom Atomic Power Station.

Gamma Spectrometry

Samples from both locations were analyzed for gamma emitting nuclides (Table C-II.3, Appendix C). All nuclides were less than the MDC.

3. Fish

Fish samples comprised of bottom feeder (catfish) and predator (bass) were collected at two locations (4 and 6) semiannually. Location 4 could be affected by Peach Bottom's effluent releases. The following analysis was performed:

Gamma Spectrometry

The edible portion of fish samples from both locations was analyzed for gamma emitting nuclides (Table C-III.1, Appendix C). Naturally occurring K-40 was found at all stations and ranged from 2,710 to 3,260 pCi/kg wet and was consistent with levels detected in previous years. No fission or activation products were found. Historical levels of Cs-137 are shown in Figure C-3, Appendix C.

4. Sediment

Aquatic samples were collected at three locations (4J, 4T and 6F) semiannually. Of these locations two, 4J and 4T located downstream, could be affected by Peach Bottom's effluent releases. The following analysis was performed:

Gamma Spectrometry

Sediment samples from all three locations were analyzed for gamma emitting nuclides (Table C-IV.1, Appendix C). Nuclides detected were naturally occurring Be7 and K-40. Radioactive nuclides Mn-54 and Co-60 originating from Peach Bottom were found at location 4J. Beryllium-7 was found at one location with a concentration of 1,080 pCi/kg dry. Potassium-40 was found at eight of nine samples in all locations and ranged from 10,100 to 22,500 pCi/kg dry. Manganese-54 was found at location 4J in two of three samples at concentrations of 36 and 61 pCi/kg dry. Cobalt-60 was found at location 4J in two samples at concentrations of 144 and 174 pCi/kg dry. Concentrations of the fission product Cs-137 were found in five

of nine sediment samples in all locations. Location 4T had the highest average concentration Cs-137 of 133 pCi/kg dry. The activity of Cs-137 detected was consistent with those detected in the pre-operational years (Figure C-4, Appendix C). No other Peach Bottom fission or activation products were found.

The shoreline doses due to the activity in the sediment were calculated using the methodology of Regulatory Guide 1.109, Calculation of Annual Doses to Man From Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance With 10 CFR Part 50, Appendix I. The following nuclides concentrations (Pu-238, Pu-239, Pu-241, Am-241, Cm-242 and Cm-244, C-14, Ni-63 and Tc-99) were scaled from 10 CFR 61 analyses and added to the dose calculations. There was insignificant additional dose due to these additional nuclides.

B. Atmospheric Environment

1. Airborne

a. Air Particulates

Continuous air particulate samples were collected from five locations on a weekly basis. The five locations were separated into three groups: Group I represents locations within the PBAPS site boundary (1B, 1Z and 1C), Group II represents the location at an intermediate distance from the PBAPS site (3A), and Group III represents the control location at a remote distance from PBAPS (5H2). The following analyses were performed.

Gross Beta

Weekly samples were analyzed for concentrations of beta emitters (Tables C-V.1 and C-V.2 and Figures C-5 and C-6, Appendix C).

Detectable gross beta activity was observed at all locations. Comparison of results among the three groups aid in determining the effects, if any, resulting from the operation of PBAPS. The results from the On-Site locations (Group I) ranged from <6 to 34 E-3 pCi/m^3, with a mean of 17 E-3 pCi/m^3. The results from the Intermediate Distance location (Group II) ranged from <7 to 38 E-3 pCi/m^3 with a mean of 16 E-3 pCi/m^3. The results from the Distant location (Group III)

ranged from <7 to 35 E-3 pCi/m^3 with a mean of 16 E-3 pCi/m^3 A comparison of the weekly mean values for 2005 indicate no notable differences among the three groups (Figure C-5, Appendix C). In addition, a comparison of the 2005 air particulate data with previous years data indicate no effects from the operation of PBAPS (Figure C-4, Appendix C).

Gamma Spectrometry

Weekly samples were composited quarterly and analyzed for gamma emitting nuclides (Table C-V.3, Appendix C). Naturally occurring Be-7 due to cosmic ray activity was detected in all samples. These values ranged from 37 to 73 E-3 pCi/m^3. All other nuclides were less than the MDC.

b. Airborne Iodine

Continuous air samples were collected from five locations (1B, 1Z, 1C, 3A, and 5H2) and analyzed weekly for I-131 (Table C-VI.1, Appendix C). All results were less than the MDC.

2. Terrestrial

a. Milk

Samples were collected from six locations (A(T), J, O, R, and S) biweekly April through November and monthly December through March. Samples from six additional locations (B, C, D, E, L, P) were taken quarterly. The following analyses were performed.

Iodine-131

Milk samples from all locations were analyzed for concentrations of I-131 (Tables C-VII.1, Appendix C). All results were less than the MDC.

Gamma Spectrometry

Each milk sample from locations A(T), J, O, R, and S was analyzed for concentrations of gamma emitting nuclides (Table C-VII.2, Appendix C).

Naturally occurring K-40 was found in all samples and ranged from 1,090 to 1,640 pCi/l. All other nuclides were less than the

MDC. Comparison of the 2005 Cs-137 milk data with previous years data indicate no effects from the operation of PBAPS (Figure C-7 (Appendix C).

b. Food Products

Gamma Spectrometry

Each food product sample from locations 1Q, 2B and 55 was analyzed for concentrations of gamma emitting nuclides (Table C-VIII.1, Appendix C).

Naturally occurring Be-7 and K-40 activity was found at all locations. Beryllium-7 activity was found in eight of nine samples and ranged from <220 to 1,190 pCi/kg wet. Potassium-40 activity was found in all samples and ranged from 3,840 to 9,290 pCi/kg wet. All other nuclides were less than the MDC.

C. Ambient Gamma Radiation

Ambient gamma radiation levels were measured using Panasonic 814 ($CaSO_4$) thermoluminescent dosimeters. Forty-seven TLD locations were established around the site. Results of TLD measurements are listed in Tables C-IX.1 through C-IX.3 and Figure C-7, Appendix C.

All TLD measurements were below 10 mR per standard month, with a range of 4.1 to 8.8 mR per standard month. A comparison of the Site Boundary and Intermediate Distance data to the Control locations data indicate that the ambient gamma radiation levels from the Control locations 16, 18, 19 and 24 were essentially the same as the other locations. The historical ambient gamma radiation data from the Control locations was plotted along with similar data from the Site and the Intermediate Distance locations (Figure C-7, Appendix C)

D. Independent Spent Fuel Storage Installation (ISFSI)

The Independent Spent Fuel Storage Installation (ISFSI) was utilized beginning June 2000. As of 2005, a total of 28 TN-68 casks, each loaded with 68 fuel bundles were in place on the ISFSI pad. As part of the overall REMP, additional TLDs were placed at locations near the site boundary and at the nearest resident. Although there was a general trend for increased dose at all REMP locations (see Figure C-7, Appendix C), Onsite location 1R, which is located on the hillside overlooking the ISFSI showed an increase trend of 0.5 to 1 mR per standard month when compared to

controls (Figure C-8, Appendix C). Location 2B, which represents the nearest residence showed no increase in dose rates when compared to controls. Data from location 2B is used to demonstrate compliance to both 40CFR190 and 10CFR72.104 limits.

E. Land Use Census

A Land Use Survey conducted during the 2005 growing season around the Peach Bottom Atomic Power Station (PBAPS) was performed by Normandeau Associates, Inc., NAI Environmental Services Division for Exelon Nuclear to comply with Section 3.8.E.2 of PBAPS's Offsite Dose Calculation Manual Specifications (ODCMS) and Bases. The purpose of the survey was to document the nearest milk producing animal in each of the sixteen meteorological sectors out to five miles. In addition, the nearest residence and garden of >500 square feet were documented. The distance and direction of all locations were positioned using Global Positioning System (GPS) technology. The control milk farm (A) went out of business and a new control farm T was added to the PBAPS REMP. The results of this survey are summarized below.

Distance in Miles from the PBAPS Reactor Buildings			
Sector	Residence Miles	Garden Miles	Milk Farm Miles
1 N	2.4	2.8	2.8
2 NNE	2.1	2.1	2.1
3 NE	2.1	2.1	2.1
4 ENE	2.0	2.4	2.1
5 E	2.0	2.8	2.8
6 ESE	3.8	3.8	3.8
7 SE	3.6	3.6	3.6
8 SSE	0.7	0.7	-
9 S	1.0	1.0	-
10 SSW	1.2	1.8	2.2
11 SW	0.9	0.9	2.3
12 WSW	0.7	-	0.9
13 W	1.0	1.0	1.0
14 WNW	0.6	0.8	-
15 NW	0.6	3.4	3.4
16 NNW	1.0	-	-

F. Summary of Results – Inter-Laboratory Comparison Program

The primary and secondary laboratories analyzed Performance Evaluation (PE) samples of air particulate, air iodine, milk, soil, food products and water matrices for 19 analytes (Appendix E). The PE samples, supplied by Analytics Inc., Environmental Resource Associates (ERA) and DOE's

Mixed Analyte Performance Evaluation Program (MAPEP), were evaluated against the following pre-set acceptance criteria:

1. Analytics Evaluation Criteria

   Analytics' evaluation report provides a ratio of laboratory results and Analytics' known value. Since flag values are not assigned by Analytics, TBE-ES evaluates the reported ratios based on internal QC requirements, which are based on the DOE MAPEP criteria.

2. ERA Evaluation Criteria

   ERA's evaluation report provides an acceptance range for control and warning limits with associated flag values. ERA's acceptance limits are established per the USEPA, NELAC, state specific PT program requirements or ERA's SOP for the Generation of Performance Acceptance Limits, as applicable. The acceptance limits are either determined by a regression equation specific to each analyte or a fixed percentage limit promulgated under the appropriate regulatory document.

3. DOE Evaluation Criteria

   MAPEP's evaluation report provides an acceptance range with associated flag values.

   The MAPEP defines three levels of performance: Acceptable (flag = "A"), Acceptable with Warning (flag = "W"), and Not Acceptable (flag = "N"). Performance is considered acceptable when a mean result for the specified analyte is ± 20% of the reference value. Performance is acceptable with warning when a mean result falls in the range from ±20% to ±30% of the reference value (i.e., 20% < bias < 30%). If the bias is greater than 30%, the results are deemed not acceptable.

For the primary laboratory, 18 out of 19 analytes met the specified acceptance criteria. One sample did not meet the specified acceptance criteria for the following reason:

1. Teledyne Brown Engineering's Analytics' September 2005 air particulate Fe-59 ratio of 1.35 exceeded the upper control limit of 1.30 due to a new technician not counting the air particulate in a petri dish.

For the secondary laboratory, 19 out of 23 analytes met the specified

acceptance criteria. Four samples did not meet the specified acceptance criteria for the following reasons:

1. Environmental Inc.'s ERA's November 2005 water Gross Alpha result of 41.1 pCi/L exceeded the upper control limit of 33.4 pCi/L. This was due to using an Am-241 efficiency instead of a Th-232 efficiency when counting the sample. Using the correct efficiency gave a result of 27.0 pCi/L.

2. Environmental Inc.'s ERA's November 2005 water Ra-228 result of 5.5 pCi/L exceeded the upper control limit of 5.0 pCi/L due to presence of radium daughters. Delay in counting 100 minutes gave a result of 4.01 pci/L.

3. Environmental Inc.'s MAPEP's January 2005 air particulate Sr-90 result of 2.2 exceeded the upper control limit of 1.76 Bq/kg. Reanalysis result was 1.56 Bq/kg.

4. Environmental Inc.'s MAPEP's July 2005 soil Am-241 result of 48.4 exceeded the lower control limit of 56.77 Bq/kg due to incorrect sample weight being used in the calculation. When recalculated with the correct sample weight, the result was 97.0 Bq/kg.

The Inter-Laboratory Comparison Program provides evidence of "in control" counting systems and methods, and that the laboratories are producing accurate and reliable data.

V. References

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

2. Interex 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

TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY FOR THE PEACH BOTTOM ATOMIC POWER STATION, 2005

Name of Facility: PEACH BOTTOM ATOMIC POWER STATION **DOCKET NUMBER:** 50-277 & 50-278
Location of Facility: YORK COUNTY, PA **REPORTING PERIOD:** 2005

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSES PERFORMED	NUMBER OF ANALYSES PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR LOCATIONS MEAN (F) RANGE	CONTROL LOCATION MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN STATIONS # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTIME REPORTED MEASUREMENTS
SURFACE WATER (PCI/LITER)	H-3	8	200	166 (0/4) (<155/<179)	176 (0/4) (<157/<198)	176 (0/4) (<157/<198)	1LL CONTROL PEACH BOTTOM UNITS 2 AND 3 INTAKE 0.24 MILES NE OF SITE	0
	GAMMA	24						
	MN-54		15	4 (0/12) (<1/<8)	4 (0/12) (<1/<6)	4 (0/12) (<1/<8)	1MM INDICATOR PEACH BOTTOM CANAL DISCHARGE 1.04 MILES SE OF SITE	0
	CO-58		15	5 (0/12) (<1/<7)	4 (0/12) (<1/<6)	5 (0/12) (<1/<7)	1MM INDICATOR PEACH BOTTOM CANAL DISCHARGE 1.04 MILES SE OF SITE	0
	FE-59		30	9 (0/12) (<3/<16)	8 (0/12) (<2/<14)	9 (0/12) (<3/<16)	1MM INDICATOR PEACH BOTTOM CANAL DISCHARGE 1.04 MILES SE OF SITE	0
	CO-60		15	5 (0/12) (<1/<8)	5 (0/12) (<1/<7)	5 (0/12) (<1/<7)	1LL CONTROL PEACH BOTTOM UNITS 2 AND 3 INTAKE 0.24 MILES NE OF SITE	0
	ZN-65		30	9 (0/12) (<3/<17)	8 (0/12) (<2/<14)	9 (0/12) (<3/<17)	1MM INDICATOR PEACH BOTTOM CANAL DISCHARGE 1.04 MILES SE OF SITE	0
	NB-95		15	5 (0/12) (<1/<9)	5 (0/12) (<1/<7)	5 (0/12) (<1/<9)	1MM INDICATOR PEACH BOTTOM CANAL DISCHARGE 1.04 MILES SE OF SITE	0
	ZR-95		30	8 (0/12) (<3/<14)	7 (0/12) (<2/<13)	8 (0/12) (<3/<14)	1MM INDICATOR PEACH BOTTOM CANAL DISCHARGE 1.04 MILES SE OF SITE	0

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Name of Facility: PEACH BOTTOM ATOMIC POWER STATION **DOCKET NUMBER:** 50-277 & 50-278
Location of Facility: YORK COUNTY, PA **REPORTING PERIOD:** 2005

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSES PERFORMED	NUMBER OF ANALYSES PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR LOCATIONS MEAN (F) RANGE	CONTROL LOCATION MEAN (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (F) RANGE	STATIONS # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTIME REPORTED MEASUREMENTS
	I-131		15	10 (0/12) (<3/<16)	9 (0/12) (<3/<12)	10 (0/12) (<3/<16)	1MM INDICATOR PEACH BOTTOM CANAL DISCHARGE 1.04 MILES SE OF SITE	0
	CS-134		15	4 (0/12) (<1/<9)	4 (0/12) (<1/<6)	4 (0/12) (<1/<9)	1MM INDICATOR PEACH BOTTOM CANAL DISCHARGE 1.04 MILES SE OF SITE	0
	CS-137		18	4 (0/12) (<1/<8)	4 (0/12) (<1/<7)	4 (0/12) (<1/<7)	1LL CONTROL PEACH BOTTOM UNITS 2 AND 3 INTAKE 0.24 MILES NE OF SITE	0
	BA-140		60	23 (0/12) (<9/<38)	23 (0/12) (<6/<32)	23 (0/12) (<6/<32)	1LL CONTROL PEACH BOTTOM UNITS 2 AND 3 INTAKE 0.24 MILES NE OF SITE	0
	LA-140		15	9 (0/12) (<3/<14)	7 (0/12) (<2/<11)	9 (0/12) (<3/<14)	1MM INDICATOR PEACH BOTTOM CANAL DISCHARGE 1.04 MILES SE OF SITE	0
DRINKING WATER (PCI/LITER)	GR-B	24	4	3.7 (11/12) (< 2.3/ 5.9)	3.8 (11/12) (< 2.2/ 8.8)	3.8 (11/12) (< 2.2/ 8.8)	6I CONTROL HOLTWOOD DAM HYDROELECTRIC STATION 5.75 MILES NW OF SITE	0
	H-3	8	200	169 (1/4) (<153/187)	170 (1/4) (<153/191)	170 (1/4) (<153/191)	6I CONTROL HOLTWOOD DAM HYDROELECTRIC STATION 5.75 MILES NW OF SITE	0
	GAMMA	24						
	MN-54		15	5 (0/12) (<3/<9)	5 (0/12) (<3/<7)	5 (0/12) (<3/<9)	4L INDICATOR CONOWINGO DAM EL 33' MSL 8.66 MILES SE OF SITE	0

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	CO-58		15	5 (0/12) (<3/<9)	5 (0/12) (<3/<7)	5 (0/12) (<3/<9)	4L INDICATOR CONOWINGO DAM EL 33' MSL 8.66 MILES SE OF SITE	0
	FE-59		30	10 (0/12) (<6/<17)	10 (0/12) (<6/<16)	10 (0/12) (<6/<17)	4L INDICATOR CONOWINGO DAM EL 33' MSL 8.66 MILES SE OF SITE	0
	CO-60		15	5 (0/12) (<3/<10)	6 (0/12) (<2/<8)	6 (0/12) (<2/<8)	6I CONTROL HOLTWOOD DAM HYDROELECTRIC STATION 5.75 MILES NW OF SITE	0
	ZN-65		30	10 (0/12) (<7/<19)	11 (0/12) (<7/<18)	11 (0/12) (<7/<18)	6I CONTROL HOLTWOOD DAM HYDROELECTRIC STATION 5.75 MILES NW OF SITE	0
	NB-95		15	6 (0/12) (<3/<11)	5 (0/12) (<3/<8)	6 (0/12) (<3/<11)	4L INDICATOR CONOWINGO DAM EL 33' MSL 8.66 MILES SE OF SITE	0
	ZR-95		30	10 (0/12) (<5/<16)	9 (0/12) (<5/<14)	10 (0/12) (<5/<16)	4L INDICATOR CONOWINGO DAM EL 33' MSL 8.66 MILES SE OF SITE	0
	I-131		15	11 (0/12) (<5/<16)	10 (0/12) (<6/<14)	11 (0/12) (<5/<16)	4L INDICATOR CONOWINGO DAM EL 33' MSL 8.66 MILES SE OF SITE	0
	CS-134		15	5 (0/12) (<3/<10)	5 (0/12) (<2/<8)	5 (0/12) (<3/<10)	4L INDICATOR CONOWINGO DAM EL 33' MSL 8.66 MILES SE OF SITE	0

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	CS-137		18	6 (0/12) (<4/<9)	5 (0/12) (<3/<8)	6 (0/12) (<4/<9)	4L INDICATOR CONOWINGO DAM EL 33' MSL 8.66 MILES SE OF SITE	0
	BA-140		60	26 (0/12) (<15/<40)	25 (0/12) (<17/<34)	26 (0/12) (<15/<40)	4L INDICATOR CONOWINGO DAM EL 33' MSL 8.66 MILES SE OF SITE	0
	LA-140		15	8 (0/12) (<2/<15)	8 (0/12) (<4/<13)	8 (0/12) (<4/<13)	6I CONTROL HOLTWOOD DAM HYDROELECTRIC STATION 5.75 MILES NW OF SITE	0
BOTTOM FEEDER (FISH) PCI/KG WET	GAMMA	4						
	K-40		N/A	2810 (2/2) (2730/2890)	2985 (2/2) (2710/3260)	2985 (2/2) (2710/3260)	6 CONTROL HOLTWOOD POND LOCATED IN HOLTWOOD POND	0
	MN-54		130	29 (0/2) (<11/<46)	30 (0/2) (<11/<49)	30 (0/2) (<11/<49)	6 CONTROL HOLTWOOD POND LOCATED IN HOLTWOOD POND	0
	CO-58		130	26 (0/2) (<10/<41)	26 (0/2) (<12/<41)	26 (0/2) (<12/<41)	6 CONTROL HOLTWOOD POND LOCATED IN HOLTWOOD POND	0
	FE-59		260	71 (0/2) (<24/<118)	63 (0/2) (<25/<102)	71 (0/2) (<24/<118)	4 INDICATOR CONOWINGO POND LOCATED IN CONOWINGO	0
	CO-60		130	24 (0/2) (<11/<36)	29 (0/2) (<12/<45)	29 (0/2) (<12/<45)	6 CONTROL HOLTWOOD POND LOCATED IN HOLTWOOD POND	0

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	ZN-65		260	61 (0/2) (<24/<99)	61 (0/2) (<23/<100)	61 (0/2) (<24/<99)	4 INDICATOR CONOWINGO POND LOCATED IN CONOWINGO	0
	CS-134		130	28 (0/2) (<11/<45)	28 (0/2) (<10/<45)	28 (0/2) (<10/<45)	6 CONTROL HOLTWOOD POND LOCATED IN HOLTWOOD POND	0
	CS-137		150	26 (0/2) (<11/<41)	32 (0/2) (<12/<51)	32 (0/2) (<12/<51)	6 CONTROL HOLTWOOD POND LOCATED IN HOLTWOOD POND	0
PREDATOR (FISH) PCI/KG WET	GAMMA K-40	4	N/A	3400 (2/2) (3010/3790)	3310 (2/2) (3250/3370)	3400 (2/2) (3010/3790)	4 INDICATOR CONOWINGO POND LOCATED IN CONOWINGO	0
	MN-54		130	34 (0/2) (<29/<39)	31 (0/2) (<12/<49)	34 (0/2) (<29/<39)	4 INDICATOR CONOWINGO POND LOCATED IN CONOWINGO	0
	CO-58		130	32 (0/2) (<27/<38)	30 (0/2) (<13/<47)	32 (0/2) (<27/<38)	4 INDICATOR CONOWINGO POND LOCATED IN CONOWINGO	0
	FE-59		260	63 (0/2) (<53/<73)	68 (0/2) (<30/<107)	68 (0/2) (<30/<107)	6 CONTROL HOLTWOOD POND LOCATED IN HOLTWOOD POND	0
	CO-60		130	37 (0/2) (<33/<40)	32 (0/2) (<14/<49)	37 (0/2) (<33/<40)	4 INDICATOR CONOWINGO POND LOCATED IN CONOWINGO	0

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	ZN-65		260	63 (0/2) (<58/<68)	64 (0/2) (<28/<100)	64 (0/2) (<28/<100)	6 CONTROL HOLTWOOD POND LOCATED IN HOLTWOOD POND	0
	CS-134		130	31 (0/2) (<27/<34)	29 (0/2) (<13/<44)	31 (0/2) (<27/<34)	4 INDICATOR CONOWINGO POND LOCATED IN CONOWINGO	0
	CS-137		150	36 (0/2) (<35/<36)	26 (0/2) (<13/<38)	36 (0/2) (<35/<36)	4 INDICATOR CONOWINGO POND LOCATED IN CONOWINGO	0
SEDIMENT PCI/KG DRY	GAMMA	9						
	BE-7		N/A	505 (1/6) (<162/1080)	402 (1/3) (<236/<504)	666 (1/3) (<162/1080)	4T INDICATOR CONOWINGO POND NEAR CONOWINGO DAM 7.92 MILES SE OF SITE	0
	K-40		N/A	14567 (6/6) (10100/22500)	8603 (2/3) (<1210/14200)	18367 (3/3) (14800/22500)	4T INDICATOR CONOWINGO POND NEAR CONOWINGO DAM 7.92 MILES SE OF SITE	0
	MN-54		N/A	55 (2/6) (<21/<88)	42 (0/3) (<29/<61)	60 (0/3) (<21/<88)	4T INDICATOR CONOWINGO POND NEAR CONOWINGO DAM 7.92 MILES SE OF SITE	0
	CO-58		N/A	46 (0/6) (<18/<74)	38 (0/3) (<30/<52)	52 (0/3) (<18/<74)	4T INDICATOR CONOWINGO POND NEAR CONOWINGO DAM 7.92 MILES SE OF SITE	0
	CO-60		N/A	86 (2/6) (<22/174)	38 (0/3) (<31/<45)	122 (2/3) (<48/174)	4J INDICATOR CONOWINGO POND NEAR BERKIN'S RUN 1.39 MILES SE OF SITE	0

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	CS-134		150	44 (0/6) (<17/<76)	35 (0/3) (<23/<51)	51 (0/3) (<17/<76)	4T INDICATOR CONOWINGO POND NEAR CONOWINGO DAM 7.92 MILES SE OF SITE	0
	CS-137		180	85 (3/6) (38/166)	192 (2/3) (<26/451)	192 (2/3) (<26/451)	6F CONTROL HOLTWOOD DAM 5.96 MILES NW OF SITE	0
AIR PARTICULATE (E-3 PCI/CU.METER)	GR-B	261	10	16 (244/261) (<6/38)	N/A	17 (49/52) (6/31)	1Z INDICATOR WEATHER STATION #1 0.26 MILES SE OF SITE	0
	GAMMA	20						
	BE-7		N/A	65 (18/18) (37/94)	N/A	72 (4/4) (59/94)	1C INDICATOR PEACH BOTTOM SOUTH SUB STATION 0.85 MILES SSE OF SITE	0
	MN-54		N/A	1.9 (0/20) (< 0.6/< 4.0)	N/A	1.9 (0/4) (< 0.6/< 4.0)	1B INDICATOR WEATHER STATION #2 0.49 MILES NW OF SITE	0
	CO-58		N/A	2.0 (0/20) (< 0.6/< 5.1)	N/A	2.5 (0/4) (< 0.7/< 5.1)	1B INDICATOR WEATHER STATION #2 0.49 MILES NW OF SITE	0
	CO-60		N/A	1.8 (0/20) (< 0.6/< 3.9)	N/A	2.2 (0/4) (< 0.7/< 3.9)	1B INDICATOR WEATHER STATION #2 0.49 MILES NW OF SITE	0
	CS-134		50	1.7 (0/20) (< 0.6/< 3.6)	N/A	2.0 (0/4) (< 0.6/< 3.4)	1B INDICATOR WEATHER STATION #2 0.49 MILES NW OF SITE	0

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	CS-137		60	1.7 (0/20) (< 0.7/< 3.5)	N/A	1.9 (0/4) (< 0.7/< 3.5)	1B INDICATOR WEATHER STATION #2 0.49 MILES NW OF SITE	0
AIR IODINE (E-3 PCI/CU.METER)	I-131	261	70	23 (0/261) (<7/<47)	N/A	25 (0/52) (<11/<46)	3A INDICATOR DELTA PA SUBSTATION 3.62 MILES SW OF SITE	0
MILK (PCI/LITER)	I-131	129	1	0.5 (0/96) (< 0.2/< 0.8)	0.5 (0/33) (< 0.2/< 0.8)	0.6 (0/4) (< 0.3/< 0.8)	C CONTROL 9.54 MILES NW OF SITE	0
	GAMMA K-40	105	N/A	1326 (84/84) (1090/1640)	1344 (21/21) (1150/1510)	1395 (21/21) (1290/1640)	R INDICATOR 0.89 MILES WSW OF SITE	0
	CS-134		15	5 (0/84) (<3/<13)	5 (0/21) (<3/<8)	5 (0/21) (<4/<13)	J INDICATOR 0.97 MILES W OF SITE	0
	CS-137		18	6 (0/84) (<4/<15)	6 (0/21) (<4/<10)	7 (0/21) (<4/<15)	J INDICATOR 0.97 MILES W OF SITE	0
	BA-140		60	23 (0/84) (<11/<38)	22 (0/21) (<15/<39)	24 (0/21) (<15/<38)	J INDICATOR 0.97 MILES W OF SITE	0
	LA-140		15	7 (0/84) (<2/<11)	6 (0/21) (<2/<12)	24 (0/21) (<4/<10)	S INDICATOR 3.61 MILES ESE OF SITE	0

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FOOD PRODUCTS	BE-7	9	N/A	613 (5/6) (<220/1190)	333 (3/3) (258/470)	646 (3/3) (242/1060)	1Q INDICATOR NW SECTOR	0
	MN-54		N/A	15 (0/6) (<13/<19)	14 (0/3) (<11/<17)	17 (0/3) (<14/<19)	1Q INDICATOR NW SECTOR	0
	CO-58		N/A	15 (0/6) (<12/<19)	14 (0/3) (<11/<17)	16 (0/3) (<14/<19)	2B INDICATOR SSE SECTOR	0
	CO-60		N/A	16 (0/6) (<13/<19)	16 (0/3) (<15/<17)	16 (0/3) (<15/<17)	55 CONTROL NE SECTOR	0
	I-131		60	50 (0/6) (<41/<57)	42 (0/3) (<32/<50)	51 (0/3) (<41/<57)	1Q INDICATOR NW SECTOR	0
	CS-134		60	14 (0/6) (<12/<16)	13 (0/3) (<10/<15)	15 (0/3) (<12/<16)	1Q INDICATOR NW SECTOR	0
	CS-137		80	16 (0/6) (<14/<19)	15 (0/3) (<11/<17)	15 (0/3) (<14/<19)	1Q INDICATOR NW SECTOR	0
DIRECT RADIATION (MILLI-ROENTGEN/STD.MO.)	TLD-QUARTERLY	185	N/A	6.8 (169/169) (4.1/8.8)	6.6 (16/16) (5.4/7.6)	8.3 (4/4) (7.9/8.6)	1R INDICATOR TRANSMISSION LINE HILL 0.53 MILES SSE OF SITE	0

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APPENDIX B

SAMPLE DESIGNATION AND LOCATIONS

TABLE B-1 Radiological Environmental Monitoring Program – Sampling Locations, Distance and Direction from Reactor Buildings, Peach Bottom Atomic Power Station, 2005

Location	Location Description	Distance & Direction from PBAPS Vents
A. Surface Water		
1LL	Peach Bottom Units 2 and 3 Intake - Composite (Control)	0.24 miles NE
1MM	Peach Bottom Canal Discharge -Composite	1.04 miles SE
B. Drinking (Potable) Water		
4L	Conowingo Dam EL 33' MSL - Composite	8.66 miles SE
6I	Holtwood Dam Hydroelectric Station - Composite (Control)	5.75 miles NW
C. Fish		
4	Conowingo Pond	Located in Conowingo Pond below the discharge
6	Holtwood Pond (Control)	Located in Holtwood Pond
D. Sediment		
4J	Conowingo Pond near Berkin's Run	1.39 miles SE
4T	Conowingo Pond near Conowingo Dam	7.92 miles SE
6F	Holtwood Dam (Control)	5.96 miles NW
E. Air Particulate - Air Iodine		
1B	Weather Station #2	0.49 miles NW
1Z	Weather Station #1	0.26 miles SE
1A	Weather Station #1	0.26 miles SE
1C	Peach Bottom South Sub Station	0.85 miles SSE
3A	Delta, PA – Substation	3.62 miles SW
5H2	Manor Substation	30.79 miles NE
F. Milk – bi-weekly / monthly		
A	(Control)	5.78 miles WSW
J		0.97 miles W
O		2.32 miles SW
R		0.89 miles WSW
S		3.61 miles SE
T	(Control)	6.55 miles W
G. Milk – quarterly		
B	(Control)	10.58 miles S
C	(Control)	9.54 miles NW
D		3.51 miles NE
E	(Control)	8.74 miles N
L		2.12 miles NE
P		2.08 miles ENE

TABLE B-1 Radiological Environmental Monitoring Program – Sampling Locations, Distance and Direction from Reactor Buildings, Peach Bottom Atomic Power Station, 2005

Location	Location Description	Distance & Direction from PBAPS Vents
H. Food Products – annually		
1Q		0.79 miles NW
2B		0.73 miles SSE
55	(Control)	9.9 miles NE
I. Environmental Dosimetry - TLD		
Site Boundary		
1L	Peach Bottom Unit 3 Intake	0.24 miles NE
1P	Tower B & C Fence	0.40 miles ESE
1A	Weather Station #1	0.26 miles SE
1Q	Tower D & E Fence	0.62 miles SE
1D	140° Sector	0.67 miles SE
2	Peach Bottom 130° Sector Hill	0.88 miles SE
1M	Discharge	1.03 miles SE
1R	Transmission Line Hill	0.53 miles SSE
1I	Peach Bottom South Substation	0.54 miles SSE
1C	Peach Bottom South Substation	0.85 miles SSE
1J	Peach Bottom 180° Sector Hill	0.71 miles S
1K	Peach Bottom Site Area	0.87 miles SW
1F	Peach Bottom 200° Sector Hill	0.51 miles SSW
40	Peach Bottom Site Area	1.46 miles SW
1NN	Peach Bottom Site	0.48 miles WSW
1H	Peach Bottom 270° Sector Hill	0.59 miles W
1G	Peach Bottom North Substation	0.60 miles WNW
1B	Weather Station #2	0.49 miles NW
1E	Peach Bottom 350° Sector Hill	0.59 miles NNW
Intermediate Distance		
2B	Burk Property	0.71 miles SSE
5	Wakefield, PA	4.64 miles E
15	Silver Spring Rd	3.68 miles N
22	Eagle Road	2.39 miles NNE
44	Goshen Mill Rd	5.07 miles NE
32	Slate Hill Rd	2.75 miles ENE
45	PB-Keeney Line	3.38 miles ENE
14	Peters Creek	1.97 miles E
17	Riverview Rd	4.07 miles ESE
31A	Eckman Rd	4.57 miles SE
4K	Conowingo Dam Power House Roof	8.61 miles SE
23	Peach Bottom 150° Sector Hill	1.01 miles SSE
27	N. Cooper Road	2.68 miles S
48	Macton Substation	4.99 miles SSW
3A	Delta, PA Substation	3.62 miles SW
49	PB-Conastone Line	4.05 miles WSW
50	TRANSCO Pumping Station	4.99 miles W
51	Fin Substation	3.98 miles WNW
26	Slab Road	4.23 miles NW
6B	Holtwood Dam Power House Roof	5.78 miles NW
42	Muddy Run Environ. Laboratory	4.13 miles NNW
43	Drumore Township School	5.00 miles NNE
46	Broad Creek	4.48 miles SSE

TABLE B-1 Radiological Environmental Monitoring Program – Sampling Locations, Distance and Direction from Reactor Buildings, Peach Bottom Atomic Power Station, 2005

Location	Location Description	Distance & Direction from PBAPS Vents
47	Broad Creek Scout Camp	4.26 miles S
Control		
16	Nottingham, PA Substation (Control)	12.72 miles E
24	Harrisville, MD Substation (Control)	10.91 miles ESE
18	Fawn Grove, PA (Control)	9.86 miles W
19	Red Lion, PA (Control)	20.21 miles WNW

TABLE B-2 Radiological Environmental Monitoring Program – Summary of Sample Collection and Analytical Methods, Peach Bottom Atomic Power Station, 2005

Sample Medium	Analysis	Sampling Method	Collection Procedure Number	Sample Size	Analytical Procedure Number
Surface Water	Gamma Spectroscopy	Monthly composite from a continuous water compositor.	NAI-ER15 Collection of water samples for radiological analysis (Peach Bottom Atomic Power Station)	2 gallon	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
Surface Water	Tritium	Quarterly composite from a continuous water compositor.	NAI-ER15 Collection of water samples for radiological analysis (Peach Bottom Atomic Power Station)	500 ml	TBE, TBE-2010 Tritium and carbon-14 analysis by liquid scintillation Env. Inc., T-02 Determination of tritium in water (direct method)
Drinking Water	Gross Beta	Monthly composite from a continuous water compositor.	NAI-ER15 Collection of water samples for radiological analysis (Peach Bottom Atomic Power Station)	2 gallon	TBE, TBE-2008 Gross alpha and/or gross beta activity in various matrices Env. Inc., W(DS)-01 Determination of gross alpha and/or gross beta in water (dissolved solids or total residue)
Drinking Water	Gamma Spectroscopy	Monthly composite from a continuous water compositor.	NAI-ER15 Collection of water samples for radiological analysis (Peach Bottom Atomic Power Station)	2 gallon	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
Drinking Water	Tritium	Quarterly composite from a continuous water compositor.	NAI-ER15 Collection of water samples for radiological analysis (Peach Bottom Atomic Power Station)	500 ml	TBE, TBE-2010 Tritium and carbon-14 analysis by liquid scintillation Env. Inc., T-02 Determination of tritium in water (direct method)
Fish	Gamma Spectroscopy	Semi-annual samples collected via electroshocking or other techniques	NAI-ER3 Collection of fish samples for radiological analysis (Peach Bottom Atomic Power Station)	1000 grams (wet)	TBE, TBE-2007 Gamma emitting radioisotope analysis
Sediment	Gamma Spectroscopy	Semi-annual grab samples	NAI-ER2 Collection of sediment samples for radiological analysis (Peach Bottom Atomic Power Station)	500 grams (dry)	TBE, TBE-2007 Gamma emitting radioisotope analysis
Air Particulates	Gross Beta	One-week composite of continuous air sampling through glass fiber filter paper	NAI-ER16 Collection of air particulate and air iodine samples for radiological analysis (Peach Bottom Atomic Power Station)	1 filter (approximately 280 cubic meters weekly)	TBE, TBE-2008 Gross alpha and/or gross beta activity in various matrices Env. Inc., AP-02 Determination of gross alpha and/or gross beta in air particulate filters

TABLE B-2 Radiological Environmental Monitoring Program – Summary of Sample Collection and Analytical Methods, Peach Bottom Atomic Power Station, 2005

Sample Medium	Analysis	Sampling Method	Collection Procedure Number	Sample Size	Analytical Procedure Number
Air Particulates	Gamma Spectroscopy	Quarterly composite of each station	TBE, TBE-2023 Compositing of samples Env. Inc., AP-03 Procedure for compositing air particulate filters for gamma spectroscopic analysis	13 filters (approximately 3600 cubic meters)	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
Air Iodine	Gamma Spectroscopy	One-week composite of continuous air sampling through charcoal filter	NAI-ER8 Collection of air particulate and air iodine samples for radiological analysis (Peach Bottom Atomic Power Station)	1 filter (approximately 280 cubic meters weekly)	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., I-131-02 Determination of I-131 in charcoal canisters by gamma spectroscopy (batch method)
Milk	I-131	Bi-weekly grab sample when cows are on pasture. Monthly all other times	NAI-ER10 Collection of milk samples for radiological analysis (Peach Bottom Atomic Power Station)	2 gallon	TBE, TBE-2012 Radiolodine in various matrices Env. Inc., I-131-01 Determination of I-131 in milk by anion exchange
Milk	Gamma Spectroscopy	Bi-weekly grab sample when cows are on pasture. Monthly all other times	NAI-ER10 Collection of milk samples for radiological analysis (Peach Bottom Atomic Power Station)	2 gallon	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
Food Products	Gamma Spectroscopy	Annual grab samples	NAI-ER12 Collection of vegetation samples for radiological analysis (Peach Bottom Atomic Power Station)	1000 grams	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
TLD	Thermoluminescence Dosimetry	Quarterly TLDs comprised of two Panasonic 814 (containing 3 each $CaSO_4$ elements)	NAI-ER9 Collection of TLD samples for radiological analysis (Peach Bottom Atomic Power Station)	2 dosimeters	Global Dosimetry

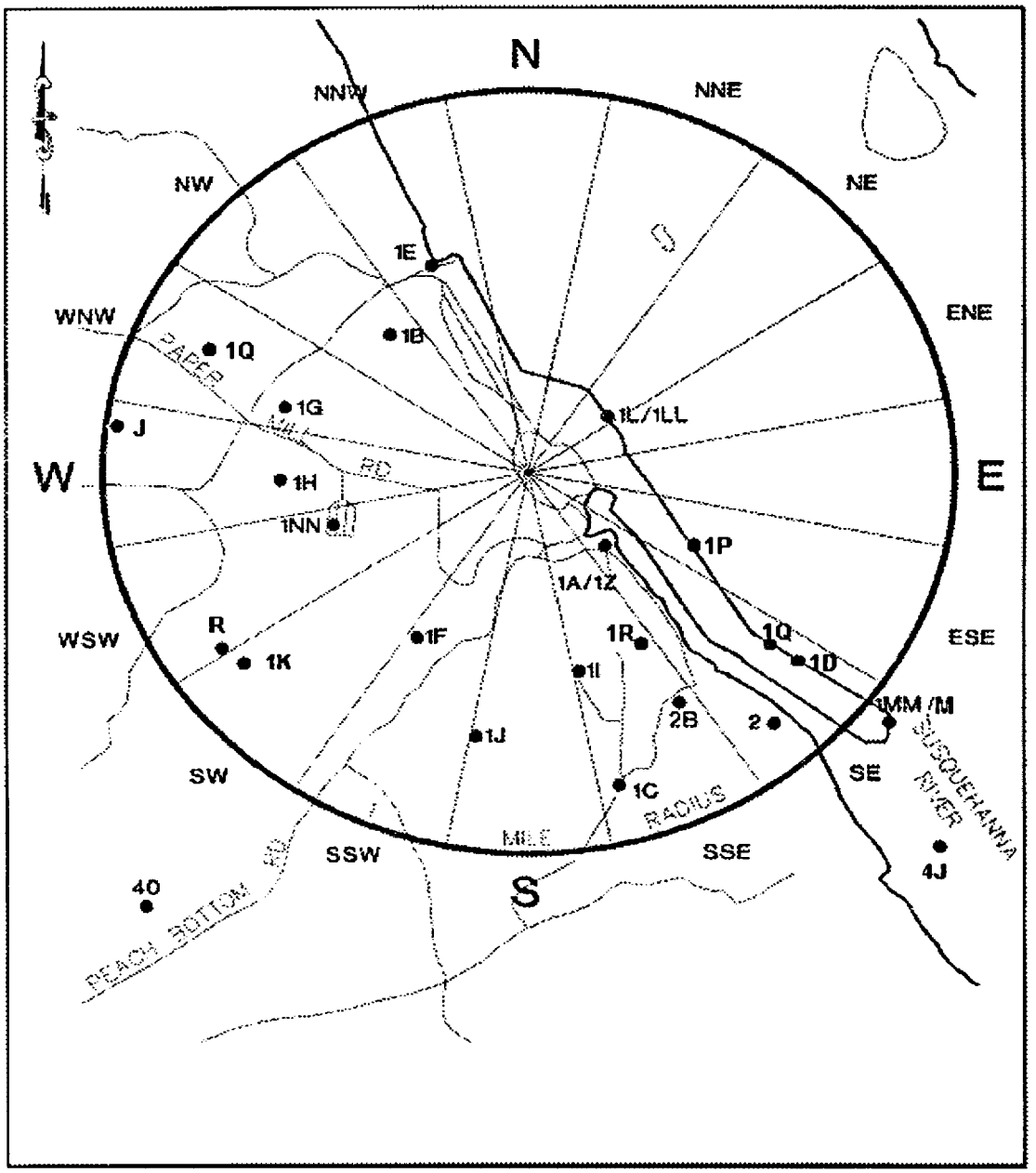


Figure B-1
Environmental Sampling Locations Within One
Mile of the Peach Bottom Atomic Power Station, 2005

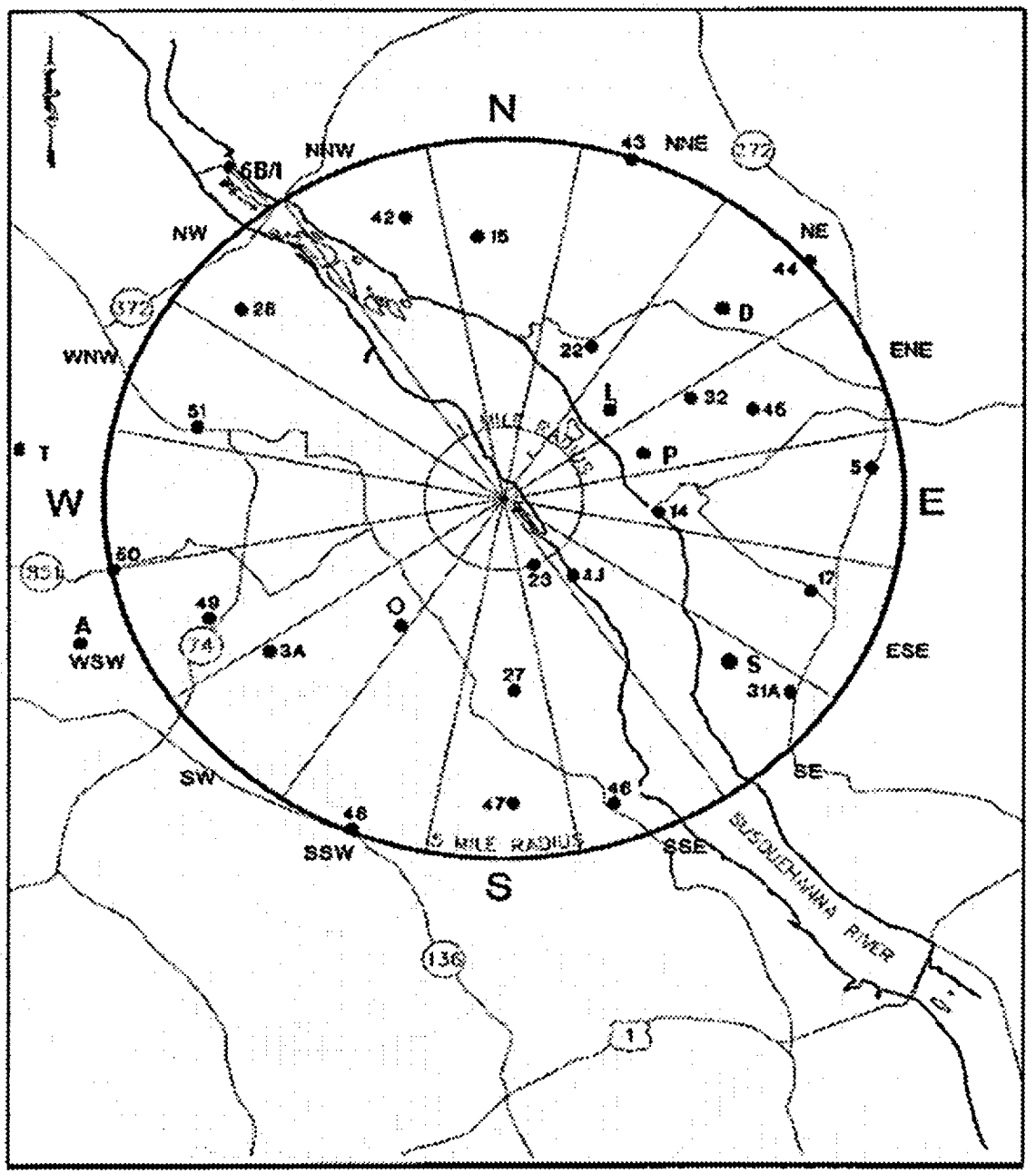


Figure B-2
Environmental Sampling Locations Between One and Approximately Five Miles of the Peach Bottom Atomic Power Station, 2005

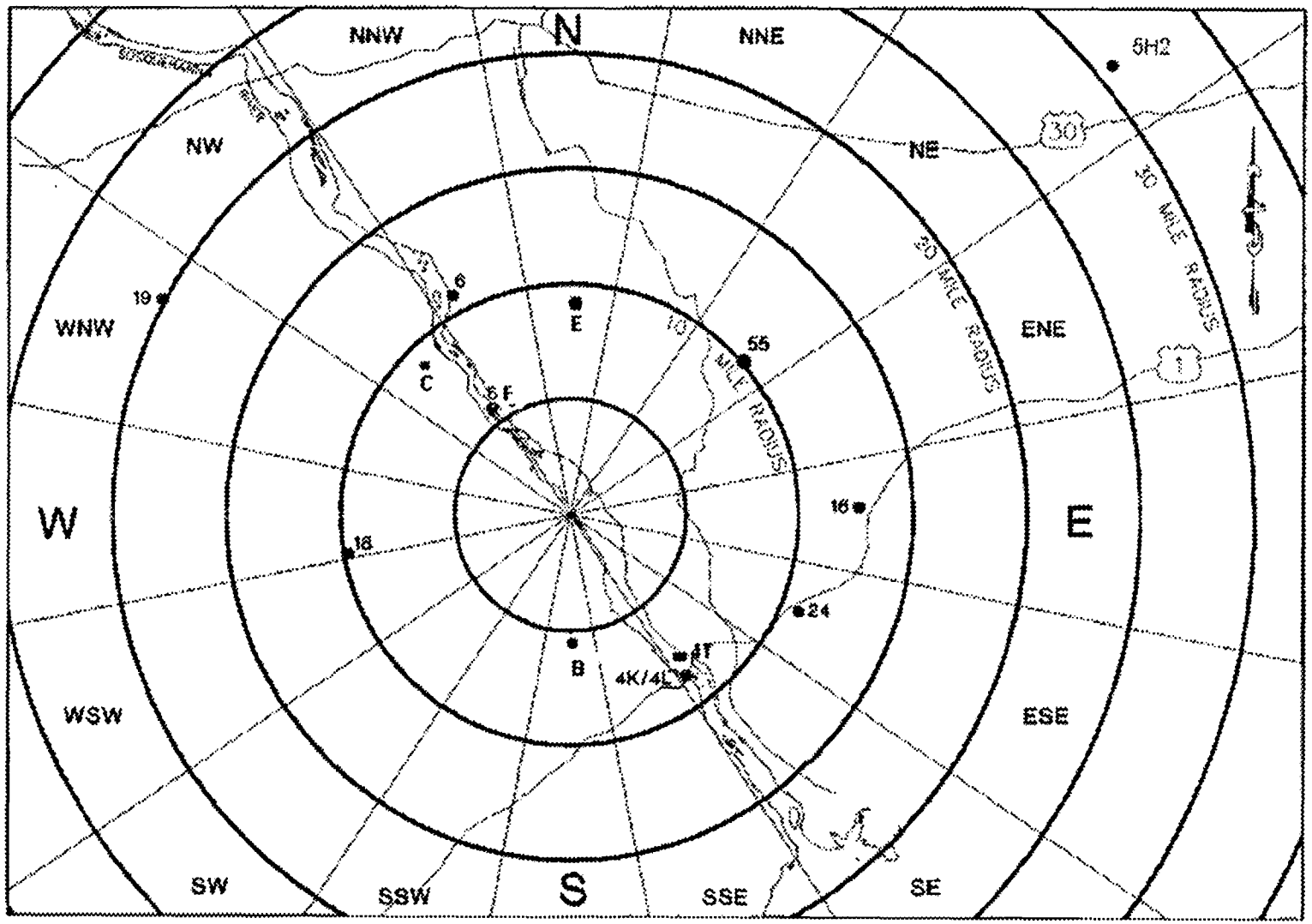


Figure B-3
Environmental Sampling Locations Greater Than
Five Miles from the Peach Bottom Atomic Power Station, 2005

APPENDIX C

DATA TABLES AND FIGURES
PRIMARY LABORATORY

TABLE C-I.1 CONCENTRATIONS OF TRITIUM IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	1LL	1MM
JAN-MAR	< 157	< 155
APR-JUN	< 179	< 179
JUL-SEP	< 170	< 169
OCT-DEC	< 198	< 162
MEAN	176 ± 34	166 ± 20

TABLE C-I.2 CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr9-5	I-131	Cs-134	Cs-137	Ba-140	La-140
1LL	JAN	< 6	< 5	< 14	< 7	< 14	< 7	< 10	< 12	< 5	< 7	< 29	< 8
	FEB	< 4	< 3	< 6	< 4	< 7	< 3	< 7	< 7	< 3	< 3	< 18	< 6
	MAR	< 5	< 2	< 7	< 7	< 8	< 5	< 5	< 12	< 3	< 5	< 32	< 9
	APR	< 5	< 5	< 11	< 5	< 11	< 5	< 7	< 9	< 4	< 4	< 23	< 2
	MAY	< 6	< 6	< 13	< 6	< 12	< 7	< 8	< 10	< 5	< 6	< 28	< 11
	JUN	< 4	< 4	< 6	< 5	< 6	< 6	< 8	< 8	< 4	< 5	< 27	< 9
	JUL	< 6	< 5	< 12	< 6	< 11	< 7	< 13	< 12	< 6	< 6	< 30	< 10
	AUG	< 3	< 3	< 6	< 4	< 5	< 3	< 5	< 6	< 2	< 3	< 15	< 4
	SEP	< 3	< 4	< 9	< 5	< 8	< 3	< 7	< 12	< 3	< 4	< 26	< 8
	OCT	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 3	< 1	< 1	< 6	< 2
	NOV	< 4	< 5	< 7	< 3	< 7	< 4	< 8	< 9	< 3	< 5	< 21	< 7
	DEC	< 4	< 4	< 5	< 4	< 8	< 4	< 7	< 7	< 4	< 4	< 19	< 5
	MEAN	4 ± 3	4 ± 3	8 ± 7	5 ± 3	8 ± 6	5 ± 4	7 ± 5	9 ± 6	4 ± 3	4 ± 3	23 ± 15	7 ± 6
1MM	JAN	< 5	< 5	< 6	< 6	< 9	< 6	< 8	< 7	< 4	< 3	< 18	< 10
	FEB	< 4	< 4	< 8	< 4	< 9	< 5	< 7	< 8	< 4	< 4	< 22	< 5
	MAR	< 6	< 5	< 12	< 6	< 10	< 6	< 9	< 16	< 5	< 6	< 33	< 14
	APR	< 6	< 6	< 11	< 6	< 9	< 5	< 9	< 11	< 5	< 5	< 26	< 8
	MAY	< 5	< 5	< 11	< 5	< 12	< 6	< 10	< 9	< 5	< 5	< 27	< 10
	JUN	< 4	< 4	< 7	< 4	< 7	< 4	< 7	< 7	< 4	< 5	< 16	< 9
	JUL	< 4	< 5	< 8	< 5	< 9	< 5	< 7	< 11	< 4	< 3	< 19	< 8
	AUG	< 3	< 4	< 7	< 4	< 7	< 4	< 6	< 8	< 3	< 3	< 20	< 7
	SEP	< 4	< 4	< 9	< 4	< 7	< 4	< 7	< 12	< 3	< 4	< 27	< 10
	OCT	< 1	< 1	< 3	< 1	< 3	< 1	< 3	< 3	< 1	< 1	< 9	< 3
	NOV	< 3	< 5	< 10	< 4	< 7	< 5	< 7	< 7	< 4	< 4	< 18	< 6
	DEC	< 8	< 7	< 16	< 8	< 17	< 9	< 14	< 15	< 9	< 8	< 38	< 14
	MEAN	4 ± 4	5 ± 3	9 ± 6	5 ± 3	9 ± 7	5 ± 3	8 ± 6	10 ± 7	4 ± 4	4 ± 3	23 ± 16	9 ± 7

TABLE C-II.1 CONCENTRATIONS OF TOTAL GROSS BETA IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	4L	6I
JAN	3.4 ± 1.3	4.3 ± 1.3
FEB	< 2.3	8.8 ± 1.9
MAR	3.6 ± 1.4	3.7 ± 1.4
APR	3.9 ± 1.4	3.7 ± 1.5
MAY	5.9 ± 1.8	< 2.2
JUN	3.3 ± 1.7	3.3 ± 1.7
JUL	4.5 ± 1.6	4.6 ± 1.6
AUG	3.0 ± 1.6	2.6 ± 1.6
SEP	4.8 ± 1.7	2.9 ± 1.5
OCT	3.7 ± 1.5	3.5 ± 1.5
NOV	2.5 ± 1.3	3.6 ± 1.4
DEC	3.8 ± 1.5	3.1 ± 1.5
MEAN	3.7 ± 2.0	3.8 ± 3.4

TABLE C-II.2 CONCENTRATIONS OF TRITIUM IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	4L	6I
JAN-MAR	< 153	< 153
APR-JUN	187 ± 113	191 ± 114
JUL-SEP	< 178	< 172
OCT-DEC	< 159	< 162
MEAN	169 ± 32	170 ± 33

TABLE C-II.3 CONCENTRATIONS OF GAMMA EMITTERS IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Zr-95	Nb-95	I-131	Cs-134	Cs-137	Ba-140	La-140
4L	JAN	< 7	< 8	< 16	< 6	< 14	< 10	< 12	< 13	< 7	< 9	< 34	< 9
	FEB	< 4	< 4	< 6	< 4	< 8	< 4	< 8	< 7	< 3	< 4	< 15	< 6
	MAR	< 5	< 5	< 9	< 5	< 8	< 6	< 10	< 12	< 4	< 5	< 24	< 6
	APR	< 6	< 4	< 10	< 7	< 11	< 6	< 12	< 11	< 6	< 7	< 25	< 6
	MAY	< 3	< 4	< 7	< 3	< 7	< 3	< 7	< 5	< 3	< 4	< 15	< 2
	JUN	< 5	< 5	< 8	< 3	< 13	< 5	< 5	< 10	< 5	< 6	< 22	< 6
	JUL	< 6	< 6	< 14	< 5	< 12	< 6	< 16	< 13	< 5	< 8	< 35	< 15
	AUG	< 5	< 4	< 11	< 4	< 9	< 4	< 8	< 10	< 4	< 5	< 25	< 8
	SEP	< 4	< 6	< 7	< 5	< 8	< 4	< 8	< 12	< 4	< 4	< 32	< 7
	OCT	< 7	< 3	< 10	< 8	< 9	< 9	< 10	< 13	< 5	< 5	< 25	< 7
	NOV	< 5	< 5	< 11	< 4	< 9	< 6	< 8	< 6	< 4	< 5	< 18	< 6
	DEC	< 9	< 9	< 17	< 10	< 19	< 11	< 15	< 16	< 10	< 9	< 40	< 13
	MEAN	5 ± 3	5 ± 4	10 ± 7	5 ± 4	10 ± 7	6 ± 5	10 ± 7	11 ± 6	5 ± 4	6 ± 4	26 ± 16	8 ± 7
6I	JAN	< 4	< 3	< 9	< 7	< 7	< 4	< 6	< 7	< 4	< 5	< 20	< 5
	FEB	< 4	< 5	< 8	< 4	< 9	< 5	< 7	< 8	< 4	< 5	< 21	< 7
	MAR	< 4	< 5	< 8	< 5	< 10	< 6	< 10	< 11	< 5	< 3	< 29	< 5
	APR	< 5	< 6	< 12	< 6	< 10	< 6	< 11	< 10	< 6	< 6	< 27	< 7
	MAY	< 3	< 3	< 7	< 6	< 8	< 4	< 6	< 6	< 4	< 5	< 17	< 5
	JUN	< 7	< 6	< 12	< 7	< 12	< 6	< 11	< 10	< 6	< 7	< 30	< 12
	JUL	< 5	< 4	< 11	< 6	< 9	< 3	< 7	< 7	< 4	< 5	< 17	< 4
	AUG	< 3	< 3	< 6	< 2	< 7	< 3	< 5	< 7	< 2	< 3	< 17	< 6
	SEP	< 5	< 5	< 9	< 6	< 11	< 6	< 8	< 14	< 4	< 4	< 34	< 10
	OCT	< 5	< 6	< 12	< 7	< 11	< 7	< 10	< 13	< 5	< 7	< 27	< 13
	NOV	< 7	< 7	< 16	< 7	< 16	< 8	< 14	< 11	< 7	< 8	< 29	< 11
	DEC	< 7	< 7	< 13	< 8	< 18	< 7	< 13	< 11	< 8	< 7	< 33	< 11
	MEAN	5 ± 3	5 ± 3	10 ± 6	6 ± 3	11 ± 7	5 ± 4	9 ± 6	10 ± 5	5 ± 3	5 ± 3	25 ± 13	8 ± 6

TABLE C-III.1 **CONCENTRATIONS OF GAMMA EMITTERS IN PREDATOR & BOTTOM FEEDER (FISH) SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005**

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								
	06/09 - 06/16/05	3010 ± 703	< 39	< 38	< 73	< 33	< 68	< 34	< 36
	10/12 - 10/12/05	3790 ± 863	< 29	< 27	< 53	< 40	< 58	< 27	< 35
	MEAN	3400 ± 1103	34 ± 14	32 ± 15	63 ± 28	37 ± 9	63 ± 14	31 ± 10	36 ± 2
	BOTTOM FEEDER								
	06/08 - 06/13/05	2890 ± 307	< 11	< 10	< 24	< 11	< 24	< 11	< 11
	10/12 - 10/12/05	2730 ± 712	< 46	< 41	< 118	< 36	< 99	< 45	< 41
	MEAN	2810 ± 226	29 ± 50	26 ± 43	71 ± 134	24 ± 36	61 ± 106	28 ± 48	26 ± 42
6	PREDATOR								
	06/08 - 06/09/05	3250 ± 269	< 12	< 13	< 30	< 14	< 28	< 13	< 13
	10/17 - 10/18/05	3370 ± 667	< 49	< 47	< 107	< 49	< 100	< 44	< 38
	MEAN	3310 ± 170	31 ± 51	30 ± 48	68 ± 110	32 ± 50	64 ± 102	29 ± 44	26 ± 35
	BOTTOM FEEDER								
	06/08 - 06/09/05	2710 ± 215	< 11	< 12	< 25	< 12	< 23	< 10	< 12
	10/12 - 10/12/05	3260 ± 747	< 49	< 41	< 102	< 45	< 100	< 45	< 51
	MEAN	2985 ± 778	30 ± 53	26 ± 41	63 ± 109	29 ± 47	61 ± 109	28 ± 49	32 ± 54

TABLE C-IV.1 CONCENTRATIONS OF GAMMA EMITTERS IN SEDIMENT SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/KG DRY ± 2 SIGMA

STC	COLLECTION PERIOD	K-40	Mn-54	Co-58	Co-60	Cs-134	Cs-137
4J	06/16/05	11700 ± 1180	< 53	< 49	< 48	< 42	< 55
	11/01/05	10100 ± 832	61 ± 36	< 44	174 ± 36	< 37	< 40
	12/20/05	10500 ± 332	36 ± 15	< 27	144 ± 14	< 31	38 ± 12
	MEAN	10900 ± 2263	57 ± 11	46 ± 6	111 ± 178	39 ± 7	47 ± 22
4T	06/16/05	17800 ± 1460	< 72	< 64	< 62	< 61	< 100
	11/01/05	22500 ± 1600	< 88	< 74	< 69	< 76	166 ± 66
	12/20/05	14800 ± 458	< 21	< 18	< 22	< 17	108 ± 19
	MEAN	20150 ± 6647	80 ± 22	69 ± 14	65 ± 10	68 ± 21	133 ± 93
6F	06/16/05	10400 ± 1100	< 61	< 52	< 45	< 51	451 ± 56
	11/01/05	< 1210	< 29	< 30	< 37	< 23	< 26
	12/20/05	14200 ± 693	< 36	< 31	< 31	< 31	100 ± 30
	MEAN	5805 ± 12997	45 ± 44	41 ± 32	41 ± 12	37 ± 39	239 ± ##

TABLE C-V.1 CONCENTRATIONS OF GROSS BETA IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

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

	GROUP I			GROUP II	GROUP III
WEEK	1B	1C	1Z	3A	5H2
1	12 ± 5	8 ± 5	12 ± 5	12 ± 5	27 ± 6
2	< 6	7 ± 4	6 ± 4	9 ± 4	13 ± 5
3	20 ± 4	20 ± 4	23 ± 4	23 ± 4	12 ± 5
4	25 ± 5	21 ± 5	23 ± 5	17 ± 4	19 ± 5
5	20 ± 4	20 ± 4	19 ± 4	18 ± 4	16 ± 5
6	15 ± 6	16 ± 6	14 ± 5	12 ± 5	18 ± 5
7	14 ± 5	16 ± 5	16 ± 5	11 ± 4	13 ± 5
8	10 ± 4	16 ± 5	15 ± 5	13 ± 5	10 ± 5
9	12 ± 5	10 ± 5	9 ± 4	9 ± 4	15 ± 5
10	16 ± 5	17 ± 5	17 ± 5	17 ± 5	9 ± 5
11	13 ± 5	17 ± 5	13 ± 5	19 ± 5	10 ± 5
12	7 ± 4	12 ± 4	11 ± 4	12 ± 4	16 ± 5
13	7 ± 5	< 6	< 7	9 ± 5	11 ± 5
14	14 ± 5	10 ± 5	12 ± 5	11 ± 5	8 ± 5
15	11 ± 5	9 ± 4	15 ± 5	10 ± 4	10 ± 5
16	16 ± 5	15 ± 5	24 ± 5	17 ± 5	11 ± 5
17	8 ± 5	8 ± 5	8 ± 5	8 ± 5	12 ± 5
18	14 ± 5	13 ± 5	10 ± 5	13 ± 5	13 ± 5
19	6 ± 4	9 ± 4	8 ± 4	8 ± 4	14 ± 5
20	14 ± 5	12 ± 4	11 ± 4	11 ± 4	17 ± 5
21	7 ± 4	< 6	7 ± 4	7 ± 4	13 ± 5
22	12 ± 5	13 ± 5	13 ± 5	12 ± 5	< 7
23	17 ± 5	11 ± 5	12 ± 5	14 ± 5	< 9
24	16 ± 5	19 ± 5	14 ± 5	14 ± 5	24 ± 5
25	8 ± 5	< 7	< 7	< 7	< 7
26	12 ± 5	11 ± 5	14 ± 5	14 ± 5	17 ± 5
27	15 ± 5	13 ± 5	18 ± 5	16 ± 5	11 ± 4
28	19 ± 5	20 ± 5	20 ± 5	16 ± 5	12 ± 5
29	17 ± 5	15 ± 5	15 ± 5	18 ± 5	20 ± 5
30	26 ± 6	20 ± 6	23 ± 6	24 ± 6	19 ± 5
31	28 ± 5	31 ± 6	27 ± 5	26 ± 5	22 ± 6
32	18 ± 5	25 ± 6	10 ± 5	21 ± 5	35 ± 6
33	25 ± 6	34 ± 9	28 ± 6	24 ± 6	27 ± 6
34	23 ± 5	24 ± 5	25 ± 5	23 ± 5	23 ± 5
35	16 ± 4	13 ± 4	17 ± 5	14 ± 4	12 ± 5
36	20 ± 5	22 ± 5	23 ± 5	18 ± 5	13 ± 5
37	22 ± 5	23 ± 6	25 ± 6	30 ± 6	21 ± 5
38	28 ± 6	20 ± 5	30 ± 6	24 ± 6	20 ± 5
39	15 ± 5	12 ± 5	16 ± 5	16 ± 5	24 ± 5
40	18 ± 5	20 ± 5	20 ± 5	21 ± 5	13 ± 5
41	< 6	< 6	< 6	8 ± 4	11 ± 5
42	14 ± 5	17 ± 5	17 ± 5	17 ± 5	< 7
43	< 7	< 7	7 ± 5	< 7	20 ± 5
44	16 ± 5	21 ± 5	22 ± 5	22 ± 5	9 ± 5
45	30 ± 6	27 ± 6	29 ± 6	24 ± 6	24 ± 5
46	18 ± 5	18 ± 5	19 ± 5	17 ± 5	25 ± 5
47	24 ± 5	23 ± 5	23 ± 5	27 ± 5	19 ± 5
48	17 ± 4	14 ± 4	15 ± 4	14 ± 4	12 ± 5
49	33 ± 6	29 ± 6	25 ± 6	23 ± 6	10 ± 5
50	20 ± 6	15 ± 6	19 ± 6	20 ± 6	31 ± 6
51	28 ± 6	34 ± 6	31 ± 6	38 ± 6	14 ± 5
52	26 ± 5	31 ± 6	28 ± 6	25 ± 5	24 ± 5
					8 ± 5
MEAN	17 ± 14	17 ± 15	17 ± 14	16 ± 13	16 ± 13

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, 2005**

GROUP I - ON-SITE LOCATIONS				GROUP II - INTERMEDIATE DISTANCE LOCATIONS				GROUP III - CONTROL LOCATIONS			
COLLECTION PERIOD	MIN.	MAX.	MEAN ± 2 SD	COLLECTION PERIOD	MIN.	MAX.	MEAN ± 2 SD	COLLECTION PERIOD	MIN.	MAX.	MEAN ± 2 SD
12/28/04 - 01/31/05	< 6	25	15 ± 15	12/28/04 - 01/31/05	9	23	15 ± 12	12/28/04 - 01/31/05	12	27	17 ± 12
01/31/05 - 02/28/05	10	20	16 ± 6	01/31/05 - 02/28/05	11	18	13 ± 6	01/31/05 - 02/28/05	10	18	14 ± 7
02/28/05 - 03/28/05	< 6	17	12 ± 8	02/28/05 - 03/28/05	9	19	13 ± 9	02/28/05 - 03/28/05	9	16	11 ± 6
03/28/05 - 05/02/05	8	24	12 ± 9	03/28/05 - 05/02/05	8	17	11 ± 8	03/28/05 - 05/02/05	8	13	11 ± 4
05/02/05 - 05/31/05	< 6	14	10 ± 6	05/02/05 - 05/31/05	7	13	10 ± 5	05/02/05 - 05/31/05	< 7	17	13 ± 9
05/31/05 - 06/27/05	< 7	19	12 ± 8	05/31/05 - 06/27/05	< 7	14	12 ± 7	05/31/05 - 06/27/05	< 7	24	14 ± 15
06/27/05 - 08/01/05	13	26	18 ± 7	06/27/05 - 08/01/05	16	24	18 ± 7	06/27/05 - 08/01/05	11	22	17 ± 10
08/01/05 - 08/29/05	10	34	23 ± 13	08/01/05 - 08/29/05	14	26	22 ± 9	08/01/05 - 08/29/05	12	35	24 ± 19
08/29/05 - 10/03/05	12	30	21 ± 10	08/29/05 - 10/03/05	16	30	22 ± 13	08/29/05 - 10/03/05	13	24	18 ± 10
10/03/05 - 10/31/05	< 6	20	12 ± 12	10/03/05 - 10/31/05	< 7	21	13 ± 14	10/03/05 - 10/31/05	< 7	20	12 ± 11
10/31/05 - 11/28/05	14	30	21 ± 10	10/31/05 - 11/28/05	14	27	21 ± 11	10/31/05 - 11/28/05	12	25	20 ± 12
11/28/05 - 01/03/06	15	34	27 ± 12	11/28/05 - 01/03/06	20	38	26 ± 16	11/28/05 - 01/03/06	8	31	17 ± 20
12/28/04 - 01/03/06	< 6	34	17 ± 11	12/28/04 - 01/03/06	< 7	38	16 ± 10	12/28/04 - 01/03/06	< 7	35	16 ± 8

TABLE C-V.3 CONCENTRATION OF GAMMA EMITTERS IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

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

STC	COLLECTION PERIOD	Be-7	Mn-54	Co-58	Co-60	Cs-134	Cs-137
1B	12/31 - 04/01/05	58 ± 11	< 0.9	< 1.1	< 0.9	< 0.8	< 0.9
	04/01 - 07/01/05	61 ± 12	< 0.6	< 0.7	< 0.7	< 0.6	< 0.7
	07/01 - 09/30/05	73 ± 7	< 4.0	< 5.1	< 3.5	< 3.4	< 3.5
	09/30 - 12/30/05	59 ± 23	< 2.3	< 2.9	< 3.9	< 3.1	< 2.4
	MEAN	63 ± 14	1.9 ± 3.1	2.5 ± 4.0	2.2 ± 3.4	2.0 ± 3.0	1.9 ± 2.7
1C	12/31 - 04/01/05	59 ± 11	< 0.8	< 0.9	< 1.0	< 0.7	< 0.8
	04/01 - 07/01/05	70 ± 13	< 0.7	< 0.6	< 0.6	< 0.6	< 0.7
	07/01 - 09/30/05	94 ± 37	< 2.7	< 2.6	< 1.4	< 2.0	< 2.3
	09/30 - 12/30/05	64 ± 21	< 3.1	< 3.0	< 2.5	< 3.6	< 2.7
	MEAN	72 ± 31	1.8 ± 2.5	1.8 ± 2.4	1.4 ± 1.7	1.7 ± 2.8	1.6 ± 2.1
1Z	12/31 - 04/01/05	57 ± 14	< 1.0	< 1.2	< 1.1	< 1.0	< 1.1
	04/01 - 07/01/05	66 ± 15	< 1.1	< 0.9	< 1.1	< 0.9	< 1.0
	07/01 - 09/30/05	90 ± 31	< 2.6	< 2.9	< 2.6	< 1.7	< 1.7
	09/30 - 12/30/05	37 ± 19	< 2.8	< 2.2	< 3.0	< 2.6	< 3.2
	MEAN	62 ± 44	1.9 ± 1.9	1.8 ± 1.8	1.9 ± 2.0	1.6 ± 1.6	1.7 ± 2.1
3A	12/31 - 04/01/05	59 ± 15	< 1.1	< 1.1	< 1.6	< 1.1	< 1.0
	04/01 - 07/01/05	59 ± 12	< 0.9	< 1.1	< 0.9	< 0.8	< 0.9
	07/01 - 09/30/05	61 ± 36	< 2.3	< 2.5	< 2.5	< 1.5	< 1.6
	09/30 - 12/30/05	74 ± 26	< 3.1	< 3.4	< 3.3	< 3.5	< 2.6
	MEAN	63 ± 15	1.8 ± 2.0	2.0 ± 2.2	2.1 ± 2.1	1.7 ± 2.4	1.5 ± 1.6
5H2	12/28 - 03/28/05	64 ± 20	< 1.1	< 1.0	< 1.1	< 0.7	< 0.8
	03/28 - 06/26/05	61 ± 13	< 1.1	< 1.4	< 0.8	< 1.1	< 1.0
	06/26 - 09/26/05	67 ± 34	< 2.2	< 1.9	< 1.4	< 1.5	< 1.8
	09/26 - 01/03/06	48 ± 20	< 3.0	< 2.6	< 2.8	< 3.4	< 2.7
	MEAN	60 ± 17	1.9 ± 1.8	1.7 ± 1.3	1.5 ± 1.7	1.7 ± 2.4	1.6 ± 1.7

TABLE C-VI.1 CONCENTRATIONS OF I-131 IN AIR IODINE SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

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

	GROUP I			GROUP II	GROUP III
WEEK	1B	1Z	1C	3A	5H2
1	< 27	< 27	< 26	< 26	< 13
2	< 22	< 22	< 22	< 22	< 12
3	< 23	< 23	< 23	< 23	< 13
4	< 21	< 21	< 21	< 21	< 16
7	< 19	< 18	< 18	< 18	< 29
6	< 24	< 24	< 24	< 24	< 16
7	< 15	< 14	< 14	< 14	< 13
8	< 21	< 21	< 21	< 21	< 16
9	< 24	< 24	< 24	< 24	< 10
10	< 20	< 20	< 20	< 20	< 9
11	< 25	< 25	< 25	< 25	< 14
12	< 18	< 18	< 18	< 18	< 16
13	< 22	< 22	< 22	< 22	< 11
14	< 18	< 18	< 18	< 18	< 10
15	< 11	< 11	< 11	< 11	< 8
16	< 15	< 15	< 15	< 15	< 8
17	< 22	< 22	< 22	< 22	< 8
18	< 19	< 19	< 19	< 19	< 8
19	< 19	< 19	< 10	< 19	< 13
20	< 26	< 26	< 26	< 26	< 18
21	< 22	< 22	< 21	< 21	< 15
22	< 23	< 23	< 23	< 23	< 14
23	< 20	< 20	< 20	< 20	< 17
24	< 24	< 24	< 24	< 24	< 11
25	< 19	< 19	< 19	< 19	< 14
26	< 18	< 18	< 18	< 18	< 13
27	< 21	< 21	< 21	< 21	< 7
28	< 25	< 25	< 25	< 25	< 25
29	< 27	< 27	< 27	< 27	< 14
30	< 26	< 27	< 27	< 27	< 14
31	< 17	< 17	< 18	< 17	< 23
32	< 21	< 21	< 21	< 21	< 18
33	< 27	< 38	< 28	< 27	< 15
34	< 25	< 25	< 26	< 25	< 8
35	< 27	< 27	< 27	< 27	< 20
36	< 29	< 29	< 30	< 29	< 15
37	< 24	< 24	< 24	< 24	< 13
38	< 28	< 28	< 28	< 28	< 9
39	< 34	< 34	< 35	< 34	< 11
40	< 32	< 31	< 32	< 32	< 11
41	< 27	< 28	< 28	< 27	< 23
42	< 28	< 43	< 43	< 43	< 15
43	< 30	< 31	< 31	< 31	< 11
44	< 16	< 16	< 17	< 16	< 13
45	< 32	< 18	< 32	< 32	< 11
46	< 42	< 42	< 43	< 42	< 15
47	< 23	< 23	< 24	< 23	< 26
48	< 29	< 29	< 16	< 30	< 12
49	< 46	< 47	< 47	< 46	< 11
50	< 39	< 40	< 40	< 40	< 13
51	< 25	< 25	< 26	< 26	< 15
52	< 41	< 42	< 43	< 41	< 19
53					< 13
MEAN	25 ± 14	25 ± 15	25 ± 16	25 ± 15	14 ± 9

TABLE C-VII.1 CONCENTRATIONS OF I-131 IN MILK SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

	NEARBY FARMS			INTERMEDIATE DISTANCE FARMS				DISTANT FARMS				
COLLECTION PERIOD	J	0	R	S	D	L	P	A	B	C	E	T
01/17/05	< 0.3	< 0.3	< 0.3	< 0.3				< 0.3				
02/14/05	< 0.5	< 0.8	< 0.7	< 0.6	< 0.7	< 0.6	< 0.6	< 0.6	< 0.6	< 0.8	< 0.6	
03/14/05	< 0.5	< 0.6	< 0.4	< 0.4				< 0.4				
04/11/05	< 0.3	< 0.3	< 0.3	< 0.7				< 0.2				
04/25/05	< 0.8	< 0.3	< 0.6	< 0.2				< 0.3				
05/09/05	< 0.6	< 0.5	< 0.8	< 0.5				< 0.5				
05/23/05	< 0.8	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.5	< 0.5	< 0.7	< 0.5	
06/06/05	< 0.2	< 0.2	< 0.2	< 0.2				< 0.2				
06/20/05	< 0.3	< 0.5	< 0.5	< 0.4				< 0.4				
07/05/05	< 0.3	< 0.3	< 0.3	< 0.3				< 0.3				
07/18/05	< 0.8	< 0.8	< 0.5	< 0.4				< 0.4				
08/01/05	< 0.5	< 0.3	< 0.4	< 0.4	< 0.4	< 0.5	< 0.5	< 0.5	< 0.4	< 0.5	< 0.5	
08/15/05	< 0.5	< 0.3	< 0.3	< 0.3				< 0.6				
08/29/05	< 0.4	< 0.7	< 0.4	< 0.3				< 0.4				
09/11/05	< 0.6	< 0.4	< 0.5	< 0.5				< 0.4				
09/26/05	< 0.4	< 0.3	< 0.4	< 0.4				< 0.4				
10/10/05	< 0.4	< 0.4	< 0.4	< 0.7				(1)				< 0.3 (1)
10/24/05	< 0.6	< 0.6	< 0.8	< 0.6								< 0.5
11/07/05	< 0.4	< 0.4	< 0.3	< 0.7	< 0.4	< 0.4	< 0.5		< 0.4	< 0.3	< 0.4	< 0.4
11/21/05	< 0.4	< 0.5	< 0.4	< 0.4								< 0.4
12/19/05	< 0.5	< 0.4	< 0.5	< 0.5								< 0.6
MEAN	0.5 ± 0.3	0.4 ± 0.3	0.5 ± 0.3	0.4 ± 0.3	0.5 ± 0.3	0.5 ± 0.1	0.5 ± 0.1	0.4 ± 0.2	0.5 ± 0.2	0.6 ± 0.4	0.5 ± 0.2	0.4 ± 0.2

(1) SEE PROGRAM CHANGES SECTION FOR EXPLANATION

TABLE C-VII.2 CONCENTRATIONS OF GAMMA EMITTERS IN MILK SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	K-40	Cs-134	Cs-137	Ba-140	La-140
A	01/16/05	1220 ± 140	< 4	< 5	< 17	< 4
	02/13/05	1250 ± 204	< 5	< 6	< 24	< 6
	03/13/05	1280 ± 156	< 6	< 5	< 20	< 7
	04/10/05	1360 ± 135	< 5	< 6	< 20	< 8
	04/24/05	1240 ± 127	< 5	< 5	< 21	< 5
	05/08/05	1230 ± 189	< 5	< 5	< 19	< 5
	05/22/05	1410 ± 115	< 3	< 5	< 16	< 4
	06/05/05	1490 ± 132	< 5	< 5	< 18	< 6
	06/19/05	1390 ± 194	< 8	< 9	< 23	< 4
	07/04/05	1390 ± 142	< 4	< 6	< 19	< 6
	07/18/05	1440 ± 146	< 5	< 7	< 20	< 6
	08/01/05	1240 ± 183	< 7	< 9	< 36	< 7
	08/14/05	1450 ± 217	< 7	< 10	< 35	< 9
	08/28/05	1350 ± 157	< 6	< 6	< 39	< 12
	09/11/05	1470 ± 139	< 3	< 5	< 20	< 6
	09/25/05 (1)	1260 ± 134	< 3	< 5	< 15	< 4
	MEAN	1342 ± 191	5 ± 3	6 ± 3	22 ± 15	6 ± 4
J	01/17/05	1600 ± 135	< 5	< 6	< 19	< 6
	02/14/05	1400 ± 174	< 5	< 7	< 31	< 8
	03/14/05	1330 ± 173	< 5	< 5	< 23	< 5
	04/10/05	1310 ± 136	< 5	< 6	< 21	< 5
	04/25/05	1310 ± 114	< 4	< 4	< 15	< 5
	05/09/05	1280 ± 161	< 6	< 7	< 27	< 7
	05/22/05	1240 ± 141	< 5	< 7	< 18	< 2
	06/05/05	1220 ± 144	< 5	< 6	< 20	< 4
	06/19/05	1440 ± 152	< 5	< 6	< 24	< 7
	07/04/05	1380 ± 154	< 5	< 6	< 21	< 6
	07/18/05	1450 ± 188	< 6	< 7	< 24	< 10
	08/01/05	1520 ± 181	< 5	< 6	< 30	< 5
	08/15/05	1200 ± 303	< 13	< 15	< 38	< 8
	08/29/05	1510 ± 159	< 5	< 7	< 27	< 8
	09/10/05	1350 ± 122	< 4	< 5	< 28	< 8
	09/26/05	1320 ± 169	< 6	< 8	< 26	< 7
	10/10/05	1380 ± 155	< 5	< 6	< 29	< 9
	10/24/05	1370 ± 108	< 4	< 5	< 16	< 5
	11/06/05	1430 ± 173	< 6	< 7	< 31	< 7
	11/20/05	1310 ± 128	< 5	< 5	< 25	< 6
	12/18/05	1280 ± 120	< 4	< 5	< 19	< 5
	MEAN	1363 ± 205	5 ± 4	7 ± 4	24 ± 12	6 ± 4

(1) SEE PROGRAM CHANGES SECTION FOR EXPLANATION

TABLE C-VII.2 CONCENTRATIONS OF GAMMA EMITTERS IN MILK SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	K-40	Cs-134	Cs-137	Ba-140	La-140
O	01/16/05	1310 ± 139	< 3	< 4	< 14	< 4
	02/13/05	1320 ± 152	< 6	< 7	< 25	< 9
	03/13/05	1280 ± 163	< 5	< 5	< 18	< 6
	04/10/05	1190 ± 169	< 4	< 5	< 13	< 3
	04/24/05	1130 ± 113	< 3	< 4	< 15	< 4
	05/08/05	1190 ± 176	< 4	< 6	< 21	< 7
	05/22/05	1280 ± 131	< 3	< 4	< 16	< 4
	06/05/05	1190 ± 177	< 6	< 8	< 23	< 7
	06/19/05	1390 ± 203	< 7	< 8	< 30	< 7
	07/04/05	1260 ± 161	< 5	< 5	< 17	< 3
	07/18/05	1220 ± 212	< 7	< 9	< 33	< 11
	08/01/05	1250 ± 131	< 5	< 6	< 20	< 8
	08/15/05	1210 ± 160	< 7	< 8	< 22	< 8
	08/28/05	1200 ± 129	< 5	< 6	< 30	< 10
	09/11/05	1290 ± 146	< 4	< 5	< 23	< 7
	09/25/05	1180 ± 130	< 4	< 6	< 18	< 5
	10/09/05	1290 ± 125	< 4	< 6	< 26	< 8
	10/23/05	1160 ± 113	< 4	< 4	< 14	< 4
	11/06/05	1220 ± 118	< 5	< 5	< 22	< 6
	11/20/05	1090 ± 140	< 3	< 5	< 23	< 3
	12/18/05	1270 ± 139	< 4	< 5	< 15	< 7
	MEAN	1234 ± 140	5 ± 3	6 ± 3	21 ± 11	6 ± 5
R	01/17/05	1360 ± 128	< 4	< 4	< 17	< 6
	02/14/05	1320 ± 168	< 5	< 5	< 24	< 3
	03/14/05	1290 ± 150	< 3	< 5	< 16	< 7
	04/11/05	1320 ± 169	< 4	< 5	< 17	< 5
	04/25/05	1390 ± 193	< 6	< 7	< 29	< 7
	05/09/05	1370 ± 160	< 6	< 7	< 24	< 6
	05/23/05	1360 ± 144	< 5	< 6	< 21	< 6
	06/06/05	1450 ± 138	< 4	< 6	< 19	< 6
	06/20/05	1390 ± 171	< 5	< 5	< 19	< 7
	07/04/05	1540 ± 176	< 6	< 7	< 27	< 9
	07/18/05	1350 ± 153	< 5	< 6	< 21	< 7
	08/01/05	1330 ± 164	< 6	< 7	< 30	< 8
	08/15/05	1450 ± 192	< 4	< 6	< 22	< 5
	08/29/05	1470 ± 196	< 6	< 7	< 27	< 5
	09/10/05	1640 ± 140	< 4	< 6	< 30	< 9
	09/26/05	1340 ± 149	< 4	< 5	< 19	< 4
	10/10/05	1380 ± 148	< 4	< 4	< 24	< 5
	10/24/05	1480 ± 154	< 5	< 6	< 22	< 8
	11/07/05	1310 ± 132	< 5	< 6	< 20	< 8
	11/21/05	1350 ± 152	< 6	< 6	< 33	< 10
	12/19/05	1410 ± 151	< 4	< 6	< 23	< 8
	MEAN	1395 ± 170	5 ± 2	6 ± 2	23 ± 10	7 ± 4

TABLE C-VII.2 CONCENTRATIONS OF GAMMA EMITTERS IN MILK SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	K-40	Cs-134	Cs-137	Ba-140	La-140
S	01/17/05	1290 ± 143	< 3	< 5	< 12	< 5
	02/14/05	1230 ± 165	< 6	< 8	< 27	< 10
	03/14/05	1240 ± 173	< 7	< 7	< 25	< 9
	04/11/05	1200 ± 158	< 4	< 5	< 18	< 5
	04/25/05	1230 ± 133	< 5	< 5	< 22	< 7
	05/09/05	1280 ± 157	< 6	< 7	< 27	< 9
	05/23/05	1150 ± 118	< 3	< 4	< 11	< 4
	06/06/05	1270 ± 130	< 5	< 6	< 20	< 6
	06/20/05	1440 ± 195	< 4	< 5	< 18	< 5
	07/05/05	1580 ± 169	< 5	< 8	< 22	< 8
	07/18/05	1400 ± 158	< 4	< 4	< 18	< 6
	08/01/05	1280 ± 187	< 5	< 6	< 26	< 7
	08/15/05	1300 ± 211	< 9	< 9	< 37	< 9
	08/29/05	1210 ± 130	< 4	< 5	< 25	< 9
	09/10/05	1560 ± 158	< 4	< 5	< 24	< 8
	09/26/05	1280 ± 148	< 5	< 7	< 21	< 7
	10/10/05	1210 ± 130	< 5	< 6	< 26	< 10
	10/24/05	1280 ± 106	< 4	< 4	< 18	< 4
	11/07/05	1390 ± 137	< 5	< 6	< 21	< 6
	11/21/05	1370 ± 131	< 5	< 6	< 27	< 5
	12/19/05	1320 ± 131	< 4	< 5	< 20	< 6
	MEAN	1310 ± 224	5 ± 3	6 ± 3	22 ± 11	7 ± 4
T	10/10/05	1380 ± 151	< 4	< 5	< 23	< 8
	10/23/05	1400 ± 126	< 5	< 6	< 19	< 7
	11/06/05	1510 ± 152	< 4	< 5	< 15	< 2
	11/20/05	1310 ± 142	< 3	< 4	< 22	< 6
	12/18/05	1150 ± 138	< 3	< 4	< 18	< 3
	MEAN	1350 ± 266	4 ± 1	5 ± 1	19 ± 6	5 ± 5

TABLE C-VIII.1 CONCENTRATIONS OF GAMMA EMITTERS IN FOOD PRODUCT SAMPLES COLLECTED IN THE VICINITY OF THREE MILE ISLAND NUCLEAR STATION, 2005

RESULTS IN UNITS OF PCI/KG WET ± 2 SIGMA

STC	COLLECTION PERIOD	Be-7	Mn-54	Co-58	Co-60	I-131	Cs-134	Cs-137
1Q Asparagus	10/06/05	1060 ± 231	< 17	< 16	< 17	< 55	< 16	< 17
1Q Domestic Grapes	10/06/05	637 ± 182	< 19	< 17	< 18	< 57	< 16	< 19
1Q Pokeweed	10/06/05	242 ± 113	< 14	< 12	< 13	< 41	< 12	< 14
	MEAN	646 ± 818	17 ± 5	15 ± 5	16 ± 5	51 ± 18	15 ± 5	16 ± 4
2B Tomatoes	10/06/05	< 220	< 13	< 19	< 19	< 50	< 15	< 15
2B Wild Grapes	10/06/05	1190 ± 169	< 13	< 15	< 14	< 50	< 14	< 14
2B Pokeweed	10/06/05	326 ± 154	< 14	< 14	< 16	< 46	< 13	< 16
	MEAN	579 ± 1064	13 ± 2	16 ± 5	16 ± 5	49 ± 5	14 ± 2	15 ± 2
5S Lima Beans	10/06/05	470 ± 181	< 17	< 15	< 17	< 50	< 14	< 16
5S Rhubarb	10/06/05	258 ± 130	< 11	< 11	< 15	< 32	< 10	< 11
5S Tomatoes	10/06/05	271 ± 172	< 15	< 17	< 17	< 43	< 15	< 17
	MEAN	333 ± 238	14 ± 6	14 ± 6	16 ± 3	42 ± 18	13 ± 5	15 ± 6

* THE MEAN AND 2 STANDARD DEVIATION VALUES ARE CALCULATED USING BOTH THE MDA AND POSITIVE VALUES

TABLE C-IX.1 QUARTERLY TLD RESULTS FOR PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF MILLI-ROENTGEN/STD. MONTH ± 2 STANDARD DEVIATIONS

STATION CODE	MEAN ± 2 S. D.	JAN - MAR	APR - JUN	JUL - SEP	OCT - DEC
1A	6.8 ± 0.7	6.3 ± 0.5	6.9 ± 0.5	6.7 ± 0.6	7.1 ± 0.6
1B	6.1 ± 0.6	5.9 ± 0.7	5.8 ± 0.5	6.0 ± 0.4	6.5 ± 0.4
1C	7.2 ± 0.4	7.0 ± 0.6	7.0 ± 0.4	7.2 ± 0.4	7.4 ± 0.5
1D	7.0 ± 0.7	6.7 ± 0.8	6.7 ± 0.8	7.0 ± 0.5	7.4 ± 0.3
1E	6.6 ± 0.6	6.3 ± 0.5	6.5 ± 0.8	6.6 ± 0.7	7.0 ± 0.3
1F	8.1 ± 0.9	7.7 ± 0.5	7.9 ± 0.8	7.9 ± 0.5	8.7 ± 0.5
1G	5.5 ± 0.7	5.3 ± 0.4	5.3 ± 0.3	5.3 ± 0.4	6.0 ± 0.3
1H	7.2 ± 0.5	7.0 ± 0.9	7.1 ± 0.5	7.1 ± 1.0	7.6 ± 0.6
1I	6.0 ± 1.1	5.7 ± 0.8	5.8 ± 0.4	5.7 ± 0.3	6.8 ± 0.2
1J	8.0 ± 1.0	7.4 ± 0.4	8.0 ± 1.2	8.1 ± 1.1	8.6 ± 0.7
1K					7.8 ± 1.0 (1)
1L	5.8 ± 0.6	5.7 ± 0.2	5.8 ± 0.5	5.4 ± 0.2	6.1 ± 0.2
1M	4.3 ± 0.3	4.3 ± 0.4	4.2 ± 0.3	4.1 ± 0.4	4.5 ± 0.5
1P	4.8 ± 0.5	4.8 ± 0.4	4.6 ± 0.4	4.6 ± 0.2	5.1 ± 0.4
1Q	5.4 ± 0.7	5.4 ± 0.6	5.1 ± 0.4	5.3 ± 0.4	5.9 ± 0.2
1R	8.3 ± 0.6	7.9 ± 0.4	8.3 ± 0.6	8.4 ± 0.6	8.6 ± 0.7
2	6.8 ± 0.8	6.5 ± 0.6	6.6 ± 0.5	6.8 ± 0.7	7.4 ± 1.3
2B	6.5 ± 0.8	6.1 ± 0.5	6.4 ± 0.4	6.4 ± 0.4	7.1 ± 1.0
3A	5.3 ± 0.3	5.2 ± 0.8	5.1 ± 0.5	5.3 ± 0.4	5.5 ± 0.4
4K	4.8 ± 0.3	4.7 ± 0.4	4.9 ± 0.6	4.7 ± 0.6	5.0 ± 0.4
5	6.4 ± 0.8	6.0 ± 0.3	6.5 ± 0.2	6.3 ± 0.3	6.9 ± 0.4
1NN	7.8 ± 1.1	7.3 ± 0.6	7.5 ± 0.6	7.7 ± 1.1	8.5 ± 0.6
6B	5.9 ± 0.3	5.8 ± 0.4	5.7 ± 0.3	5.8 ± 0.7	6.1 ± 0.3
14	7.0 ± 1.1	6.6 ± 0.5	6.7 ± 0.5	6.8 ± 0.4	7.8 ± 1.5
15	7.3 ± 0.8	6.8 ± 0.6	7.8 ± 1.7	7.1 ± 0.7	7.3 ± 0.6
16	7.1 ± 0.9	6.6 ± 0.4	6.7 ± 0.6	7.4 ± 0.8	7.5 ± 0.6
17	7.8 ± 0.8	7.4 ± 0.4	7.7 ± 0.5	7.7 ± 0.3	8.4 ± 0.7
18	7.2 ± 0.7	6.8 ± 0.9	7.2 ± 0.5	7.1 ± 0.4	7.6 ± 0.8
19	6.6 ± 0.6	6.4 ± 0.7	6.5 ± 1.1	6.3 ± 0.3	7.0 ± 0.3
22	7.2 ± 0.5	7.0 ± 1.0	7.0 ± 0.7	7.5 ± 0.6	7.4 ± 0.8
23	7.5 ± 0.9	7.1 ± 0.5	7.5 ± 0.8	7.2 ± 0.3	8.1 ± 0.7
24	5.7 ± 0.4	5.4 ± 0.7	5.7 ± 0.4	5.8 ± 0.5	5.9 ± 0.9
26	7.7 ± 0.4	7.6 ± 0.9	7.6 ± 0.8	7.5 ± 1.2	8.0 ± 0.4
27	7.2 ± 0.4	6.9 ± 0.5	7.2 ± 0.2	7.3 ± 0.7	7.4 ± 0.6
31A	5.7 ± 0.2	5.7 ± 0.4	5.6 ± 0.4	5.8 ± 0.3	5.8 ± 0.5
32	7.5 ± 0.4	7.2 ± 0.5	7.7 ± 0.5	7.6 ± 0.2	7.6 ± 1.5
40	8.3 ± 0.8	7.9 ± 0.6	8.0 ± 0.4	8.3 ± 0.9	8.8 ± 0.6
42	6.1 ± 0.9	6.2 ± 0.7	5.7 ± 0.4	5.9 ± 0.4	6.7 ± 1.0
43	7.8 ± 0.5	7.7 ± 0.8	7.7 ± 0.8	7.7 ± 0.5	8.2 ± 1.0
44	6.8 ± 0.4	6.6 ± 0.5	6.8 ± 0.6	6.7 ± 0.4	7.1 ± 0.3
45	7.6 ± 0.7	7.1 ± 0.6	7.4 ± 0.4	7.8 ± 0.8	7.9 ± 0.7
46	6.7 ± 1.3	6.3 ± 0.6	6.3 ± 0.8	6.4 ± 0.3	7.6 ± 1.1
47	7.7 ± 0.4	7.5 ± 0.7	7.6 ± 0.4	7.8 ± 1.0	8.0 ± 0.4
48	7.1 ± 0.3	7.0 ± 0.5	7.0 ± 0.6	6.9 ± 0.5	7.3 ± 0.3
49	7.0 ± 0.6	6.7 ± 0.3	7.1 ± 0.5	6.7 ± 0.3	7.3 ± 0.4
50	7.9 ± 1.2	7.0 ± 0.8	8.0 ± 0.5	7.9 ± 0.6	8.5 ± 1.2
51	7.5 ± 0.3	7.7 ± 1.0	7.5 ± 0.8	7.3 ± 0.3	7.6 ± 0.7

(1) SEE PROGRAM CHANGES SECTION FOR EXPLANATION

TABLE C-IX.2 **MEAN QUARTERLY TLD RESULTS FOR THE SITE BOUNDARY, INTERMEDIATE AND CONTROL LOCATIONS FOR PEACH BOTTOM ATOMIC POWER STATION, 2005**

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

COLLECTION PERIOD	SITE BOUNDARY ± 2 S. D.	INTERMEDIATE	CONTROL
JAN-MAR	6.4 ± 2.1	6.7 ± 1.6	6.3 ± 1.2
APR-JUN	6.5 ± 2.4	6.9 ± 1.8	6.5 ± 1.2
JUL-SEP	6.6 ± 2.5	6.9 ± 1.8	6.7 ± 1.5
OCT-DEC	7.1 ± 2.4	7.3 ± 1.8	7.0 ± 1.6

TABLE C-IX.3 **SUMMARY OF THE AMBIENT DOSIMETRY PROGRAM FOR PEACH BOTTOM ATOMIC POWER STATION, 2005**

RESULTS IN UNITS OF MILLI-ROENTGEN/STD. MONTH

LOCATION	SAMPLES ANALYZED	PERIOD MINIMUM	PERIOD MAXIMUM	PERIOD MEAN ± 2 S. D.	PRE-OP MEAN ± 2 S. D.
SITE BOUNDARY	77	4.1	8.8	6.7 ± 2.4	5.4 ± 1.7
INTERMEDIATE	92	4.7	8.5	6.9 ± 1.8	5.3 ± 1.3
CONTROL	16	5.4	7.6	6.6 ± 1.3	5.7 ± 1.8

THE PRE-OPERATIONAL MEAN WAS CALCULATED FROM MONTHLY TLD READINGS 01/07/73 TO 08/05/73.

SITE BOUNDARY STATIONS - 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1NN, 1P, 1Q, 1R, 2, 2B, 40
INTERMEDIATE STATIONS - 3A, 4K, 5, 6B, 14, 15, 17, 22, 23, 26, 27, 31A, 32, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51

CONTROL STATIONS - 16, 18, 19, 24

TABLE C-X.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

SURFACE WATER (TRITIUM LIQUID SCINTILLATION)

SAMPLING PERIOD	1LL	1MM
JAN-MAR	12/29/2005 - 03/30/2005	12/29/2005 - 03/30/2005
APR-JUN	03/30/2005 - 06/29/2005	03/30/2005 - 06/29/2005
JUL-SEP	06/29/2005 - 09/28/2005	06/29/2005 - 09/28/2005
OCT-DEC	09/28/2005 - 12/28/2005	09/28/2005 - 12/28/2005

SURFACE WATER (GAMMA SPECTROSCOPY)

SAMPLING PERIOD	1LL	1MM
JAN	12/29/2004 - 02/02/2005	12/29/2004 - 02/02/2005
FEB	02/02/2005 - 03/02/2005	02/02/2005 - 03/02/2005
MAR	03/02/2005 - 03/30/2005	03/02/2005 - 03/30/2005
APR	03/30/2005 - 04/27/2005	03/30/2005 - 04/27/2005
MAY	04/27/2005 - 06/01/2005	04/27/2005 - 06/01/2005
JUN	06/01/2005 - 06/29/2005	06/01/2005 - 06/29/2005
JUL	06/29/2005 - 08/03/2005	06/29/2005 - 08/03/2005
AUG	08/03/2005 - 08/31/2005	08/03/2005 - 08/31/2005
SEP	08/31/2005 - 09/28/2005	08/31/2005 - 09/28/2005
OCT	09/28/2005 - 11/02/2005	09/28/2005 - 11/02/2005
NOV	11/02/2005 - 11/30/2005	11/02/2005 - 11/30/2005
DEC	11/30/2005 - 12/28/2005	11/30/2005 - 12/28/2005

DRINKING WATER (TRITIUM)

SAMPLING PERIOD	4L	6I
JAN-MAR	12/31/2004 - 04/01/2005	12/31/2004 - 04/01/2005
APR-JUN	04/01/2005 - 07/01/2005	04/01/2005 - 07/01/2005
JUL-SEP	07/01/2005 - 09/30/2005	07/01/2005 - 09/30/2005
OCT-DEC	09/30/2005 - 12/30/2005	09/30/2005 - 12/30/2005

DRINKING WATER (GROSS BETA & GAMMA)

SAMPLING PERIOD	4L	6I
JAN	12/31/2005 - 02/04/2005	12/31/2005 - 02/04/2005
FEB	02/04/2005 - 03/04/2005	02/04/2005 - 03/04/2005
MAR	03/04/2005 - 04/01/2005	03/04/2005 - 04/01/2005
APR	04/01/2005 - 04/29/2005	04/01/2005 - 04/29/2005
MAY	04/29/2005 - 06/03/2005	04/29/2005 - 06/03/2005
JUN	06/03/2005 - 07/01/2005	06/03/2005 - 07/01/2005
JUL	07/01/2005 - 08/05/2005	07/01/2005 - 08/05/2005
AUG	08/05/2005 - 09/02/2005	08/05/2005 - 09/02/2005
SEP	09/02/2005 - 09/28/2005	09/02/2005 - 09/28/2005
OCT	09/30/2005 - 11/04/2005	09/30/2005 - 11/04/2005
NOV	11/04/2005 - 12/04/2005	11/04/2005 - 12/04/2005
DEC	12/04/2005 - 12/30/2005	12/04/2005 - 12/30/2005

TABLE C-X.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

AIR PARTICULATE (GAMMA SPECTROSCOPY)

SAMPLING PERIOD	1B	1Z	1C	3A	5H2
JAN-MAR	12/31 - 04/01/2005	12/31 - 04/01/2005	12/31 - 04/01/2005	12/31 - 04/01/2005	12/28 - 03/28/2005
APR-JUN	04/01 - 07/01/2005	04/01 - 07/01/2005	04/01 - 07/01/2005	04/01 - 07/01/2005	03/28 - 06/27/2005
JUL-SEP	07/01 - 09/30/2005	07/01 - 09/30/2005	07/01 - 09/30/2005	07/01 - 09/30/2005	06/27 - 09/26/2005
OCT-DEC	09/30 - 12/30/2005	09/30 - 12/30/2005	09/30 - 12/30/2005	09/30 - 12/30/2005	09/26 - 01/03/2005

AIR PARTICULATE (G. BETA & I-131)

WEEK	1B	1Z	1C	3A	5H2
1	12/31 - 01/07/2005	12/31 - 01/07/2005	12/31 - 01/07/2005	12/31 - 01/07/2005	12/28 - 01/03/2005
2	01/07 - 01/13/2005	01/07 - 01/13/2005	01/07 - 01/13/2005	01/07 - 01/13/2005	01/03 - 01/10/2005
3	01/13 - 01/21/2005	01/13 - 01/21/2005	01/13 - 01/21/2005	01/13 - 01/21/2005	01/10 - 01/17/2005
4	01/21 - 01/28/2005	01/21 - 01/28/2005	01/21 - 01/28/2005	01/21 - 01/28/2005	01/17 - 01/24/2005
5	01/28 - 02/04/2005	01/28 - 02/04/2005	01/28 - 02/04/2005	01/28 - 02/04/2005	01/24 - 01/31/2005
6	02/04 - 02/11/2005	02/04 - 02/11/2005	02/04 - 02/11/2005	02/04 - 02/11/2005	01/31 - 02/07/2005
7	02/11 - 02/18/2005	02/11 - 02/18/2005	02/11 - 02/18/2005	02/11 - 02/18/2005	02/07 - 02/14/2005
8	02/18 - 02/25/2005	02/18 - 02/25/2005	02/18 - 02/25/2005	02/18 - 02/25/2005	02/14 - 02/21/2005
9	02/25 - 03/04/2005	02/25 - 03/04/2005	02/25 - 03/04/2005	02/25 - 03/04/2005	02/21 - 02/28/2005
10	03/04 - 03/11/2005	03/04 - 03/11/2005	03/04 - 03/11/2005	03/04 - 03/11/2005	02/28 - 03/07/2005
11	03/11 - 03/18/2005	03/11 - 03/18/2005	03/11 - 03/18/2005	03/11 - 03/18/2005	03/07 - 03/14/2005
12	03/18 - 03/25/2005	03/18 - 03/25/2005	03/18 - 03/25/2005	03/18 - 03/25/2005	03/14 - 03/21/2005
13	03/25 - 04/01/2005	03/25 - 04/01/2005	03/25 - 04/01/2005	03/25 - 04/01/2005	03/21 - 03/28/2005
14	04/01 - 04/08/2005	04/01 - 04/08/2005	04/01 - 04/08/2005	04/01 - 04/08/2005	03/28 - 04/04/2005
15	04/08 - 04/15/2005	04/08 - 04/15/2005	04/08 - 04/15/2005	04/08 - 04/15/2005	04/04 - 04/11/2005
16	04/15 - 04/22/2005	04/15 - 04/22/2005	04/15 - 04/22/2005	04/15 - 04/22/2005	04/11 - 04/18/2005
17	04/22 - 04/29/2005	04/22 - 04/29/2005	04/22 - 04/29/2005	04/22 - 04/29/2005	04/18 - 04/25/2005
18	04/29 - 05/06/2005	04/29 - 05/06/2005	04/29 - 05/06/2005	04/29 - 05/06/2005	04/25 - 05/02/2005
19	05/06 - 05/13/2005	05/06 - 05/13/2005	05/06 - 05/13/2005	05/06 - 05/13/2005	05/02 - 05/09/2005
20	05/13 - 05/20/2005	05/13 - 05/20/2005	05/13 - 05/20/2005	05/13 - 05/20/2005	05/09 - 05/16/2005
21	05/20 - 05/27/2005	05/20 - 05/27/2005	05/20 - 05/27/2005	05/20 - 05/27/2005	05/16 - 05/23/2005
22	05/27 - 06/03/2005	05/27 - 06/03/2005	05/27 - 06/03/2005	05/27 - 06/03/2005	05/23 - 05/31/2005
23	06/03 06/10/2005	06/03 06/10/2005	06/03 06/10/2005	06/03 06/10/2005	05/31 - 06/06/2005
24	06/10 - 06/17/2005	06/10 - 06/17/2005	06/10 - 06/17/2005	06/10 - 06/17/2005	06/06 - 06/13/2005
25	06/17 - 06/24/2005	06/17 - 06/24/2005	06/17 - 06/24/2005	06/17 - 06/24/2005	06/13 - 06/20/2005
26	06/24 - 07/01/2005	06/24 - 07/01/2005	06/24 - 07/01/2005	06/24 - 07/01/2005	06/20 - 06/27/2005
27	07/01 - 07/08/2005	07/01 - 07/08/2005	07/01 - 07/08/2005	07/01 - 07/08/2005	06/27 - 07/05/2005
28	07/08 - 07/15/2005	07/08 - 07/15/2005	07/08 - 07/15/2005	07/08 - 07/15/2005	07/05 - 07/11/2005
29	07/15 - 07/22/2005	07/15 - 07/22/2005	07/15 - 07/22/2005	07/15 - 07/22/2005	07/11 - 07/18/2005
30	07/22 - 07/28/2005	07/22 - 07/28/2005	07/22 - 07/28/2005	07/22 - 07/28/2005	07/18 - 07/25/2005
31	07/28 - 08/05/2005	07/28 - 08/05/2005	07/28 - 08/05/2005	07/28 - 08/05/2005	07/25 - 08/01/2005
32	08/05 - 08/12/2005	08/05 - 08/12/2005	08/05 - 08/12/2005	08/05 - 08/12/2005	08/01 - 08/08/2005
33	08/12 - 08/18/2005	08/12 - 08/18/2005	08/12 - 08/18/2005	08/12 - 08/18/2005	08/08 - 08/15/2005
34	08/18 - 08/25/2005	08/18 - 08/25/2005	08/18 - 08/25/2005	08/18 - 08/25/2005	08/15 - 08/22/2005
35	08/25 - 09/02/2005	08/25 - 09/02/2005	08/25 - 09/02/2005	08/25 - 09/02/2005	08/22 - 08/29/2005
36	09/02 - 09/09/2005	09/02 - 09/09/2005	09/02 - 09/09/2005	09/02 - 09/09/2005	08/29 - 09/05/2005
37	09/09 - 09/16/2005	09/09 - 09/16/2005	09/09 - 09/16/2005	09/09 - 09/16/2005	09/05 - 09/12/2005
38	09/16 - 09/23/2005	09/16 - 09/23/2005	09/16 - 09/23/2005	09/16 - 09/23/2005	09/12 - 09/19/2005
39	09/23 - 09/30/2005	09/23 - 09/30/2005	09/23 - 09/30/2005	09/23 - 09/30/2005	09/19 - 09/26/2005
40	09/30 - 10/07/2005	09/30 - 10/07/2005	09/30 - 10/07/2005	09/30 - 10/07/2005	09/26 - 10/03/2005
41	10/07 - 10/14/2005	10/07 - 10/14/2005	10/07 - 10/14/2005	10/07 - 10/14/2005	10/03 - 10/10/2005
42	10/14 - 10/21/2005	10/14 - 10/21/2005	10/14 - 10/21/2005	10/14 - 10/21/2005	10/10 - 10/17/2005
43	10/21 - 10/28/2005	10/21 - 10/28/2005	10/21 - 10/28/2005	10/21 - 10/28/2005	10/17 - 10/24/2005
44	10/28 - 11/04/2005	10/28 - 11/04/2005	10/28 - 11/04/2005	10/28 - 11/04/2005	10/24 - 10/31/2005
45	11/04 - 11/11/2005	11/04 - 11/11/2005	11/04 - 11/11/2005	11/04 - 11/11/2005	10/31 - 11/07/2005
46	11/11 - 11/18/2005	11/11 - 11/18/2005	11/11 - 11/18/2005	11/11 - 11/18/2005	11/07 - 11/14/2005
47	11/18 - 11/25/2005	11/18 - 11/25/2005	11/18 - 11/25/2005	11/18 - 11/25/2005	11/14 - 11/21/2005
48	11/25 - 12/04/2005	11/25 - 12/04/2005	11/25 - 12/04/2005	11/25 - 12/04/2005	11/21 - 11/28/2005
49	12/04 - 12/10/2005	12/04 - 12/10/2005	12/04 - 12/10/2005	12/04 - 12/10/2005	11/28 - 12/05/2005
50	12/10 - 12/16/2005	12/10 - 12/16/2005	12/10 - 12/16/2005	12/10 - 12/16/2005	12/05 - 12/12/2005
51	12/16 - 12/23/2005	12/16 - 12/23/2005	12/16 - 12/23/2005	12/16 - 12/23/2005	12/12 - 12/19/2005
52	12/23 - 12/30/2005	12/23 - 12/30/2005	12/23 - 12/30/2005	12/23 - 12/30/2005	12/19 - 12/26/2005
53					12/27 - 01/03/2006

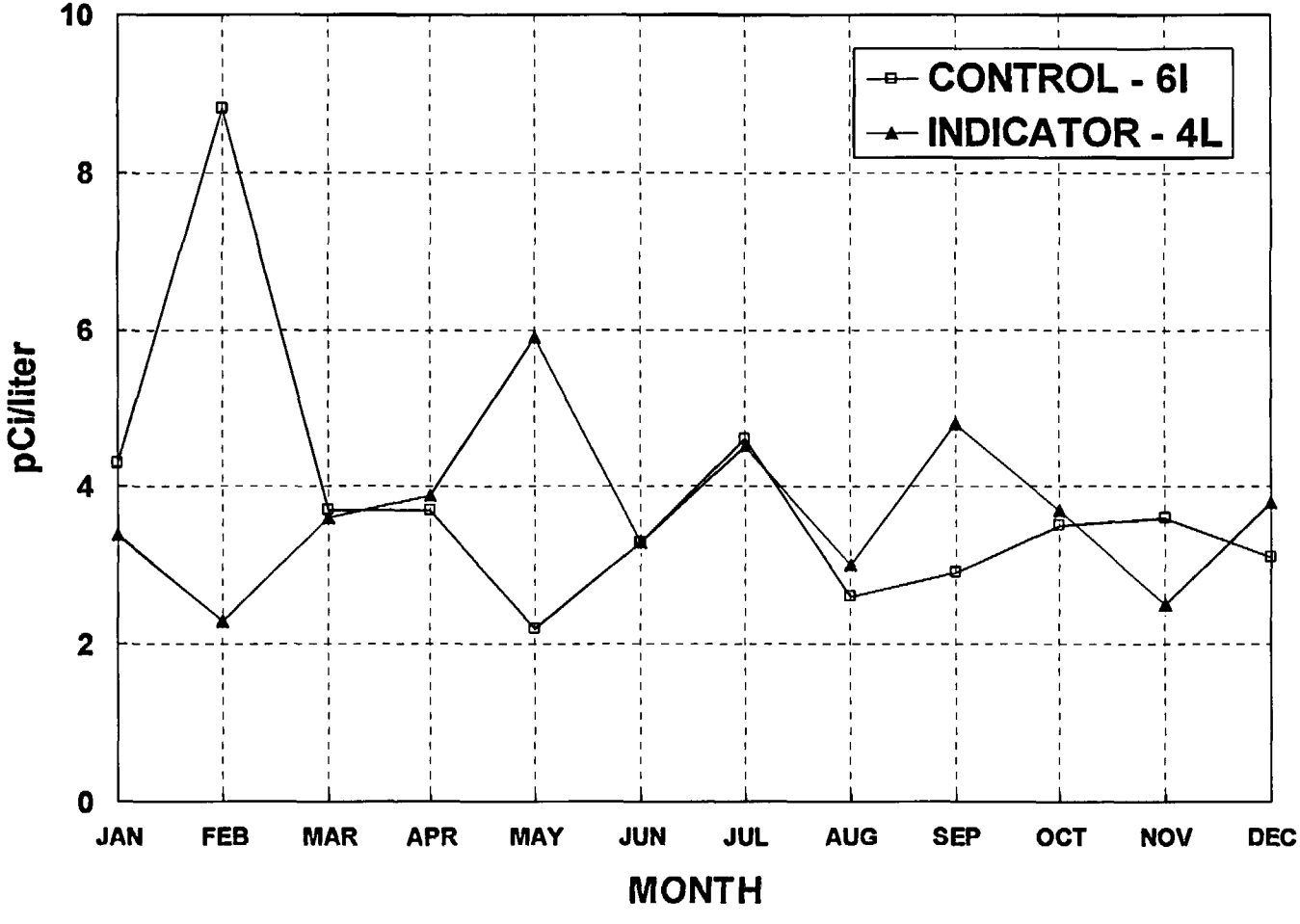
TABLE C-X.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

TLD

STATION CODE	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC
1A	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
1B	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
1C	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
1D	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
1E	12/30/2004 - 03/31/2005	03/31/2005 - 06/30/2005	06/30/2005 - 10/06/2005	10/06/2005 - 01/05/2006
1F	12/30/2004 - 03/31/2005	03/31/2005 - 06/30/2005	06/30/2005 - 10/06/2005	10/06/2005 - 01/05/2006
1G	12/30/2004 - 03/31/2005	03/31/2005 - 06/30/2005	06/30/2005 - 10/06/2005	10/06/2005 - 01/05/2006
1H	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
1I	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
1J	12/30/2004 - 03/31/2005	03/31/2005 - 06/30/2005	06/30/2005 - 10/06/2005	10/06/2005 - 01/05/2006
1K			(1)	10/07/2005 - 01/05/2006
1L	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
1M	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
1P	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
1Q	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
1R	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
2	12/30/2004 - 03/31/2005	03/31/2005 - 06/30/2005	06/30/2005 - 10/06/2005	10/06/2005 - 01/05/2006
2B	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
3A	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
4K	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
5	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/06/2006
1NN	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
6B	12/31/2004 - 04/01/2005	04/01/2005 - 07/01/2005	07/01/2005 - 10/07/2005	10/07/2005 - 01/06/2006
14	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
15	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
16	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
17	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
18	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
19	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
22	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
23	12/30/2004 - 03/31/2005	03/31/2005 - 06/30/2005	06/30/2005 - 10/06/2005	10/06/2005 - 01/05/2006
24	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/05/2006
26	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/05/2006
27	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/05/2006
31A	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/05/2006
32	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/05/2006
40	12/29/2005 - 03/31/2005	03/31/2005 - 06/30/2005	06/30/2005 - 10/06/2005	10/06/2005 - 01/05/2006
42	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
43	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
44	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
45	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
46	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
47	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
48	12/29/2005 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
49	12/30/2004 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
50	12/30/2004 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006
51	12/29/2004 - 03/30/2005	03/30/2005 - 06/29/2005	06/29/2005 - 10/04/2005	10/04/2005 - 01/04/2006

(1) SEE SAMPLE CHANGES SECTION FOR EXPLANATION

FIGURE C-1
MONTHLY TOTAL GROSS BETA CONCENTRATIONS IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 2005



PBAPS changed to total gross beta at the beginning of 2005.
Previous data included summation of less than values.

FIGURE C-2
MEAN ANNUAL CS-137 CONCENTRATIONS IN FISH SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1971 - 2005

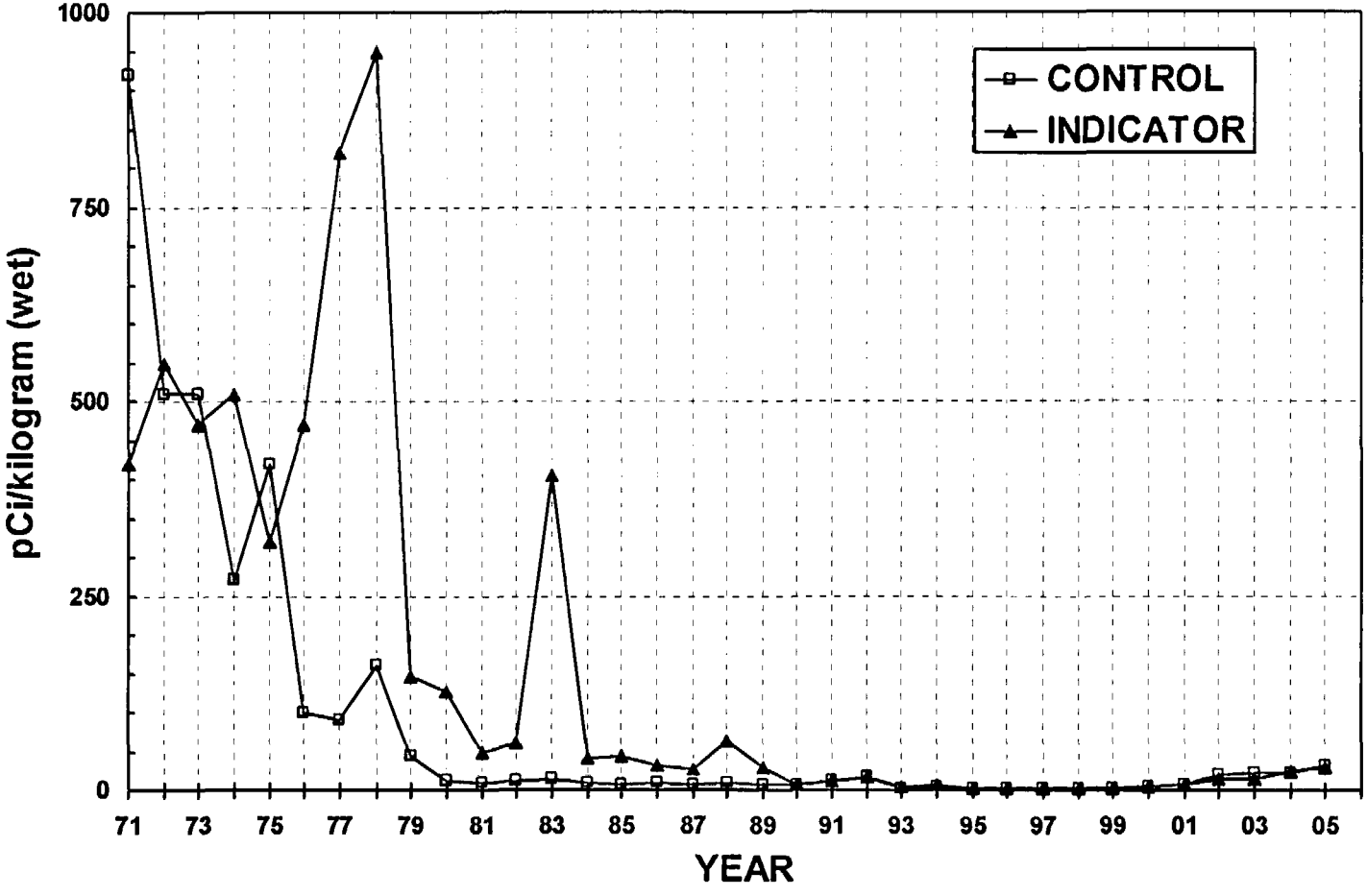
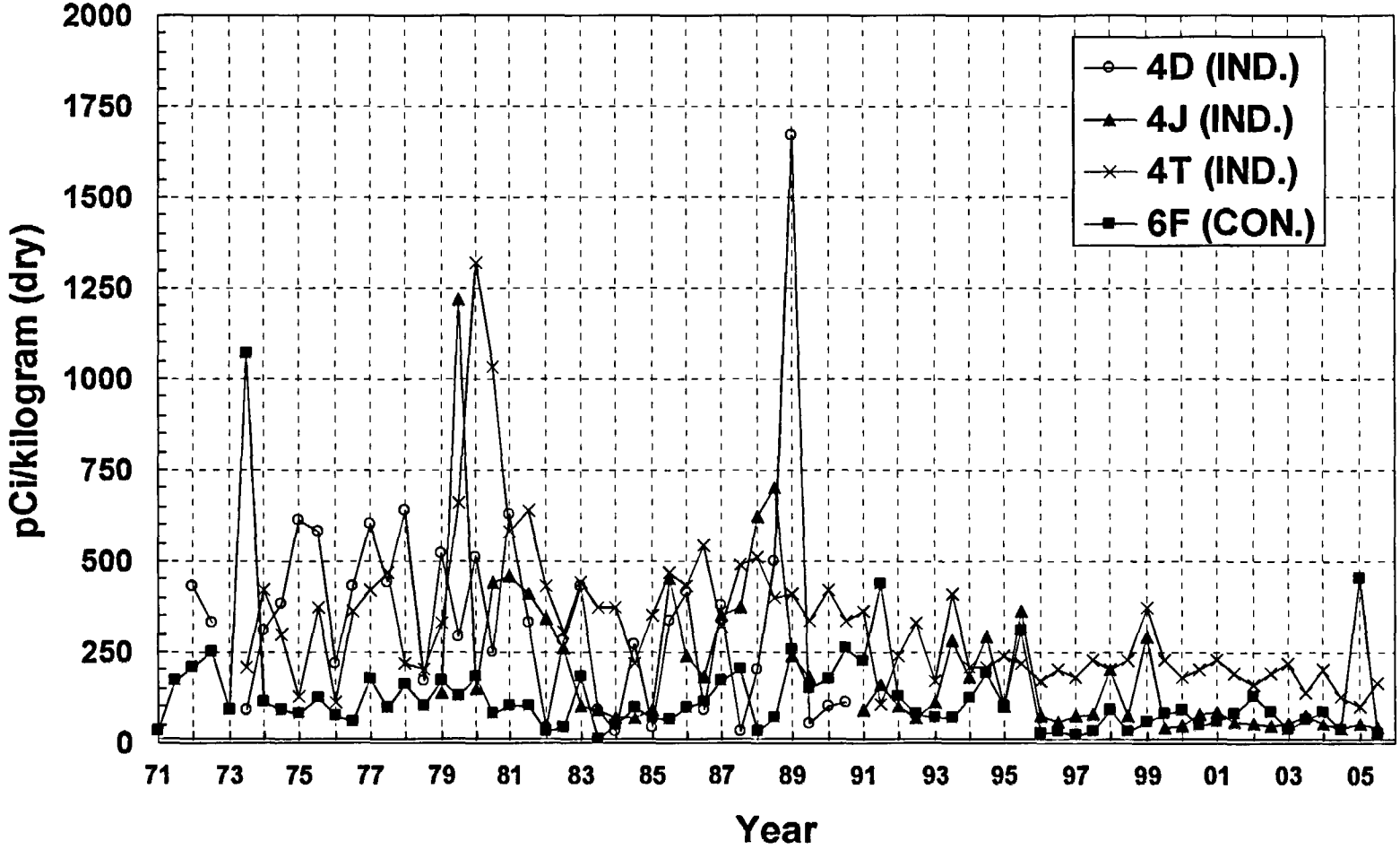


FIGURE C-3
CONCENTRATIONS OF CS-137 IN SEDIMENT SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1971 – 2005



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

FIGURE C-4
MEAN WEEKLY GROSS BETA CONCENTRATIONS IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 2005

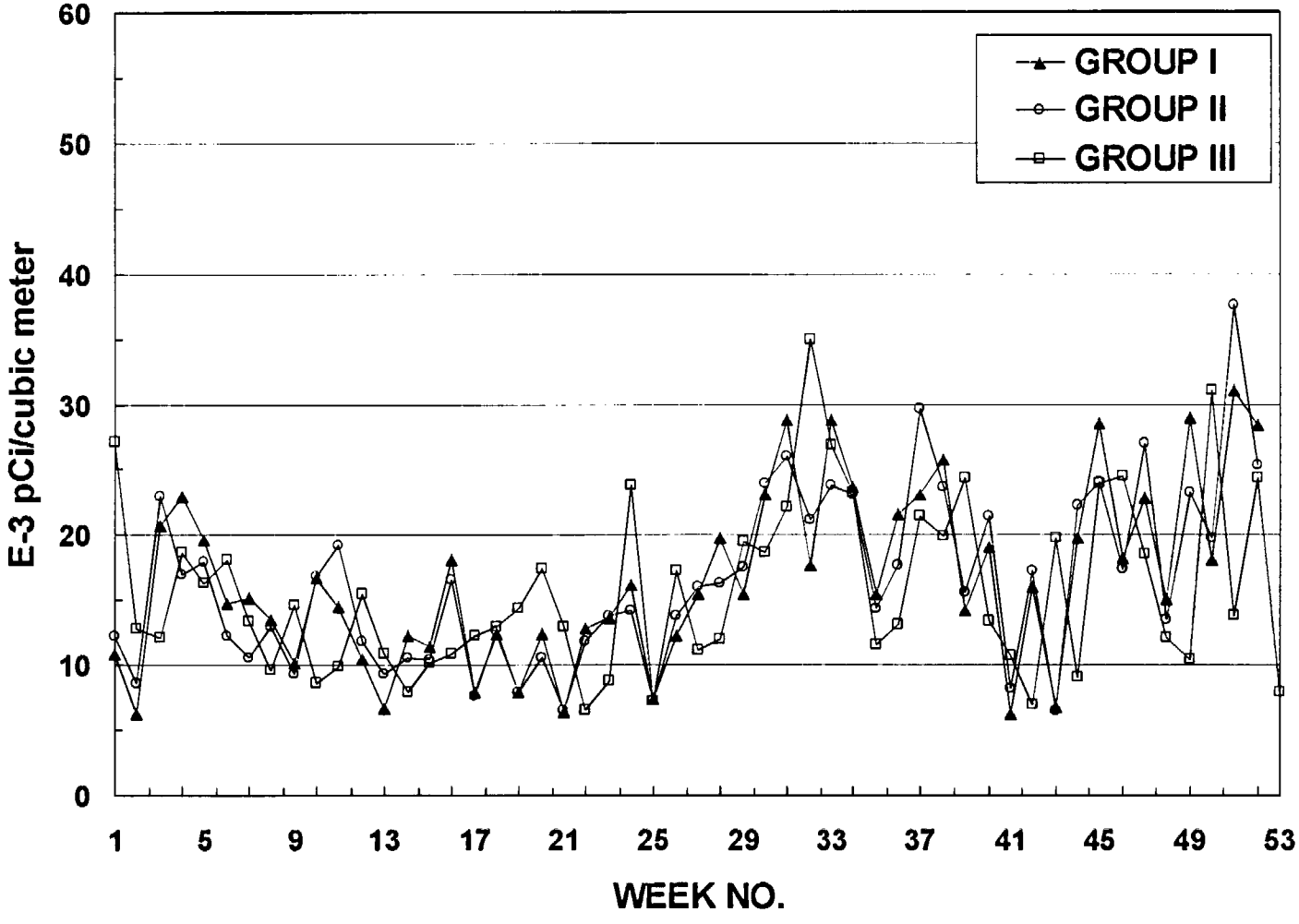


FIGURE C-5
MEAN MONTHLY GROSS BETA CONCENTRATIONS IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1970 – 2005
3

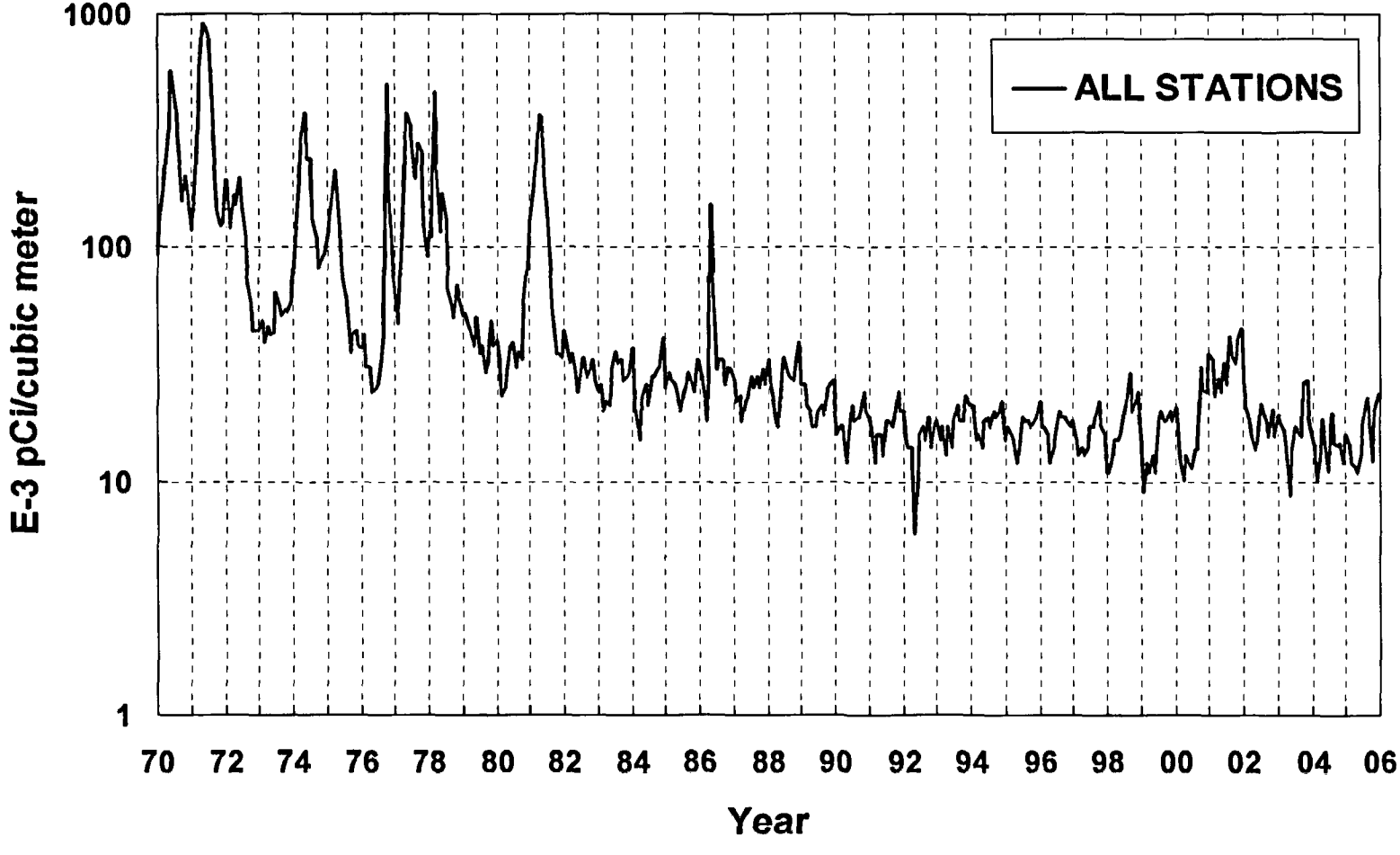
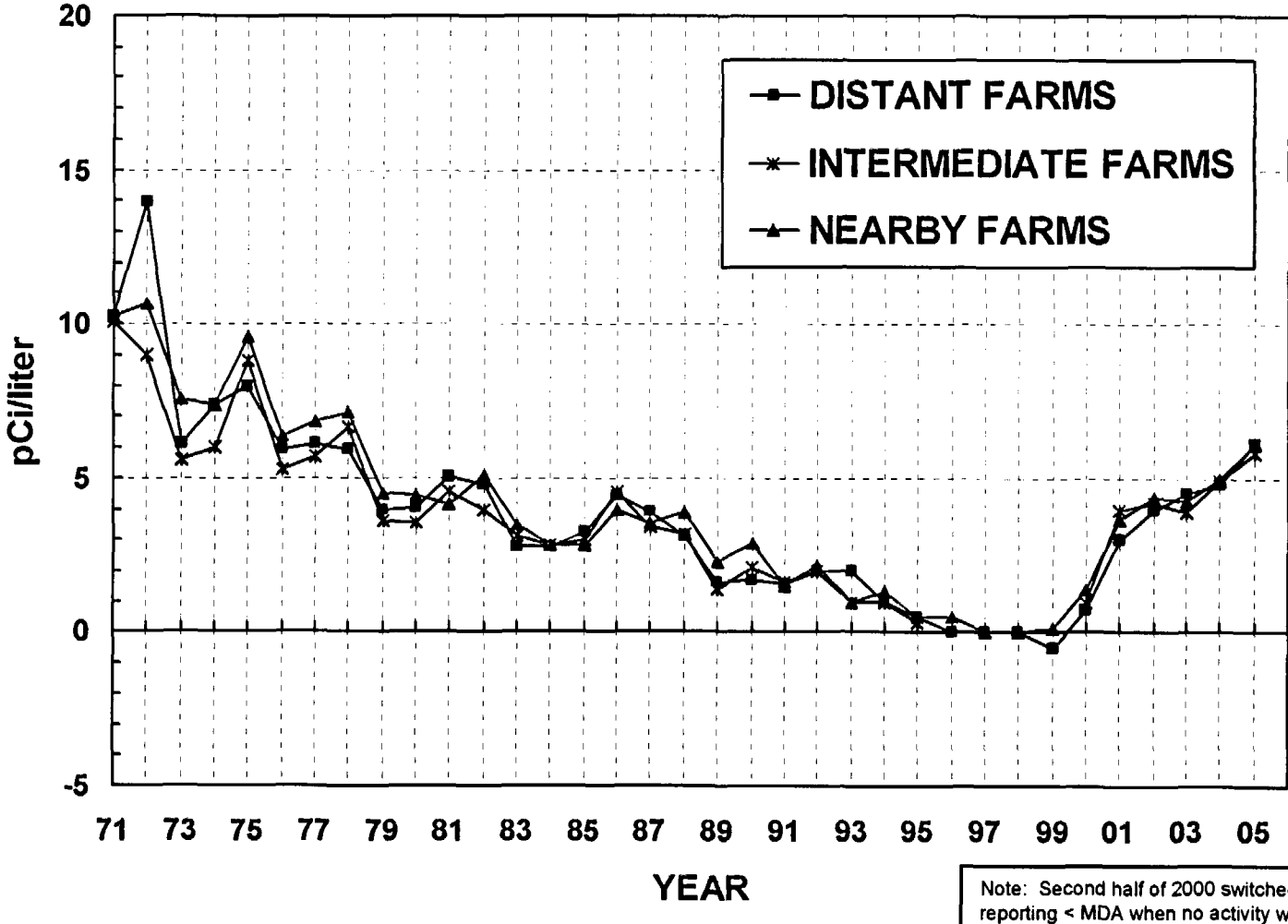


FIGURE C-6
MEAN ANNUAL CS-137 CONCENTRATIONS IN MILK SAMPLES COLLECTED IN THE VICINITY OF PBAPS, 1971 - 2005



Intermediate Farms Discontinued from 1995 - 1999

Note: Second half of 2000 switched to reporting < MDA when no activity was detected. Using MDA values result in a larger number.

FIGURE C- 7
MEAN QUARTERLY AMBIENT GAMMA RADIATION LEVELS (TLD) IN THE VICINITY OF PBAPS, 1973 - 2005

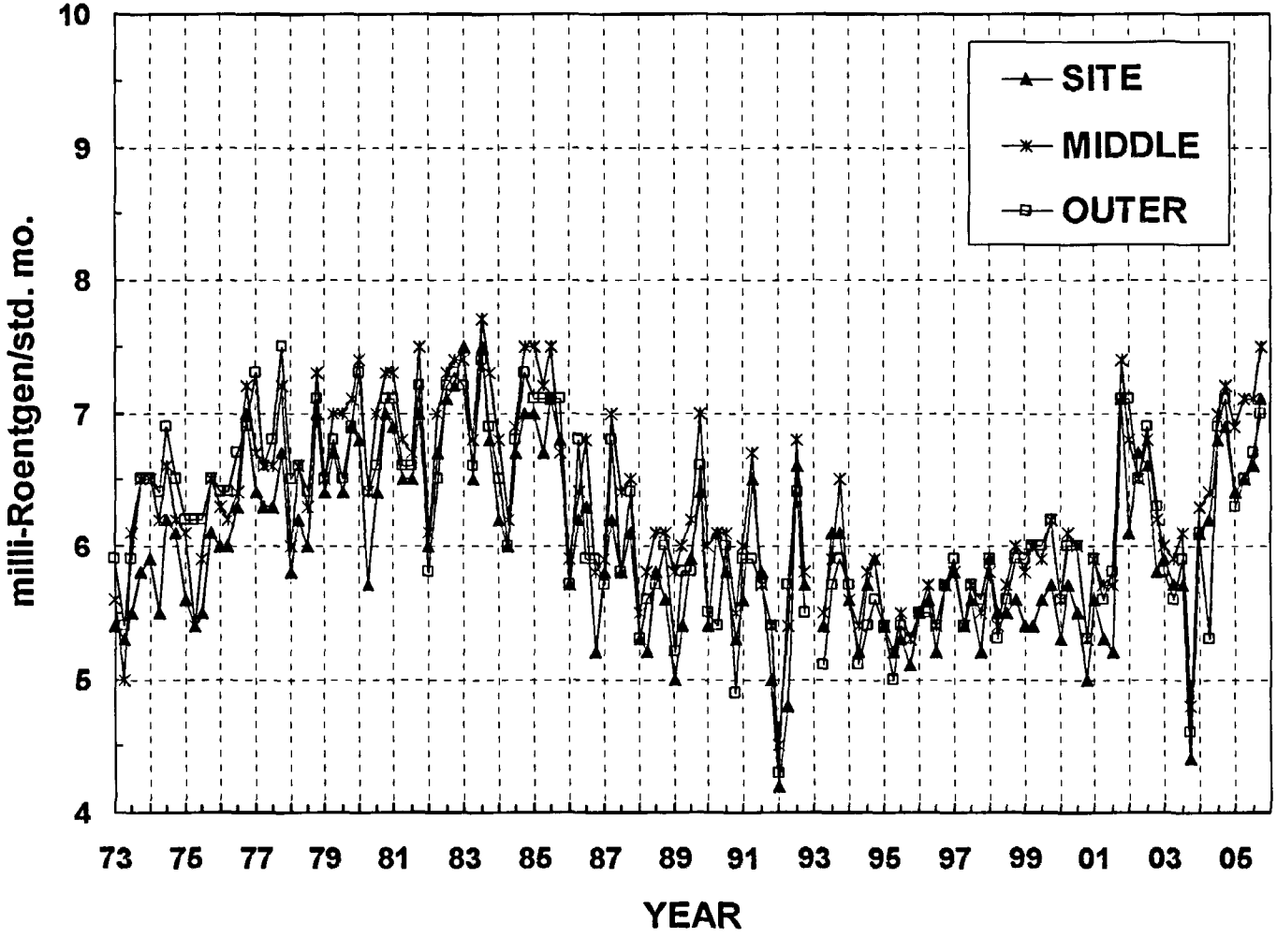
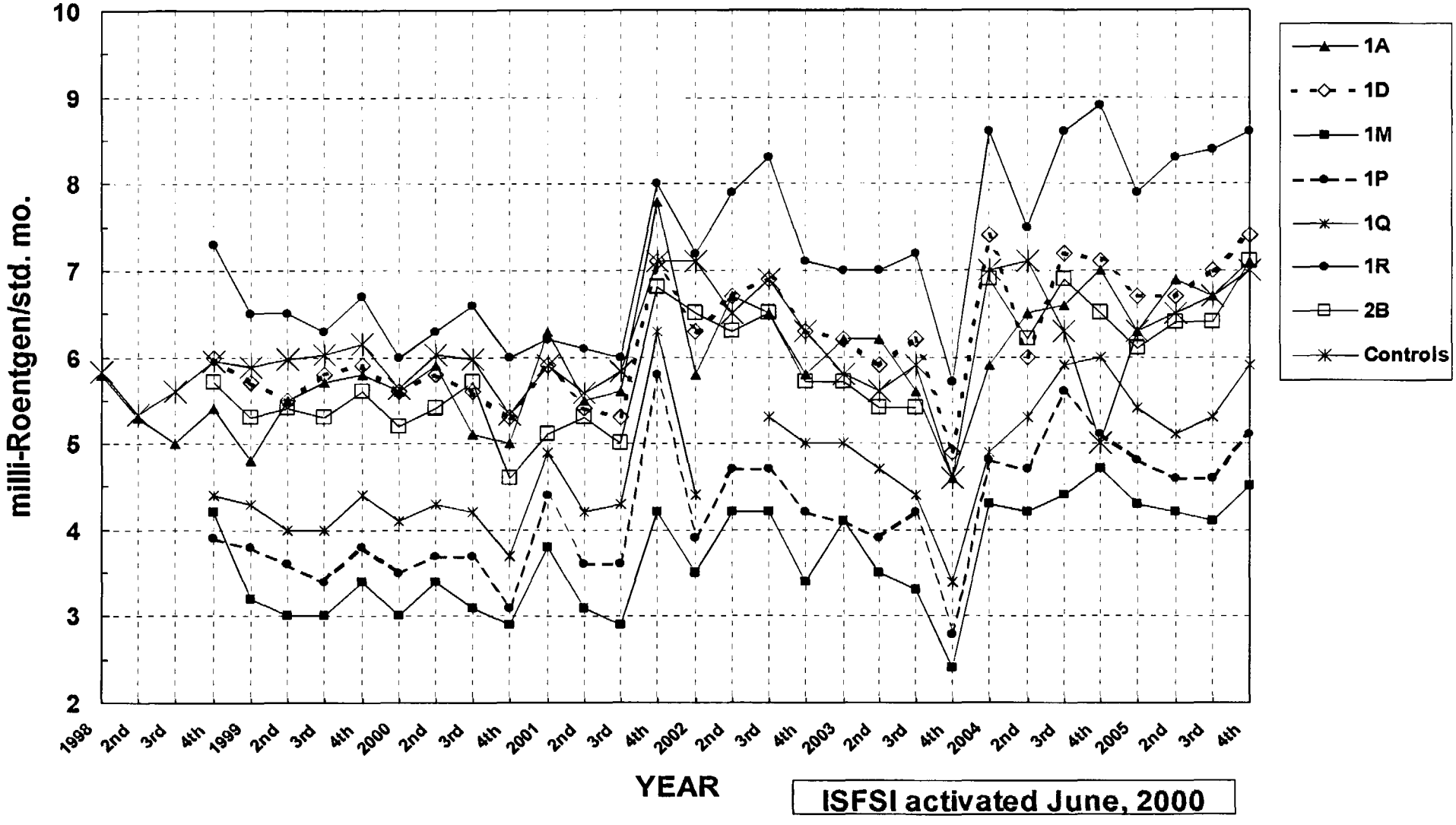


FIGURE C-8
QUARTERLY AMBIENT GAMMA RADIATION LEVELS (TLD) NEAR THE INDEPENDENT SPENT FUEL STORAGE INSTALLATION LOCATED AT PBAPS, 1998 - 2005



APPENDIX D

DATA TABLES AND FIGURES
COMPARISON LABORATORY

The following section contains data and figures illustrating the analyses performed by the QC laboratory, Environmental, Inc. Duplicate samples were obtained from several locations and media and split between the primary laboratory, Teledyne Brown Engineering (TBE) and the QC laboratory. Comparison of the results for most media were within expected ranges.

The QC laboratory results for gross beta insoluble and soluble in drinking water samples were very similar to those reported by the Primary laboratory. All results between the laboratories were within 4 pCi/l of each other. The data reported were well within the historical range.

TABLE D-I.1 CONCENTRATIONS OF GROSS BETA INSOLUBLE IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	4L
JAN	< 2.0
FEB	< 2.0
MAR	< 2.2
APR	< 1.9
MAY	< 1.7
JUN	< 2.1
JUL	< 2.0
AUG	< 1.7
SEP	< 1.9
OCT	< 2.0
NOV	< 1.8
DEC	< 1.9
MEAN	1.9 ± 0.3

TABLE D-I.2 CONCENTRATIONS OF GROSS BETA SOLUBLE IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	4L
JAN	< 1.7
FEB	< 0.9
MAR	< 1.8
APR	< 1.6
MAY	< 0.8
JUN	< 2.0
JUL	< 0.9
AUG	< 1.9
SEP	< 1.7
OCT	< 2.0
NOV	< 1.8
DEC	< 1.6
MEAN	1.6 ± 0.9

TABLE D-I.3 CONCENTRATIONS OF GAMMA EMITTERS IN DRINKING WATER SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Zr-95	Nb-95	Cs-134	Cs-137	Ba-140	La-140
4L	JAN	< 2	< 5	< 9	< 5	< 5	< 4	< 5	< 3	< 5	< 27	< 4
	FEB	< 5	< 5	< 8	< 5	< 10	< 7	< 4	< 3	< 4	< 15	< 8
	MAR	< 4	< 5.6	< 7.4	< 4.4	< 4.3	< 7.9	< 3.4	< 4.7	< 3.1	< 27	< 8.3
	APR	< 5	< 2.4	< 12	< 4.3	< 7.6	< 8.7	< 5.2	< 4.1	< 3.5	< 38	< 6.7
	MAY	< 3	< 2.1	< 7	< 3.5	< 5.6	< 7.1	< 6.4	< 0.8	< 2.5	< 33	< 7.6
	JUN	< 3.1	< 2.9	< 5.1	< 3.7	< 3.1	< 4.5	< 1.9	< 2.3	< 3.1	< 39	< 12
	JUL	< 2.5	< 2	< 7	< 1.8	< 2.9	< 4.1	< 4.3	< 1.5	< 1.7	< 24	< 6
	AUG	< 1.7	< 2.5	< 2.7	< 2.3	< 4.2	< 4.2	< 2.4	< 1.5	< 2.3	< 17	< 5.4
	SEP	< 2	< 2.1	< 6.4	< 1.8	< 5.9	< 5.5	< 2	< 1.9	< 1.8	< 12	< 4.5
	OCT	< 3	< 2.4	< 5.2	< 2.4	< 4.1	< 6.1	< 4.5	< 2.5	< 2.6	< 21	< 5.4
	NOV	< 7.4	< 8	< 19	< 9	< 12	< 11	< 7.1	< 5.2	< 5.2	< 16	< 7.5
	DEC	< 2.4	< 2.6	< 6.4	< 2.4	< 3.1	< 3.9	< 4.8	< 2.1	< 2.5	< 14	< 1.8
	MEAN	3 ± 3	4 ± 4	8 ± 8	4 ± 4	6 ± 6	6 ± 5	4 ± 3	3 ± 3	3 ± 2	24 ± 19	6 ± 5

TABLE D-II.1 CONCENTRATIONS OF GROSS BETA INSOLUBLE IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

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

COLLECTION PERIOD	1A
1	22 ± 4
2	10 ± 4
3	28 ± 4
4	33 ± 4
5	27 ± 4
6	17 ± 4
7	24 ± 4
8	20 ± 4
9	18 ± 4
10	23 ± 4
11	19 ± 4
12	16 ± 4
13	13 ± 3
14	18 ± 4
15	15 ± 4
16	27 ± 4
17	14 ± 4
18	22 ± 4
19	15 ± 4
20	18 ± 4
21	7 ± 4
22	21 ± 4
23	19 ± 4
24	18 ± 4
25	15 ± 3
26	24 ± 4
27	18 ± 4
28	26 ± 4
29	23 ± 4
30	33 ± 5
31	33 ± 4
32	30 ± 5
33	40 ± 6
34	23 ± 5
35	20 ± 4
36	26 ± 5
37	44 ± 5
38	39 ± 5
39	24 ± 5
40	27 ± 5
41	8 ± 4
42	22 ± 5
43	(1)
44	24 ± 4
45	39 ± 5
46	21 ± 4
47	38 ± 5
48	31.04 ± 5
49	27.95 ± 5
50	28 ± 5
51	41.3 ± 5
52	33.87 ± 5
MEAN	24 ± 17

(1) PUMP FAILURE

TABLE D-II.2 **CONCENTRATIONS OF GAMMA EMITTERS IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005**

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

STC	COLLECTION PERIOD	Be-7	Mn-54	Co-58	Co-60	Cs-134	Cs-137
1A	12/31 - 04/01/05	64 ± 13.7	< 0.7	< 0.5	< 0.6	< 0.8	< 1.0
	04/01 - 06/27/05	63 ± 14.4	< 0.8	< 0.7	< 0.8	< 0.9	< 0.4
	07/01 - 09/30/05	75 ± 18	< 1.1	< 0.7	< 1.1	< 0.6	< 0.5
	09/30 - 12/30/05	66 ± 17	< 0.7	< 1.2	< 1.3	< 0.8	< 0.6
	MEAN	67 ± 11	0.8 ± 0.4	0.8 ± 0.6	1.0 ± 0.6	0.8 ± 0.3	0.6 ± 0.5

TABLE D-III.1 CONCENTRATIONS OF I-131 BY CHEMICAL SEPARATION AND GAMMA EMITTERS IN MILK SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	I-131	K-40	Cs-134	Cs-137	Ba-140	La-140
A	02/13/05	< 0.3	1297 ± 112.8	< 4	< 5	< 12.5	< 4.2
	05/22/05	< 0.2	1435 ± 126.3	< 2	< 4	< 13	< 3
	08/01/05	< 0.2	1358 ± 169.2	< 3	< 6	< 34	< 6
	11/06/05 *						
	MEAN	0.25 ± 0.12	1341 ± 144	4 ± 4	6 ± 3	24 ± 25	6 ± 5
J	02/13/05	< 0.2	1515 ± 181.7	< 5	< 7	< 32	< 5
	05/22/05	< 0.4	1382 ± 121.7	< 6	< 3	< 16	< 2
	08/01/05	< 0.1	1369 ± 177.1	< 6	< 5	< 23	< 9
	11/06/05	< 0.4	1444 ± 174.1	< 6	< 5	< 34	< 5
	MEAN	0.28 ± 0.30	1427 ± 134	6 ± 1	5 ± 3	26 ± 17	5 ± 6
O	02/13/05	< 0.2	1354 ± 119.3	< 3	< 4	< 25	< 3
	05/22/05	< 0.2	1336 ± 122.4	< 4	< 3	< 17	< 2
	08/01/05	< 0.1	1254 ± 115.1	< 3	< 3	< 21	< 3
	11/06/05	< 0.3	1314 ± 142.3	< 5	< 4	< 36	< 5
	MEAN	0.20 ± 0.16	1315 ± 87	4 ± 1	3 ± 1	25 ± 17	3 ± 3
T	11/06/05	< 0.3	1274 ± 164.1	< 7	< 8	< 35	< 9

(1) SEE PROGRAM CHANGES SECTION FOR EXPLANATION

TABLE D-IV.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF PEACH BOTTOM ATOMIC POWER STATION, 2005

DRINKING WATER (GROSS BETA & GAMMA SPECTROSCOPY)

COLLECTION PERIOD	4L
JAN	12/31/04 - 02/04/05
FEB	02/04/05 - 03/04/05
MAR	03/04/05 - 04/01/05
APR	04/01/05 - 04/29/05
MAY	04/29/05 - 06/03/05
JUN	06/03/05 - 07/01/05
JUL	07/01/05 - 08/05/05
AUG	08/05/05 - 09/02/05
SEP	09/02/05 - 09/30/05
OCT	09/30/05 - 11/04/05
NOV	11/04/05 - 12/04/05
DEC	12/04/05 - 12/30/05

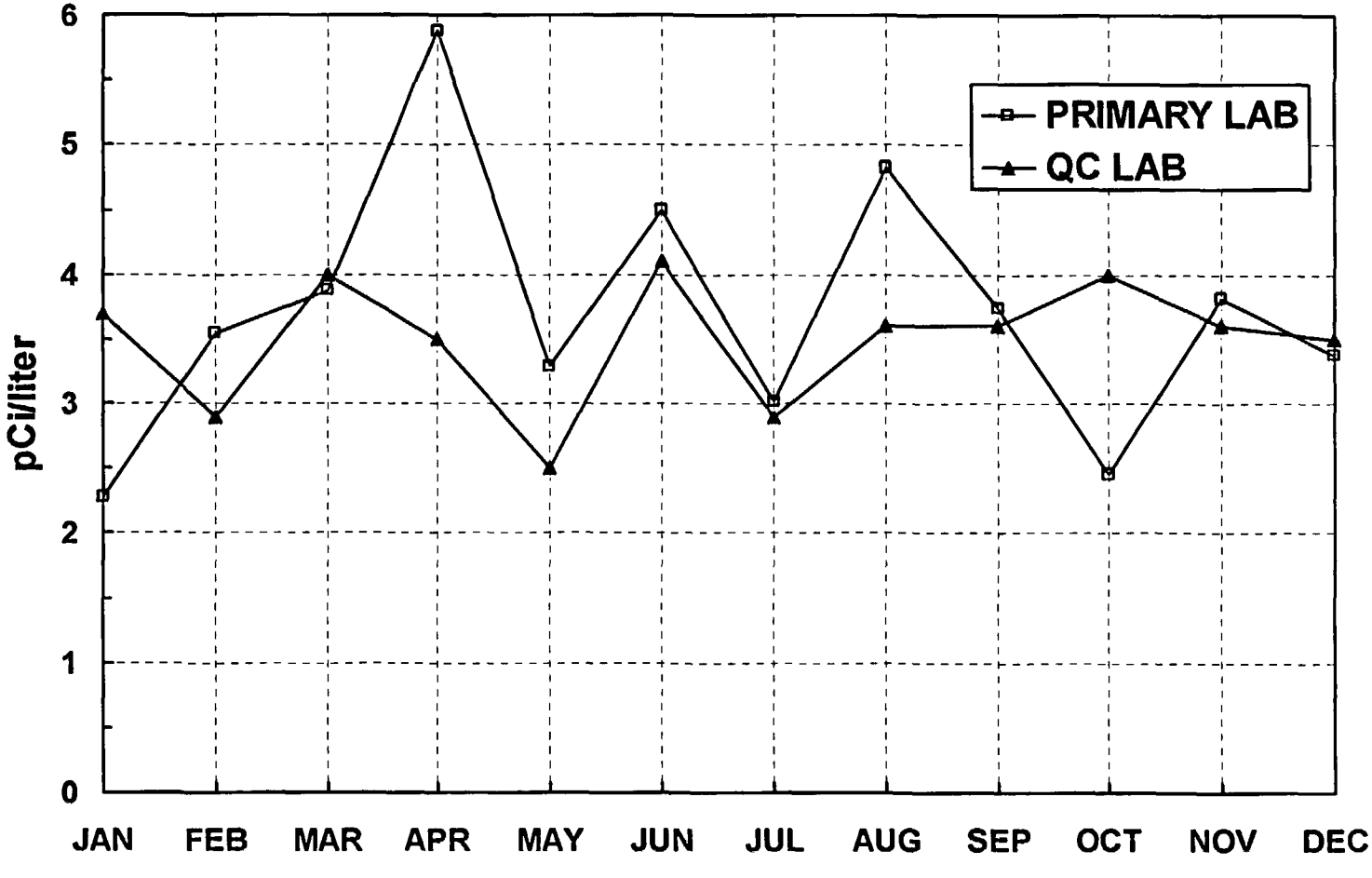
AIR PARTICULATE (GAMMA SPECTROSCOPY)

COLLECTION PERIOD	1A
JAN-MAR	12/31/04 - 04/01/05
APR-JUN	04/01/05 - 06/27/05
JUL-SEP	07/01/05 - 09/30/05
OCT-DEC	09/30/05 - 12/30/05

AIR PARTICULATE (GROSS BETA)

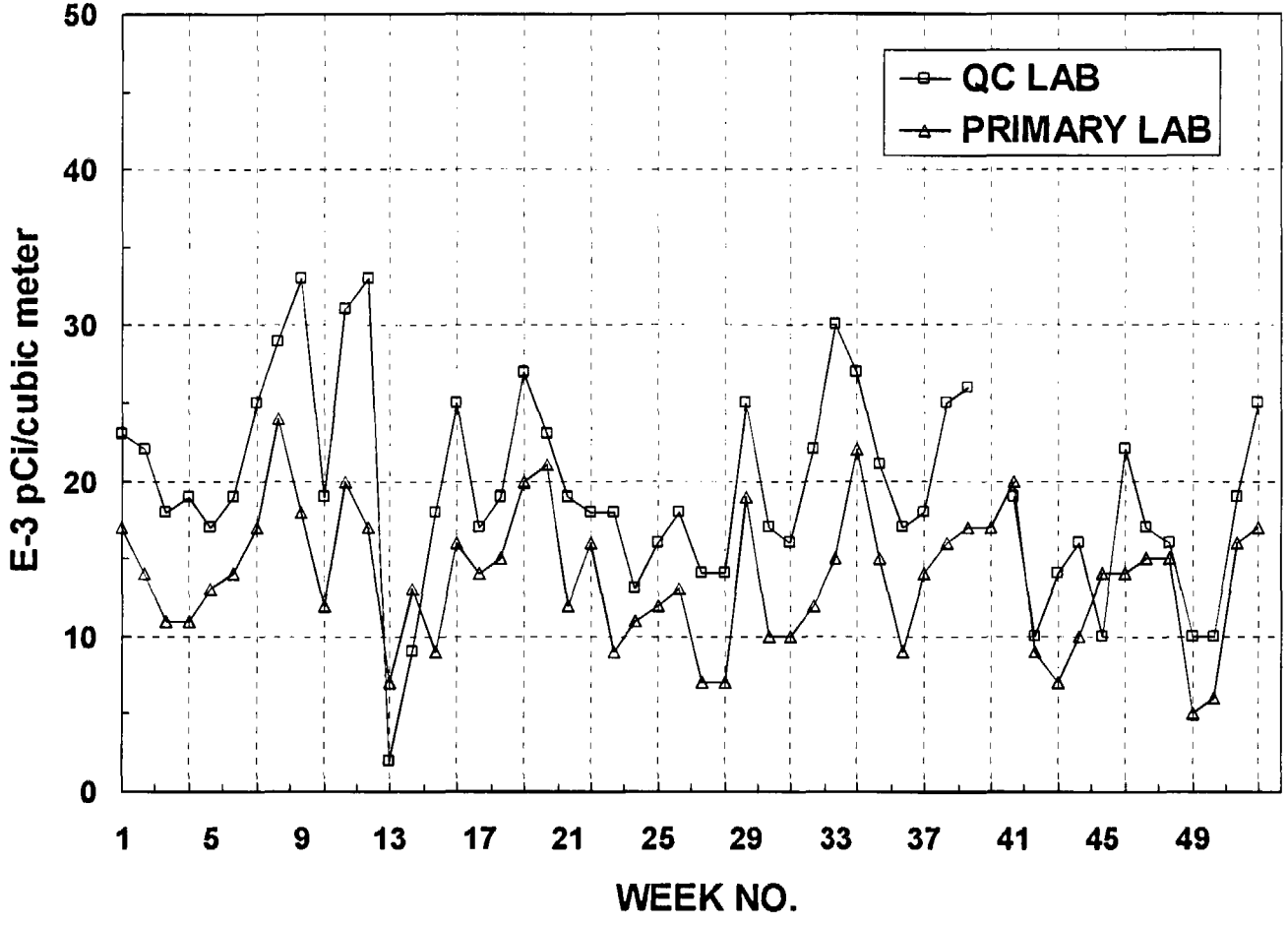
COLLECTION PERIOD	1A	COLLECTION PERIOD	1A
1	12/31/04 - 01/07/05	27	07/01/05 - 07/08/05
2	01/07/05 - 01/13/05	28	07/08/05 - 07/15/05
3	01/13/05 - 01/21/05	29	07/15/05 - 07/22/05
4	01/21/05 01/28/05	30	07/22/05 - 07/28/05
5	01/28/05 - 02/04/05	31	07/28/05 - 08/05/05
6	02/04/05 - 02/11/05	32	08/05/05 -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

FIGURE D-1
COMPARISON OF MONTHLY TOTAL GROSS BETA CONCENTRATIONS IN DRINKING WATER SAMPLES SPLIT BETWEEN THE PRIMARY AND QC LABORATORIES, 2005



ENVIRONMENTAL INC. SOLUBLE AND INSOLUBLE FRACTIONS WERE COMBINED FOR TOTAL GROSS BETA COMPARISON.

FIGURE D-2
COMPARISON OF WEEKLY GROSS BETA CONCENTRATIONS FROM COLLOCATED AIR PARTICULATE LOCATIONS SPLIT BETWEEN THE PRIMARY AND QC LABORATORIES, 2005



APPENDIX E

INTER-LABORATORY COMPARISON PROGRAM

TABLE E-1 ANALYTICS ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM
TELEDYNE BROWN ENGINEERING, 2005
(PAGE 1 OF 3)

Month/Year	Identification Number	Matrix	Nuclide	Units	Reported Value (a)	Known Value (b)	Ratio (c) TBE/Analytics	Evaluation (d)
March 2005	E4522-396	Milk	Sr-89	pCi/L	96.9	107	0.91	A
			Sr-90	pCi/L	16.9	17.9	0.94	A
	E4523-396	Milk	I-131	pCi/L	82.7	92.3	0.90	A
			Ce-141	pCi/L	217	229	0.95	A
			Cr-51	pCi/L	314	334	0.94	A
			Cs-134	pCi/L	123	139	0.89	A
			Cs-137	pCi/L	125	130	0.96	A
			Co-58	pCi/L	110	115	0.96	A
			Mn-54	pCi/L	158	160	0.99	A
			Fe-59	pCi/L	118	111	1.06	A
			Zn-65	pCi/L	191	198	0.96	A
			Co-60	pCi/L	140	144	0.97	A
	E4525-396	AP	Ce-141	pCi	150	172	0.87	A
			Cr-51	pCi	278	250	1.11	A
			Cs-134	pCi	105	104	1.01	A
			Cs-137	pCi	95.6	97.1	0.98	A
			Co-58	pCi	84.4	86.3	0.98	A
			Mn-54	pCi	112	120	0.93	A
			Fe-59	pCi	92.8	83.2	1.12	A
			Zn-65	pCi	162	148	1.09	A
			Co-60	pCi	102	108	0.94	A
	E4524-396	Charcoal	I-131	pCi	67.4	60.7	1.11	A
June 2005	E4630-396	Milk	Sr-89	pCi/L	89.4	88.1	1.01	A
			Sr-90	pCi/L	11.6	11.4	1.02	A
	E4631-396	Milk	I-131	pCi/L	82.3	86.9	0.95	A
			Ce-141	pCi/L	91.6	92.4	0.99	A
			Cr-51	pCi/L	278	303	0.92	A
			Cs-134	pCi/L	81.1	95.0	0.85	A
			Cs-137	pCi/L	180	189	0.95	A
			Mn-54	pCi/L	124	125	0.99	A
			Fe-59	pCi/L	61.1	63.9	0.96	A
			Zn-65	pCi/L	156	155	1.01	A
			Co-60	pCi/L	136	145	0.94	A
	E4633-396	AP	Ce-141	pCi	79.2	64.2	1.23	W
			Cr-51	pCi	263	210	1.25	W
			Cs-134	pCi	69.7	66.1	1.05	A
			Cs-137	pCi	135	131	1.03	A
			Mn-54	pCi	94.9	87.0	1.09	A
			Fe-59	pCi	48	44.4	1.09	A
			Zn-65	pCi	120	108	1.11	A
			Co-60	pCi	104	101	1.03	A
	E4632-396	Charcoal	I-131	pCi	88.9	92.5	0.96	A

TABLE E-1 ANALYTICS ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM
TELEDYNE BROWN ENGINEERING, 2005
(PAGE 2 OF 3)

Month/Year	Identification Number	Matrix	Nuclide	Units	Reported Value (a)	Known Value (b)	Ratio (c) TBE/Analytics	Evaluation (d)
September 2005	E4766-396	Milk	Sr-89	pCi/L	135.0	146.0	0.92	A
			Sr-90	pCi/L	9.7	11.5	0.84	A
	E4767-396	Milk	I-131	pCi/L	87.5	94.3	0.93	A
			Ce-141	pCi/L	203	233	0.87	A
			Cr-51	pCi/L	279	338	0.83	A
			Cs-134	pCi/L	102	122.0	0.84	A
			Cs-137	pCi/L	178	195	0.91	A
			Co-58	pCi/L	55.3	63.4	0.87	A
			Mn-54	pCi/L	81.8	92.0	0.89	A
			Fe-59	pCi/L	59.9	61.0	0.98	A
			Zn-65	pCi/L	120	123	0.98	A
			Co-60	pCi/L	146	167	0.87	A
	E4769-396	AP	Ce-141	pCi	193	169	1.14	A
			Cr-51	pCi	267	246	1.09	A
			Cs-134	pCi	78.4	88.8	0.88	A
			Cs-137	pCi	166	142	1.17	A
			Co-58	pCi	53.7	46.0	1.17	A
			Mn-54	pCi	81.6	66.8	1.22	W
			Fe-59	pCi	59.6	44.3	1.35	N (1)
			Zn-65	pCi	107	89.6	1.19	A
			Co-60	pCi	133	122	1.09	A
	E4768-396	Charcoal	I-131	pCi	63.9	64.2	1.00	A
December 2005	E4766-396	Milk	Sr-89	pCi/L	114	128	0.89	A
			Sr-90	pCi/L	11.6	10.3	1.13	A
	E4767-396	Milk	I-131	pCi/L	79.6	74.6	1.07	A
			Ce-141	pCi/L	202	224	0.90	A
			Cr-51	pCi/L	185	193	0.96	A
			Cs-134	pCi/L	74.9	87.3	0.86	A
			Cs-137	pCi/L	177	189	0.94	A
			Co-58	pCi/L	73.9	77.5	0.95	A
			Mn-54	pCi/L	152	152	1.00	A
			Fe-59	pCi/L	97.5	82.4	1.18	A
			Zn-65	pCi/L	161	154	1.05	A
			Co-60	pCi/L	102	111	0.92	A
	E4633-396	AP	Ce-141	pCi	221	201	1.10	A
			Cr-51	pCi	195	173	1.13	A
			Cs-134	pCi	68.4	78.3	0.87	A
			Cs-137	pCi	194	170	1.14	A
			Co-58	pCi	77.4	69.4	1.12	A
			Mn-54	pCi	171	137	1.25	W
			Fe-59	pCi	94.2	73.9	1.27	W
			Zn-65	pCi	173	138	1.25	W
			Co-60	pCi	109	99.1	1.10	A

TABLE E-1 ANALYTICS ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM
TELEDYNE BROWN ENGINEERING, 2005
(PAGE 3 OF 3)

Month/Year	Identification Number	Matrix	Nuclide	Units	Reported Value (a)	Known Value (b)	Ratio (c) TBE/Analytics	Evaluation (d)
December 2005	E4632-396	Charcoal	I-131	pCi	73.3	73.3	1.00	A

(1) New technician - AP not counted in petri dish resulted in high Fe-59 activity. Counting in petri dish, the Fe-59 would have been acceptable as evidenced by the 4Q05 AP recount data. NCR 06-01

(a) Teledyne Brown Engineering reported result.

(b) The Analytics known value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation.

(c) Ratio of Teledyne Brown Engineering to Analytics results.

(d) Analytics evaluation based on TBE internal QC limits: A= Acceptable. Reported result falls within ratio limits of 0.80-1.20. W-Acceptable with warning. Reported result falls within 0.70-0.80 or 1.20-1.30. N = Not Acceptable. Reported result falls outside the ratio limits of < 0.70 and > 1.30.

TABLE E-2 **ERA ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM**
TELEDYNE BROWN ENGINEERING, 2005
(PAGE 1 OF 1)

Month/Year	Identification Number	Media	Nuclide	Units	Reported Value (a)	Known Value (b)	Control Limits	Evaluation (c)
May 2005	Rad 61	Water	Sr-89	pCi/L	37.5	41.3	32.6 - 50.0	A
			Sr-90	pCi/L	5.37	5.92	0.00 - 14.6	A
			Ba-133	pCi/L	88.6	88.4	73.1 - 104	A
			Cs-134	pCi/L	70.5	78.6	69.9 - 87.3	A
			Cs-137	pCi/L	201	201	184 - 218	A
			Co-60	pCi/L	37.5	37.0	28.3 - 45.7	A
			Zn-65	pCi/L	122	118	97.6 - 138	A
			Gr-A	pCi/L	35.5	37.0	21.0 - 53.0	A
			Gr-B	pCi/L	35.6	34.2	25.5 - 42.9	A
			H-3	pCi/L	24600	24400	20200 - 28600	A
	Rad 61	Water	I-131	pCi/L	13.6	15.5	10.3 - 20.7	A
November 2005	Rad 63	Water	Sr-89	pCi/L	18.0	19.0	10.3 - 27.7	A
			Sr-90	pCi/L	16.6	16.0	7.37 - 24.7	A
			Ba-133	pCi/L	31.7	31.2	22.5 - 39.9	A
			Cs-134	pCi/L	30.8	33.9	25.2 - 42.6	A
			Cs-137	pCi/L	26.8	28.3	19.6 - 37.0	A
			Co-60	pCi/L	83.9	84.1	75.4 - 92.8	A
			Zn-65	pCi/L	109	105	86.8 - 123	A
			Gr-A	pCi/L	19.5	23.3	13.2 - 33.4	A
			Gr-B	pCi/L	34.0	39.1	30.4 - 47.8	A
			H-3	pCi/L	12400	12200	10100 - 14300	A
	Rad 63	Water	I-131	pCi/L	17.8	17.4	12.2 - 22.6	A

(a) Teledyne Brown Engineering reported result.

(b) The ERA known value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation.

(c) ERA evaluation: A=acceptable. Reported result falls within the Warning Limits. NA=not acceptable. Reported result falls outside of the Control Limits. CE=check for Error. Reported result falls within the Control Limits and outside of the Warning Limit.

TABLE E-3 DOE's MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)
TELEDYNE BROWN ENGINEERING, 2005
(PAGE 1 OF 2)

Month/Year	Identification Number	Media	Nuclide	Units	Reported Value (a)	Known Value (b)	Acceptance Range	Evaluation (c)
April 2005	05-MaW13	Water	Cs-134	Bq/L	108	127	88.90 - 165.10	A
			Cs-137	Bq/L	305	332	232.40 - 461.60	A
			Co-57	Bq/L	215	227	158.90 - 295.10	A
			Co-60	Bq/L	241	251	175.70 - 326.30	A
			H-3	Bq/L	283	280	196.00 - 364.00	A
			Mn-54	Bq/L	314	331	231.70 - 430.30	A
			Sr-90	Bq/L	0.093		no range given (1)	A
			Zn-65	Bq/L	509	496	347.20 - 644.80	A
	MaS13	Soil	Cs-134	Bq/L	655	759	531.30 - 986.70	A
			Cs-137	Bq/L	310	315	220.50 - 409.50	A
			Co-57	Bq/L	234	242	169.40 - 314.60	A
			Co-60	Bq/L	219	212	148.40 - 275.60	A
			Mn-54	Bq/L	512	485	339.50 - 630.50	A
			K-40	Bq/L	642	604	422.80 - 785.20	A
			Zn-65	Bq/L	890	810	567.00 - 1053	A
	GrW13	Water	Gr-A	Bq/L	0.601	0.525	>0.0 - 1.05	A
			Gr-B	Bq/L	1.54	1.67	0.84 - 2.51	A
	RdF13	AP	Cs-134	Bq/sample	3.26	3.51	2.46 - 4.56	A
			Cs-137	Bq/sample	2.05	2.26	1.58 - 2.94	A
			Co-57	Bq/sample	4.78	4.92	3.44 - 6.40	A
			Co-60	Bq/sample	3.02	3.03	2.12 - 3.94	A
			Mn-54	Bq/sample	3.31	3.33	2.33 - 4.33	A
			Sr-90	Bq/sample	1.15	1.35	0.95 - 1.76	A
			Zn-65	Bq/sample	3.14	3.14	2.20 - 4.08	A
	GrF13	AP	Gr-A	Bq/sample	0.0764	0.232	>0.0 - 0.46	A
			Gr-B	Bq/sample	0.305	0.297	0.15 - 0.45	A
April 2005	RdV13	Vegetation	Cs-134	Bq/kg	5.45	5	3.50 - 6.50	A
			Cs-137	Bq/kg	4.80	4.1	2.88 - 5.34	A
			Co-57	Bq/kg	13.4	9.88	6.92 - 12.84	A *
			Co-60	Bq/kg	3.67	3.15	2.21 - 4.10	A
			Mn-54	Bq/kg	6.45	5.18	3.63 - 6.73	A
			Sr-90	Bq/kg	1.49	1.65	1.16 - 2.15	A
			Zn-65	Bq/kg	7.71	6.29	4.40 - 8.18	A
October 2005	05-MaW14	Water	Cs-134	Bq/L	142	167	116.90 - 217.10	A
			Cs-137	Bq/L	302	333	233.10 - 432.90	A
			Co-57	Bq/L	251	272	190.40 - 353.60	A
			Co-60	Bq/L	243	261	182.70 - 339.30	A
			H-3	Bq/L	547	527	368.90 - 685.10	A
			Mn-54	Bq/L	383	418	292.60 - 543.40	A
			Sr-90	Bq/L	8.75	8.98	6.29 - 11.67	A
			Zn-65	Bq/L	324	330	231.00 - 429.00	A

TABLE E-3 DOE's MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)
TELEDYNE BROWN ENGINEERING, 2005
(PAGE 2 OF 2)

Month/Year	Identification Number	Media	Nuclide	Units	Reported Value (a)	Known Value (b)	Acceptance Range	Evaluation (c)
October 2005	MaS14	Soil	Cs-134	Bq/L	494	568	397.60 - 738.40	A
			Cs-137	Bq/L	446	439	307.30 - 570.70	A
			Co-57	Bq/L	506	524	366.80 - 681.20	A
			Co-60	Bq/L	289	287	200.90 - 373.10	A
			Mn-54	Bq/L	460	439	307.30 - 570.70	A
			K-40	Bq/L	626	604	422.80 - 785.20	A
			Zn-65	Bq/L	889	823	576.10 - 1070	A
	GrW14	Water	Gr-A	Bq/L	0.858	0.79	0.21 - 1.38	A
			Gr-B	Bq/L	1.22	1.35	0.85 - 1.92	A
October 2005	RdF14	AP	Cs-134	Bq/sample	4.11	3.85	2.70 - 5.01	A
			Cs-137	Bq/sample	3.16	3.23	2.26 - 4.20	A
			Co-57	Bq/sample	6.14	6.2	4.34 - 8.06	A
			Co-60	Bq/sample	2.86	2.85	2.00 - 3.71	A
			Mn-54	Bq/sample	4.54	4.37	3.06 - 5.68	A
			Sr-90	Bq/sample	2.12	2.25	1.58 - 2.93	A
			Zn-65	Bq/sample	4.28	4.33	3.03 - 5.63	A
	GrF14	AP	Gr-A	Bq/sample	0.304	0.482	>0.0 - 0.80	A
			Gr-B	Bq/sample	0.858	0.827	0.55 - 1.22	A
	RdV13	Vegetation	Cs-134	Bq/kg	4.35	4.09	2.86 - 5.32	A
			Cs-137	Bq/kg	5.99	5.4	3.80 - 7.06	A
			Co-57	Bq/kg	17.0	13.30	9.31 - 17.29	W
			Co-60	Bq/kg	4.87	4.43	3.10 - 5.76	A
			Mn-54	Bq/kg	7.40	6.57	4.60 - 8.54	A
			Sr-90	Bq/kg	2.03	2.42	1.69 - 3.15	A
			Zn-65	Bq/kg	11.8	10.2	7.14 - 13.26	A

** Under investigation. MAPEP reported the result as acceptable although the reported value of 13.4 is higher than the acceptance range upper limit of 12.84.*

(1) The Sr-90 in water was a MAPEP false positive test. The TBE reported result of 0.093 ± 0.0908 Bq/L was the forced Sr-90 activity and uncertainty, as required by MAPEP. The MDC for the sample was 0.145 pCi/L.

(a) Teledyne Brown Engineering reported result.

(b) The MAPEP known value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation.

(c) DOE/MAPEP evaluation: A=acceptable, W=acceptable with warning, N=not acceptable.

TABLE E-4 **ERA[a] STATISTICAL SUMMARY PROFICIENCY TESTING PROGRAM ENVIRONMENTAL, INC., 2005**

Lab Code	Date	Analysis	Concentration (pCi/L) Laboratory Result[b]	ERA Result[c]	Control Limits	Acceptance
STW-1051	02/15/05	Sr-89	28.0 ± 1.2	29.4	20.7 - 38.1	Pass
STW-1051	02/15/05	Sr-90	25.1 ± 0.7	24.4	15.7 - 33.1	Pass
STW-1052	02/15/05	Ba-133	52.9 ± 2.8	53.4	44.2 - 62.6	Pass
STW-1052	02/15/05	Co-60	54.4 ± 0.4	56.6	47.9 - 65.3	Pass
STW-1052	02/15/05	Cs-134	67.7 ± 1.8	64.9	56.2 - 73.6	Pass
STW-1052	02/15/05	Cs-137	39.6 ± 1.8	40.2	31.5 - 48.9	Pass
STW-1052	02/15/05	Zn-65	159.7 ± 3.0	161.0	133.0 - 189.0	Pass
STW-1053	02/15/05	Gr. Alpha	55.1 ± 1.8	67.9	38.5 - 97.3	Pass
STW-1053	02/15/05	Gr. Beta	46.8 ± 1.3	51.1	38.5 - 97.3	Pass
STW-1054	02/15/05	Ra-226	13.7 ± 1.5	14.1	10.4 - 17.8	Pass
STW-1054	02/15/05	Ra-228	13.3 ± 0.6	13.7	7.8 - 19.6	Pass
STW-1054	02/15/05	Uranium	5.1 ± 0.2	5.0	0.0 - 10.2	Pass
STW-1055	05/17/05	Sr-89	45.1 ± 4.1	41.3	32.6 - 50.0	Pass
STW-1055	05/17/05	Sr-90	7.5 ± 0.9	5.9	0.0 - 14.6	Pass
STW-1056	05/17/05	Ba-133	87.1 ± 2.0	88.4	73.1 - 104.0	Pass
STW-1056	05/17/05	Co-60	38.4 ± 0.8	37.0	28.3 - 45.7	Pass
STW-1056	05/17/05	Cs-134	75.3 ± 0.7	78.6	69.9 - 87.3	Pass
STW-1056	05/17/05	Cs-137	201.0 ± 8.4	194.0	184.0 - 218.0	Pass
STW-1056	05/17/05	Zn-65	130.0 ± 6.7	118.0	97.6 - 138.0	Pass
STW-1057	05/17/05	Gr. Alpha	42.7 ± 2.9	37.0	21.0 - 53.0	Pass
STW-1057	05/17/05	Gr. Beta	34.0 ± 0.4	34.2	25.5 - 42.9	Pass
STW-1058	05/17/05	I-131	14.7 ± 0.5	15.5	10.3 - 20.7	Pass
STW-1059	05/17/05	Ra-226	6.6 ± 0.1	7.6	5.6 - 9.5	Pass
STW-1059	05/17/05	Ra-228	19.3 ± 0.7	18.9	10.7 - 27.1	Pass
STW-1059	05/17/05	Uranium	9.6 ± 0.1	10.1	4.9 - 15.3	Pass
STW-1060	05/17/05	H-3	24100.0 ± 109.0	24400.0	20200.0 - 28600.0	Pass
STW-1067	08/16/05	Sr-89	29.1 ± 3.0	28.0	19.3 - 36.7	Pass
STW-1067	08/16/05	Sr-90	36.0 ± 0.6	33.8	25.1 - 42.5	Pass
STW-1068	08/16/05	Ba-133	107.0 ± 1.7	106.0	87.7 - 124.0	Pass
STW-1068	08/16/05	Co-60	15.2 ± 0.2	13.5	4.8 - 22.2	Pass
STW-1068	08/16/05	Cs-134	89.1 ± 0.3	92.1	83.4 - 101.0	Pass
STW-1068	08/16/05	Cs-137	72.1 ± 1.0	72.7	64.0 - 81.4	Pass
STW-1068	08/16/05	Zn-65	67.4 ± 1.4	65.7	54.3 - 77.1	Pass
STW-1069	08/16/05	Gr. Alpha	44.3 ± 1.5	55.7	31.6 - 79.8	Pass
STW-1069	08/16/05	Gr. Beta	58.4 ± 2.1	61.3	44.0 - 78.6	Pass
STW-1070	08/16/05	Ra-226	16.6 ± 1.5	16.6	12.3 - 20.9	Pass
STW-1070	08/16/05	Ra-228	6.2 ± 0.3	6.2	3.5 - 8.9	Pass
STW-1070	08/16/05	Uranium	4.5 ± 0.1	4.5	0.0 - 9.7	Pass

TABLE E-4 **ERA[a] STATISTICAL SUMMARY PROFICIENCY TESTING PROGRAM ENVIRONMENTAL, INC., 2005**

Lab Code	Date	Analysis	Concentration (pCi/L) Laboratory Result[b]	ERA Result[c]	Control Limits	Acceptance
STW-1072	11/15/05	Sr-89	20.6 ± 0.4	19.0	10.3 - 27.7	Pass
STW-1072	11/15/05	Sr-90	15.0 ± 0.3	16.0	7.3 - 24.7	Pass
STW-1073	11/15/05	Ba-133	31.8 ± 1.8	31.2	22.5 - 39.9	Pass
STW-1073	11/15/05	Co-60	85.0 ± 1.4	84.1	75.4 - 92.8	Pass
STW-1073	11/15/05	Cs-134	37.2 ± 2.1	33.9	25.2 - 42.6	Pass
STW-1073	11/15/05	Cs-137	27.8 ± 0.7	28.3	19.6 - 37.0	Pass
STW-1073	11/15/05	Zn-65	109.0 ± 1.0	105.0	86.8 - 123.0	Pass
STW-1074 [d]	11/15/05	Gr. Alpha	41.1 ± 1.2	23.3	13.2 - 33.4	Fail
STW-1074	11/15/05	Gr. Beta	42.7 ± 0.5	39.1	30.4 - 47.8	Pass
STW-1075	11/15/05	I-131	20.5 ± 0.6	17.4	12.2 - 22.6	Pass
STW-1076	11/15/05	Ra-226	7.8 ± 0.6	8.3	6.2 - 10.5	Pass
STW-1076 [e]	11/15/05	Ra-228	5.5 ± 0.6	3.5	2.0 - 5.0	Fail
STW-1076	11/15/05	Uranium	15.5 ± 0.3	16.1	10.9 - 21.3	Pass
STW-1077	11/15/05	H-3	12500.0 ± 238.0	12200.0	10100.0 - 14300.0	Pass

[a] Results obtained by Environmental, Inc., Midwest Laboratory as a participant in the crosscheck program for proficiency testing in drinking water conducted by Environmental Resources Associates (ERA).

[b] Unless otherwise indicated, the laboratory result is given as the mean ± standard deviation for three determinations.

[c] Results are presented as the known values, expected laboratory precision (1 sigma, 1 determination) and control limits as provided by ERA.

[d] The original samples were calculated using an Am-241 efficiency. The samples were spiked with Th-232. Samples were recounted and calculated using the Th-232 efficiency. Results of the recount: 27.01 ± 2.35 pCi/L.

[e] Decay of short-lived radium daughters contributed to a higher counting rate. Delay of counting for 100 minutes provided better results. The reported result was the average of the first cycle of 100 minutes, the average of the second cycle counts was 4.01 pCi/L

TABLE E-5 DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)[a] ENVIRONMENTAL, INC., 2005

Lab Code[c]	Date	Analysis	Concentration[b] Laboratory result	Known Activity	Control Limits[a]	Acceptance
STW-1045	01/01/05	Gr. Alpha	0.45 ± 0.10	0.53	0.00 - 1.05	Pass
STW-1045	01/01/05	Gr. Beta	1.90 ± 0.10	1.67	0.84 - 2.51	Pass
STW-1046	01/01/05	Am-241	1.62 ± 0.12	1.72	1.20 - 2.24	Pass
STW-1046	01/01/05	Co-57	239.40 ± 1.20	227.00	158.90 - 295.10	Pass
STW-1046	01/01/05	Co-60	248.70 ± 1.00	251.00	175.70 - 326.30	Pass
STW-1046	01/01/05	Cs-134	115.50 ± 1.80	127.00	88.90 - 165.10	Pass
STW-1046	01/01/05	Cs-137	328.50 ± 1.70	332.00	232.40 - 431.60	Pass
STW-1046	01/01/05	Fe-55	64.90 ± 7.00	75.90	53.13 - 98.67	Pass
STW-1046	01/01/05	H-3	304.00 ± 9.70	280.00	196.00 - 364.00	Pass
STW-1046	01/01/05	Mn-54	334.80 ± 1.90	331.00	231.70 - 430.30	Pass
STW-1046	01/01/05	Ni-63	7.10 ± 1.60	9.00	0.00 - 20.00	Pass
STW-1046	01/01/05	Pu-238	0.01 ± 0.02	0.02	0.00 - 1.00	Pass
STW-1046	01/01/05	Pu-239/40	2.50 ± 0.14	2.40	1.68 - 3.12	Pass
STW-1046	01/01/05	Sr-90	0.70 ± 0.80	0.00	0.00 - 5.00	Pass
STW-1046	01/01/05	Tc-99	43.20 ± 1.40	42.90	30.03 - 55.77	Pass
STW-1046	01/01/05	U-233/4	3.31 ± 0.20	3.24	2.27 - 4.21	Pass
STW-1046	01/01/05	U-238	3.38 ± 0.20	3.33	2.33 - 4.33	Pass
STW-1046	01/01/05	Zn-65	538.40 ± 3.80	496.00	347.20 - 644.80	Pass
STVE-1047	01/01/05	Co-57	10.60 ± 0.20	9.88	6.92 - 12.84	Pass
STVE-1047	01/01/05	Co-60	3.00 ± 0.20	3.15	2.21 - 4.10	Pass
STVE-1047	01/01/05	Cs-134	4.80 ± 0.40	5.00	3.50 - 6.50	Pass
STVE-1047	01/01/05	Cs-137	4.10 ± 0.30	4.11	2.88 - 5.34	Pass
STVE-1047	01/01/05	Mn-54	5.10 ± 0.30	5.18	3.63 - 6.73	Pass
STVE-1047	01/01/05	Zn-65	6.20 ± 0.50	6.29	4.40 - 8.18	Pass
STSO-1048	01/01/05	Am-241	96.60 ± 10.00	109.00	76.30 - 141.70	Pass
STSO-1048	01/01/05	Co-57	264.00 ± 2.00	242.00	169.40 - 314.60	Pass
STSO-1048	01/01/05	Co-60	226.50 ± 2.20	212.00	148.40 - 275.60	Pass
STSO-1048	01/01/05	Cs-134	760.60 ± 3.70	759.00	531.30 - 986.70	Pass
STSO-1048	01/01/05	Cs-137	336.20 ± 3.60	315.00	220.50 - 409.50	Pass
STSO-1048	01/01/05	K-40	663.70 ± 18.00	604.00	422.80 - 785.20	Pass
STSO-1048	01/01/05	Mn-54	541.30 ± 3.90	485.00	339.50 - 630.50	Pass
STSO-1048	01/01/05	Ni-63	924.30 ± 17.20	1220.00	854.00 - 1586.00	Pass
STSO-1048	01/01/05	Pu-238	0.60 ± 0.80	0.48	0.00 - 1.00	Pass
STSO-1048	01/01/05	Pu-239/40	78.00 ± 4.80	89.50	62.65 - 116.35	Pass
STSO-1048	01/01/05	Sr-90	514.60 ± 18.70	640.00	448.00 - 832.00	Pass
STSO-1048	01/01/05	U-233/4	47.90 ± 4.00	62.50	43.75 - 81.25	Pass
STSO-1048	01/01/05	U-238	226.30 ± 8.60	249.00	174.30 - 323.70	Pass
STSO-1048	01/01/05	Zn-65	851.30 ± 7.30	810.00	567.00 - 1053.00	Pass
STAP-1050	01/01/05	Gr. Alpha	0.11 ± 0.03	0.23	0.00 - 0.46	Pass
STAP-1050	01/01/05	Gr. Beta	0.38 ± 0.05	0.30	0.15 - 0.45	Pass

TABLE E-5 DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)[a] ENVIRONMENTAL, INC., 2005

Lab Code[c]	Date	Analysis	Concentration[b] Laboratory result	Known Activity	Control Limits[a]	Acceptance
STAP-1049	01/01/05	Am-241	0.10 ± 0.04	0.10	0.07 - 0.13	Pass
STAP-1049	01/01/05	Co-57	4.76 ± 0.64	4.92	3.44 - 6.40	Pass
STAP-1049	01/01/05	Co-60	2.84 ± 0.22	3.03	2.12 - 3.94	Pass
STAP-1049	01/01/05	Cs-134	3.54 ± 0.37	3.51	2.46 - 4.56	Pass
STAP-1049	01/01/05	Cs-137	2.20 ± 0.27	2.26	1.58 - 2.94	Pass
STAP-1049	01/01/05	Mn-54	3.15 ± 0.21	3.33	2.33 - 4.33	Pass
STAP-1049	01/01/05	Pu-238	0.16 ± 0.04	0.20	0.14 - 0.25	Pass
STAP-1049	01/01/05	Pu-239/40	0.17 ± 0.02	0.17	0.14 - 0.25	Pass
STAP-1049[e]	01/01/05	Sr-90	2.24 ± 0.34	1.35	0.95 - 1.76	Fail
STAP-1049	01/01/05	U-233/4	0.34 ± 0.02	0.34	0.24 - 0.44	Pass
STAP-1049	01/01/05	U-238	0.35 ± 0.02	0.35	0.25 - 0.46	Pass
STAP-1049	01/01/05	Zn-65	3.12 ± 0.15	3.14	2.20 - 4.08	Pass
STW-1061	07/01/05	Am-241	2.21 ± 0.13	2.23	1.56 - 2.90	Pass
STW-1061	07/01/05	Co-57	293.20 ± 7.30	272.00	190.40 - 353.60	Pass
STW-1061	07/01/05	Co-60	275.70 ± 1.30	261.00	182.70 - 339.30	Pass
STW-1061	07/01/05	Cs-134	171.80 ± 4.00	167.00	116.90 - 217.10	Pass
STW-1061	07/01/05	Cs-137	342.10 ± 2.20	333.00	233.10 - 432.90	Pass
STW-1061	07/01/05	Fe-55	167.80 ± 9.30	196.00	137.20 - 254.80	Pass
STW-1061	07/01/05	H-3	514.20 ± 12.60	527.00	368.90 - 685.10	Pass
STW-1061	07/01/05	Mn-54	437.00 ± 2.50	418.00	292.60 - 543.40	Pass
STW-1061	07/01/05	Ni-63	105.10 ± 3.60	100.00	70.00 - 130.00	Pass
STW-1061	07/01/05	Pu-238	1.64 ± 0.12	1.91	1.34 - 2.48	Pass
STW-1061	07/01/05	Pu-239/40	2.32 ± 0.13	2.75	1.93 - 3.58	Pass
STW-1061	07/01/05	Sr-90	9.20 ± 1.30	8.98	6.29 - 11.67	Pass
STW-1061	07/01/05	Tc-99	72.30 ± 2.30	66.50	46.55 - 86.45	Pass
STW-1061	07/01/05	U-233/4	4.11 ± 0.18	4.10	2.87 - 5.33	Pass
STW-1061	07/01/05	U-238	4.14 ± 0.18	4.26	2.98 - 5.54	Pass
STW-1061	07/01/05	Zn-65	364.60 ± 4.90	330.00	231.00 - 429.00	Pass
STW-1062	07/01/05	Gr. Alpha	0.57 ± 0.05	0.79	0.21 - 1.38	Pass
STW-1062	07/01/05	Gr. Beta	1.36 ± 0.05	1.35	0.85 - 1.92	Pass
STSO-1063[f]	07/01/05	Am-241	48.40 ± 3.90	81.10	56.77 - 105.43	Fail
STSO-1063	07/01/05	Co-57	608.30 ± 2.80	524.00	366.80 - 681.20	Pass
STSO-1063	07/01/05	Co-60	322.70 ± 2.40	287.00	200.90 - 373.10	Pass
STSO-1063	07/01/05	Cs-134	632.10 ± 5.20	568.00	397.60 - 738.40	Pass
STSO-1063	07/01/05	Cs-137	512.40 ± 4.20	439.00	307.30 - 570.70	Pass
STSO-1063	07/01/05	K-40	720.50 ± 19.00	604.00	422.80 - 785.20	Pass
STSO-1063	07/01/05	Mn-54	516.80 ± 5.10	439.00	307.30 - 570.70	Pass
STSO-1063	07/01/05	Ni-63	366.50 ± 13.30	445.00	311.50 - 578.50	Pass
STSO-1063	07/01/05	Pu-238	68.80 ± 15.00	60.80	42.56 - 79.04	Pass
STSO-1063	07/01/05	Pu-239/40	0.00 ± 0.00	0.00	0.00 - 0.00	
STSO-1063	07/01/05	Sr-90	602.90 ± 17.20	757.00	529.90 - 984.10	Pass
STSO-1063	07/01/05	U-233/4	61.50 ± 1.00	52.50	36.75 - 68.25	Pass
STSO-1063	07/01/05	U-238	164.50 ± 16.70	168.00	117.60 - 218.40	Pass
STSO-1063	07/01/05	Zn-65	874.70 ± 8.40	823.00	576.10 - 1070.00	Pass

TABLE E-5 DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)[a] ENVIRONMENTAL, INC., 2005

Lab Code[c]	Date	Analysis	Concentration[b] Laboratory result	Known Activity	Control Limits[d]	Acceptance
STVE-1064	07/01/05	Am-241	0.18 ± 0.03	0.23	0.16 - 0.30	Pass
STVE-1064	07/01/05	Co-57	15.90 ± 0.20	13.30	9.31 - 17.29	Pass
STVE-1064	07/01/05	Co-60	4.80 ± 0.10	4.43	3.10 - 5.76	Pass
STVE-1064	07/01/05	Cs-134	4.60 ± 0.20	4.09	2.86 - 5.32	Pass
STVE-1064	07/01/05	Cs-137	5.90 ± 0.30	5.43	3.80 - 7.06	Pass
STVE-1064	07/01/05	Mn-54	7.20 ± 0.20	6.57	4.60 - 8.54	Pass
STVE-1064	07/01/05	Pu-238	0.04 ± 0.02	0.00	0.00 - 1.00	Pass
STVE-1064	07/01/05	Pu-239/40	0.13 ± 0.02	0.16	0.11 - 0.21	Pass
STVE-1064	07/01/05	Sr-90	2.80 ± 0.30	2.42	1.69 - 3.15	Pass
STVE-1064	07/01/05	U-233/4	0.28 ± 0.03	0.33	0.23 - 0.43	Pass
STVE-1064	07/01/05	U-238	0.33 ± 0.04	0.35	0.24 - 0.45	Pass
STVE-1064	07/01/05	Zn-65	11.00 ± 0.50	10.20	7.14 - 13.26	Pass
STAP-1065	07/01/05	Gr. Alpha	0.30 ± 0.04	0.48	0.00 - 0.80	Pass
STAP-1065	07/01/05	Gr. Beta	0.97 ± 0.06	0.83	0.55 - 1.22	Pass
STAP-1066	07/01/05	Am-241	0.14 ± 0.03	0.16	0.11 - 0.21	Pass
STAP-1066	07/01/05	Co-57	5.81 ± 0.17	6.20	4.34 - 8.06	Pass
STAP-1066	07/01/05	Co-60	2.79 ± 0.14	2.85	2.00 - 3.71	Pass
STAP-1066	07/01/05	Cs-134	3.67 ± 0.12	3.85	2.70 - 5.01	Pass
STAP-1066	07/01/05	Cs-137	2.93 ± 0.23	3.23	2.26 - 4.20	Pass
STAP-1066	07/01/05	Mn-54	4.11 ± 0.26	4.37	3.06 - 5.68	Pass
STAP-1066	07/01/05	Pu-238	0.11 ± 0.02	0.10	0.07 - 0.13	Pass
STAP-1066	07/01/05	Pu-239/40	0.10 ± 0.01	0.09	0.06 - 0.12	Pass
STAP-1066	07/01/05	Sr-90	2.25 ± 0.29	2.25	1.58 - 2.93	Pass
STAP-1066	07/01/05	U-233/4	0.28 ± 0.02	0.27	0.19 - 0.35	Pass
STAP-1066	07/01/05	U-238	0.28 ± 0.02	0.28	0.20 - 0.37	Pass
STAP-1066	07/01/05	Zn-65	4.11 ± 0.26	4.33	3.06 - 5.68	Pass

[a] Results obtained by Environmental, Inc., Midwest Laboratory as a participant in the Department of Energy's Mixed Analyte Performance Evaluation Program, Idaho Operations office, Idaho Falls, Idaho

[b] Results are reported in units of Bq/kg (soil), Bq/L (water) or Bq/total sample (filters, vegetation) as requested by the Department of Energy.

[c] Laboratory codes as follows: STW (water), STAP (air filter), STSO (soil), STVE (vegetation).

[d] MAPEP results are presented as the known values and expected laboratory precision (1 sigma, 1 determination) and control limits as defined by the MAPEP.

[e] The strontium carbonate precipitates were redissolved and processed. The average of the three analyses was 1.34 pCi/L, although the recovery was only 30%. The result of a new analysis was 1.56 pCi/L.

[f] Incorrect sample weight used in calculation. Result of recalculation: 97.0 ± 7.8 Bq/kg.

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