AmerGen

An Exelon Company

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Subject: Clinton Power Station Annual Radiological Environmental Operating Report

In accordance with Technical Specification requirement 5.6.2, AmerGen Energy Company, LLC (AmerGen) is submitting the 2005 Annual Radiological Environmental Operating Report for Clinton Power Station. This report covers the period from January 1, 2005 through December 31, 2005.

Respectfully,

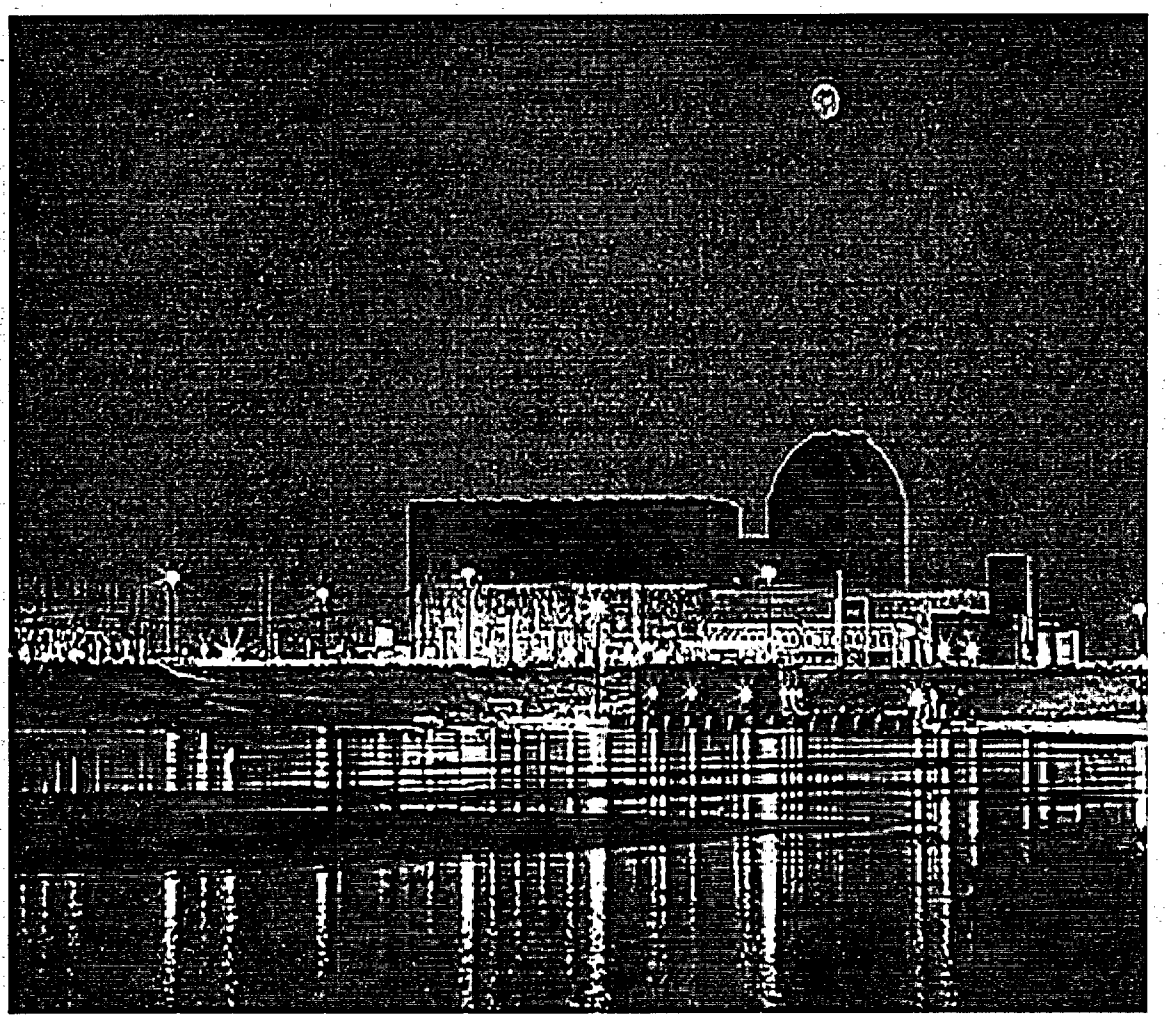
M. D. McDowell
Plant Manager
Clinton Power Station

EET/blf

Attachment

cc: Regional Administrator - NRC Region III
NRC Senior Resident Inspector – Clinton Power Station
Office of Nuclear Facility Safety – Illinois Emergency Management Agency

IE25



Docket No: 50-461

CLINTON POWER STATION

Annual Radiological Environmental Operating Report

1 January Through 31 December 2005

Prepared By

Teledyne Brown Engineering
Environmental Services

AmerGen℠
An Exelon Company

Clinton Power Station
Clinton, IL 61727

April 2006

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I. Summary and Conclusions

This report on the Radiological Environmental Monitoring Program conducted for the Clinton Power Station (CPS) by AmerGen covers the period 1 January 2005 through 31 December 2005. During that time period, 1,561 analyses were performed on 1,285 samples. In assessing all the data gathered for this report and comparing these results with preoperational data, it was concluded that the operation of CPS had no adverse radiological impact on the environment.

There were zero (0) radioactive liquid releases from CPS during 2005. Releases of gaseous radioactive materials were accurately measured in plant effluents. There was no gaseous effluent releases that approached the limits specified in the CPS Offsite Dose Calculation Manual (ODCM). The highest calculated offsite dose received by a member of the public due to the release of gaseous effluents from Clinton Power Station was 1.06 E-03 mR (or 0.00106 milli-Roentgen).

Surface, drinking, and ground water samples were analyzed for concentrations of tritium and gamma emitting nuclides. Drinking water samples were also analyzed for concentrations of gross beta. No fission or activation products were detected. Gross beta activities detected were consistent with those detected in previous years. No tritium activity was detected and the required LLD was met.

Fish and sediment samples were analyzed for concentrations of gamma emitting nuclides. No fission or activation products were detected in fish or sediment samples.

Air particulate samples were analyzed for concentrations of gross beta and gamma emitting nuclides. Cosmogenic Be-7 was detected at levels consistent with those detected in previous years. No fission or activation products were detected.

High sensitivity I-131 analyses were performed on weekly air samples. All required LLDs were met.

Cow milk samples were analyzed for concentrations of I-131 and gamma emitting nuclides. All I-131 results were below the minimum detectable concentration and all required LLDs were met. Concentrations of naturally occurring K-40 were consistent with those detected in previous years. No fission or activation products were found.

Food product samples were analyzed for concentrations of gross beta and gamma emitting nuclides. Gross beta activities detected were consistent with those detected in previous years. Concentrations of Cosmogenic Be-7 and naturally occurring K-40 were consistent with those detected in previous years. No fission or activation products were detected.

Grass samples were analyzed for concentrations of gamma emitting nuclides. Concentrations of Cosmogenic Be-7 and naturally occurring K-40 were

consistent with those detected in previous years. No fission or activation products were detected.

Environmental gamma radiation measurements were performed quarterly using thermoluminescent dosimeters. Levels detected were consistent with those observed in previous years.

II. Introduction

The Clinton Power Station (CPS), consisting of one 1017 MWt boiling water reactor is located in Harp Township, DeWitt County, Illinois. CPS is owned and operated by AmerGen Energy Company and became operational in 1987. Unit No. 1 went critical on 15 February 1987. The site encloses approximately 13,730 acres. This includes the 4,895 acre, man-made cooling lake and about 452 acres of property not owned by AmerGen. The plant is situated on approximately 150 acres. The cooling water discharge flume – which discharges to the eastern arm of the lake – occupies an additional 130 acres. Although the nuclear reactor, supporting equipment and associated electrical generation and distribution equipment lie in Harp Township, portions of the aforementioned 13,730 acre plot reside within Wilson, Rutledge, DeWitt, Creek, Nixon and Santa Anna Townships.

A Radiological Environmental Monitoring Program (REMP) for CPS was initiated in 1987. The preoperational period for most media covers the periods May 1980 through 27 February 1987 and was summarized in a separate report. This report covers those analyses performed by Teledyne Brown Engineering (TBE), Global Dosimetry, and Environmental Inc. (Midwest Labs) on samples collected during the period 1 January 2005 through 31 December 2005.

A. Objective of the REMP

The objectives of the REMP are to:

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

The 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 Station operation to assess Station radiological effects (if any) on man and the environment.

III. Program Description

A. Sample Collection

This section describes the general collection methods used by Clinton and Environmental Inc. to obtain environmental samples for the CPS REMP in 2005. Sample locations and descriptions can be found in Tables B–1 and B–2, and Figures B–1 through B–3, Appendix B. The sampling methods used by Clinton and Environmental Inc. (Midwest Labs) are listed in Table B-2.

Aquatic Environment

The aquatic environment was evaluated by performing radiological analyses on samples of surface water, drinking water, well water, fish, and sediment. Two gallon water samples were collected monthly from continuous samplers located at three surface water locations (CL-90, CL-91 and CL-99), one drinking water location (CL-14) and two well water locations (CL-07D and CL-12) and a monthly grab sample was collected from one surface water location (CL-13). All samples were collected in new unused plastic bottles, which were rinsed at least twice with source water prior to collection. Fish samples comprising the flesh of largemouth bass, crappie, carp, and bluegill, the species most commonly harvested from the lakes by sporting fishermen, were collected semiannually at two locations, CL-19 and CL-105 (control). Sediment samples composed of recently deposited substrate were collected at one location semiannually, CL-07B.

Atmospheric Environment

The atmospheric environment was evaluated by performing radiological analyses on samples of air particulate, airborne iodine, milk, food produce and grass. Airborne iodine and particulate samples were collected and analyzed weekly at ten locations (CL-01, CL-02, CL-03, CL-04, CL-06, CL-07, CL-08, CL-11, CL-15, and CL-94). The control location was CL-11. 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 one cubic foot per minute. The filters were replaced weekly and sent to the laboratory for analysis.

Milk samples were collected biweekly at one location (CL-116) from May through October, and monthly from November through April. All samples were collected in new unused plastic bottles from the bulk tank at each

location, preserved with sodium bisulfite, and shipped promptly to the laboratory.

Food products were collected once a month from June through September at four locations (CL-114, CL-115, CL-117 and CL-118). The control location was CL-114. Various types of samples were collected and placed in new unused plastic bags, and sent to the laboratory for analysis.

Grass samples were collected biweekly at four locations (CL-01, CL-02, CL-08 and CL-116) from May through October. The control location was CL-116. All samples were collected in new unused plastic bags and sent to the laboratory for analysis.

Ambient Gamma Radiation

Direct radiation measurements were made using Panasonic 814 calcium sulfate (CaF_2) thermoluminescent dosimeters (TLD). The TLD locations were placed on and around the CPS site as follows:

An inner ring consisting of 16 locations (CL-01, CL-05, CL-22, CL-23, CL-24, CL-34, CL-35, CL-36, CL-42 CL-43, CL-44, CL-45, CL-46, CL-47, CL-48 and CL-63) near and within the site perimeter.

An outer ring consisting of 16 locations (CL-51, CL-52, CL-53, CL-54, CL-55, CL-56, CL-57, CL-58, CL-60, CL-61, CL-76, CL-77, CL-78, CL-79, CL-80 and CL-81) extending to approximately 5 miles from the site designed to measure possible exposures to close-in population.

A special interest set consisting of seven locations (CL-37, CL-41, CL-49, CL-64, CL65, CL-74 and CL-75) representing special interest areas.

A supplemental set consisting of 14 locations (CL-02, CL-03, CL-04, CL-06, CL-07, CL-08, CL-15, CL-33, CL-84, CL-90, CL-91, CL-97, CL-99, and CL-114).

The balance of 1 location (CL-11) representing the control station.

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 sixteen–22 1/2 degree sectors around the site, where estimated annual dose from CPS, if any, would be most significant;

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

4. And near the closest dwelling to the vents in the prevailing downwind direction.

Two TLDs – each composed of two CaF_2 thermoluminescent phosphors enclosed in plastic – were placed at each location in a PVC conduit located approximately three feet above ground level. The TLDs were exchanged quarterly and sent to Global Dosimetry for analysis.

B. Sample Analysis

This section describes the general analytical methodologies used by TBE and Environmental Inc. (Midwest Labs) to analyze the environmental samples for radioactivity for the CPS REMP in 2005. The analytical procedures used by the laboratories are listed in Table B-2.

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

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

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

3. Concentrations of tritium in surface, drinking and well 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 CPS becoming operational was used as a baseline with which these operational data were compared. For the purpose of this report, CPS was considered operational at initial criticality. In addition, data were compared to previous years' operational data for consistency and trending. Several factors were important in the interpretation of the data:

1. <u>Lower Limit of Detection and Minimum Detectable Concentration</u>

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 CPS 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 may 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 water, drinking water, well water, fish, sediment and milk, 14 nuclides, Be-7, K-40, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Zr-95, Nb-95, Cs-134, Cs-137, Ba-140, La-140 and Ce-144 were reported.

For grass and vegetation 15 nuclides, Be-7, K-40, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Zr-95, Nb-95, I-131, Cs-134, Cs-137, Ba-140, La-140 and Ce-144 were reported.

For air particulate 11 nuclides, Be-7, K-40, Co-60, Nb-95, Zr-95, Ru-103, Ru-106, Cs-134, Cs-137, Ce-141, and Ce-144 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

The exceptions described below are those that are considered 'deviations'

from the Radiological Environmental Monitoring Program as required by the Station's ODCM. By definition, 'deviations' are permitted as delineated within NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants", October 1978, and within Radiological Assessment Branch Technical Position, Revision 1, November 1979, which states...."Deviations are permitted from the required sampling schedule if specimens are unobtainable due to hazardous conditions, seasonal unavailability, malfunction of automatic sampling equipment and other legitimate reasons".... The below section addresses the reporting requirements found within Section 7.1 of the Station's ODCM.

July 6, 2005

Water sampler CL-99 locked up and unable to collect composite sample. (Issue Report 351449)

August 10, 2005

Water compositor CL-91 found not working and was replaced the following day. (Issue Report 363263)

September 2, 2005

Air sampler CL-06 was found not running due to loss of power (Issue Report 371080)

September 28, 2005

TLD sample station CL-47 found to be missing during quarterly collection (Issue Report 379317)

October 10, 2005

Air samplers CL-02 and CL-03 found not running due to loss of power (Issue Report 382388)

October 12, 2005

Air sampler CL-03 found not running due to loss of power (Issue Report 385277)

December 7, 2005

Air sampler CL-03 found not running due to loss of power (Issue

Report 431566)

December 15, 2005

Water sampler CL-91 secured due to frozen sampling line (Issue Report 434417)

Table D-1 LISTING OF SAMPLE ANOMALIES

Sample Type	Location Code	Collection Date	Reason
A/I	CL-02	10/05/05 – 10/15/05	Low reading due to power failure.
TLD	CL-37	April-June	TLD standard deviation was not calculated due to one or more elements that were damaged or produced unusual results.

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 recurrence. Occasional equipment breakdowns and power outages were unavoidable.

The overall sample recovery rate indicates that the appropriate procedures and equipment are in place to assure reliable program implementation.

E. Program Changes

Beginning the third quarter 2005, Teledyne Brown Engineering Environmental Services became the primary laboratory and Environmental Inc. (Midwest Labs) became the QC laboratory.

Samples for the CPS REMP were collected by Clinton for Amergen Energy Company during the first half of 2005 and by Environmental Inc. (Midwest Labs) during the last half of 2005.

IV. Results and Discussion

A. Aquatic Environment

1. Surface Water

Samples were taken from a continuous sampler at three locations (CL-90, CL-91 and CL-99) on a monthly schedule and grab samples were taken monthly from one station (CL-13). The following analyses were performed.

Iodine-131

Monthly samples from location CL-90 were analyzed for I-131 activity (Table C-I.1, Appendix C). The highest MDC calculated was <1.0 pCi/L and the required LLD was met.

Tritium

Monthly samples from all locations were composited quarterly and analyzed for tritium activity (Table C–I.2, Appendix C). The highest MDC calculated was <175 pCi/l, which is below the vendor required LLD of 200 pCi/L.

Gamma Spectrometry

Samples from all locations were analyzed for gamma emitting nuclides (Table C–I.3, Appendix C). Naturally occurring K-40 was found in one sample at location CL-13 at a concentration of 25 pCi/L. No other nuclides were detected and all required LLDs were met.

2. Drinking Water

Monthly samples were collected from a continuous water sampler at one location (CL-14). The following analyses were performed:

Gross Beta

Monthly samples were analyzed for concentrations of gross beta (Tables C–II.1, Appendix C). The values ranged from <1.0 to 2.1 pCi/l. Concentrations detected were consistent with those detected in previous years.

Tritium

Monthly samples were composited quarterly and analyzed for tritium activity (Table C–II.2, Appendix C). The highest MDC

calculated was <164 pCi/l, which is below the vendor required LLD of 200 pCi/L.

Gamma Spectrometry

Monthly samples were analyzed for gamma emitting nuclides (Table C–II.3, Appendix C). No nuclides were detected and all required LLDs were met.

3. Ground Water

Quarterly grab samples were collected at two locations (CL-7D and CL-12, consisting of CL-12R and CL-12T). The following analyses were performed:

Tritium

Samples from all locations were analyzed for tritium activity (Table C–III.1, Appendix C). The highest MDC calculated was <196 pCi/l, which is below the vendor required LLD of 200 pCi/L.

Gamma Spectrometry

Samples from all locations were analyzed for gamma emitting nuclides (Table C–III.2, Appendix C). Naturally occurring K-40 was found at both stations and ranged from 81 to 84 pCi/l. No other nuclides were detected and all required LLDs were met.

4. Fish

Fish samples comprised of carp, bass, bluegill, crappie, striper and white hybrids were collected at two locations (CL-19 and CL-105) semiannually. The following analysis was performed:

Gamma Spectrometry

The edible portion of fish samples from both locations was analyzed for gamma emitting nuclides (Table C–IV.1, Appendix C). Naturally occurring K-40 was found at both stations and ranged from 2,450 to 3,780 pCi/kg wet and was consistent with levels detected in previous years. No fission or activation products were found.

5. Sediment

Aquatic sediment samples were collected at one location (CL-07B) semiannually. The following analysis was performed:

Gamma Spectrometry

Sediment samples were analyzed for gamma emitting nuclides (Table C–V.1, Appendix C). Naturally occurring K-40 was the only nuclide detected.

Potassium-40 was found in both samples and ranged from <5,210 to 8,390. The activity detected was consistent with those detected in the pre–operational years. No fission or activation products were found.

B. Atmospheric Environment

1. Airborne

a. Air Particulates

Continuous air particulate samples were collected from 10 locations on a weekly basis. The 10 locations were separated into three groups: Group I represents locations within one mile of the CPS site boundary (CL-02, CL-03, CL-04, CL-06, CL-15, and CL-94). Group II represents the locations at an intermediate distance within one to five miles of CPS (CL-01, CL-07, and CL-08), and Group III represents the control location greater than five miles from CPS (CL-11). The following analyses were performed:

Gross Beta

Weekly samples were analyzed for concentrations of beta emitters (Table C–VI.1 and C–VI.2 and Figure C–1, 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 CPS. The results from the On-Site locations (Group I) ranged from 7 to 43 E–3 pCi/m^3 with a mean of 22 E–3 pCi/m^3. The results from the Intermediate Distance location (Group II) ranged from <7 to 43 E–3 pCi/m^3 with a mean of

22 E–3 pCi/m^3. The results from the Control locations (Group III) ranged from 10 to 43 E–3 pCi/m^3 with a mean of 23 E–3 pCi/m^3. Comparison of the 2005 air particulate data with previous years data indicate no effects from the operation of CPS (Figure C–5, Appendix C). In addition a comparison of the weekly mean values for 2005 indicate no notable differences among the three groups.

Gamma Spectrometry

Weekly samples were composited quarterly and analyzed for gamma emitting nuclides (Table C–VI.3, Appendix C). Naturally occurring Be-7 due to cosmic ray activity was detected in all samples. These values ranged from <43 to 97 E–3 pCi/m^3. All other nuclides were less than the MDC and all required LLDs were met.

b. Airborne Iodine

Continuous air samples were collected from 10 locations (CL-01, CL-02, CL-03, CL-04, CL-06, CL-07, CL-08, CL-11, CL-15 and CL-94) and analyzed weekly for I-131 (Table C–VII.1, Appendix C). All results were less than the MDC and the required LLD was met.

2. Terrestrial

a. Milk

Samples were collected from one location (CL-116) biweekly May through October and monthly November through April. The following analyses were performed:

Iodine-131

Milk samples were analyzed for concentrations of I-131 (Table C–VIII.1, Appendix C). All results were less than the MDC and the required LLD was met.

Gamma Spectrometry

Each milk sample was analyzed for concentrations of gamma emitting nuclides (Table C–VIII.2, Appendix C). Naturally occurring K-40 activity was found in all samples and ranged from 1,015 to 1,410 pCi/l. All other nuclides

were less than the MDC and all required LLDs were met.

b. Food Products

Samples were collected from four locations (CL-114, CL-115, CL-117 and CL-118) monthly June through September. The following analyses were performed:

Gamma Spectrometry

Each food product sample was analyzed for concentrations of gamma emitting nuclides (Table C–IX.1, Appendix C).

Naturally occurring Be–7 due to cosmic ray activity was detected in 32 of 48 samples. The values ranged from 73 to 4,570 pCi/kg wet. Naturally occurring K-40 activity was found in all samples. The values ranged from 2,220 to 11,600 pCi/kg wet. All other nuclides were less than the MDC and all required LLDs were met.

b. Grass

Samples were collected from four locations (CL-01, CL-02, CL-08, and CL-116) biweekly May through October. The following analyses were performed:

Gamma Spectrometry

Each grass sample was analyzed for concentrations of gamma emitting nuclides (Table C–IX.2, Appendix C).

Naturally occurring Be–7 due to cosmic ray activity was detected in all 52 samples. The values ranged from 810 to 4,930 pCi/kg wet. Naturally occurring K-40 activity was found in all samples. The values ranged from 3,240 to 15,770 pCi/kg wet. All other nuclides were less than the MDC and all required LLDs were met.

C. Ambient Gamma Radiation

Ambient gamma radiation levels were measured utilizing Panasonic 814 (CaF_2) thermoluminescent dosimeters. Fifty-four TLD locations were established around the site. Results of TLD measurements are listed in Tables C–X.1 to C–X.3, Appendix C.

TLD measurements from the inner ring ranged from 15.6 to 23.0 mR/quarter with an average of measurement of 20.6 mR/quarter. TLD measurements from the outer ring ranged from 18.6 to 23.2 mR/quarter with an average measurement of 21.0 mR/quarter. The inner ring and outer ring measurements compared well to the control station, CL-11, which ranged from 18.1 mR/quarter to 20.4 mR/quarter with an average measurement of 19.3 mR/quarter. A comparison of the Inner Ring and Outer Ring data to the Control Location data indicate that the ambient gamma radiation levels from all the locations were comparable. The historical ambient gamma radiation data from the control location were plotted along with similar data from the Inner and Outer Ring Locations (Figure C–2, Appendix C).

D. Land Use Survey

A Land Use Survey conducted during the July through October 2005 growing season around the Clinton Power Station (CPS) was performed by Environmental Inc. (Midwest Labs) for AmerGen to comply with Clinton's Offsite Dose Calculation Manual, section 5.2. The purpose of the survey was to document the nearest resident, milk producing animal and garden of greater than 538 ft^2 in each of the sixteen 22 ½ degree sectors around the site. The distance and direction of all locations from the CPS Station HVAC vent stack were positioned using Global Positioning System (GPS) technology. There were no changes required to the CPS REMP, as a result of this survey. The results of this survey are summarized below.

Distance in Miles from the CPS Station HVAC Vent Stack			
Sector	Residence Miles	Garden Miles	Milk Farm Miles
1 N	0.9	0.9	0.9
2 NNE	1.0	3.6	2.3
3 NE	1.3	2.2	>5.0
4 ENE	1.8	2.6	>5.0
5 E	1.0	>5.0	1.0
6 ESE	3.2	3.3	>5.0
7 SE	2.8	>5.0	>5.0
8 SSE	1.8	2.8	>5.0
9 S	3.0	3.0	4.1
10 SSW	2.9	>5.0	>5.0
11 SW	0.7	>5.0	>5.0
12 WSW	1.6	>5.0	2.9
13 W	1.6	2.0	>5.0
14 WNW	1.6	2.0	0.8
15 NW	1.6	>5.0	2.3
16 NNW	1.7	1.3	1.3

E. Summary of Results – Inter-Laboratory Comparison Program

The primary and secondary laboratories analyzed Performance Evaluation (PE) samples of air particulate, air iodine, milk, soil, vegetation and water matrices for 19 analytes (Appendix D). 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 TBE's result 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 he 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

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21. Technical Specifications, Clinton Power Station, Unit No. 1, Docket No. 50-461, Office of Nuclear Reactor Regulation, 1986. Facility Operating License Number NPF-62.

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23. Clinton Power Station, Unit 1, Off-Site Dose Calculation Manual.

APPENDIX A

RADIOLOGICAL ENVIRONMENTAL MONITORING REPORT SUMMARY

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

Name of Facility: CLINTON POWER STATION — **DOCKET NUMBER:** 50-461
Location of Facility: DEWITT COUNTY, IL — **REPORTING PERIOD:** ANNUAL 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: STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
SURFACE WATER (PCI/LITER)	I-131 (LOW LVL)	12	1	0.5 (0/12) (< 0.3/< 1.0)	NA	0.5 (0/12) (< 0.3/< 1.0)	CL-90 INDICATOR DISCHARGE FLUME 0.4 MILES SE	0
	H-3	16	200	162 (0/16) (<150/<175)	NA	164 (0/4) (<150/<175)	CL-99 INDICATOR NORTH FORK ACCESS 3.5 MILES NNE	0
	GAMMA	48						
	BE-7		NA	39 (0/48) (<12/<68)	NA	42 (0/12) (<13/<66)	CL-90 INDICATOR DISCHARGE FLUME 0.4 MILES SE	0
	K-40		NA	77 (1/48) (<9/<149)	NA	83 (1/12) (25/<121)	CL-13 INDICATOR SALT CREEK BRIDGE ON RT. 10 3.6 MILES SW	0
	MN-54		15	4 (0/48) (<1/<9)	NA	5 (0/12) (<1/<7)	CL-99 INDICATOR NORTH FORK ACCESS 3.5 MILES NNE	0
	CO-58		15	4 (0/48) (<1/<9)	NA	4 (0/12) (<1/<6)	CL-99 INDICATOR NORTH FORK ACCESS 3.5 MILES NNE	0
	FE-59		30	8 (0/48) (<3/<15)	NA	8 (0/12) (<3/<15)	CL-99 INDICATOR NORTH FORK ACCESS 3.5 MILES NNE	0
	CO-60		15	4 (0/48) (<1/<10)	NA	4 (0/12) (<1/<10)	CL-90 INDICATOR DISCHARGE FLUME 0.4 MILES SE	0

THE MEAN AND 2 STANDARD DEVIATION VALUES ARE CALCULATED USING BOTH THE MDAs AND THE POSITIVE VALUES
FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F)

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	ZN-65		30	7 (0/48) (<2/<21)	NA	8 (0/12) (<2/<19)	CL-90 INDICATOR DISCHARGE FLUME 0.4 MILES SE	0
	NB-95		15	5 (0/48) (<1/<10)	NA	5 (0/12) (<1/<10)	CL-99 INDICATOR NORTH FORK ACCESS 3.5 MILES NNE	0
	ZR-95		30	8 (0/48) (<2/<15)	NA	8 (0/12) (<3/<12)	CL-99 INDICATOR NORTH FORK ACCESS 3.5 MILES NNE	0
	CS-134		15	4 (0/48) (<1/<10)	NA	4 (0/12) (<1/<9)	CL-99 INDICATOR NORTH FORK ACCESS 3.5 MILES NNE	0
	CS-137		18	4 (0/48) (<1/<10)	NA	5 (0/12) (<1/<10)	CL-90 INDICATOR DISCHARGE FLUME 0.4 MILES SE	0
	BA-140		60	23 (0/48) (<8/<48)	NA	24 (0/12) (<16/<39)	CL-99 INDICATOR NORTH FORK ACCESS 3.5 MILES NNE	0
	LA-140		15	7 (0/48) (<2/<15)	NA	7 (0/12) (<3/<12)	CL-99 INDICATOR NORTH FORK ACCESS 3.5 MILES NNE	0
	CE-144		NA	34 (0/48) (<7/<63)	NA	35 (0/12) (<8/<57)	CL-13 INDICATOR SALT CREEK BRIDGE ON RT. 10 3.6 MILES SW	0

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DRINKING WATER (PCI/LITER)	GR-B	12	4	1.6 (8/12) (< 1.0/< 2.1)	NA	1.6 (8/12) (< 1.0/< 2.1)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	H-3	4	200	160 (0/4) (<150/<164)	NA	160 (0/4) (<150/<164)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	GAMMA	12						
	BE-7		NA	45 (0/12) (<11/<64)	NA	45 (0/12) (<11/<64)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	K-40		NA	94 (0/12) (<24/<148)	NA	94 (0/12) (<24/<148)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	MN-54		15	4 (0/12) (<1/<6)	NA	4 (0/12) (<1/<6)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	CO-58		15	5 (0/12) (<1/<7)	NA	5 (0/12) (<1/<7)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	FE-59		30	8 (0/12) (<3/<13)	NA	8 (0/12) (<3/<13)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	CO-60		15	4 (0/12) (<1/<7)	NA	4 (0/12) (<1/<7)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0

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	ZN-65		30	7 (0/12) (<2/<13)	NA	7 (0/12) (<2/<13)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	NB-95		15	5 (0/12) (<1/<8)	NA	5 (0/12) (<1/<8)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	ZR-95		30	8 (0/12) (<2/<15)	NA	8 (0/12) (<2/<15)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	CS-134		15	4 (0/12) (<1/<7)	NA	4 (0/12) (<1/<7)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	CS-137		18	5 (0/12) (<1/<8)	NA	5 (0/12) (<1/<8)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	BA-140		60	25 (0/12) (<16/<34)	NA	25 (0/12) (<16/<34)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	LA-140		15	8 (0/12) (<3/<13)	NA	8 (0/12) (<3/<13)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0
	CE-144		NA	37 (0/12) (<7/<55)	NA	37 (0/12) (<7/<55)	CL-14 INDICATOR STATION PLANT SERVICE BLDG ONSITE	0

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GROUND WATER (PCI/LITER)	H-3	12	200	171 (0/12) (<141/<196)	NA	172 (0/4) (<144/<194)	CL-12T INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	GAMMA	12						
	BE-7		NA	43 (0/12) (<24/<59)	NA	50 (0/4) (<45/<59)	CL-12T INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	K-40		NA	72 (2/12) (<38/<109)	NA	84 (0/4) (<57/<104)	CL-12R INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	MN-54		15	4 (0/12) (<2/<7)	NA	5 (0/4) (<4/<7)	CL-12T INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	CO-58		15	4 (0/12) (<1/<7)	NA	5 (0/4) (<3/<6)	CL-12T INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	FE-59		30	8 (0/12) (<4/<12)	NA	9 (0/4) (<7/<11)	CL-12T INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	CO-60		15	4 (0/12) (<2/<6)	NA	4 (0/4) (<3/<6)	CL-12T INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	ZN-65		30	9 (0/12) (<3/<14)	NA	10 (0/4) (<5/<14)	CL-12R INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0

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	NB-95		15	5 (0/12) (<3/<8)	NA	6 (0/4) (<5/<8)	CL-12R INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	ZR-95		30	8 (0/12) (<4/<11)	NA	10 (0/4) (<6/<11)	CL-12R INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	CS-134		15	4 (0/12) (<3/<6)	NA	5 (0/4) (<4/<6)	CL-12R INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	CS-137		18	5 (0/12) (<3/<8)	NA	6 (0/4) (<4/<7)	CL-12R INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	BA-140		60	23 (0/12) (<13/<31)	NA	28 (0/4) (<26/<31)	CL-12R INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	LA-140		15	7 (0/12) (<2/<13)	NA	8 (0/4) (<6/<13)	CL-12T INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
	CE-144		NA	36 (0/12) (<28/<46)	NA	40 (0/4) (<37/<46)	CL-12R INDICATOR DEWITT PUMP HOUSE 1.6 MILES E	0
FISH (PCI/KG WET)	GAMMA	16						
	BE-7		N/A	287 (0/8) (<100/<583)	255 (0/8) (<100/<435)	287 (0/8) (<100/<583)	CL-19 INDICATOR END OF DISCHARGE FLUME 3.4 MILES E OF SITE	0

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	K-40		N/A	2975 (8/8) (2660/3410)	2906 (8/8) (2450/3780)	2975 (8/8) (2660/3410)	CL-19 INDICATOR END OF DISCHARGE FLUME 3.4 MILES E OF SITE	0
	MN-54		130	38 (0/8) (<9/<87)	29 (0/8) (<13/<50)	38 (0/8) (<9/<87)	CL-19 INDICATOR END OF DISCHARGE FLUME 3.4 MILES E OF SITE	0
	CO-58		130	35 (0/8) (<9/<83)	31 (0/8) (<16/<55)	35 (0/8) (<9/<83)	CL-19 INDICATOR END OF DISCHARGE FLUME 3.4 MILES E OF SITE	0
	FE-59		260	74 (0/8) (<33/<182)	71 (0/8) (<43/<88)	74 (0/8) (<33/<182)	CL-19 INDICATOR END OF DISCHARGE FLUME 3.4 MILES E OF SITE	0
	CO-60		130	33 (0/8) (<8/<62)	29 (0/8) (<12/<57)	33 (0/8) (<8/<62)	CL-19 INDICATOR END OF DISCHARGE FLUME 3.4 MILES E OF SITE	0
	ZN-65		260	64 (0/8) (<17/<173)	62 (0/8) (<18/<108)	64 (0/8) (<17/<173)	CL-19 INDICATOR END OF DISCHARGE FLUME 3.4 MILES E OF SITE	0
	NB-95		N/A	40 (0/8) (<15/<82)	35 (0/8) (<17/<50)	40 (0/8) (<15/<82)	CL-19 INDICATOR END OF DISCHARGE FLUME 3.4 MILES E OF SITE	0
	ZR-95		N/A	60 (0/8) (<25/<139)	53 (0/8) (<25/<92)	60 (0/8) (<25/<139)	CL-19 INDICATOR END OF DISCHARGE FLUME 3.4 MILES E OF SITE	0

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	CS-134		100	32 (0/8) (<10/<71)	27 (0/8) (<14/<46)	32 (0/8) (<10/<71)	CL-19 INDICATOR END OF DISCHARGE FLUME 3.4 MILES E OF SITE	0
	CS-137		100	32 (0/8) (<7/<87)	29 (0/8) (<12/<47)	32 (0/8) (<7/<87)	CL-19 INDICATOR END OF DISCHARGE FLUME 3.4 MILES E OF SITE	0
	BA-140		N/A	254 (0/8) (<159/<370)	299 (0/8) (<221/<364)	299 (0/8) (<221/<364)	CL-105 CONTROL LAKE SHELBYVILLE 50 MILES S OF SITE	0
	LA-140		N/A	71 (0/8) (<23/<115)	74 (0/8) (<52/<90)	74 (0/8) (<52/<90)	CL-105 CONTROL LAKE SHELBYVILLE 50 MILES S OF SITE	0
	CE-144		N/A	181 (0/8) (<68/<592)	144 (0/8) (<65/<225)	181 (0/8) (<68/<592)	CL-19 INDICATOR END OF DISCHARGE FLUME 3.4 MILES E OF SITE	0
SEDIMENT (PCI/KG DRY)	GAMMA	2						
	BE-7		NA	151 (0/2) (<92/<210)	NA	151 (0/2) (<92/<210)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0
	K-40		NA	6800 (2/2) (5210/8390)	NA	6800 (2/2) (5210/8390)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0
	MN-54		NA	18 (0/2) (<11/<25)	NA	18 (0/2) (<11/<25)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0

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

Name of Facility: CLINTON POWER STATION — **DOCKET NUMBER:** 50-461
Location of Facility: DEWITT COUNTY, IL — **REPORTING PERIOD:** ANNUAL 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: STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
	CO-58		NA	19 (0/2) (<15/<24)	NA	19 (0/2) (<15/<24)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0
	FE-59		NA	41 (0/2) (<26/<56)	NA	41 (0/2) (<26/<56)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0
	CO-60		NA	21 (0/2) (<15/<28)	NA	21 (0/2) (<15/<28)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0
	ZN-65		NA	47 (0/2) (<45/<48)	NA	47 (0/2) (<45/<48)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0
	NB-95		NA	15 (0/2) (<10/<21)	NA	15 (0/2) (<10/<21)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0
	ZR-95		NA	31 (0/2) (<20/<41)	NA	31 (0/2) (<20/<41)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0
	CS-134		150	20 (0/2) (<19/<21)	NA	20 (0/2) (<19/<21)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0
	CS-137		180	19 (0/2) (<14/<24)	NA	19 (0/2) (<14/<24)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0

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	BA-140		NA	90 (0/2) (<71/<108)	NA	90 (0/2) (<71/<108)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0
	LA-140		NA	27 (0/2) (<15/<40)	NA	27 (0/2) (<15/<40)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0
	CE-144		NA	93 (0/2) (<77/<109)	NA	93 (0/2) (<77/<109)	CL-07B INDICATOR CLINTON LAKE 2.1 MILES SE	0
AIR PARTICULATE (PCI/CU.METER)	GR-B	517	10	22 (464/465) (<7/43)	23 (52/52) (10/43)	23 (52/52) (10/43)	CL-11 CONTROL ILLINOIS POWER SUBSTATION 16 MILES S	0
	GAMMA	40						
	BE-7		NA	67.3 (35/36) (35.1/97)	65.1 (4/4) (50.7/88)	72.6 (4/4) (61.4/83)	CL-15 INDICATOR RT. 900N RESIDENCE 0.9 MILES N	0
	K-40		NA	33.9 (0/36) (<21/<72.9)	39.8 (0/4) (<21/<59.4)	43.4 (0/4) (<24/<72.9)	CL-08 INDICATOR DEWITT CEMETERY 2.2 MILES E	0
	CO-60		NA	1.6 (0/36) (< 0.5/< 3.6)	1.6 (0/4) (< 0.5/< 2.8)	1.8 (0/4) (< 0.6/< 3.6)	CL-04 INDICATOR RESIDENCE NEAR RECREATION AREA 0.8 MILES SW	0
	NB-95		NA	2.0 (0/36) (< 0.4/< 5.7)	2.5 (0/4) (< 0.2/< 5.4)	2.7 (0/4) (< 0.4/< 5.7)	CL-08 INDICATOR DEWITT CEMETERY 2.2 MILES E	0

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	ZR-95		NA	3.3 (0/36) (< 0.5/< 9.8)	5.0 (0/4) (< 0.7/<12.6)	5.0 (0/4) (< 0.7/<12.6)	CL-11 CONTROL ILLINOIS POWER SUBSTATION 16 MILES S	0
	RU-103		NA	2.3 (0/36) (< 0.5/< 6.1)	3.2 (0/4) (< 0.5/< 7.6)	3.2 (0/4) (< 0.5/< 7.6)	CL-11 CONTROL ILLINOIS POWER SUBSTATION 16 MILES S	0
	RU-106		NA	13.1 (0/36) (< 3.9/<29.7)	16.9 (0/4) (< 4.6/<28.4)	16.9 (0/4) (< 4.6/<28.4)	CL-11 CONTROL ILLINOIS POWER SUBSTATION 16 MILES S	0
	CS-134		50	1.7 (0/36) (< 0.4/< 3.8)	2.4 (0/4) (< 0.5/< 4.2)	2.4 (0/4) (< 0.5/< 4.2)	CL-11 CONTROL ILLINOIS POWER SUBSTATION 16 MILES S	0
	CS-137		60	1.5 (0/36) (< 0.3/< 4.1)	1.6 (0/4) (< 0.4/< 3.2)	1.9 (0/4) (< 0.6/< 4.1)	CL-02 INDICATOR CLINTON'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	CE-141		NA	3.3 (0/36) (< 0.7/< 9.2)	4.3 (0/4) (< 0.7/<10)	4.3 (0/4) (< 0.7/<10)	CL-11 CONTROL ILLINOIS POWER SUBSTATION 16 MILES S	0
	CE-144		NA	7.2 (0/36) (< 2.5/<13.2)	8.8 (0/4) (< 3.4/<15.8)	8.8 (0/4) (< 3.4/<15.8)	CL-11 CONTROL ILLINOIS POWER SUBSTATION 16 MILES S	0
AIR IODINE (PCI/CU.METER)	I-131	517	70	20 (0/465) (<6/<47)	21 (0/52) (<6/<46)	22 (0/52) (<6/<47)	CL-15 INDICATOR RT. 900N RESIDENCE 0.9 MILES N	0

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MILK (PCI/LITER)	I-131 (LOW LVL)	19	1	NA	0.5 (0/19) (< 0.2/< 0.8)	0.5 (0/19) (< 0.2/< 0.8)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	GAMMA	19						
	BE-7		NA	NA	41 (0/19) (<13/<61)	41 (0/19) (<13/<61)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	K-40		NA	NA	1219 (19/19) (1015/1410)	1219 (19/19) (1015/1410)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	MN-54		NA	NA	5 (0/19) (<1/<8)	5 (0/19) (<1/<8)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	CO-58		NA	NA	5 (0/19) (<1/<8)	5 (0/19) (<1/<8)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	FE-59		NA	NA	10 (0/19) (<3/<15)	10 (0/19) (<3/<15)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	CO-60		NA	NA	5 (0/19) (<1/<9)	5 (0/19) (<1/<9)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	ZN-65		NA	NA	11 (0/19) (<3/<18)	11 (0/19) (<3/<18)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0

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	NB-95		NA	NA	5 (0/19) (<1/<9)	5 (0/19) (<1/<9)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	ZR-95		NA	NA	9 (0/19) (<2/<14)	9 (0/19) (<2/<14)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	CS-134		15	NA	5 (0/19) (<1/<7)	5 (0/19) (<1/<7)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	CS-137		18	NA	5 (0/19) (<2/<9)	5 (0/19) (<2/<9)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	BA-140		60	NA	24 (0/19) (<7/<36)	24 (0/19) (<7/<36)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	LA-140		15	NA	6 (0/19) (<2/<12)	6 (0/19) (<2/<12)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	CE-144		NA	NA	40 (0/19) (<10/<59)	40 (0/19) (<10/<59)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
VEGETATION (PCI/KG WET)	GAMMA	48						
	BE-7		NA	586 (24/36) (<95/2540)	638 (8/12) (73/4570)	744 (8/12) (<95/2540)	CL-115 INDICATOR SITE'S SECONDARY ACCESS ROAD 0.7 MILES NE	0

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	K-40		NA	5297 (36/36) (2220/11600)	5393 (12/12) (2950/10200)	5985 (12/12) (2470/11600)	CL-117 INDICATOR RESIDENCE NORTH OF SITE 0.9 MILES N	0
	MN-54		NA	16 (0/36) (<5/<37)	16 (0/12) (<5/<34)	17 (0/12) (<6/<27)	CL-117 INDICATOR RESIDENCE NORTH OF SITE 0.9 MILES N	0
	CO-58		NA	16 (0/36) (<6/<31)	15 (0/12) (<5/<29)	17 (0/12) (<6/<28)	CL-118 INDICATOR SITE'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	FE-59		NA	36 (0/36) (<14/<68)	35 (0/12) (<11/<68)	37 (0/12) (<15/<68)	CL-118 INDICATOR SITE'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	CO-60		NA	17 (0/36) (<5/<64)	16 (0/12) (<4/<33)	21 (0/12) (<5/<64)	CL-118 INDICATOR SITE'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	ZN-65		NA	35 (0/36) (<8/<77)	35 (0/12) (<11/<79)	38 (0/12) (<12/<68)	CL-118 INDICATOR SITE'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	NB-95		NA	18 (0/36) (<6/<32)	16 (0/12) (<4/<29)	19 (0/12) (<6/<32)	CL-118 INDICATOR SITE'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	ZR-95		NA	29 (0/36) (<11/<56)	29 (0/12) (<8/<55)	32 (0/12) (<11/<56)	CL-118 INDICATOR SITE'S MAIN ACCESS ROAD 0.7 MILES NNE	0

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	I-131		60	34 (0/36) (<12/<54)	30 (0/12) (<15/<46)	35 (0/12) (<12/<54)	CL-118 INDICATOR SITE'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	CS-134		60	15 (0/36) (<5/<28)	13 (0/12) (<4/<25)	16 (0/12) (<5/<28)	CL-118 INDICATOR SITE'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	CS-137		80	17 (0/36) (<5/<32)	15 (0/12) (<5/<28)	18 (0/12) (<5/<32)	CL-118 INDICATOR SITE'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	BA-140		NA	84 (0/36) (<34/<146)	72 (0/12) (<32/<106)	89 (0/12) (<48/<140)	CL-118 INDICATOR SITE'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	LA-140		NA	22 (0/36) (<8/<53)	20 (0/12) (<6/<46)	24 (0/12) (<9/<53)	CL-118 INDICATOR SITE'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	CE-144		NA	103 (0/36) (<31/<210)	92 (0/12) (<27/<152)	111 (0/12) (<40/<210)	CL-117 INDICATOR RESIDENCE NORTH OF SITE 0.9 MILES N	0
GRASS (PCI/KG WET)	GAMMA	40						
	BE-7		NA	2407 (30/30) (830/4900)	2303 (10/10) (810/4930)	2709 (10/10) (1270/4900)	CL-01 INDICATOR CAMP QUEST 1.8 MILES W	0
	K-40		NA	7468 (30/30) (3240/14970)	9297 (10/10) (5020/15770)	9297 (10/10) (5020/15770)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0

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	MN-54		NA	22 (0/30) (<9/<44)	27 (0/10) (<10/<41)	27 (0/10) (<10/<41)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	CO-58		NA	22 (0/30) (<9/<83)	27 (0/10) (<11/<42)	27 (0/10) (<11/<42)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	FE-59		NA	47 (0/30) (<23/<84)	59 (0/10) (<26/<102)	59 (0/10) (<26/<102)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	CO-60		NA	21 (0/30) (<9/<36)	23 (0/10) (<10/<36)	23 (0/10) (<10/<36)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	ZN-65		NA	48 (0/30) (<19/<112)	61 (0/10) (<24/<98)	61 (0/10) (<24/<98)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	NB-95		NA	24 (0/30) (<10/<72)	28 (0/10) (<12/<46)	28 (0/10) (<11/<72)	CL-02 INDICATOR CLINTON'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	ZR-95		NA	40 (0/30) (<17/<98)	49 (0/10) (<21/<118)	49 (0/10) (<21/<118)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	I-131		60	44 (0/30) (<22/<58)	51 (0/10) (<41/<59)	51 (0/10) (<41/<59)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0

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	CS-134		60	22 (0/30) (<8/<58)	28 (0/10) (<9/<52)	28 (0/10) (<9/<52)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	CS-137		80	23 (0/30) (<10/<79)	26 (0/10) (<10/<39)	26 (0/10) (<11/<79)	CL-02 INDICATOR CLINTON'S MAIN ACCESS ROAD 0.7 MILES NNE	0
	BA-140		NA	109 (0/30) (<58/<244)	135 (0/10) (<82/<174)	135 (0/10) (<82/<174)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	LA-140		NA	26 (0/30) (<8/<48)	34 (0/10) (<17/<54)	34 (0/10) (<17/<54)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
	CE-144		NA	152 (0/30) (<55/<396)	192 (0/10) (<64/<309)	34 (0/10) (<64/<309)	CL-116 CONTROL PASTURE IN RURAL KENNEY 14 MILES WSW	0
DIRECT RADIATION (MILLI-ROENTGEN/STD.MO.	TLD-QUARTERLY	215	N/A	20.5 (214/211) (15.6/23.2)	196.3 (4/4) (18.1/20.4)	22.1 (4/4) (20.0/23.1)	CL-41 INDICATOR 2.4 MILES E OF SITE	0

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APPENDIX B

LOCATION DESIGNATION, DISTANCE & DIRECTION, AND SAMPLE COLLECTION & ANALYTICAL METHODS

TABLE B-1: Radiological Environmental Monitoring Program - Sampling Locations, Distance and Direction, Clinton Power Station, 2005

Location	Location Description	Distance & Direction From Site
A. Surface Water		
Cl-13	Salt Creek Bridge on Rt. 10 (indicator)	3.6 miles SW
CL-90	Discharge Flume (indicator)	0.4 miles SE
CL-91	Parnell Boat Access (indicator)	6.1 miles ENE
CL-99	North Fork Access (indicator)	3.5 miles NNE
B. Drinking (Potable) Water		
CL-14	Station Plant Service Bldg (indicator)	onsite
C. Well Water		
CL-07D	Mascoutin Recreation Area (indicator)	2.3 miles ESE
CL-12T	DeWitt Pump House (indicator)	1.6 miles E
CL-12R	DeWitt Pump House (indicator)	1.6 miles E
D. Milk - bi-weekly / monthly		
CL-116	Control	14 miles WSW
E. Air Particulates / Air Iodine		
CL-01	Camp Quest	1.8 miles W
CL-02	Clinton's Main Access Road	0.7 miles NNE
CL-03	Clinton's Secondary Access Road	0.7 miles NE
CL-04	Residence Near Recreation Area	0.8 miles SW
CL-06	Clinton's Recreation Area	0.7 miles WSW
CL-07	Mascoutin Recreation Area	2.3 miles SE
CL-08	DeWitt Cemetery	2.2 miles E
CL-11	Illinois Power Substation (Control)	16 miles S
CL-15	Rt. 900N Residence	0.9 miles N
CL-94	Old Clinton Road	0.6 miles E
F. Fish		
CL-19	End of Discharge Flume (indicator)	3.4 miles E
CL-105	Lake Shelbyville (control)	50 miles S
G. Sediment		
CL-07B	Clinton Lake (indicator)	2.1miles SE
H. Food Products		
CL-114	Cisco (Control)	12.5 miles SSE
CL-115	Site's Secondary Access Road	0.7 miles NE
CL-117	Residence North of Site	0.9 miles N
CL-118	Site's Main Access Road	0.7 miles NNE
I. Grass		
CL-01	Camp Quest	1.8 miles W
CL-02	Clinton's Main Access Road	0.7 miles NNE
CL-08	DeWitt Cemetery	2.2 miles E
CL-116	Pasture in Rural Kenney	14 miles WSW

TABLE B-1: Radiological Environmental Monitoring Program - Sampling Locations, Distance and Direction, Clinton Power Station, 2005

Location	Location Description	Distance & Direction From Site
J. Environmental Dosimetry - TLD		
Inner Ring		
CL-01		1.8 miles W
CL-05		0.7 miles NNE
CL-22		0.6 miles NE
CL-23		0.5 miles ENE
CL-24		0.5 miles E
CL-34		0.8 miles WNW
CL-35		0.7 miles NW
CL-36		0.6 miles N
CL-42		2.8 miles ESE
CL-43		2.8 miles SE
CL-44		2.3 miles SSE
CL-45		2.8 miles S
CL-46		2.8 miles SSW
CL-47		3.3 miles SW
CL-48		2.3 miles WSW
CL-63		1.3 miles NNW
Outer Ring		
CL-51		4.4 miles NW
CL-52		4.3 miles NNW
CL-53		4.3 miles E
CL-54		4.6 miles ESE
CL-55		4.1 miles SE
CL-56		4.1 miles SSE
CL-57		4.6 miles S
CL-58		4.3 miles SSW
CL-60		4.5 miles SW
CL-61		4.5 miles WSW
CL-76		4.6 miles N
CL-77		4.5 miles NNE
CL-78		4.8 miles NE
CL-79		4.5 miles ENE
CL-80		4.1 miles W
CL-81		4.5 miles WNW

TABLE B-1: Radiological Environmental Monitoring Program - Sampling Locations, Distance and Direction, Clinton Power Station, 2005

Location	Location Description	Distance & Direction From Site
Special Interest		
CL-37		3.4 miles N
CL-41		2.4 miles E
CL-49		3.5 miles W
CL-64		2.1 miles WNW
CL-65		2.6 miles ENE
CL-74		1.9 miles W
CL-75		0.9 miles N
Supplemental		
CL-02		0.7 miles NNE
CL-03		0.7 miles NE
CL-04		0.8 miles SW
CL-06		0.8 miles WSW
CL-07		2.3 miles SE
CL-08		2.2 miles E
CL-15		0.9 miles N
CL-33		11.7 miles SW
CL-84		0.6 miles E
CL-90		0.4 miles SE
CL-91		6.1 miles ENE
CL-97		10.3 miles SW
CL-99		3.5 miles NNE
CL-114		12.5 miles SE
Control		
CL-11		16 miles S

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

Sample Medium	Analysis	Sampling Method	Analytical Procedure Number
Surface Water	Gamma Spectroscopy	Monthly composite from a continuous water compositor.	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.	TBE, TBE-2011 Tritium analysis in drinking water 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.	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) Env. Inc., W(SS)-02 Determination of gross alpha and/or gross beta in water (suspended solids)
Drinking Water	Gamma Spectroscopy	Monthly composite from a continuous water compositor.	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.	TBE, TBE-2011 Tritium analysis in drinking water by liquid scintillation Env. Inc., T-02 Determination of tritium in water (direct method)
Well Water	Gamma Spectroscopy	Quarterly composite from a continuous water compositor.	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
Well Water	Tritium	Quarterly composite from a continuous water compositor.	TBE, TBE-2011 Tritium analysis in drinking water 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	TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
Air Particulates	Gross Beta	One-week composite of continuous air sampling through glass fiber filter paper	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
Air Particulates	Gamma Spectroscopy	Quarterly composite of each station	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	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	TBE, TBE-2012 Radioiodine in various matrices Env. Inc., I-131-01 Determination of I-131 in milk by anion exchange

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

Sample Medium	Analysis	Sampling Method	Analytical Procedure Number
Food Products	Gross Beta	Monthly grab June through September	TBE, TBE-2008 Gross Alpha and/or gross beta activity in various matrices Env. Inc., EIML-AB-01 Gross alpha or gross beta in solid samples
Food Products	Gamma Spectroscopy	Monthly grab June through September	TBE, TBE-2007 Gamma emitting radioisotopes analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
Grass	Gamma Spectroscopy	Biweekly May through October	TBE, TBE-2007 Gamma emitting radioisotopes analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
TLD	Thermoluminescence Dosimetry	Quarterly TLDs comprised of two Global Dosimetry CaF_2 elements.	Global Dosimetry

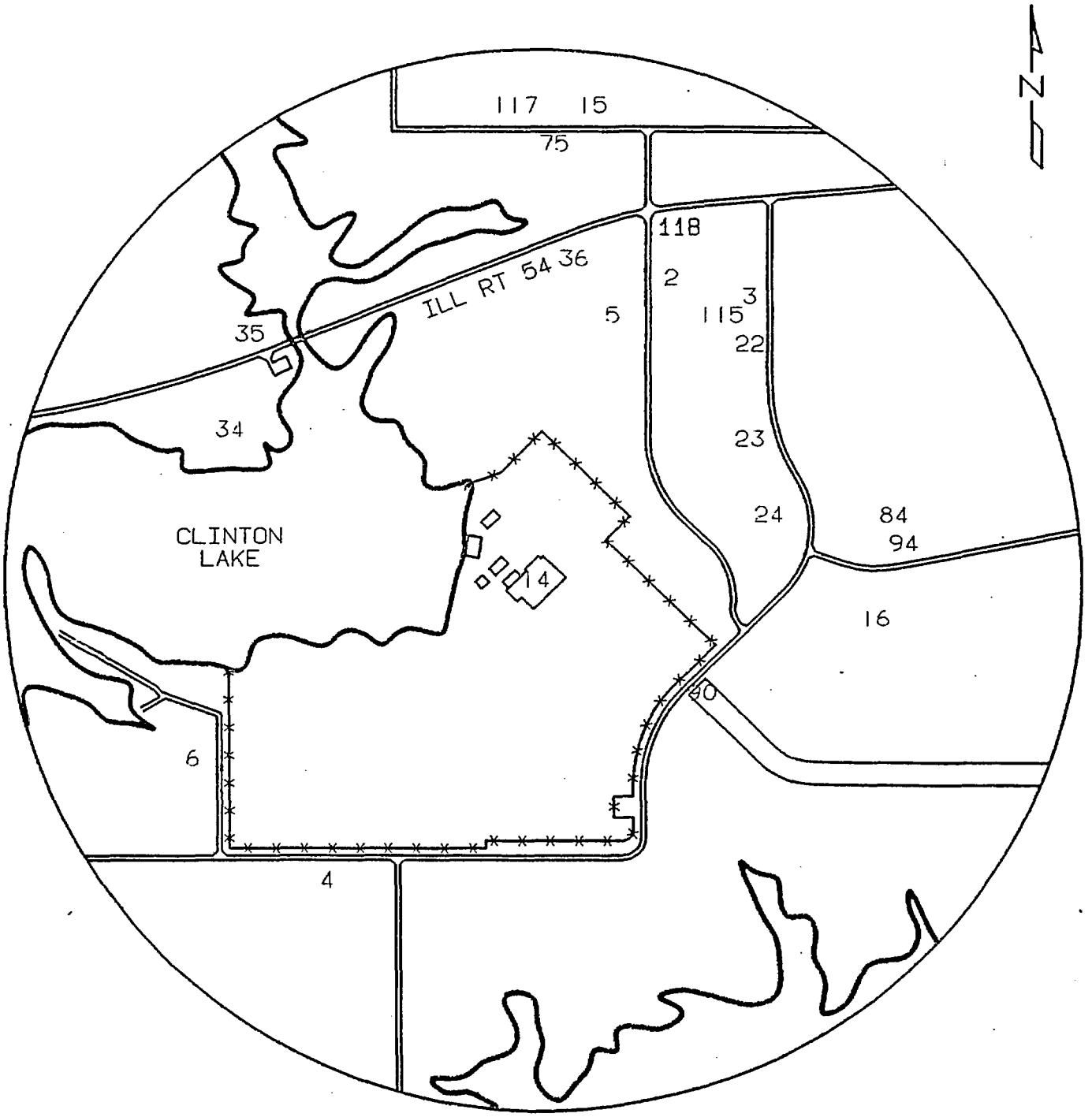


Figure B-1
Environmental Sampling Locations Within One
Mile of the Clinton Power Station, 2005

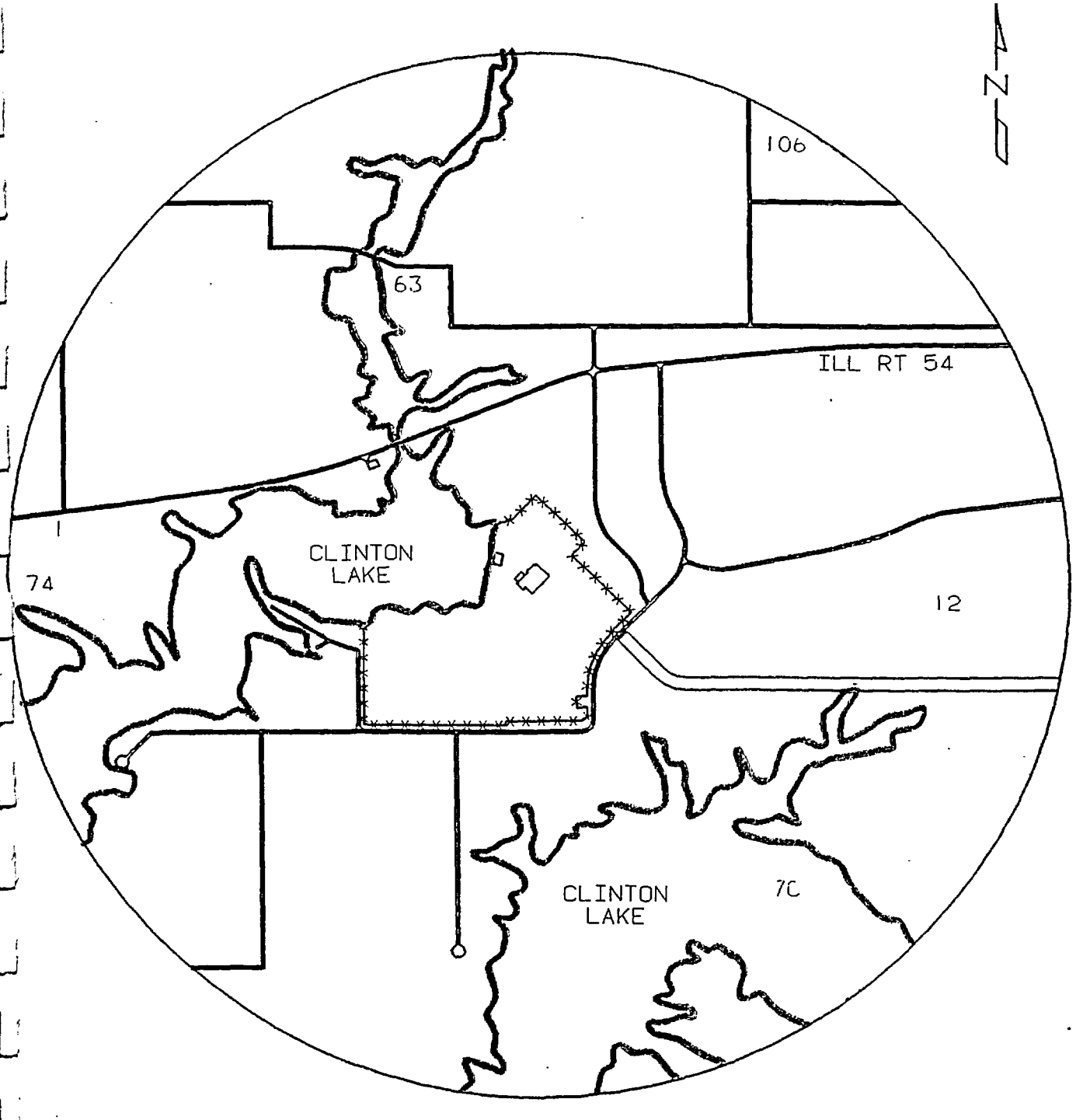


Figure B-2
Environmental Sampling Locations Between One and Two
Miles of the Clinton Power Station, 2005

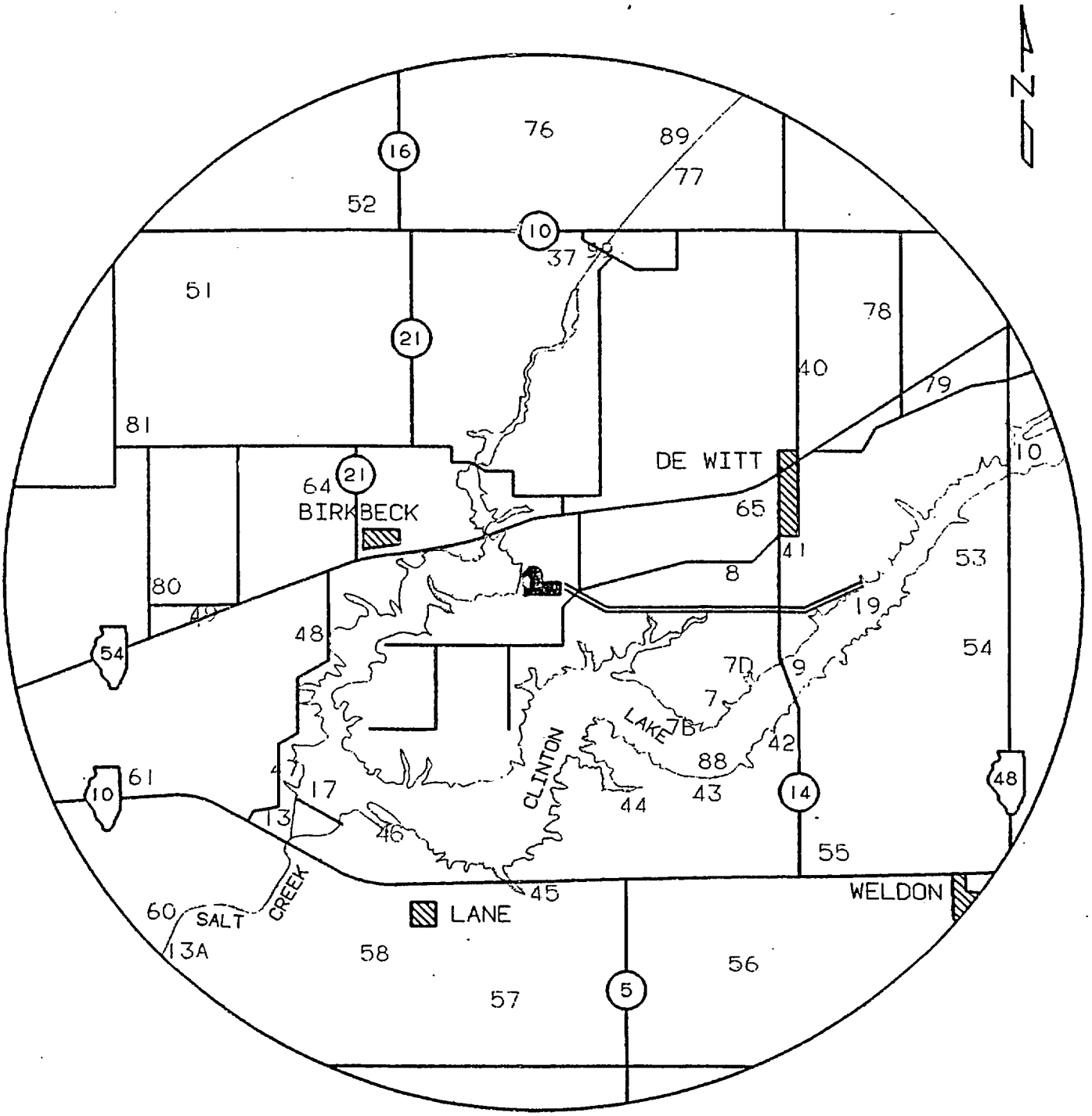


Figure B-3
Environmental Sampling Locations Between Two and Five Miles of the Clinton Power Station, 2005

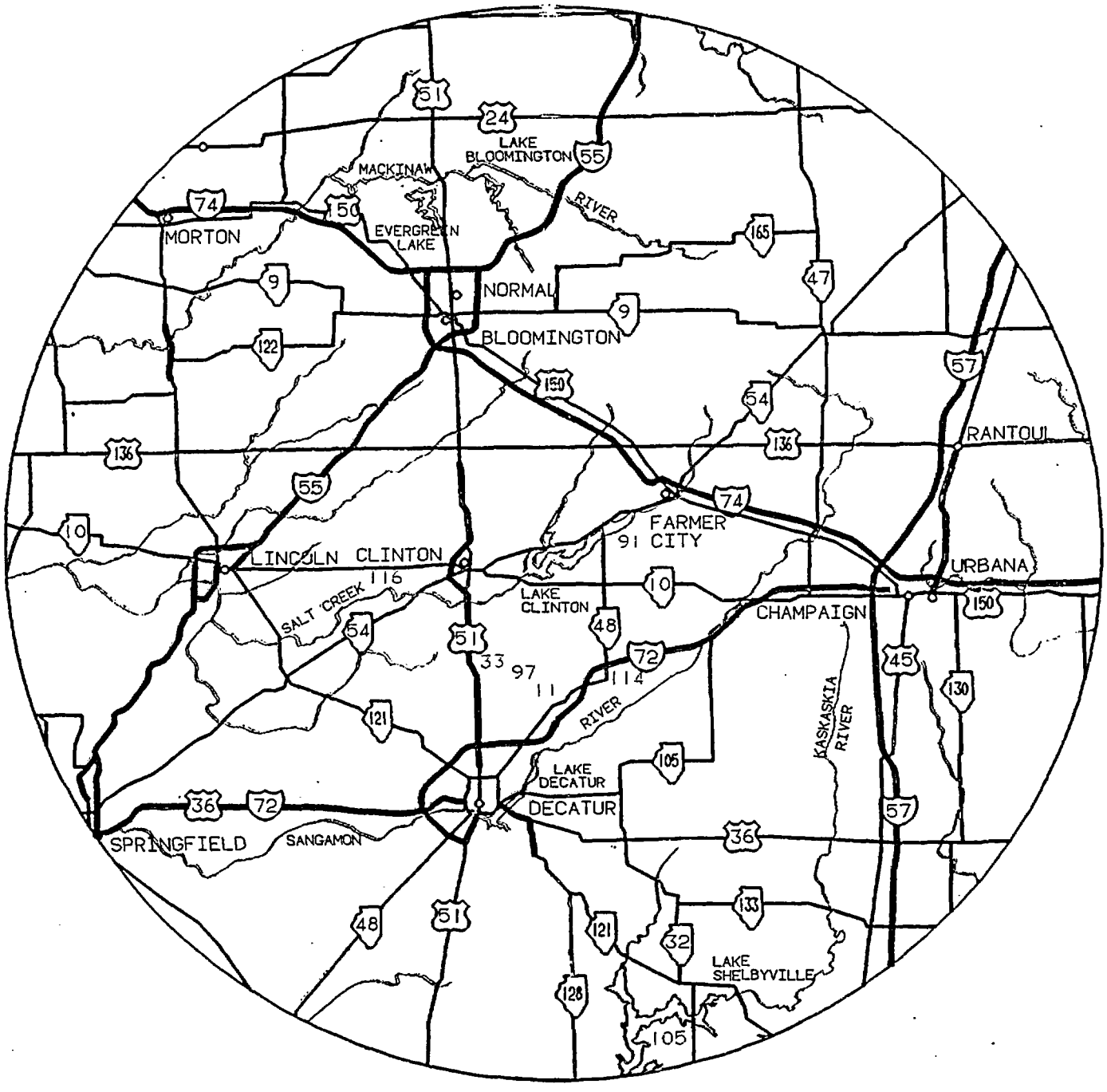


Figure B-4
Environmental Sampling Locations Greater Than Five
Miles of the Clinton Power Station, 2005

APPENDIX C

DATA TABLES AND FIGURES - PRIMARY LABORATORY

TABLE C-I.1 CONCENTRATIONS OF I-131 IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	CL-90
JAN	< 0.4
FEB	< 0.3
MAR	< 0.3
APR	< 0.3
MAY	< 0.4
JUN	< 0.3
JUL	< 0.9
AUG	< 0.7
SEP	< 1.0
OCT	< 0.7
NOV	< 0.8
DEC	< 0.5
MEAN	0.5 ± 0.5

TABLE C-I.2 CONCENTRATIONS OF TRITIUM IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	CL-13	CL-90	CL-91	CL-99
JAN-MAR	< 150	< 150	< 150	< 150
APR-JUN	< 164	< 164	< 164	< 164
JUL-SEP	< 166	< 162	< 166	< 175
OCT-DEC	< 165	< 165	< 168	< 166
MEAN	161 ± 15	160 ± 14	162 ± 16	164 ± 21

TABLE C-I.3 CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	CS-134	CS-137	BA-140	LA-140	CE-144
CL-13	JAN	< 41	< 112	< 5	< 5	< 8	< 4	< 8	< 5	< 11	< 5	< 5	< 18	< 4	< 55
	FEB	< 31	< 61	< 3	< 3	< 5	< 2	< 4	< 4	< 5	< 4	< 3	< 20	< 5	< 34
	MAR	< 30	< 76	< 2	< 3	< 4	< 2	< 4	< 4	< 7	< 2	< 2	< 21	< 6	< 34
	APR	< 34	< 101	< 6	< 3	< 11	< 5	< 6	< 6	< 5	< 6	< 6	< 15	< 3	< 49
	MAY	< 40	< 93	< 4	< 5	< 8	< 3	< 4	< 5	< 11	< 6	< 3	< 42	< 15	< 25
	JUN	< 54	< 88	< 4	< 3	< 5	< 3	< 5	< 5	< 6	< 4	< 6	< 16	< 4	< 47
	JUL	< 36	< 113	< 3	< 3	< 9	< 4	< 8	< 5	< 8	< 3	< 4	< 20	< 8	< 31
	AUG	< 14	25 ± 18	< 1	< 1	< 3	< 1	< 2	< 2	< 2	< 1	< 1	< 19	< 6	< 8
	SEP	< 40	< 86	< 4	< 4	< 10	< 4	< 11	< 5	< 8	< 4	< 5	< 19	< 8	< 30
	OCT	< 44	< 56	< 5	< 4	< 10	< 5	< 10	< 5	< 9	< 4	< 6	< 25	< 7	< 33
	NOV	< 24	< 62	< 3	< 3	< 7	< 5	< 9	< 3	< 5	< 3	< 4	< 16	< 6	< 21
	DEC	< 64	< 121	< 7	< 8	< 15	< 8	< 21	< 7	< 14	< 10	< 8	< 37	< 10	< 57
	MEAN	38 ± 27	83 ± 56	4 ± 3	4 ± 3	8 ± 7	4 ± 4	7 ± 10	5 ± 3	8 ± 6	4 ± 5	4 ± 4	22 ± 17	7 ± 6	35 ± 29
CL-90	JAN	< 34	< 34	< 1	< 3	< 5	< 2	< 7	< 3	< 6	< 3	< 4	< 8	< 2	< 19
	FEB	< 52	< 110	< 4	< 5	< 6	< 4	< 6	< 6	< 8	< 7	< 4	< 16	< 5	< 44
	MAR	< 39	< 78	< 4	< 3	< 7	< 5	< 5	< 4	< 10	< 2	< 6	< 16	< 5	< 33
	APR	< 41	< 108	< 5	< 3	< 10	< 4	< 5	< 5	< 9	< 4	< 6	< 23	< 7	< 31
	MAY	< 49	< 106	< 5	< 5	< 8	< 5	< 9	< 4	< 4	< 6	< 5	< 21	< 4	< 35
	JUN	< 56	< 124	< 4	< 6	< 7	< 4	< 6	< 6	< 7	< 4	< 6	< 22	< 7	< 49
	JUL	< 47	< 106	< 6	< 5	< 11	< 4	< 9	< 5	< 9	< 5	< 6	< 25	< 7	< 37
	AUG	< 13	< 11	< 1	< 2	< 3	< 1	< 2	< 2	< 3	< 1	< 1	< 20	< 6	< 10
	SEP	< 37	< 48	< 5	< 4	< 8	< 5	< 9	< 5	< 6	< 4	< 3	< 23	< 7	< 32
	OCT	< 32	< 41	< 4	< 4	< 8	< 4	< 8	< 4	< 6	< 3	< 5	< 21	< 6	< 31
	NOV	< 33	< 87	< 4	< 4	< 10	< 4	< 8	< 4	< 8	< 4	< 5	< 18	< 7	< 29
	DEC	< 66	< 75	< 9	< 9	< 9	< 10	< 19	< 10	< 15	< 6	< 10	< 48	< 15	< 63
	MEAN	42 ± 27	77 ± 73	4 ± 4	4 ± 4	7 ± 4	4 ± 4	8 ± 8	5 ± 4	7 ± 6	4 ± 3	5 ± 4	22 ± 19	6 ± 6	34 ± 27

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

TABLE C-I.3 CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	CS-134	CS-137	BA-140	LA-140	CE-144
CL-91	JAN	< 37	< 77	< 2	< 3	< 5	< 3	< 4	< 4	< 7	< 4	< 2	< 31	< 4	< 48
	FEB	< 18	< 83	< 3	< 3	< 8	< 3	< 5	< 5	< 5	< 3	< 3	< 16	< 3	< 35
	MAR	< 41	< 108	< 4	< 3	< 7	< 4	< 6	< 6	< 12	< 6	< 3	< 24	< 5	< 36
	APR	< 40	< 69	< 4	< 3	< 9	< 4	< 6	< 2	< 4	< 3	< 3	< 18	< 4	< 21
	MAY	< 24	< 69	< 3	< 3	< 4	< 3	< 2	< 4	< 8	< 2	< 2	< 21	< 3	< 33
	JUN	< 28	< 53	< 3	< 2	< 4	< 1	< 4	< 4	< 3	< 3	< 3	< 15	< 3	< 24
	JUL	< 38	< 44	< 4	< 4	< 8	< 4	< 10	< 4	< 8	< 4	< 4	< 24	< 8	< 35
	AUG	< 12	< 9	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 1	< 1	< 18	< 6	< 7
	SEP	< 51	< 62	< 5	< 6	< 12	< 5	< 11	< 6	< 10	< 5	< 6	< 31	< 10	< 40
	OCT	< 53	< 125	< 7	< 6	< 9	< 6	< 11	< 7	< 13	< 6	< 6	< 34	< 9	< 43
	NOV	< 31	< 88	< 4	< 4	< 4	< 3	< 7	< 4	< 6	< 4	< 5	< 18	< 4	< 28
	DEC	< 36	< 47	< 5	< 4	< 12	< 7	< 9	< 3	< 9	< 4	< 4	< 22	< 11	< 29
	MEAN	34 ± 25	70 ± 61	4 ± 3	4 ± 3	7 ± 6	4 ± 4	6 ± 6	4 ± 3	7 ± 7	4 ± 3	3 ± 3	23 ± 13	6 ± 6	32 ± 22
CL-99	JAN	< 46	< 83	< 4	< 5	< 5	< 2	< 4	< 5	< 7	< 2	< 5	< 21	< 4	< 27
	FEB	< 43	< 110	< 6	< 6	< 6	< 5	< 6	< 6	< 9	< 3	< 5	< 16	< 8	< 58
	MAR	< 55	< 112	< 5	< 4	< 7	< 4	< 4	< 6	< 5	< 9	< 4	< 29	< 3	< 36
	APR	< 27	< 103	< 4	< 4	< 4	< 3	< 5	< 5	< 6	< 4	< 4	< 22	< 4	< 35
	MAY	< 41	< 72	< 3	< 5	< 8	< 2	< 3	< 3	< 12	< 4	< 3	< 39	< 12	< 23
	JUN	< 27	< 77	< 4	< 3	< 9	< 2	< 4	< 5	< 8	< 4	< 4	< 19	< 7	< 37
	JUL	< 68	< 149	< 7	< 6	< 15	< 6	< 20	< 10	< 11	< 8	< 6	< 32	< 12	< 53
	AUG	< 13	< 31	< 1	< 1	< 3	< 1	< 2	< 1	< 3	< 1	< 1	< 19	< 6	< 9
	SEP	< 42	< 40	< 4	< 4	< 9	< 5	< 10	< 5	< 9	< 4	< 6	< 18	< 5	< 32
	OCT	< 40	< 105	< 4	< 4	< 10	< 5	< 8	< 5	< 8	< 4	< 5	< 23	< 7	< 34
	NOV	< 46	< 35	< 6	< 5	< 14	< 5	< 12	< 5	< 11	< 4	< 5	< 20	< 9	< 38
	DEC	< 45	< 46	< 5	< 6	< 11	< 6	< 14	< 6	< 11	< 6	< 6	< 27	< 10	< 40
	MEAN	41 ± 28	80 ± 74	5 ± 3	4 ± 3	8 ± 7	4 ± 4	8 ± 10	5 ± 4	8 ± 6	4 ± 4	5 ± 3	24 ± 13	7 ± 6	35 ± 25

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

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	CL-14
JAN	1.2 ± 0.5
FEB	1.6 ± 0.8
MAR	1.0 ± 0.3
APR	1.1 ± 0.6
MAY	< 1.0
JUN	1.2 ± 0.5
JUL	< 1.9
AUG	< 2.0
SEP	2.0 + 1.3
OCT	1.9 + 1.3
NOV	2.1 + 1.3
DEC	< 2.1
MEAN	1.6 ± 0.9

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

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	CL-14
JAN-MAR	< 150
APR-JUN	< 164
JUL-SEP	< 162
OCT-DEC	< 162
MEAN	160 ± 13

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

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

RESULTS IN UNITS OF PCI/L ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	CS-134	CS-137	BA-140	LA-140	CE-144
CL-14	JAN	< 44	< 107	< 5	< 6	< 9	< 5	< 7	< 5	< 8	< 5	< 6	< 25	< 10	< 38
	FEB	< 39	< 119	< 4	< 4	< 6	< 6	< 6	< 4	< 14	< 5	< 5	< 23	< 8	< 42
	MAR	< 41	< 73	< 4	< 3	< 7	< 4	< 5	< 5	< 7	< 3	< 4	< 34	< 6	< 24
	APR	< 44	< 116	< 4	< 5	< 9	< 3	< 4	< 4	< 7	< 6	< 7	< 19	< 3	< 39
	MAY	< 61	< 120	< 3	< 6	< 9	< 2	< 10	< 4	< 6	< 3	< 4	< 27	< 8	< 51
	JUN	< 59	< 104	< 3	< 4	< 5	< 4	< 4	< 3	< 11	< 4	< 6	< 25	< 8	< 55
	JUL	< 59	< 139	< 6	< 5	< 13	< 6	< 13	< 8	< 15	< 7	< 6	< 34	< 13	< 50
	AUG	< 11	< 24	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 1	< 1	< 16	< 5	< 7
	SEP	< 45	< 107	< 6	< 6	< 13	< 6	< 9	< 6	< 10	< 5	< 6	< 30	< 10	< 38
	OCT	< 31	< 35	< 3	< 4	< 8	< 6	< 5	< 3	< 7	< 4	< 4	< 16	< 7	< 24
	NOV	< 39	< 42	< 5	< 5	< 9	< 5	< 10	< 4	< 8	< 5	< 6	< 21	< 8	< 31
	DEC	< 64	< 148	< 6	< 7	< 13	< 7	< 12	< 8	< 7	< 7	< 8	< 30	< 11	< 50
	MEAN	45 ± 30	94 ± 83	4 ± 3	5 ± 3	8 ± 6	4 ± 4	7 ± 7	5 ± 4	8 ± 7	4 ± 4	5 ± 4	25 ± 13	8 ± 5	37 ± 28

TABLE C-III.1 CONCENTRATIONS OF TRITIUM IN GROUND WATER SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	CL-07D	CL-12R	CL-12T
JAN-MAR	< 144	< 141	< 144
APR-JUN	< 161	< 161	< 165
JUL-SEP	< 183	< 188	< 185
OCT-DEC	< 185	< 196	< 194
MEAN	168 ± 39	172 ± 51	172 ± 45

TABLE C-III.2 CONCENTRATIONS OF GAMMA EMITTERS IN GROUND WATER SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	CS-134	CS-137	BA-140	LA-140	CE-144
CL-07D	MAR	< 40	< 53	< 2	< 2	< 7	< 3	< 3	< 4	< 5	< 4	< 3	< 27	< 3	< 34
	JUN	< 24	< 54	< 3	< 1	< 4	< 2	< 4	< 3	< 4	< 3	< 3	< 13	< 2	< 30
	SEP	< 52	81 ± 76	< 7	< 7	< 12	< 4	< 13	< 6	< 10	< 6	< 8	< 27	< 8	< 38
	DEC	< 41	< 38	< 4	< 5	< 6	< 6	< 13	< 4	< 7	< 4	< 5	< 14	< 5	< 30
	MEAN	39 ± 23	56 ± 36	4 ± 5	4 ± 5	8 ± 7	4 ± 4	8 ± 11	4 ± 3	6 ± 5	4 ± 3	4 ± 5	20 ± 16	5 ± 5	33 ± 8
CL-12R	MAR	< 24	< 76	< 2	< 2	< 8	< 2	< 5	< 6	< 6	< 5	< 4	< 26	< 4	< 38
	JUN	< 36	< 97	< 5	< 2	< 4	< 4	< 8	< 5	< 10	< 4	< 7	< 26	< 4	< 37
	SEP	< 56	< 57	< 6	< 6	< 11	< 6	< 14	< 8	< 11	< 6	< 6	< 31	< 10	< 46
	DEC	< 44	< 104	< 5	< 6	< 10	< 5	< 13	< 6	< 11	< 5	< 7	< 27	< 9	< 38
	MEAN	40 ± 27	84 ± 43	4 ± 3	4 ± 4	8 ± 6	4 ± 3	10 ± 9	6 ± 2	10 ± 5	5 ± 2	6 ± 2	28 ± 5	7 ± 7	40 ± 9
CL-12T	MAR	< 59	< 109	< 7	< 3	< 7	< 4	< 3	< 6	< 8	< 4	< 5	< 20	< 6	< 43
	JUN	< 45	< 72	< 4	< 5	< 10	< 3	< 4	< 3	< 8	< 4	< 4	< 23	< 6	< 28
	SEP	< 47	< 44	< 5	< 5	< 11	< 5	< 12	< 6	< 9	< 5	< 5	< 25	< 8	< 36
	DEC	< 51	84 ± 72	< 5	< 6	< 10	< 6	< 11	< 4	< 10	< 5	< 5	< 20	< 13	< 38
	MEAN	50 ± 13	77 ± 54	5 ± 2	5 ± 3	9 ± 3	4 ± 3	8 ± 9	5 ± 3	9 ± 2	4 ± 1	5 ± 1	22 ± 5	8 ± 7	36 ± 13

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

TABLE C-IV.1 **CONCENTRATIONS OF GAMMA EMITTERS IN FISH SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	CS-134	CS-137	BA-140	LA-140	CE-144
CL-19															
Largemouth Bass	04/18/05	< 100	3200 ± 320	< 9	< 9	< 33	< 10	< 17	< 15	< 25	< 10	< 8	< 192	< 23	< 68
Bluegill	04/18/05	< 200	2660 ± 530	< 29	< 28	< 43	< 28	< 23	< 34	< 40	< 20	< 12	< 240	< 68	< 72
Carp	04/18/05	< 130	2790 ± 540	< 26	< 12	< 53	< 18	< 40	< 18	< 27	< 26	< 9	< 159	< 71	< 106
Channel Catfish	04/18/05	< 140	3210 ± 360	< 14	< 17	< 36	< 8	< 18	< 27	< 28	< 17	< 7	< 286	< 34	< 70
Bluegill	10/03/05	< 583	2940 ± 1020	< 87	< 83	< 182	< 62	< 173	< 82	< 139	< 71	< 87	< 370	< 92	< 592
Largemouth Bass	10/03/05	< 537	3410 ± 819	< 55	< 56	< 105	< 46	< 112	< 52	< 93	< 45	< 52	< 288	< 101	< 215
Carp	10/03/05	< 210	2680 ± 635	< 34	< 29	< 45	< 42	< 39	< 33	< 53	< 25	< 31	< 159	< 64	< 112
Channel Catfish	10/03/05	< 394	2910 ± 636	< 48	< 47	< 98	< 51	< 93	< 58	< 77	< 45	< 48	< 341	< 115	< 215
	MEAN	287 ± 383	2975 ± 546	38 ± 50	35 ± 50	74 ± 103	33 ± 40	64 ± 113	40 ± 46	60 ± 81	32 ± 40	32 ± 58	254 ± 161	71 ± 63	181 ± 353
CL-105 *															
Largemouth Bass	04/18/05	< 110	3780 ± 600	< 21	< 16	< 55	< 19	< 39	< 25	< 47	< 23	< 12	< 221	< 56	< 95
Bluegill	04/18/05	< 170	2640 ± 570	< 13	< 19	< 88	< 16	< 52	< 17	< 30	< 14	< 21	< 364	< 74	< 65
Crappie	04/18/05	< 100	2700 ± 570	< 13	< 19	< 58	< 15	< 21	< 39	< 25	< 14	< 18	< 297	< 79	< 85
Carp	04/18/05	< 130	3030 ± 560	< 16	< 18	< 43	< 12	< 18	< 25	< 25	< 16	< 17	< 324	< 52	< 94
Bluegill	10/03/05	< 334	2450 ± 835	< 31	< 34	< 68	< 34	< 81	< 36	< 58	< 28	< 39	< 253	< 83	< 190
Crappie	10/03/05	< 381	3080 ± 828	< 50	< 41	< 88	< 42	< 108	< 43	< 74	< 39	< 35	< 296	< 86	< 225
Largemouth Bass	10/03/05	< 383	2690 ± 584	< 40	< 46	< 86	< 40	< 89	< 42	< 75	< 35	< 44	< 305	< 90	< 179
Carp	10/03/05	< 435	2880 ± 662	< 48	< 55	< 87	< 57	< 89	< 50	< 92	< 46	< 47	< 331	< 71	< 222
	MEAN	255 ± 282	2906 ± 820	29 ± 30	31 ± 30	71 ± 36	29 ± 33	62 ± 68	35 ± 23	53 ± 51	27 ± 24	29 ± 27	299 ± 90	74 ± 27	144 ± 132

* INDICATES CONTROL SAMPLE

TABLE C-V.1 CONCENTRATIONS OF GAMMA EMITTERS IN SEDIMENT SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	CS-134	CS-137	BA-140	LA-140	CE-144
CL-07B	04/18/05	< 92	5210 ± 510	< 11	< 15	< 26	< 15	< 48	< 10	< 20	< 19	< 14	< 71	< 15	< 77
	10/03/05	< 210	8390 ± 788	< 25	< 24	< 56	< 28	< 45	< 21	< 41	< 21	< 24	< 108	< 40	< 109
	MEAN	151 ± 167	6800 ± 4497	18 ± 20	19 ± 12	41 ± 42	21 ± 18	47 ± 4	15 ± 15	31 ± 30	20 ± 3	19 ± 14	90 ± 52	27 ± 35	93 ± 45

TABLE C-VI.1 CONCENTRATIONS OF GROSS BETA IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

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

	GROUP I					
WEEK	CL-02	CL-03	CL-04	CL-06	CL-15	CL-94
1	24 ± 4	28 ± 4	27 ± 4	27 ± 4	29 ± 4	29 ± 4
2	30 ± 4	26 ± 4	30 ± 4	31 ± 4	31 ± 4	27 ± 4
3	29 ± 4	29 ± 4	35 ± 4	28 ± 4	32 ± 4	34 ± 4
4	35 ± 4	29 ± 4	31 ± 4	31 ± 4	31 ± 4	32 ± 4
5	26 ± 3	27 ± 3	27 ± 4	23 ± 3	27 ± 3	25 ± 3
6	28 ± 4	25 ± 4	26 ± 4	26 ± 4	30 ± 4	28 ± 4
7	26 ± 4	23 ± 4	25 ± 4	28 ± 4	22 ± 4	24 ± 4
8	29 ± 4	28 ± 4	25 ± 4	27 ± 4	26 ± 4	26 ± 4
9	37 ± 4	28 ± 4	29 ± 4	31 ± 4	29 ± 4	28 ± 3
10	24 ± 3	24 ± 3	22 ± 3	22 ± 3	31 ± 4	29 ± 4
11	26 ± 3	27 ± 4	22 ± 3	24 ± 3	26 ± 4	26 ± 4
12	16 ± 4	15 ± 4	15 ± 4	14 ± 4	13 ± 4	19 ± 4
13	17 ± 4	18 ± 4	15 ± 4	19 ± 4	17 ± 4	18 ± 4
14	19 ± 3	20 ± 3	17 ± 3	17 ± 3	16 ± 3	19 ± 3
15	21 ± 3	17 ± 3	19 ± 3	20 ± 3	19 ± 3	19 ± 3
16	23 ± 4	23 ± 4	24 ± 4	20 ± 4	24 ± 4	21 ± 4
17	16 ± 3	15 ± 3	11 ± 4	14 ± 4	15 ± 4	13 ± 3
18	22 ± 3	22 ± 3	20 ± 3	22 ± 3	20 ± 3	21 ± 3
19	32 ± 4	31 ± 4	34 ± 4	29 ± 4	31 ± 4	26 ± 4
20	15 ± 3	16 ± 3	14 ± 3	15 ± 3	14 ± 3	17 ± 3
21	16 ± 3	18 ± 3	19 ± 3	18 ± 3	17 ± 3	17 ± 3
22	17 ± 3	17 ± 3	13 ± 3	17 ± 3	17 ± 3	17 ± 3
23	19 ± 3	22 ± 4	22 ± 4	23 ± 4	22 ± 3	21 ± 3
24	16 ± 3	16 ± 3	14 ± 3	15 ± 3	16 ± 3	16 ± 3
25	10 ± 3	12 ± 3	12 ± 3	12 ± 3	14 ± 3	15 ± 3
26	42 ± 4	39 ± 4	43 ± 4	41 ± 4	42 ± 4	42 ± 4
27	12 ± 5	15 ± 5	11 ± 5	10 ± 5	11 ± 5	12 ± 5
28	22 ± 5	19 ± 5	18 ± 5	18 ± 5	18 ± 5	18 ± 5
29	12 ± 5	14 ± 5	14 ± 5	14 ± 5	14 ± 5	12 ± 5
30	13 ± 5	20 ± 5	12 ± 5	14 ± 5	15 ± 5	12 ± 5
31	19 ± 5	22 ± 5	20 ± 5	16 ± 5	19 ± 5	12 ± 5
32	27 ± 5	29 ± 5	26 ± 5	25 ± 5	23 ± 5	24 ± 5
33	20 ± 5	24 ± 5	20 ± 5	20 ± 5	18 ± 5	15 ± 5
34	10 ± 5	7 ± 4	9 ± 5	7 ± 5	12 ± 5	14 ± 5
35	27 ± 6	23 ± 5	21 ± 5	20 ± 5	23 ± 5	22 ± 5
36	16 ± 5	19 ± 5	16 ± 5	(1)	18 ± 5	16 ± 5
37	43 ± 7	40 ± 6	34 ± 6	29 ± 6	41 ± 6	32 ± 6
38	22 ± 5	24 ± 5	20 ± 5	23 ± 5	15 ± 4	16 ± 4
39	17 ± 5	20 ± 5	19 ± 5	16 ± 5	17 ± 5	14 ± 5
40	13 ± 6	13 ± 6	17 ± 5	16 ± 5	19 ± 5	22 ± 5
41	10 ± 4	(1)	10 ± 3	10 ± 4	10 ± 3	9 ± 4
42	23 ± 5	25 ± 5	24 ± 5	22 ± 5	23 ± 5	25 ± 5
43	11 ± 4	13 ± 4	9 ± 4	10 ± 4	14 ± 4	10 ± 4
44	24 ± 4	25 ± 5	25 ± 4	33 ± 5	27 ± 5	26 ± 5
45	34 ± 5	30 ± 5	33 ± 5	30 ± 5	30 ± 5	39 ± 6
46	14 ± 5	17 ± 5	15 ± 4	18 ± 4	14 ± 4	18 ± 4
47	21 ± 5	20 ± 5	20 ± 4	20 ± 5	23 ± 5	21 ± 5
48	12 ± 4	11 ± 4	15 ± 4	15 ± 4	14 ± 4	15 ± 4
49	19 ± 4	(1)	27 ± 5	27 ± 5	24 ± 4	25 ± 4
50	28 ± 5	30 ± 5	30 ± 5	30 ± 5	30 ± 5	28 ± 5
51	32 ± 5	31 ± 5	32 ± 5	29 ± 5	28 ± 5	32 ± 5
52	36 ± 5	39 ± 6	37 ± 5	37 ± 5	33 ± 5	31 ± 5
MEAN	22 ± 18	22 ± 14	22 ± 16	22 ± 15	22 ± 15	22 ± 15

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-VI.1 CONCENTRATIONS OF GROSS BETA IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

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

	GROUP II			GROUP III
WEEK	CL-01	CL-07	CL-08	CL-11 **
1	29 ± 4	24 ± 4	26 ± 4	28 ± 4
2	28 ± 4	30 ± 4	29 ± 4	26 ± 4
3	38 ± 4	30 ± 3	36 ± 4	39 ± 4
4	33 ± 4	34 ± 4	36 ± 4	33 ± 4
5	27 ± 3	25 ± 3	28 ± 4	27 ± 3
6	27 ± 4	29 ± 4	27 ± 4	29 ± 4
7	23 ± 4	29 ± 4	22 ± 4	20 ± 4
8	26 ± 4	25 ± 4	27 ± 4	25 ± 4
9	29 ± 4	30 ± 4	28 ± 4	31 ± 4
10	23 ± 3	27 ± 4	23 ± 3	24 ± 4
11	21 ± 3	25 ± 3	30 ± 4	31 ± 4
12	13 ± 3	18 ± 4	19 ± 4	18 ± 4
13	19 ± 4	19 ± 4	14 ± 4	17 ± 4
14	23 ± 3	22 ± 3	27 ± 4	20 ± 3
15	18 ± 3	20 ± 3	21 ± 3	20 ± 3
16	25 ± 4	28 ± 4	23 ± 4	25 ± 4
17	15 ± 4	13 ± 3	17 ± 4	15 ± 4
18	22 ± 3	21 ± 3	18 ± 3	20 ± 3
19	36 ± 4	31 ± 4	30 ± 4	33 ± 4
20	12 ± 3	14 ± 3	15 ± 3	12 ± 3
21	17 ± 3	17 ± 3	18 ± 3	20 ± 3
22	15 ± 3	18 ± 3	18 ± 3	17 ± 3
23	23 ± 4	18 ± 3	21 ± 4	23 ± 4
24	13 ± 3	11 ± 3	15 ± 3	15 ± 3
25	12 ± 3	12 ± 3	14 ± 3	15 ± 3
26	43 ± 4	37 ± 4	43 ± 4	43 ± 4
27	10 ± 4	11 ± 5	13 ± 5	16 ± 5
28	16 ± 5	15 ± 5	17 ± 5	22 ± 5
29	20 ± 5	12 ± 5	13 ± 5	10 ± 5
30	14 ± 5	13 ± 5	12 ± 4	15 ± 5
31	16 ± 5	16 ± 5	19 ± 5	19 ± 5
32	24 ± 5	26 ± 5	30 ± 5	34 ± 5
33	22 ± 5	18 ± 5	24 ± 5	22 ± 5
34	10 ± 5	< 7	9 ± 5	12 ± 5
35	24 ± 5	20 ± 5	19 ± 5	26 ± 5
36	17 ± 5	14 ± 5	17 ± 5	25 ± 5
37	39 ± 6	36 ± 6	40 ± 6	40 ± 6
38	21 ± 5	18 ± 4	19 ± 5	17 ± 4
39	15 ± 5	14 ± 5	16 ± 5	17 ± 5
40	18 ± 5	17 ± 5	22 ± 5	24 ± 5
41	11 ± 4	10 ± 3	12 ± 4	10 ± 3
42	22 ± 5	26 ± 5	24 ± 5	27 ± 5
43	13 ± 4	8 ± 4	10 ± 4	10 ± 4
44	25 ± 5	21 ± 4	25 ± 5	30 ± 5
45	30 ± 5	31 ± 5	30 ± 5	27 ± 5
46	14 ± 4	20 ± 4	24 ± 6	17 ± 4
47	23 ± 5	25 ± 5	17 ± 4	22 ± 5
48	15 ± 4	10 ± 4	11 ± 4	14 ± 4
49	20 ± 4	23 ± 4	25 ± 5	30 ± 5
50	34 ± 5	32 ± 5	28 ± 5	30 ± 5
51	29 ± 5	26 ± 5	26 ± 5	31 ± 5
52	38 ± 5	40 ± 6	40 ± 6	33 ± 5
MEAN	22 ± 16	21 ± 16	22 ± 16	23 ± 16

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

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 CLINTON POWER STATION, 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
12/29/04 - 02/02/05	23	35	29 ± 6	12/29/04 - 02/02/05	24	38	30 ± 9	12/29/04 - 02/02/05	26	39	31 ± 11
02/02/05 - 03/02/05	22	37	27 ± 6	02/02/05 - 03/02/05	22	30	27 ± 5	02/02/05 - 03/02/05	20	31	26 ± 10
03/02/05 - 03/30/05	13	31	21 ± 10	03/02/05 - 03/30/05	13	30	21 ± 10	03/02/05 - 03/30/05	17	31	23 ± 13
03/30/05 - 04/27/05	11	24	18 ± 7	03/30/05 - 04/27/05	13	28	21 ± 9	03/30/05 - 04/27/05	15	25	20 ± 8
04/27/05 - 06/01/05	13	34	20 ± 12	04/27/05 - 06/01/05	12	36	20 ± 14	04/27/05 - 06/01/05	12	33	20 ± 16
06/01/05 - 06/29/05	10	43	23 ± 23	06/01/05 - 06/29/05	11	43	22 ± 24	06/01/05 - 06/29/05	15	43	24 ± 26
06/29/05 - 08/03/05	10	22	15 ± 7	06/29/05 - 08/03/05	10	20	14 ± 6	06/29/05 - 08/03/05	10	22	17 ± 9
08/03/05 - 08/31/05	7	29	19 ± 13	08/03/05 - 08/31/05	< 7	30	19 ± 15	08/03/05 - 08/31/05	12	34	23 ± 19
08/31/05 - 09/28/05	14	43	23 ± 18	08/31/05 - 09/28/05	14	40	22 ± 20	08/31/05 - 09/28/05	17	40	25 ± 22
09/28/05 - 11/02/05	9	33	18 ± 14	09/28/05 - 11/02/05	8	26	17 ± 13	09/28/05 - 11/02/05	10	30	20 ± 20
11/02/05 - 11/30/05	11	39	21 ± 15	11/02/05 - 11/30/05	10	31	21 ± 15	11/02/05 - 11/30/05	14	27	20 ± 11
11/30/05 - 12/28/05	19	39	30 ± 9	11/30/05 - 12/28/05	20	40	30 ± 13	11/30/05 - 12/28/05	30	33	31 ± 3
12/29/03 - 12/28/04	7	43	22 ± 9	12/29/03 - 12/28/04	< 7	43	22 ± 9	12/29/03 - 12/28/04	10	43	23 ± 9

* GROUP I LOCATIONS WITHIN 1 MILE OF CPS
** GROUP II LOCATIONS WITHIN 1-5 MILES OF CPS
*** GROUP III LOCATIONS GREATER THAN 5 MILES OF CPS

TABLE C-VI.3 CONCENTRATIONS OF GAMMA EMITTERS IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	CO-60	NB-95	ZR-95	RU-103	RU-106	CS-134	CS-137	CE-141	CE-144
CL-01	12/29/04	70 ± 15	< 24	< 1	< 1	< 2	< 1	< 5	< 1	< 0.4	< 1	< 4
	03/30/05	93 ± 15	< 22	< 1	< 1	< 1	< 1	< 6	< 1	< 0.4	< 1	< 4
	06/29/05	59 ± 24	< 26	< 1	< 1	< 3	< 2	< 11	< 1	< 1	< 3	< 6
	09/28/05	41 ± 20	< 48	< 1	< 3	< 6	< 3	< 19	< 3	< 2	< 4	< 10
	MEAN	66 ± 43	30 ± 25	1 ± 1	1 ± 2	3 ± 4	2 ± 2	10 ± 13	1 ± 2	1 ± 2	2 ± 3	6 ± 5
CL-02	12/29/04	74 ± 16	< 25	< 1	< 1	< 1	< 1	< 6	< 1	< 1	< 2	< 5
	03/30/05	75 ± 14	< 27	< 1	< 1	< 1	< 1	< 4	< 1	< 1	< 1	< 3
	06/29/05	< 43	< 46	< 2	< 5	< 8	< 6	< 25	< 3	< 4	< 9	< 12
	09/28/05	52 ± 15	< 29	< 2	< 3	< 4	< 3	< 19	< 3	< 2	< 4	< 10
	MEAN	61 ± 32	32 ± 19	1 ± 2	2 ± 4	4 ± 7	3 ± 5	13 ± 20	2 ± 3	2 ± 3	4 ± 7	7 ± 8
CL-03	12/29/04	61 ± 17	< 24	< 1	< 1	< 1	< 1	< 6	< 1	< 1	< 1	< 4
	03/30/05	81 ± 13	< 22	< 1	< 0.4	< 1	< 1	< 6	< 1	< 1	< 1	< 4
	06/29/05	85 ± 30	< 32	< 3	< 3	< 3	< 4	< 12	< 1	< 3	< 4	< 6
	09/28/05	55 ± 18	< 66	< 2	< 4	< 6	< 4	< 30	< 4	< 3	< 4	< 13
	MEAN	70 ± 30	36 ± 41	2 ± 2	2 ± 4	3 ± 4	2 ± 4	14 ± 22	2 ± 3	2 ± 3	3 ± 4	7 ± 9
CL-04	12/29/04	66 ± 16	< 29	< 1	< 1	< 2	< 1	< 8	< 1	< 1	< 1	< 4
	03/30/05	76 ± 16	< 22	< 1	< 0.4	< 1	< 1	< 5	< 1	< 1	< 1	< 4
	06/29/05	81 ± 32	< 42	< 4	< 5	< 5	< 5	< 18	< 3	< 3	< 9	< 13
	09/28/05	51 ± 16	< 29	< 2	< 2	< 4	< 3	< 20	< 3	< 2	< 4	< 10
	MEAN	68 ± 27	30 ± 17	2 ± 3	2 ± 4	3 ± 5	2 ± 4	13 ± 15	2 ± 2	2 ± 3	4 ± 7	8 ± 9
CL-06	12/29/04	54 ± 13	< 24	< 1	< 1	< 2	< 1	< 6	< 1	< 1	< 2	< 3
	03/30/05	97 ± 17	< 22	< 1	< 1	< 1	< 1	< 7	< 1	< 0.3	< 2	< 4
	06/29/05	60 ± 31	< 47	< 3	< 3	< 8	< 6	< 27	< 4	< 3	< 9	< 12
	09/28/05	51 ± 15	< 40	< 3	< 3	< 4	< 2	< 16	< 2	< 2	< 3	< 7
	MEAN	65 ± 43	33 ± 25	2 ± 2	2 ± 2	4 ± 7	3 ± 5	14 ± 19	2 ± 3	1 ± 3	4 ± 7	7 ± 8

TABLE C-VI.3 CONCENTRATIONS OF GAMMA EMITTERS IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	CO-60	NB-95	ZR-95	RU-103	RU-106	CS-134	CS-137	CE-141	CE-144
CL-07	12/29/04	52 ± 13	< 24	< 1	< 1	< 1	< 1	< 6	< 1	< 1	< 2	< 3
	03/30/05	73 ± 14	< 21	< 1	< 0.4	< 1	< 1	< 6	< 1	< 0.4	< 1	< 4
	06/29/05	89 ± 34	< 58	< 3	< 4	< 6	< 4	< 16	< 2	< 2	< 6	< 11
	09/28/05	43 ± 17	< 43	< 3	< 3	< 6	< 3	< 18	< 3	< 2	< 4	< 10
	MEAN	64 ± 42	36 ± 34	2 ± 3	2 ± 3	3 ± 6	2 ± 3	11 ± 14	2 ± 2	1 ± 2	3 ± 4	7 ± 8
CL-08	12/29/04	73 ± 12	< 24	< 1	< 1	< 1	< 1	< 5	< 1	< 1	< 2	< 3
	03/30/05	83 ± 13	< 28	< 1	< 0.4	< 1	< 1	< 4	< 0.4	< 1	< 1	< 5
	06/29/05	86 ± 44	< 73	< 3	< 6	< 10	< 6	< 30	< 3	< 1	< 9	< 13
	09/28/05	38 ± 18	< 49	< 3	< 4	< 5	< 4	< 29	< 3	< 3	< 4	< 12
	MEAN	70 ± 44	43 ± 45	2 ± 3	3 ± 5	4 ± 8	3 ± 5	17 ± 28	2 ± 3	1 ± 3	4 ± 7	8 ± 10
CL-11 *	12/29/04	59 ± 17	< 24	< 1	< 1	< 1	< 1	< 8	< 1	< 1	< 2	< 3
	03/30/05	88 ± 11	< 21	< 1	< 0.2	< 1	< 1	< 5	< 1	< 0.4	< 1	< 4
	06/29/05	63 ± 30	< 59	< 3	< 5	< 13	< 8	< 28	< 4	< 3	< 10	< 16
	09/28/05	51 ± 24	< 55	< 2	< 4	< 6	< 4	< 27	< 4	< 2	< 5	< 13
	MEAN	65 ± 32	40 ± 40	2 ± 2	2 ± 5	5 ± 11	3 ± 6	17 ± 25	2 ± 4	2 ± 3	4 ± 8	9 ± 13
CL-15	12/29/04	83 ± 18	< 24	< 1	< 1	< 2	< 1	< 6	< 1	< 1	< 1	< 6
	03/30/05	73 ± 13	< 21	< 1	< 0.4	< 1	< 1	< 5	< 1	< 0.4	< 1	< 4
	06/29/05	73 ± 28	< 31	< 4	< 3	< 6	< 4	< 24	< 2	< 3	< 7	< 13
	09/28/05	61 ± 18	< 48	< 2	< 3	< 4	< 3	< 21	< 2	< 2	< 4	< 10
	MEAN	73 ± 18	31 ± 24	2 ± 3	2 ± 3	3 ± 4	2 ± 3	14 ± 20	2 ± 2	1 ± 2	3 ± 6	8 ± 8
CL-94	12/29/04	68 ± 17	< 24	< 1	< 1	< 2	< 1	< 6	< 1	< 1	< 2	< 6
	03/30/05	78 ± 13	< 22	< 1	< 1	< 1	< 1	< 6	< 1	< 0.4	< 1	< 5
	06/29/05	92 ± 35	< 55	< 2	< 4	< 7	< 4	< 22	< 2	< 2	< 6	< 10
	09/28/05	35 ± 13	< 29	< 3	< 3	< 4	< 2	< 19	< 2	< 2	< 3	< 8
	MEAN	68 ± 48	32 ± 30	2 ± 2	2 ± 3	3 ± 5	2 ± 3	13 ± 17	1 ± 1	1 ± 2	3 ± 4	7 ± 5

* INDICATES CONTROL STATION

TABLE C-VII.1 CONCENTRATIONS OF I-131 IN AIR IODINE SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

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

	GROUP I					
WEEK	CL-02	CL-03	CL-04	CL-06	CL-15	CL-94
1	< 16	< 16	< 15	< 16	< 19	< 19
2	< 16	< 17	< 17	< 17	< 11	< 10
3	< 10	< 10	< 10	< 11	< 9	< 9
4	< 14	< 15	< 14	< 14	< 15	< 15
5	< 16	< 16	< 17	< 16	< 13	< 14
6	< 19	< 20	< 20	< 19	< 17	< 17
7	< 14	< 14	< 15	< 14	< 17	< 17
8	< 17	< 17	< 17	< 16	< 16	< 16
9	< 14	< 14	< 14	< 14	< 17	< 17
10	< 18	< 18	< 18	< 18	< 18	< 18
11	< 17	< 17	< 17	< 17	< 14	< 14
12	< 14	< 14	< 14	< 14	< 14	< 14
13	< 23	< 23	< 24	< 25	< 15	< 15
14	< 15	< 14	< 15	< 16	< 11	< 12
15	< 11	< 11	< 12	< 12	< 17	< 18
16	< 13	< 13	< 13	< 14	< 12	< 13
17	< 13	< 13	< 14	< 15	< 14	< 14
18	< 9	< 10	< 10	< 10	< 9	< 9
19	< 13	< 13	< 12	< 12	< 15	< 15
20	< 13	< 13	< 13	< 13	< 10	< 10
21	< 24	< 23	< 23	< 23	< 13	< 13
22	< 10	< 10	< 10	< 10	< 21	< 21
23	< 9	< 9	< 9	< 9	< 18	< 18
24	< 11	< 11	< 11	< 10	< 17	< 17
25	< 15	< 16	< 15	< 16	< 6	< 6
26	< 13	< 13	< 13	< 13	< 16	< 16
27	< 16	< 16	< 16	< 9	< 20	< 14
28	< 17	< 17	< 17	< 9	< 22	< 12
29	< 28	< 28	< 28	< 21	< 32	< 18
30	< 20	< 20	< 21	< 10	< 20	< 11
31	< 17	< 17	< 17	< 9	< 18	< 9
32	< 18	< 18	< 18	< 9	< 20	< 11
33	< 37	< 37	< 21	< 37	< 32	< 16
34	< 30	< 31	< 31	< 23	< 27	< 22
35	< 23	< 23	< 23	< 13	< 31	< 18
36	< 26	< 28	< 29	(1)	< 27	< 29
37	< 18	< 18	< 18	< 10	< 27	< 18
38	< 29	< 28	< 30	< 18	< 26	< 20
39	< 25	< 25	< 26	< 17	< 22	< 17
40	< 39	< 22	< 24	< 25	< 32	< 22
41	< 34	(1)	< 29	< 19	< 29	< 17
42	< 34	< 35	< 33	< 22	< 35	< 20
43	< 21	< 22	< 22	< 16	< 39	< 38
44	< 35	< 35	< 35	< 20	< 30	< 17
45	< 35	< 35	< 35	< 21	< 30	< 20
46	< 36	< 35	< 28	< 28	< 28	< 28
47	< 30	< 31	< 28	< 21	< 42	< 28
48	< 24	< 24	< 23	< 17	< 32	< 21
49	< 30	(1)	< 30	< 30	< 24	< 18
50	< 23	< 23	< 23	< 17	< 15	< 20
51	< 27	< 27	< 27	< 15	< 47	< 30
52	< 33	< 33	< 34	< 25	< 39	< 29
MEAN	21 ± 17	20 ± 16	20 ± 15	17 ± 12	22 ± 19	17 ± 12

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-VII.1 CONCENTRATIONS OF I-131 IN AIR IODINE SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

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

	GROUP II			GROUP III
WEEK	CL-01	CL-07	CL-08	CL-11 *
1	< 16	< 20	< 19	< 19
2	< 19	< 10	< 10	< 10
3	< 10	< 8	< 9	< 9
4	< 14	< 15	< 15	< 14
5	< 16	< 14	< 14	< 14
6	< 19	< 16	< 17	< 17
7	< 14	< 17	< 17	< 17
8	< 17	< 15	< 16	< 16
9	< 14	< 17	< 17	< 17
10	< 18	< 18	< 18	< 18
11	< 17	< 14	< 14	< 14
12	< 14	< 14	< 14	< 14
13	< 22	< 15	< 16	< 15
14	< 15	< 11	< 12	< 11
15	< 12	< 17	< 17	< 16
16	< 13	< 12	< 12	< 12
17	< 13	< 14	< 14	< 14
18	< 10	< 9	< 9	< 9
19	< 13	< 14	< 14	< 14
20	< 13	< 10	< 10	< 10
21	< 23	< 13	< 13	< 13
22	< 10	< 21	< 21	< 22
23	< 9	< 18	< 19	< 18
24	< 11	< 17	< 17	< 17
25	< 15	< 6	< 6	< 6
26	< 13	< 16	< 16	< 16
27	< 15	< 21	< 21	< 19
28	< 17	< 22	< 22	< 22
29	< 28	< 32	< 32	< 32
30	< 21	< 20	< 18	< 21
31	< 17	< 18	< 18	< 17
32	< 18	< 20	< 20	< 20
33	< 38	< 31	< 31	< 31
34	< 32	< 27	< 27	< 27
35	< 24	< 32	< 32	< 32
36	< 28	< 19	< 29	< 28
37	< 18	< 27	< 27	< 27
38	< 29	< 26	< 26	< 33
39	< 26	< 22	< 22	< 22
40	< 23	< 31	< 31	< 31
41	< 29	< 29	< 31	< 29
42	< 34	< 35	< 35	< 35
43	< 22	< 37	< 25	< 38
44	< 35	< 31	< 31	< 32
45	< 35	< 30	< 30	< 28
46	< 28	< 29	< 27	< 18
47	< 28	< 45	< 42	< 42
48	< 24	< 33	< 31	< 31
49	< 30	< 24	< 26	< 25
50	< 23	< 20	< 20	< 20
51	< 27	< 47	< 47	< 46
52	< 33	< 39	< 39	< 38
MEAN	20 ± 15	21 ± 19	21 ± 18	21 ± 18

* INDICATES CONTROL STATION

TABLE C-VIII.1 CONCENTRATIONS OF I-131 IN MILK SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	CONTROL FARM CL-116 *
01/26/05	< 0.5
02/23/05	< 0.4
03/31/05	< 0.3
04/27/05	< 0.3
05/11/05	< 0.3
05/25/05	< 0.4
06/08/05	< 0.3
06/22/05	< 0.3
07/06/05	< 0.7
07/20/05	< 0.6
08/03/05	< 0.5
08/17/05	< 0.7
08/31/05	< 0.7
09/14/05	< 0.7
09/28/05	< 0.8
10/12/05	< 0.6
10/26/05	< 0.6
11/30/05	< 0.2
12/28/05	< 0.6
MEAN	0.5 ± 0.2

* INDICATES CONTROL STATION

TABLE C-VIII.2 CONCENTRATIONS OF GAMMA EMITTERS IN MILK SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	CS-134	CS-137	BA-140	LA-140	CE-144
CL-116 *	01/26/05	< 20	1308 ± 108	< 2	< 4	< 4	< 2	< 7	< 5	< 6	< 3	< 4	< 16	< 2	< 47
	02/23/05	< 26	1393 ± 121	< 3	< 3	< 6	< 4	< 8	< 5	< 6	< 4	< 4	< 11	< 4	< 25
	03/31/05	< 32	1156 ± 137	< 4	< 3	< 9	< 5	< 5	< 4	< 8	< 4	< 4	< 20	< 3	< 36
	04/27/05	< 46	1313 ± 177	< 7	< 6	< 12	< 5	< 17	< 5	< 13	< 6	< 5	< 26	< 5	< 56
	05/11/05	< 31	1106 ± 152	< 5	< 2	< 8	< 6	< 10	< 7	< 8	< 5	< 5	< 27	< 5	< 53
	05/25/05	< 47	1015 ± 177	< 6	< 7	< 12	< 5	< 10	< 6	< 12	< 7	< 6	< 15	< 8	< 43
	06/08/05	< 41	1107 ± 160	< 5	< 4	< 10	< 4	< 13	< 5	< 11	< 5	< 4	< 36	< 10	< 59
	06/22/05	< 53	1295 ± 177	< 6	< 3	< 11	< 6	< 8	< 4	< 10	< 5	< 7	< 31	< 5	< 47
	07/06/05	< 40	1200 ± 146	< 6	< 5	< 9	< 5	< 11	< 4	< 9	< 4	< 5	< 21	< 2	< 35
	07/20/05	< 41	1220 ± 131	< 5	< 5	< 12	< 5	< 12	< 6	< 10	< 5	< 6	< 27	< 6	< 39
	08/03/05	< 61	1280 ± 168	< 8	< 7	< 11	< 9	< 18	< 7	< 12	< 7	< 9	< 34	< 7	< 46
	08/17/05	< 57	1100 ± 161	< 7	< 8	< 15	< 7	< 17	< 9	< 14	< 6	< 8	< 31	< 12	< 50
	08/31/05	< 36	1020 ± 133	< 5	< 4	< 10	< 5	< 9	< 6	< 8	< 4	< 5	< 23	< 7	< 30
	09/14/05	< 13	1300 ± 48	< 1	< 1	< 3	< 1	< 3	< 1	< 2	< 1	< 2	< 7	< 2	< 10
	09/28/05	< 34	1190 ± 145	< 4	< 3	< 10	< 5	< 11	< 5	< 8	< 4	< 5	< 21	< 4	< 30
	10/12/05	< 61	1320 ± 158	< 7	< 6	< 15	< 7	< 15	< 8	< 12	< 6	< 6	< 34	< 11	< 46
	10/26/05	< 44	1120 ± 111	< 5	< 4	< 9	< 6	< 11	< 5	< 10	< 4	< 5	< 20	< 6	< 30
	11/30/05	< 42	1410 ± 131	< 5	< 6	< 14	< 6	< 14	< 6	< 10	< 4	< 6	< 23	< 8	< 34
	12/28/05	< 54	1310 ± 197	< 5	< 8	< 15	< 6	< 11	< 6	< 11	< 7	< 6	< 26	< 8	< 41
	MEAN	41 ± 27	1219 ± 237	5 ± 3	5 ± 4	10 ± 7	5 ± 3	11 ± 8	5 ± 3	9 ± 6	5 ± 3	5 ± 3	24 ± 15	6 ± 6	40 ± 24

* INDICATES CONTROL STATION

TABLE C-IX.1 **CONCENTRATIONS OF GAMMA EMITTERS IN VEGETATION SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005**

RESULTS IN UNITS OF PCI/KG WET ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	I-131	CS-134	CS-137	BA-140	LA-140	CE-144
CL-114 ** Cabbage	06/29/05	< 140	2950 ± 310	< 10	< 12	< 18	< 10	< 14	< 12	< 20	< 24	< 10	< 10	< 35	< 6	< 108
CL-114 Chard	06/29/05	< 180	8940 ± 750	< 34	< 29	< 55	< 17	< 54	< 20	< 55	< 34	< 16	< 14	< 81	< 20	< 120
CL-114 Lettuce	06/29/05	< 210	5170 ± 630	< 20	< 14	< 35	< 14	< 26	< 23	< 32	< 46	< 19	< 14	< 104	< 33	< 118
CL-114 Cabbage	07/27/05	207 ± 134	3960 ± 500	< 19	< 17	< 47	< 21	< 43	< 18	< 43	< 26	< 17	< 21	< 82	< 20	< 101
CL-114 Chard	07/27/05	293 ± 204	7370 ± 679	< 14	< 16	< 37	< 19	< 43	< 18	< 25	< 28	< 13	< 19	< 74	< 10	< 100
CL-114 Lettuce	07/27/05	< 256	5510 ± 720	< 25	< 27	< 68	< 33	< 79	< 29	< 51	< 44	< 25	< 28	< 106	< 46	< 152
CL-114 Cabbage	08/31/05	316 ± 53	4000 ± 148	< 6	< 6	< 14	< 6	< 13	< 6	< 11	< 19	< 5	< 6	< 41	< 11	< 36
CL-114 Chard	08/31/05	73 ± 52	4860 ± 182	< 5	< 5	< 11	< 4	< 11	< 4	< 8	< 15	< 4	< 5	< 32	< 7	< 27
CL-114 Lettuce	08/31/05	581 ± 122	10200 ± 376	< 12	< 14	< 34	< 13	< 32	< 14	< 24	< 39	< 11	< 13	< 85	< 26	< 76
CL-114 Cabbage	09/28/05 Cabbage	465 ± 291	3480 ± 463	< 13	< 14	< 32	< 16	< 37	< 14	< 27	< 27	< 11	< 16	< 76	< 14	< 88
CL-114 Chard	09/28/05 Chard	359 ± 167	4360 ± 472	< 16	< 15	< 48	< 22	< 40	< 21	< 33	< 33	< 18	< 20	< 91	< 26	< 105
CL-114 Lettuce	09/28/05 Lettuce	4570 ± 248	3910 ± 326	< 12	< 12	< 25	< 19	< 26	< 13	< 20	< 23	< 11	< 14	< 63	< 16	< 78
	MEAN*	638 ± 2493	5393 ± 4546	16 ± 17	15 ± 14	35 ± 34	16 ± 15	35 ± 39	16 ± 14	29 ± 29	30 ± 19	13 ± 12	15 ± 13	72 ± 50	20 ± 23	92 ± 70

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

** INDICATES CONTROL STATION

TABLE C-IX.1 **CONCENTRATIONS OF GAMMA EMITTERS IN VEGETATION SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005**

RESULTS IN UNITS OF PCI/KG WET ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	I-131	CS-134	CS-137	BA-140	LA-140	CE-144
CL-115 Cabbage	06/29/05	< 130	2880 ± 450	< 10	< 10	< 38	< 12	< 19	< 21	< 32	< 29	< 16	< 17	< 71	< 15	< 58
CL-115 Corn Leaves	06/29/05	< 310	2220 ± 340	< 11	< 11	< 35	< 16	< 16	< 24	< 23	< 26	< 15	< 19	< 92	< 9	< 68
CL-115 Lettuce	06/29/05	150 ± 50	2720 ± 170	< 9	< 8	< 18	< 9	< 8	< 10	< 14	< 17	< 9	< 9	< 34	< 8	< 47
CL-115 Cabbage	07/27/05	294 ± 128	3000 ± 418	< 14	< 13	< 39	< 15	< 36	< 15	< 27	< 23	< 17	< 15	< 75	< 24	< 115
CL-115 Chard	07/27/05	< 95	4720 ± 306	< 8	< 9	< 25	< 10	< 21	< 10	< 15	< 53	< 7	< 9	< 94	< 22	< 37
CL-115 Lettuce	07/27/05	< 261	9440 ± 868	< 26	< 30	< 68	< 32	< 77	< 24	< 49	< 44	< 24	< 28	< 128	< 23	< 183
CL-115 Cabbage	08/31/05	296 ± 105	4740 ± 252	< 9	< 10	< 22	< 10	< 23	< 11	< 20	< 34	< 8	< 11	< 71	< 20	< 57
CL-115 Chard,Milkweed	08/31/05	1530 ± 120	6940 ± 264	< 6	< 7	< 18	< 6	< 16	< 8	< 13	< 24	< 6	< 7	< 51	< 11	< 43
CL-115 Lettuce	08/31/05	2540 ± 130	6960 ± 262	< 10	< 10	< 27	< 10	< 25	< 12	< 19	< 35	< 9	< 10	< 72	< 22	< 60
CL-115 Cabbage	09/28/05	599 ± 260	2540 ± 391	< 17	< 19	< 37	< 11	< 37	< 20	< 30	< 31	< 14	< 16	< 96	< 27	< 124
CL-115 Chard	09/28/05	601 ± 251	5070 ± 619	< 26	< 31	< 51	< 25	< 64	< 32	< 47	< 51	< 22	< 28	< 146	< 32	< 157
CL-115 Lettuce	09/28/05	2120 ± 167	6610 ± 348	< 16	< 16	< 35	< 15	< 35	< 17	< 29	< 30	< 16	< 17	< 85	< 26	< 98
	MEAN*	744 ± 1679	4820 ± 4559	13 ± 13	15 ± 17	34 ± 29	14 ± 15	31 ± 41	17 ± 15	26 ± 24	33 ± 22	14 ± 12	16 ± 14	85 ± 61	20 ± 15	87 ± 96

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

TABLE C-IX.1 **CONCENTRATIONS OF GAMMA EMITTERS IN VEGETATION SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005**

RESULTS IN UNITS OF PCI/KG WET ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	I-131	CS-134	CS-137	BA-140	LA-140	CE-144
CL-117 Cabbage	06/29/05	< 120	2470 ± 350	< 9	< 13	< 36	< 13	< 13	< 11	< 16	< 16	< 5	< 10	< 61	< 14	< 117
CL-117 Chard	06/29/05	< 290	7340 ± 780	< 27	< 23	< 36	< 14	< 39	< 14	< 52	< 43	< 16	< 15	< 85	< 22	< 210
CL-117 Lettuce	06/29/05	< 180	6140 ± 650	< 19	< 17	< 27	< 14	< 24	< 20	< 20	< 16	< 19	< 17	< 37	< 12	< 75
CL-117 Cabbage	07/27/05	400 ± 157	3320 ± 499	< 19	< 18	< 37	< 18	< 41	< 18	< 34	< 26	< 18	< 23	< 75	< 32	< 131
CL-117 Chard	07/27/05	< 248	6150 ± 689	< 21	< 25	< 52	< 26	< 48	< 26	< 40	< 40	< 21	< 24	< 100	< 38	< 123
CL-117 Lettuce	07/27/05	< 365	6230 ± 753	< 27	< 21	< 56	< 21	< 62	< 27	< 48	< 49	< 27	< 30	< 120	< 27	< 186
CL-117 Cabbage	08/31/05	541 ± 107	4730 ± 228	< 10	< 9	< 22	< 9	< 21	< 9	< 17	< 34	< 8	< 10	< 66	< 19	< 57
CL-117 Chard	08/31/05	230 ± 78	5710 ± 216	< 6	< 6	< 14	< 6	< 15	< 6	< 11	< 21	< 5	< 6	< 42	< 9	< 40
CL-117 Lettuce	08/31/05	813 ± 123	11600 ± 343	< 11	< 12	< 31	< 13	< 29	< 13	< 21	< 39	< 11	< 7	< 80	< 23	< 67
CL-117 Cabbage	09/28/05	215 ± 130	2850 ± 351	< 9	< 10	< 27	< 13	< 22	< 10	< 14	< 20	< 10	< 15	< 53	< 14	< 70
CL-117 Chard	09/28/05	440 ± 182	5390 ± 473	< 18	< 17	< 39	< 20	< 38	< 19	< 33	< 34	< 19	< 17	< 91	< 16	< 109
CL-117 Lettuce	09/28/05	1370 ± 291	9890 ± 738	< 27	< 25	< 61	< 25	< 62	< 29	< 48	< 51	< 23	< 29	< 143	< 37	< 151
	MEAN*	434 ± 699	5985 ± 5394	17 ± 15	16 ± 13	36 ± 28	16 ± 12	34 ± 34	17 ± 15	30 ± 30	32 ± 25	15 ± 14	17 ± 17	80 ± 62	22 ± 19	111 ± 105

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

TABLE C-IX.1 **CONCENTRATIONS OF GAMMA EMITTERS IN VEGETATION SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005**

RESULTS IN UNITS OF PCI/KG WET ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	I-131	CS-134	CS-137	BA-140	LA-140	CE-144
CL-118 Cabbage	06/29/05	< 200	5670 ± 370	< 10	< 15	< 21	< 7	< 24	< 18	< 44	< 21	< 12	< 19	< 88	< 9	< 93
CL-118 Chard	06/29/05	180 ± 90	7900 ± 360	< 9	< 13	< 25	< 16	< 29	< 20	< 13	< 12	< 15	< 14	< 61	< 13	< 70
CL-118 Lettuce	06/29/05	< 210	4360 ± 590	< 14	< 21	< 29	< 15	< 52	< 18	< 32	< 32	< 13	< 10	< 71	< 16	< 114
CL-118 Cabbage	07/27/05	< 250	4260 ± 599	< 25	< 21	< 58	< 27	< 55	< 23	< 42	< 36	< 25	< 25	< 96	< 29	< 148
CL-118 Chard, Leaves	07/27/05	1540 ± 489	4830 ± 908	< 37	< 25	< 68	< 64	< 68	< 30	< 56	< 43	< 28	< 29	< 121	< 53	< 197
CL-118 Lettuce	07/27/05	578 ± 340	5430 ± 755	< 23	< 28	< 55	< 28	< 56	< 23	< 41	< 41	< 23	< 23	< 115	< 19	< 161
CL-118 Cabbage	08/31/05	230 ± 86	3400 ± 209	< 9	< 9	< 22	< 9	< 19	< 9	< 17	< 30	< 7	< 9	< 63	< 18	< 55
CL-118 Chard	08/31/05	320 ± 68	4970 ± 170	< 6	< 7	< 18	< 6	< 15	< 7	< 13	< 34	< 6	< 6	< 61	< 16	< 39
CL-118 Lettuce	08/31/05	431 ± 66	3550 ± 119	< 5	< 6	< 15	< 5	< 12	< 6	< 11	< 54	< 5	< 5	< 73	< 23	< 31
CL-118 Cabbage	09/28/05	569 ± 280	2710 ± 485	< 25	< 21	< 52	< 24	< 53	< 32	< 52	< 50	< 27	< 32	< 129	< 40	< 178
CL-118 Chard, Timothy	09/28/05	1800 ± 159	8900 ± 336	< 9	< 9	< 20	< 9	< 21	< 9	< 17	< 19	< 9	< 10	< 48	< 12	< 60
CL-118 Lettuce	09/28/05	664 ± 333	5060 ± 633	< 30	< 28	< 65	< 37	< 54	< 31	< 53	< 54	< 28	< 30	< 140	< 39	< 173
	MEAN*	581 ± 1075	5087 ± 3571	17 ± 21	17 ± 16	37 ± 40	21 ± 34	38 ± 39	19 ± 19	32 ± 35	35 ± 28	16 ± 18	18 ± 20	89 ± 62	24 ± 27	110 ± 119

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

TABLE C-IX.2 CONCENTRATIONS OF GAMMA EMITTERS IN GRASS SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/KG WET ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	I-131	CS-134	CS-137	BA-140	LA-140	CE-144
CL-01																
	05/11/05	2260 ± 370	5190 ± 480	< 13	< 11	< 49	< 18	< 37	< 16	< 24	< 35	< 12	< 12	< 74	< 13	< 152
	05/25/05	1510 ± 220	6650 ± 560	< 18	< 19	< 29	< 15	< 35	< 21	< 51	< 42	< 16	< 10	< 82	< 8	< 88
	06/08/05	2210 ± 240	7060 ± 220	< 13	< 14	< 40	< 19	< 36	< 12	< 31	< 32	< 13	< 16	< 58	< 10	< 111
	06/22/05	4900 ± 450	7280 ± 810	< 39	< 29	< 59	< 25	< 85	< 34	< 57	< 57	< 46	< 48	< 168	< 23	< 306
	08/17/05	1890 ± 346	3240 ± 526	< 27	< 28	< 59	< 29	< 70	< 33	< 50	< 53	< 31	< 30	< 128	< 43	< 169
	08/31/05	2890 ± 172	6160 ± 289	< 9	< 9	< 23	< 13	< 19	< 10	< 17	< 44	< 8	< 10	< 81	< 25	< 55
	09/14/05	1270 ± 266	4860 ± 526	< 19	< 16	< 35	< 9	< 31	< 16	< 27	< 34	< 14	< 17	< 107	< 13	< 100
	09/28/05	2440 ± 313	6400 ± 641	< 25	< 24	< 45	< 27	< 62	< 27	< 43	< 44	< 25	< 25	< 122	< 31	< 154
	10/12/05	3840 ± 517	6310 ± 794	< 21	< 23	< 62	< 36	< 49	< 31	< 43	< 49	< 22	< 29	< 103	< 23	< 156
	10/26/05	3880 ± 504	5810 ± 765	< 28	< 27	< 54	< 31	< 38	< 23	< 43	< 52	< 26	< 26	< 134	< 33	< 128
	MEAN	2709 ± 2327	5896 ± 2401	21 ± 18	20 ± 15	45 ± 27	22 ± 17	46 ± 40	22 ± 18	39 ± 26	44 ± 17	21 ± 23	22 ± 24	106 ± 66	22 ± 23	142 ± 136
CL-02																
	05/11/05	1110 ± 410	6390 ± 750	< 25	< 23	< 38	< 25	< 35	< 29	< 40	< 22	< 26	< 19	< 86	< 13	< 217
	05/25/05	3050 ± 350	11840 ± 840	< 24	< 13	< 75	< 13	< 45	< 26	< 41	< 53	< 34	< 23	< 123	< 17	< 225
	06/08/05	2440 ± 320	7930 ± 590	< 19	< 10	< 30	< 15	< 35	< 29	< 29	< 39	< 17	< 17	< 95	< 13	< 195
	06/22/05	2710 ± 770	14970 ± 1590	< 44	< 83	< 59	< 27	< 112	< 72	< 98	< 55	< 58	< 79	< 244	< 40	< 396
	08/17/05	1800 ± 282	5490 ± 566	< 24	< 21	< 51	< 21	< 55	< 23	< 46	< 43	< 22	< 23	< 99	< 30	< 171
	08/31/05	2620 ± 142	8980 ± 264	< 10	< 11	< 26	< 10	< 23	< 11	< 20	< 53	< 9	< 11	< 92	< 27	< 65
	09/14/05	2000 ± 334	4910 ± 533	< 18	< 17	< 47	< 19	< 39	< 20	< 45	< 55	< 16	< 24	< 144	< 33	< 128
	09/28/05	2360 ± 280	4760 ± 512	< 20	< 21	< 52	< 24	< 44	< 23	< 37	< 43	< 20	< 25	< 103	< 34	< 136
	10/12/05	3370 ± 394	7360 ± 683	< 34	< 34	< 58	< 33	< 69	< 34	< 52	< 58	< 24	< 30	< 159	< 48	< 172
	10/26/05	3440 ± 167	7120 ± 332	< 13	< 13	< 28	< 13	< 29	< 14	< 24	< 24	< 12	< 14	< 64	< 19	< 73
	MEAN	2490 ± 1445	7975 ± 6478	23 ± 20	25 ± 44	46 ± 32	20 ± 15	49 ± 52	28 ± 34	43 ± 44	44 ± 26	24 ± 28	26 ± 39	121 ± 103	27 ± 24	178 ± 188

TABLE C-IX.2 CONCENTRATIONS OF GAMMA EMITTERS IN GRASS SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

RESULTS IN UNITS OF PCI/KG WET ± 2 SIGMA

STC	COLLECTION PERIOD	BE-7	K-40	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	ZR-95	I-131	CS-134	CS-137	BA-140	LA-140	CE-144
CL-08																
	05/11/05	830 ± 270	7720 ± 770	< 23	< 26	< 34	< 21	< 69	< 28	< 22	< 41	< 19	< 19	< 86	< 13	< 137
	05/25/05	1040 ± 270	6740 ± 620	< 17	< 18	< 65	< 26	< 53	< 21	< 55	< 33	< 21	< 24	< 84	< 21	< 129
	06/08/05	1780 ± 390	6700 ± 750	< 31	< 28	< 53	< 17	< 40	< 23	< 55	< 32	< 37	< 29	< 64	< 20	< 212
	06/22/05	3450 ± 470	11830 ± 1010	< 33	< 40	< 84	< 32	< 45	< 20	< 66	< 49	< 24	< 30	< 173	< 40	< 136
	08/17/05	2190 ± 298	9040 ± 692	< 18	< 17	< 36	< 25	< 45	< 20	< 28	< 31	< 17	< 18	< 74	< 24	< 111
	08/31/05	1170 ± 116	13200 ± 305	< 10	< 11	< 29	< 10	< 26	< 12	< 20	< 49	< 9	< 10	< 90	< 24	< 60
	09/14/05	1740 ± 294	6500 ± 642	< 18	< 18	< 37	< 10	< 49	< 16	< 27	< 56	< 16	< 17	< 96	< 38	< 124
	09/28/05	2140 ± 363	6530 ± 770	< 23	< 23	< 40	< 23	< 58	< 21	< 37	< 42	< 22	< 24	< 128	< 39	< 139
	10/12/05	2250 ± 363	8690 ± 737	< 19	< 16	< 50	< 12	< 51	< 19	< 34	< 35	< 16	< 19	< 82	< 23	< 136
	10/26/05	3620 ± 341	8390 ± 696	< 27	< 29	< 68	< 28	< 68	< 31	< 49	< 54	< 24	< 25	< 138	< 38	< 174
	MEAN	2021 ± 1878	8534 ± 4635	22 ± 14	23 ± 17	49 ± 36	20 ± 15	50 ± 26	21 ± 11	39 ± 32	42 ± 19	21 ± 15	22 ± 12	101 ± 68	28 ± 20	136 ± 78
CL-116 *																
	05/11/05	1030 ± 270	8700 ± 660	< 29	< 20	< 37	< 15	< 64	< 16	< 48	< 41	< 31	< 24	< 123	< 17	< 205
	05/25/05	1770 ± 480	15670 ± 990	< 27	< 37	< 62	< 30	< 63	< 43	< 63	< 58	< 39	< 32	< 166	< 39	< 302
	06/08/05	4930 ± 570	15770 ± 1090	< 39	< 34	< 99	< 36	< 98	< 32	< 48	< 59	< 52	< 29	< 174	< 46	< 257
	06/22/05	2220 ± 530	13100 ± 1240	< 41	< 42	< 102	< 27	< 91	< 46	< 118	< 50	< 37	< 39	< 140	< 48	< 309
	08/17/05	2170 ± 547	5020 ± 806	< 34	< 31	< 62	< 25	< 71	< 34	< 54	< 56	< 26	< 34	< 153	< 54	< 206
	08/31/05	2970 ± 143	5580 ± 240	< 10	< 11	< 26	< 10	< 24	< 12	< 21	< 55	< 9	< 10	< 99	< 29	< 64
	09/14/05	810 ± 262	6640 ± 549	< 13	< 16	< 41	< 13	< 32	< 16	< 27	< 45	< 13	< 12	< 82	< 17	< 104
	09/28/05	2770 ± 313	6400 ± 591	< 21	< 28	< 50	< 25	< 50	< 24	< 38	< 45	< 24	< 25	< 126	< 34	< 155
	10/12/05	2350 ± 373	8590 ± 816	< 26	< 19	< 47	< 34	< 45	< 21	< 36	< 47	< 19	< 22	< 123	< 37	< 136
	10/26/05	2010 ± 529	7500 ± 947	< 32	< 30	< 66	< 19	< 69	< 30	< 36	< 56	< 32	< 30	< 163	< 22	< 183
	MEAN	2303 ± 2291	9297 ± 8127	27 ± 20	27 ± 20	59 ± 50	23 ± 18	61 ± 47	28 ± 23	49 ± 55	51 ± 13	28 ± 26	26 ± 18	135 ± 60	34 ± 26	192 ± 162

* INDICATES CONTROL STATION

TABLE C-X.1 QUARTERLY TLD RESULTS FOR CLINTON POWER STATION, 2005

RESULTS IN UNITS OF MILLI-ROENTGEN/QUARTER ± 2 STANDARD DEVIATIONS

STATION CODE	MEAN ± 2 S. D.	JAN - MAR	APR - JUN	JUL - SEP	OCT - DEC
CL-1	18.8 ± 4.6	15.6 ± 8.0	18.5 ± 0.4	20.7 ± 2.0	20.2 ± 1.9
CL-2	21.4 ± 2.8	22.6 ± 4.0	19.7 ± 1.8	22.4 ± 3.7	20.7 ± 1.2
CL-3	21.1 ± 3.2	21.6 ± 5.0	19.1 ± 2.4	22.9 ± 1.8	20.7 ± 2.6
CL-4	20.3 ± 2.7	20.8 ± 2.2	18.3 ± 1.0	21.1 ± 1.7	21.1 ± 1.4
CL-5	21.8 ± 2.1	22.2 ± 3.6	20.5 ± 1.0	23.0 ± 3.0	21.5 ± 1.5
CL-6	18.9 ± 2.0	19.6 ± 2.1	17.4 ± 1.5	19.4 ± 1.1	19.1 ± 1.8
CL-7	19.1 ± 2.5	20.2 ± 3.3	17.7 ± 0.7	20.1 ± 1.4	18.4 ± 1.4
CL-8	20.2 ± 2.0	20.5 ± 3.6	18.8 ± 0.6	21.2 ± 2.4	20.1 ± 1.6
CL-11	19.3 ± 1.9	20.4 ± 3.7	18.1 ± 0.5	19.6 ± 1.3	19.2 ± 0.8
CL-15	18.5 ± 2.3	18.9 ± 1.2	17.0 ± 1.4	19.7 ± 0.8	18.4 ± 1.7
CL-22	21.3 ± 1.9	22.0 ± 1.8	19.9 ± 1.7	21.6 ± 2.4	21.7 ± 1.2
CL-23	20.3 ± 1.8	21.0 ± 2.2	19.0 ± 1.2	20.9 ± 1.2	20.4 ± 1.4
CL-24	21.4 ± 2.2	21.8 ± 1.8	19.7 ± 3.5	22.0 ± 1.3	21.9 ± 0.6
CL-33	21.4 ± 2.8	22.7 ± 2.1	19.4 ± 0.9	22.0 ± 1.4	21.5 ± 2.0
CL-34	21.3 ± 2.2	21.6 ± 0.8	19.7 ± 2.3	22.1 ± 1.8	21.9 ± 2.7
CL-35	19.9 ± 2.1	21.0 ± 1.1	18.5 ± 0.6	20.3 ± 1.0	19.9 ± 2.0
CL-36	20.2 ± 2.4	20.3 ± 1.3	18.5 ± 1.8	21.1 ± 0.9	21.0 ± 1.2
CL-37	20.0 ± 3.0	20.6 ± 1.5	17.9 ± *	21.4 ± 1.3	20.2 ± 1.8
CL-41	22.1 ± 2.8	23.1 ± 5.1	20.0 ± 2.1	22.8 ± 1.2	22.5 ± 3.3
CL-42	20.2 ± 2.4	21.3 ± 3.7	18.5 ± 1.3	20.8 ± 1.2	20.1 ± 0.5
CL-43	21.8 ± 2.5	21.8 ± 1.6	20.0 ± 1.1	22.9 ± 0.8	22.3 ± 2.9
CL-44	21.3 ± 2.4	21.9 ± 1.5	19.5 ± 1.3	22.2 ± 0.9	21.4 ± 1.4
CL-45	21.8 ± 2.2	22.9 ± 4.8	20.5 ± 0.6	22.5 ± 1.3	21.2 ± 1.2
CL-46	19.3 ± 1.0	19.7 ± 1.3	18.7 ± 1.3	19.7 ± 1.7	19.1 ± 2.0
CL-47	20.7 ± 2.5	22.0 ± 2.9	20.6 ± 2.2	(1)	19.5 ± 2.1
CL-48	20.2 ± 1.4	20.4 ± 1.1	19.5 ± 2.1	21.1 ± 1.5	19.9 ± 1.8
CL-49	21.6 ± 1.5	20.9 ± 1.1	21.2 ± 1.3	22.6 ± 3.3	21.6 ± 1.5
CL-51	21.6 ± 1.9	22.4 ± 2.5	20.2 ± 1.1	21.9 ± 2.1	21.9 ± 0.5
CL-52	21.4 ± 1.9	21.5 ± 2.4	20.5 ± 0.8	22.7 ± 1.8	20.9 ± 1.0
CL-53	20.0 ± 1.9	19.9 ± 2.2	18.6 ± 1.7	20.8 ± 3.4	20.5 ± 2.0
CL-54	21.2 ± 2.7	22.9 ± 4.5	19.7 ± 1.4	21.4 ± 1.7	20.6 ± 1.8
CL-55	21.9 ± 1.4	22.0 ± 5.1	20.8 ± 1.7	22.3 ± 1.9	22.3 ± 5.1
CL-56	21.4 ± 2.0	20.6 ± 3.3	20.4 ± 1.0	22.2 ± 1.3	22.2 ± 1.9
CL-57	21.6 ± 3.0	21.8 ± 2.8	19.6 ± 1.4	23.2 ± 1.1	21.8 ± 1.2
CL-58	21.6 ± 1.7	22.6 ± 3.0	20.5 ± 0.8	21.8 ± 3.2	21.5 ± 3.2
CL-60	20.8 ± 1.3	21.1 ± 1.6	19.9 ± 1.3	21.3 ± 0.9	21.0 ± 1.1
CL-61	21.2 ± 1.5	20.4 ± 2.2	20.7 ± 1.8	21.7 ± 1.7	22.0 ± 1.4
CL-63	19.2 ± 1.6	18.5 ± 1.9	19.8 ± 3.9	18.4 ± 1.0	19.9 ± 2.5
CL-64	20.3 ± 2.8	19.5 ± 1.9	19.0 ± 0.5	22.2 ± 1.9	20.5 ± 1.0
CL-65	21.1 ± 2.8	20.4 ± 4.5	19.4 ± 3.0	22.3 ± 1.3	22.1 ± 2.0
CL-74	18.6 ± 2.0	19.2 ± 2.6	17.1 ± 0.6	19.2 ± 0.8	19.0 ± 0.9
CL-75	20.7 ± 2.7	20.1 ± 1.8	19.3 ± 2.7	22.5 ± 1.1	20.7 ± 2.6
CL-76	20.7 ± 1.5	19.9 ± 1.2	20.3 ± 1.9	21.7 ± 2.5	20.7 ± 0.7
CL-77	20.0 ± 2.9	19.0 ± 0.7	18.7 ± 0.4	21.9 ± 2.4	20.3 ± 0.9
CL-78	20.5 ± 3.0	19.6 ± 0.8	19.0 ± 1.7	22.4 ± 3.0	21.0 ± 1.8
CL-79	21.3 ± 2.9	19.3 ± 1.9	21.4 ± 3.0	22.0 ± 2.2	22.6 ± 3.3
CL-80	21.3 ± 2.3	21.6 ± 0.9	19.7 ± 2.4	22.5 ± 1.1	21.5 ± 0.9
CL-81	20.3 ± 3.1	19.4 ± 1.5	19.0 ± 0.8	22.5 ± 3.2	20.4 ± 2.2
CL-84	20.9 ± 3.8	20.2 ± 2.6	18.6 ± 1.1	23.1 ± 1.9	21.5 ± 2.8
CL-90	17.6 ± 2.8	17.2 ± 1.7	15.8 ± 1.8	18.9 ± 3.1	18.4 ± 3.6
CL-91	19.6 ± 3.3	19.0 ± 1.5	17.6 ± 1.1	20.9 ± 1.8	21.0 ± 1.5
CL-97	21.2 ± 2.3	20.7 ± 1.3	20.1 ± 2.8	22.8 ± 1.6	21.1 ± 1.4
CL-99	17.7 ± 1.8	18.4 ± 2.9	16.4 ± 1.4	18.3 ± 2.2	17.8 ± 1.5
CL-114	19.0 ± 2.3	18.5 ± 1.9	17.8 ± 1.1	20.5 ± 2.4	19.2 ± 1.0

(*) STANDARD DEVIATION WAS NOT CALCULATED DUE TO ONE OR MORE ELEMENTS THAT WERE DAMAGED OR PRODUCED UNUSUAL RESULTS.

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-X.2 MEAN QUARTERLY TLD RESULTS FOR THE INNER RING, OUTER RING, SPECIAL INTEREST, SUPPLEMENTAL AND CONTROL LOCATIONS FOR CLINTON POWER STATION, 2005

RESULTS IN UNITS OF MILLI-ROENTGEN/QUARTER ± 2 STANDARD DEVIATIONS OF THE STATION DATA

STATION CODE	INNER RING ± 2 S. D.	OUTER RING ± 2 S. D.	SPECIAL INTEREST ± 2 S. D.	SUPPLEMENTAL ± 2 S. D.	CONTROL
JAN-MAR	20.9 ± 3.6	20.9 ± 2.6	20.5 ± 2.6	20.1 ± 3.2	20.4
APR-JUN	19.5 ± 1.5	19.9 ± 1.6	19.1 ± 2.7	18.1 ± 2.5	18.1
JUL-SEP	21.3 ± 2.5	22.0 ± 1.2	21.9 ± 2.5	21.0 ± 3.1	19.6
OCT-DEC	20.7 ± 2.0	21.3 ± 1.5	20.9 ± 2.4	19.9 ± 2.6	19.2

TABLE C-X.3 SUMMARY OF THE AMBIENT DOSIMETRY PROGRAM FOR CLINTON POWER STATION, 2005

RESULTS IN UNITS OF MILLI-ROENTGEN/QUARTER

LOCATION	SAMPLES ANALYZED	PERIOD MINIMUM	PERIOD MAXIMUM	PERIOD MEAN ± 2 S. D.	PRE-OP MEAN, ± 2 S. D., ALL LOCATIOI
INNER RING	63	15.6	23.0	20.6 ± 2.8	
OUTER RING	64	18.6	23.2	21.0 ± 2.3	18.0 ± 2.4
SPECIAL	28	17.1	23.1	20.6 ± 3.1	
SUPPLEMENTAL	56	15.8	23.1	19.8 ± 3.5	
CONTROL	4	18.1	20.4	19.3 ± 1.9	

THE PRE-OPERATIONAL MEAN WAS CALCULATED FROM MONTHLY TLD READINGS MAY 1980 - FEBRUARY 27, 1987.

INNER RING STATIONS - CL-01, CL-05, CL-22, CL-23, CL-24, CL-34, CL-35, CL-36, CL-42, CL-43, CL-44, CL-45, CL-46, CL-47, CL-48, CL-63

OUTER RING STATIONS - CL-51, CL-52, CL-53, CL-54, CL-55, CL-56, CL-57, CL-58, CL-60, CL-61, CL-76, CL-77, CL-78, CL-79, CL-80, CL-81

SPECIAL INTEREST STATIONS - CL-37, CL-41, CL-49, CL-64, CL-65, CL-74, CL-75

SUPPLEMENTAL STATIONS- CL-02, CL-03, CL-04, CL-06, CL-07, CL-08, CL-15, CL-33, CL-84 CL-90, CL-91, CL-97, CL-99, CL-114

CONTROL STATION - CL-11

TABLE C-XI.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

SURFACE WATER (TRITIUM LIQUID SCINTILLATION)

COLLECTION PERIOD	CL-13	CL-90	CL-91	CL-99
JAN-MAR	01/03/05 - 03/28/05	01/03/05 - 03/28/05	01/03/05 - 03/28/05	01/03/05 - 03/28/05
APR-JUN	03/28/05 - 06/27/05	03/28/05 - 06/27/05	03/28/05 - 06/27/05	03/28/05 - 06/27/05
JUL-SEP	07/27/05 - 09/28/05	07/27/05 - 09/28/05	07/27/05 - 09/28/05	07/27/05 - 09/28/05
OCT-DEC	09/28/05 - 12/28/05	09/28/05 - 12/28/05	09/28/05 - 12/28/05	09/28/05 - 12/28/05

SURFACE WATER (I-131 (CL-90 only) & GAMMA SPECTROSCOPY)

COLLECTION PERIOD	CL-13	CL-90	CL-91	CL-99
JAN	12/29/04 - 01/26/05	12/29/04 - 01/26/05	12/29/04 - 01/26/05	12/29/04 - 01/26/05
FEB	01/26/05 - 02/23/05	01/26/05 - 02/23/05	01/26/05 - 02/23/05	01/26/05 - 02/23/05
MAR	02/23/05 - 03/30/25	02/23/05 - 03/30/25	02/23/05 - 03/30/25	02/23/05 - 03/30/25
APR	03/30/05 - 04/27/05	03/30/05 - 04/27/05	03/30/05 - 04/27/05	03/30/05 - 04/27/05
MAY	04/27/05 - 05/25/05	04/27/05 - 05/25/05	04/27/05 - 05/25/05	04/27/05 - 05/25/05
JUN	05/25/05 - 06/29/05	05/25/05 - 06/29/05	05/25/05 - 06/29/05	05/25/05 - 06/29/05
JUL	06/29/05 - 07/27/05	06/29/05 - 07/27/05	06/29/05 - 07/27/05	06/29/05 - 07/27/05
AUG	07/27/53 - 08/31/05	07/27/53 - 08/31/05	07/27/53 - 08/31/05	07/27/53 - 08/31/05
SEP	08/31/05 - 09/28/05	08/31/05 - 09/28/05	08/31/05 - 09/28/05	08/31/05 - 09/28/05
OCT	09/28/05 - 10/26/05	09/28/05 - 10/26/05	09/28/05 - 10/26/05	09/28/05 - 10/26/05
NOV	10/26/05 - 11/30/05	10/26/05 - 11/30/05	10/26/05 - 11/30/05	10/26/05 - 11/30/05
DEC	11/30/05 - 12/28/05	11/30/05 - 12/28/05	11/30/05 - 12/28/05	11/30/05 - 12/28/05

DRINKING WATER (TRITIUM)

COLLECTION PERIOD	CL-14
JAN-MAR	12/28/05 - 03/30/05
APR-JUN	03/30/05 - 07/27/05
JUL-SEP	07/27/05 - 09/28/05
OCT-DEC	09/28/05 - 12/28/05

DRINKING WATER (GROSS BETA & GAMMA SPECTROSCOPY)

COLLECTION PERIOD	CL-14
JAN	12/29/04 - 01/26/05
FEB	01/26/05 - 02/23/05
MAR	02/23/05 - 03/30/25
APR	03/30/05 - 04/27/05
MAY	04/27/05 - 05/25/05
JUN	05/25/05 - 06/29/05
JUL	06/29/05 - 07/27/05
AUG	07/27/53 - 08/31/05
SEP	08/31/05 - 09/28/05
OCT	09/28/05 - 10/26/05
NOV	10/26/05 - 11/30/05
DEC	11/30/05 - 12/28/05

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-XI.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

GROUND WATER (TRITIUM LIQUID SCINTILLATION AND GAMMA SPECTROSCOPY)

COLLECTION PERIOD	CL-07D	CL-12R	CL-12T
JAN-MAR	03/28/05	03/28/05	03/28/05
APR-JUN	06/27/05	06/27/05	06/27/05
JUL-SEP	09/28/05	09/28/05	09/28/05
OCT-DEC	12/28/05	12/28/05	12/28/05

AIR PARTICULATE (GAMMA SPECTROSCOPY)

COLLECTION PERIOD	CL-01	CL-02	CL-03	CL-04	CL-06
JAN-MAR	12/29/04 - 03/30/05	12/29/04 - 03/30/05	12/29/04 - 03/30/05	12/29/04 - 03/30/05	12/29/04 - 03/30/05
APR-JUN	03/30/05 - 06/29/05	03/30/05 - 06/29/05	03/30/05 - 06/29/05	03/30/05 - 06/29/05	03/30/05 - 06/29/05
JUL-SEP	06/29/05 - 09/28/05	06/29/05 - 09/28/05	06/29/05 - 09/28/05	06/29/05 - 09/28/05	06/29/05 - 09/28/05
OCT-DEC	09/28/05 - 12/28/05	09/28/05 - 12/28/05	09/28/05 - 12/28/05	09/28/05 - 12/28/05	09/28/05 - 12/28/05

AIR PARTICULATE (GAMMA SPECTROSCOPY)

COLLECTION PERIOD	CL-07	CL-08	CL-11	CL-15	CL-94
JAN-MAR	12/29/04 - 03/30/05	12/29/04 - 03/30/05	12/29/04 - 03/30/05	12/29/04 - 03/30/05	12/29/04 - 03/30/05
APR-JUN	03/30/05 - 06/29/05	03/30/05 - 06/29/05	03/30/05 - 06/29/05	03/30/05 - 06/29/05	03/30/05 - 06/29/05
JUL-SEP	06/29/05 - 09/28/05	06/29/05 - 09/28/05	06/29/05 - 09/28/05	06/29/05 - 09/28/05	06/29/05 - 09/28/05
OCT-DEC	09/28/05 - 12/28/05	09/28/05 - 12/28/05	09/28/05 - 12/28/05	09/28/05 - 12/28/05	09/28/05 - 12/28/05

TABLE C-XI.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

AIR PARTICULATE (GROSS BETA & I-131)

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

TABLE C-XI.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

AIR PARTICULATE (GROSS BETA & I-131)

COLLECTION PERIOD	CL-07	CL-08	CL-11	CL-15	CL-94
1	12/29/04 - 01/05/05	12/29/04 - 01/05/05	12/29/04 - 01/05/05	12/29/04 - 01/05/05	12/29/04 - 01/05/05
2	01/05/05 - 01/12/05	01/05/05 - 01/12/05	01/05/05 - 01/12/05	01/05/05 - 01/12/05	01/05/05 - 01/12/05
3	01/12/05 - 01/19/05	01/12/05 - 01/19/05	01/12/05 - 01/19/05	01/12/05 - 01/19/05	01/12/05 - 01/19/05
4	01/19/05 - 01/26/05	01/19/05 - 01/26/05	01/19/05 - 01/26/05	01/19/05 - 01/26/05	01/19/05 - 01/26/05
5	01/26/05 - 02/02/05	01/26/05 - 02/02/05	01/26/05 - 02/02/05	01/26/05 - 02/02/05	01/26/05 - 02/02/05
6	02/02/05 - 02/09/05	02/02/05 - 02/09/05	02/02/05 - 02/09/05	02/02/05 - 02/09/05	02/02/05 - 02/09/05
7	02/09/05 - 02/16/05	02/09/05 - 02/16/05	02/09/05 - 02/16/05	02/09/05 - 02/16/05	02/09/05 - 02/16/05
8	02/16/05 - 02/23/05	02/16/05 - 02/23/05	02/16/05 - 02/23/05	02/16/05 - 02/23/05	02/16/05 - 02/23/05
9	02/23/05 - 03/02/05	02/23/05 - 03/02/05	02/23/05 - 03/02/05	02/23/05 - 03/02/05	02/23/05 - 03/02/05
10	03/02/05 - 03/09/05	03/02/05 - 03/09/05	03/02/05 - 03/09/05	03/02/05 - 03/09/05	03/02/05 - 03/09/05
11	03/09/05 - 03/16/05	03/09/05 - 03/16/05	03/09/05 - 03/16/05	03/09/05 - 03/16/05	03/09/05 - 03/16/05
12	03/16/05 - 03/23/05	03/16/05 - 03/23/05	03/16/05 - 03/23/05	03/16/05 - 03/23/05	03/16/05 - 03/23/05
13	03/23/05 - 03/30/05	03/23/05 - 03/30/05	03/23/05 - 03/30/05	03/23/05 - 03/30/05	03/23/05 - 03/30/05
14	03/30/05 - 04/06/05	03/30/05 - 04/06/05	03/30/05 - 04/06/05	03/30/05 - 04/06/05	03/30/05 - 04/06/05
15	04/06/05 - 04/13/05	04/06/05 - 04/13/05	04/06/05 - 04/13/05	04/06/05 - 04/13/05	04/06/05 - 04/13/05
16	04/13/05 - 04/20/05	04/13/05 - 04/20/05	04/13/05 - 04/20/05	04/13/05 - 04/20/05	04/13/05 - 04/20/05
17	04/20/05 - 04/27/05	04/20/05 - 04/27/05	04/20/05 - 04/27/05	04/20/05 - 04/27/05	04/20/05 - 04/27/05
18	04/27/05 - 05/04/05	04/27/05 - 05/04/05	04/27/05 - 05/04/05	04/27/05 - 05/04/05	04/27/05 - 05/04/05
19	05/04/05 - 05/11/05	05/04/05 - 05/11/05	05/04/05 - 05/11/05	05/04/05 - 05/11/05	05/04/05 - 05/11/05
20	05/11/05 - 05/18/05	05/11/05 - 05/18/05	05/11/05 - 05/18/05	05/11/05 - 05/18/05	05/11/05 - 05/18/05
21	05/18/05 - 05/25/05	05/18/05 - 05/25/05	05/18/05 - 05/25/05	05/18/05 - 05/25/05	05/18/05 - 05/25/05
22	05/25/05 - 06/01/05	05/25/05 - 06/01/05	05/25/05 - 06/01/05	05/25/05 - 06/01/05	05/25/05 - 06/01/05
23	06/01/05 - 06/08/05	06/01/05 - 06/08/05	06/01/05 - 06/08/05	06/01/05 - 06/08/05	06/01/05 - 06/08/05
24	06/08/05 - 06/15/05	06/08/05 - 06/15/05	06/08/05 - 06/15/05	06/08/05 - 06/15/05	06/08/05 - 06/15/05
25	06/15/05 - 06/22/05	06/15/05 - 06/22/05	06/15/05 - 06/22/05	06/15/05 - 06/22/05	06/15/05 - 06/22/05
26	06/22/05 - 06/29/05	06/22/05 - 06/29/05	06/22/05 - 06/29/05	06/22/05 - 06/29/05	06/22/05 - 06/29/05
27	06/29/05 - 07/06/05	06/29/05 - 07/06/05	06/29/05 - 07/06/05	06/29/05 - 07/06/05	06/29/05 - 07/06/05
28	07/06/05 - 07/13/05	07/06/05 - 07/13/05	07/06/05 - 07/13/05	07/06/05 - 07/13/05	07/06/05 - 07/13/05
29	07/13/05 - 07/20/05	07/13/05 - 07/20/05	07/13/05 - 07/20/05	07/13/05 - 07/20/05	07/13/05 - 07/20/05
30	07/20/05 - 07/27/05	07/20/05 - 07/27/05	07/20/05 - 07/27/05	07/20/05 - 07/27/05	07/20/05 - 07/27/05
31	07/27/05 - 08/03/05	07/27/05 - 08/03/05	07/27/05 - 08/03/05	07/27/05 - 08/03/05	07/27/05 - 08/03/05
32	08/03/05 - 08/10/05	08/03/05 - 08/10/05	08/03/05 - 08/10/05	08/03/05 - 08/10/05	08/03/05 - 08/10/05
33	08/10/05 - 08/17/05	08/10/05 - 08/17/05	08/10/05 - 08/17/05	08/10/05 - 08/17/05	08/10/05 - 08/17/05
34	08/17/05 - 08/24/05	08/17/05 - 08/24/05	08/17/05 - 08/24/05	08/17/05 - 08/24/05	08/17/05 - 08/24/05
35	08/24/05 - 08/31/05	08/24/05 - 08/31/05	08/24/05 - 08/31/05	08/24/05 - 08/31/05	08/24/05 - 08/31/05
36	08/31/05 - 09/07/05	08/31/05 - 09/07/05	08/31/05 - 09/07/05	08/31/05 - 09/07/05	08/31/05 - 09/07/05
37	09/07/05 - 09/14/05	09/07/05 - 09/14/05	09/07/05 - 09/14/05	09/07/05 - 09/14/05	09/07/05 - 09/14/05
38	09/14/05 - 09/21/05	09/14/05 - 09/21/05	09/14/05 - 09/21/05	09/14/05 - 09/21/05	09/14/05 - 09/21/05
39	09/21/05 - 09/28/05	09/21/05 - 09/28/05	09/21/05 - 09/28/05	09/21/05 - 09/28/05	09/21/05 - 09/28/05
40	09/28/05 - 10/05/05	09/28/05 - 10/05/05	09/28/05 - 10/05/05	09/28/05 - 10/05/05	09/28/05 - 10/05/05
41	10/05/05 - 10/12/05	10/05/05 - 10/12/05	10/05/05 - 10/12/05	10/05/05 - 10/12/05	10/05/05 - 10/12/05
42	10/12/05 - 10/19/05	10/12/05 - 10/19/05	10/12/05 - 10/19/05	10/12/05 - 10/19/05	10/12/05 - 10/19/05
43	10/19/05 - 10/26/05	10/19/05 - 10/26/05	10/19/05 - 10/26/05	10/19/05 - 10/26/05	10/19/05 - 10/26/05
44	10/26/05 - 11/02/05	10/26/05 - 11/02/05	10/26/05 - 11/02/05	10/26/05 - 11/02/05	10/26/05 - 11/02/05
45	11/02/05 - 11/09/05	11/02/05 - 11/09/05	11/02/05 - 11/09/05	11/02/05 - 11/09/05	11/02/05 - 11/09/05
46	11/09/05 - 11/16/05	11/09/05 - 11/16/05	11/09/05 - 11/16/05	11/09/05 - 11/16/05	11/09/05 - 11/16/05
47	11/16/05 - 11/23/05	11/16/05 - 11/23/05	11/16/05 - 11/23/05	11/16/05 - 11/23/05	11/16/05 - 11/23/05
48	11/23/05 - 11/30/05	11/23/05 - 11/30/05	11/23/05 - 11/30/05	11/23/05 - 11/30/05	11/23/05 - 11/30/05
49	11/30/05 - 12/07/05	11/30/05 - 12/07/05	11/30/05 - 12/07/05	11/30/05 - 12/07/05	11/30/05 - 12/07/05
50	12/07/05 - 12/14/05	12/07/05 - 12/14/05	12/07/05 - 12/14/05	12/07/05 - 12/14/05	12/07/05 - 12/14/05
51	12/14/05 - 12/21/05	12/14/05 - 12/21/05	12/14/05 - 12/21/05	12/14/05 - 12/21/05	12/14/05 - 12/21/05
52	12/21/05 - 12/28/05	12/21/05 - 12/28/05	12/21/05 - 12/28/05	12/21/05 - 12/28/05	12/21/05 - 12/28/05

TABLE C-XI.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF CLINTON POWER STATION, 2005

TLD

STATION CODE	JAN - MAR	APR - JUN	JUL - SEP	OCT - DEC
CL-1	12/30/04 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/05
CL-2	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-3	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-4	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-5	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-6	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-7	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-8	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-11	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-15	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-22	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-23	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-24	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-33	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-34	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-35	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-36	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-37	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-41	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-42	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-43	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-44	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-45	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-46	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-47	12/30/05 - 03/30/05	03/30/05 - 06/29/05	(1)	09/28/05 - 12/28/53
CL-48	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-49	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-51	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-52	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-53	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-54	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-55	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-56	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-57	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-58	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-59	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-60	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-61	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-63	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-64	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-65	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-74	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-75	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-76	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-77	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-78	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-79	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-80	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-81	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-84	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-90	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-91	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-97	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-99	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53
CL-114	12/30/05 - 03/30/05	03/30/05 - 06/29/05	06/29/05 - 09/28/05	09/28/05 - 12/28/53

(1) SEE PROGRAM EXCEPTIONS FOR EXPLANATION

FIGURE C-1
MEAN MONTHLY GROSS BETA CONCENTRATION IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF CPS, 2005

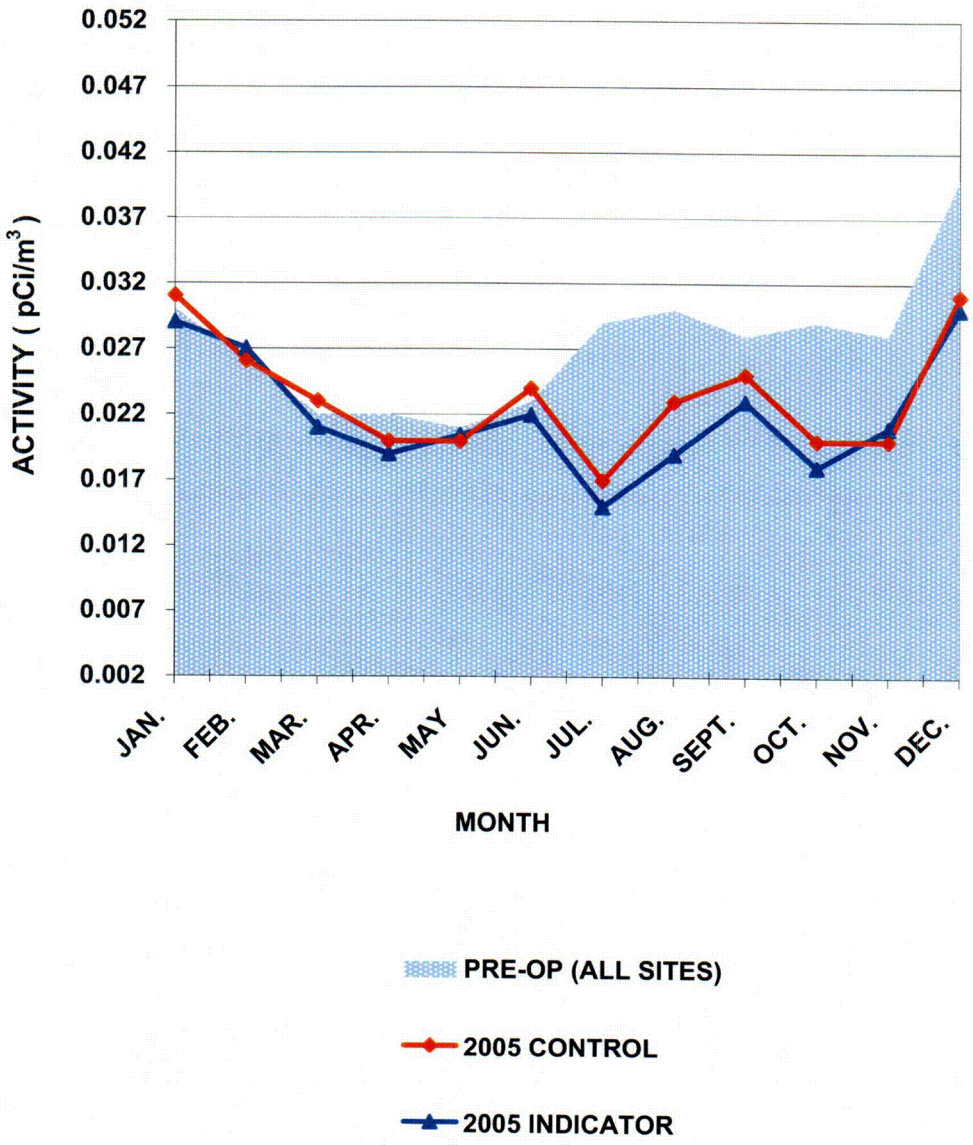
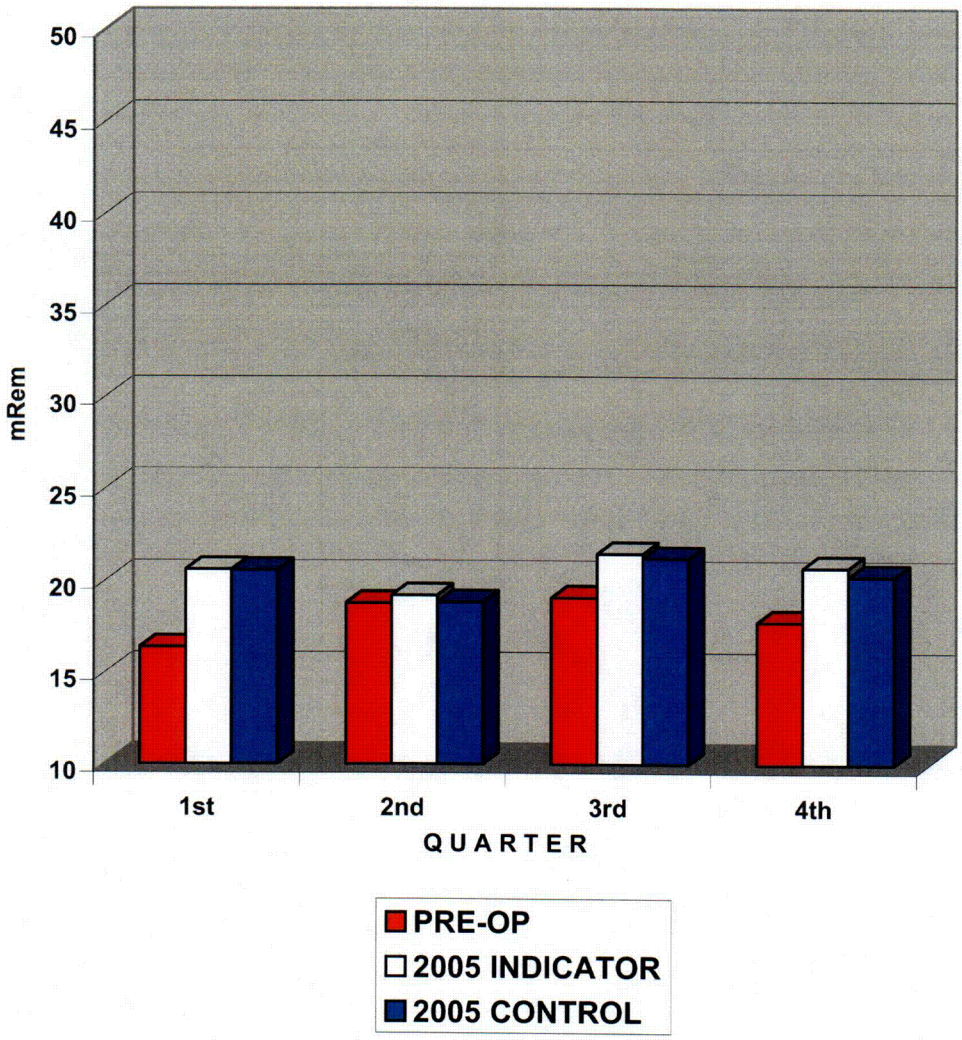


FIGURE C-2
MEAN QUARTERLY AMBIENT GAMMA RADIATION LEVELS (TLD) IN THE VICINITY OF CPS, 2005



APPENDIX D

INTER-LABORATORY COMPARISON PROGRAM

TABLE D-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 D-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 D-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 D-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 D-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 D-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

(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 D-4

ERA[a] STATISTICAL SUMMARY PROFICIENCY TESTING PROGRAM
ENVIRONMENTAL, INC., 2005

(Page 1 of 2)

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 D-4

ERA[a] STATISTICAL SUMMARY PROFICIENCY TESTING PROGRAM ENVIRONMENTAL, INC., 2005

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

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Lab Code[c]	Date	Analysis	Concentration[b] Laboratory result	Known Activity	Control Limits[d]	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 D-5 DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)[a]
ENVIRONMENTAL, INC., 2005

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Lab Code[c]	Date	Concentration [b] Analysis	Laboratory result	Known Activity	Control Limits [d]	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 D-5 DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)[a]
ENVIRONMENTAL, INC., 2005

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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.