Exelon Generation Company, LLC
Braidwood Station
35100 South Route 53, Suite 84
Braceville, IL 60407-9619

www.exeloncorp.com

Exelon Nuclear

May 15, 2008
BW080049

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Braidwood Station, Units 1 and 2
Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN 50-456 and STN 50-457

Subject: 2007 Annual Radiological Environmental Operating Report

Attached is the 2007 Annual Radiological Environmental Operating Report for Braidwood Station. This report is being submitted in accordance with Technical Specification 5.6.2, "Annual Radiological Environmental Operating Report." This report contains information associated with the station's radiological environmental and meteorological monitoring programs. This information is consistent with the objectives described in the Offsite Dose Calculation Manual and 10 CFR 50, Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion 'As Low as is Reasonably Achievable' for Radioactive Material In Light-Water-Cooled Nuclear Power Reactor Effluents," Sections IV.B.2, and IV.B.3. Technical Specification 5.6.2 requires the Annual Radiological Environmental Operating Report to be submitted by May 15 of each year.

If you have any questions regarding this information, please contact Mr. David Gullott, Regulatory Assurance Manager, at (815) 417-2800.

Respectfully,

Bryan Hanson
Site Vice President
Braidwood Station

Attachment: 2007 Annual Radiological Environmental Operating Report

IE25

NRR

cc: Region Administrator - NRC Region III
Illinois Emergency Management Agency - Division of Nuclear Safety (report only)
Vice President - Regulatory and Legal Affairs (w/o attachments)
Director, Licensing and Regulatory Affairs (w/o attachments)
Regulatory Assurance Manager - Braidwood Station (w/o attachments)
Manager, Licensing - Braidwood, Byron and LaSalle County Stations (w/o attachments)
Braidwood Nuclear Licensing Administrator (w/o attachments)
Exelon Document Control Desk Licensing (report only)

Docket No: 50-456
50-457

BRAIDWOOD STATION
UNITS 1 and 2

Annual Radiological
Environmental Operating Report

1 January Through 31 December 2007

Prepared By

Teledyne Brown Engineering
Environmental Services

Exelon SM
Nuclear

Braidwood Station
Braceville, IL 60407

May 2008

Table Of Contents

Appendices

I. Summary and Conclusions

This report on the Radiological Environmental Monitoring Program conducted for the Braidwood Station by Exelon covers the period 1 January 2007 through 31 December 2007. During that time period, 1,566 analyses were performed on 1344 samples. In assessing all the data gathered for this report and comparing these results with preoperational data, it was concluded that the operation of Braidwood Station had no adverse radiological impact on the environment.

Surface, public and ground/well water samples were analyzed for concentrations of tritium and gamma emitting nuclides. Surface water and public water samples were also analyzed for concentrations of gross beta. No fission or activation products were detected. Gross beta and tritium activities detected were consistent with those detected in previous years.

Fish (commercially and/or recreationally important species) and sediment samples were analyzed for concentrations of gamma emitting nuclides. No fission or activation products were detected in fish. Sediment samples had Cesium-137 concentrations consistent with levels observed during the preoperational years. No plant produced fission or activation products were found in sediment.

Air particulate samples were analyzed for concentrations of gross beta and gamma emitting nuclides. No fission or activation products were detected.

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

Cow milk samples were analyzed for concentrations of I-131 and gamma emitting nuclides. All I-131 results were below the minimum detectable activity. Concentrations of naturally occurring K-40 were detected. No fission or activation products were found.

Food Product samples were analyzed for concentrations of gamma emitting nuclides. Cesium-137 was detected in two samples at low concentrations, probably from the soil attached to the food products. No plant produced 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.

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II. Introduction

The Braidwood Station, consisting of two 3587 MWt pressurized water reactors owned and operated by Exelon Corporation, is located in Will County, Illinois. Unit No. 1 went critical on 29 May 1987. Unit No. 2 went critical on 08 March 1988. The site is located in northeastern Illinois, 15 miles south-southwest of Joliet, Illinois, 60 miles southwest of Chicago, and southwest of the Kankakee River.

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 2007 through 31 December 2007.

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

Samples for the Braidwood Station REMP were collected for Exelon Nuclear by Environmental Inc. (Midwest Labs). This section describes the general collection methods used by Environmental Inc. (Midwest Labs) to

obtain environmental samples for the Braidwood Station REMP in 2007. Sample locations and descriptions can be found in Table B–1 and Figures B–1 through B–3, Appendix B. The collection procedures used by Environmental Inc. are listed in Table B-2.

Aquatic Environment

The aquatic environment was evaluated by performing radiological analyses on samples of surface water, public water, well water, fish, and sediment. Two gallon water samples were collected weekly from six surface water locations (BD-10, BD-25 [control], BD-38, BD-40, BD-55 and BD-56) and one weekly composite sample of public drinking water location (BD-22) and ground/well water samples collected quarterly from nine locations (BD-13, BD-34, BD-35, BD-36, BD-37, BD-50, BD-51, BD-53 and BD-54). All samples were collected in new unused plastic bottles, which were rinsed with source water prior to collection. Fish samples comprising the flesh of largemouth bass, smallmouth bass, rock bass, golden redhorse, channel catfish, bluegill and carp were collected semiannually at three locations, BD-25 (control), BD-28, and BD-41. Sediment samples composed of recently deposited substrate were collected at two locations semiannually, BD-10 and BD-57.

Atmospheric Environment

The atmospheric environment was evaluated by performing radiological analyses on samples of air particulate, airborne iodine, and milk. Air particulate samples were collected and analyzed weekly at eight locations (BD-02, BD-03, BD-04, BD-05, BD-06, BD-19, BD-20, and BD-21). The control location was BD-03. 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 air filters and air iodine samples were replaced weekly and sent to the laboratory for analysis.

Milk samples were collected biweekly at two locations (BD-17 and BD-18) from May through October, and monthly from November through April. The control location was BD-18. All samples were collected in new unused two gallon plastic bottles from the bulk tank at each location, preserved with sodium bisulfite, and shipped promptly to the laboratory. Food products were collected annually in September at five locations (BD-C, BD-Quad 1, BD-Quad 2, BD-Quad 3, and BD-Quad 4). The control location was BD-C. Various types of samples were collected and placed in new unused plastic bags, and sent to the laboratory for analysis.

Ambient Gamma Radiation

Direct radiation measurements were made using dual calcium fluoride and lithium flouride thermoluminescent dosimeters (TLD). Each location consisted of 2 TLD sets. The TLDs were exchanged quarterly and sent to Global Dosimetry for analysis. The TLDs were placed at locations on and around the Braidwood Station site as follows:

An inner ring (site boundary) consisting of 16 locations (BD-101, BD-102, BD-103, BD-104, BD-105, BD-106, BD-107, BD-108, BD-109, BD-110, BD-111a, BD-112, BD-113a, BD-114, BD-115 and BD-116) near and within the site perimeter representing fence post doses (i.e., at locations where the doses will be potentially greater than maximum annual off–site doses) from Braidwood Station release.

An outer ring (intermediate distance) consisting of 16 locations (BD-201, BD-202, BD-203, BD-204, BD-205, BD-206, BD-207, BD-208, BD-209, BD-210, BD-211, BD-212, BD-213, BD-214, BD-215, BD-216) extending to approximately 5 miles from the site designed to measure possible exposures to close-in population.

An other set consisting of seven locations (BD-02, BD-04, BD-05, BD-06, BD-19, BD-20 and BD-21.

The balance of one location (BD-03) representing the control area.

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 Braidwood Station, if any, would be most significant;

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 Braidwood Station REMP in 2007. 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 public and surface water and air particulates.

2. Concentrations of gamma emitters in public, ground/well and surface water, air particulates, milk, fish, sediment and food products.

3. Concentrations of tritium in public, ground/well and surface 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 Braidwood Station becoming operational were used as a baseline with which these operational data were compared. For the purpose of this report, Braidwood Station 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. Lower Limit of Detection and Minimum Detectable Concentration

The lower limit of detection (LLD) was defined as the smallest concentration of radioactive material in a sample that would yield a net count (above background) that would be detected with only a 5% probability of falsely concluding that a blank observation represents a "real" signal. The LLD was intended as a before the fact estimate of a system (including instrumentation, procedure and sample type) and not as an after the fact criteria for the presence of activity. All analyses were designed to achieve the required Braidwood Station 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, public and ground/well water 12 nuclides, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Nb-95, Zr-95, I-131, Cs-134, Cs-137, Ba-140, and La-140 were reported.

For fish, sediment, air particulate, milk and vegetation 11 nuclides, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Nb-95, Zr-95, Cs-134, Cs-137, Ba-140, and La-140 were reported.

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

D. Program Exceptions

For 2007 the Braidwood Station REMP had a sample recovery rate in excess of 99%. Sample anomalies and missed samples are listed in the tables below:

Table D-1 LISTING OF SAMPLE ANOMALIES

Sample Type	Location Code	Collection Date	Reason
A/I	BD-02, BD-03 BD-04, BD-20 BD-21	05/17/07	No apparent reason for low timer reading; possible power outage.
A/I	BD-02, BD-03 BD-04, BD-20 BD-21	05/24/07	No apparent reason for low timer reading; possible power outage.
A/I	BD-02, BD-03 BD-04, BD-20 BD-21	05/31/07	No apparent reason for low timer reading; possible power outage.
A/I	BD-02, BD-03 BD-04, BD-20 BD-21	06/07/07	No apparent reason for low timer reading; possible power outage.

Table D-1 LISTING OF SAMPLE ANOMALIES (continued)

Sample Type	Location Code	Collection Date	Reason
A/I	BD-02, BD-03 BD-04, BD-20 BD-21	06/14/07	No apparent reason for low timer reading; possible power outage.
A/I	BD-02, BD-03 BD-04, BD-20 BD-21	06/21/07	No apparent reason for low timer reading; possible power outage.
A/I	BD-02, BD-03 BD-04, BD-20 BD-21	06/28/07	No apparent reason for low timer reading; possible power outage.
A/I	BD-02, BD-03 BD-04, BD-20 BD-21	07/05/07	No apparent reason for low timer reading; possible power outage.
A/I	BD-02, BD-03 BD-06, BD-19 BD-20, BD-21	08/30/07	Low reading due to power outages from storm.
A/I	BD-05	09/21/07	Work being done at substation; sample taken from portable substation.
A/I	BD-04	12/20/07	No apparent reason for low timer reading.

Table D-2 LISTING OF MISSED SAMPLES

Sample Type	Location Code	Collection Date	Reason
WT	BD-38	02/15/07	No samples. Water frozen.
WT	BD-55	02/15/07	No samples. Water frozen.
WT	BD-56	02/15/07	No samples. Water frozen.
WT	BD-38	02/22/07	No samples. Water frozen.
WT	BD-55	02/22/07	No samples. Water frozen.

Table D-2 LISTING OF MISSED SAMPLES (continued)

Sample Type	Location Code	Collection Date	Reason
WT	BD-56	02/22/07	No samples. Water frozen.
WT	BD-55	03/01/07	No samples. Water frozen.
WT	BD-56	03/01/07	No samples. Water frozen.
WT	BD-55	03/07/07	No samples. Water frozen.
WT	BD-56	03/07/07	No samples. Water frozen.
WG	BD-50	04/12/07	No samples. Homeowner refused sample collector. Off schedule until further notice.
WG	BD-52	04/12/07	No sample. Well no longer active.
WG	BD-50	07/12/07	No samples. Water Homeowner refused sample collector.
WG	BD-34	10/11/07	No sample for the quarter, homeowner away for the entire quarter.
WG	BD-50	10/11/07	No samples. Water Homeowner refused sample collector.
A/I	BD-05	11/01/07	No sample. Sample equipment inside a power line repair zone, sample collector denied access due to industrial safety concerns.
A/I	BD-05	11/08/07	No sample. Sample equipment inside a power line repair zone, sample collector denied access due to industrial safety concerns.
SW	BD-55	12/06/07	No samples. Water frozen.
SW	BD-56	12/06/07	No samples. Water frozen.
SW	BD-55	12/13/07	No samples. Water frozen.
SW	BD-56	12/13/07	No samples. Water frozen.

Table D-2 LISTING OF MISSED SAMPLES (continued)

Sample Type	Location Code	Collection Date	Reason
SW	BD-56	12/20/07	No samples. Water frozen.
SW	BD-56	12/27/07	No samples. Water frozen.

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

Groundwater station BD-52 was removed from the Radiological Environmental Monitoring Program in 2007 due to the well being abandoned and closed.

Starting in 2007, the mean and two standard deviation values are calculated using the positive values only.

IV. Results and Discussion

A. Aquatic Environment

1. Surface Water

Samples were taken weekly and composited monthly at six locations (BD-10, BD-25, BD-38, BD-40, BD-55 and BD-56). Of these locations only BD-10 located downstream, could be affected by Braidwood Station's effluent releases. The following analyses were performed.

Gross Beta

Samples from all locations were analyzed for concentrations of gross beta (Table C–I.1, Appendix C). Gross beta was detected in all the samples. The values ranged from 2.3 to 15 pCi/l. Concentrations detected were consistent with those detected in

previous years (Figures C–1 through C-3, Appendix C).

Tritium

Quarterly composites of weekly collections were analyzed for tritium activity (Table C–I.2, Appendix C). Tritium activity was detected in three samples and ranged from 219 to 585 pCi/L. Concentrations detected were consistent with those detected in previous years (Figures C–4 through C-6, Appendix C).

Gamma Spectrometry

Samples from all locations were analyzed for gamma emitting nuclides (Table C–I.3, Appendix C). No nuclides were detected, and all required LLDs were met.

2. Public Water

Monthly composite of weekly samples were collected at one location (BD-22). This location could be affected by Braidwood Station's effluent releases. The following analyses were performed:

Gross Beta

Samples from the location were analyzed for concentrations of gross beta (Tables C–II.1, Appendix C). Gross beta was detected in all samples. The values ranged from 2.8 to 6.8 pCi/l. Concentrations detected were consistent with those detected in previous years (Figure C–7, Appendix C).

Tritium

Monthly composites of weekly samples from the location were analyzed for tritium activity (Table C–II.2, Appendix C). Tritium was detected in five of 12 samples. The values ranged from 238 to 1020 pCi/l. Concentrations detected were consistent with those detected in previous years (Figure C–8, Appendix C).

Gamma Spectrometry

Samples from the location were analyzed for gamma emitting nuclides (Table C–II.3, Appendix C). No nuclides were detected, and all required LLDs were met.

3. Ground/well Water

Quarterly samples were collected at nine locations (BD-13, BD-34, BD-35, BD-36, BD-37, BD-50, BD-51, BD-53 and BD-54). The following analyses were performed:

Tritium

Quarterly grab samples from the locations were analyzed for tritium activity (Table C–III.1, Appendix C). Tritium was detected in three of 33 samples. The values ranged from 352 to 936 pCi/l. Concentrations detected were consistent with those detected in previous years (Figures C–9 through C–13, Appendix C).

Gamma Spectrometry

Samples from all locations were analyzed for gamma emitting nuclides (Table C–III.2, Appendix C). No nuclides were detected, and all required LLDs were met.

4. Fish

Fish samples comprised of largemouth bass, smallmouth bass, rock bass, golden redhorse, channel catfish, bluegill and common carp were collected at three locations (BD-25, BD-28, and BD-41) semiannually. Location BD-28 could be affected by Braidwood Station's effluent releases. The following analysis was performed:

Gamma Spectrometry

The edible portion of fish samples from both locations was analyzed for gamma emitting nuclides (Table C–IV.1, Appendix C). No fission or activation products were found. No nuclides were detected, and all required LLDs were met.

5. Sediment

Aquatic sediment samples were collected at two locations (BD-10 and BD-57) semiannually. The locations, located downstream, could be affected by Braidwood Station's effluent releases. The following analysis was performed:

Gamma Spectrometry

Sediment samples from the location were analyzed for gamma emitting nuclides (Table C–V.1, Appendix C).

Concentrations of the fission product Cs-137 were found at both stations in three of four samples. The values ranged from 105 to 151 pCi/kg dry. The activity detected was consistent with those detected in previous years (29 pCi/kg to 260 pCi/kg from 1995 to 2006). No other Braidwood fission or activation products were found and all required LLDs were met.

B. Atmospheric Environment

1. Airborne

a. Air Particulates

Continuous air particulate samples were collected from eight locations on a weekly basis. The eight locations were separated into three groups: Near field samplers (BD-06, BD-19, BD-20 and BD-21), far field samplers within 10 km of the site (BD-02, BD-04 and BD-05) and the Control sampler between 10 and 30 km from the site (BD-03). Far field samples are analyzed when the respective near field sample results are inconsistent with previous measurements and radioactivity is confirmed as having its origin in airborne effluents from the station, or at the discretion of the REMP Program Owner. The following analyses were performed:

Gross Beta

Weekly samples were analyzed for concentrations of beta emitters (Table C–VI.1 and C-VI.2, 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 Braidwood Station. The results from the near field (Group I) ranged from 4 to 49 E–3 pCi/m^3 with a mean of 22 E–3 pCi/m^3. The results from the far field (Group II) ranged from 9 to 52 E–3 pCi/m^3 with a mean of 22 E–3 pCi/m^3. The results from the Control location (Group III) ranged from 12 to 43 E–3 pCi/m^3 with a mean of 20 E–3 pCi/m^3. Comparison of the 2007 air particulate data with previous

years data indicate no effects from the operation of Braidwood Station. In addition a comparison of the weekly mean values for 2007 indicate no notable differences among the three groups (Figures C–14 through C-18, Appendix C).

Gamma Spectrometry

Weekly samples were composited quarterly and analyzed for gamma emitting nuclides (Table C–VI.3, Appendix C). No nuclides were detected, and all required LLDs were met.

b. Airborne Iodine

Continuous air samples were collected from eight locations (BD-02, BD-03, BD-04, BD-05, BD-06, BD19, BD-20, and BD-21) and analyzed weekly for I-131 (Table C–VII.1, Appendix C). I-131 was not detected, and the required LLD was met.

2. Terrestrial

a. Milk

Samples were collected from two locations (BD-17 and BD-18) biweekly May through October and monthly November through April. The following analyses were performed:

Iodine-131

Milk samples from all locations were analyzed for concentrations of I-131 (Table C–VIII.1, Appendix C). No I-131 was detected, and all required LLDs were met.

Gamma Spectrometry

Each milk sample was analyzed for concentrations of gamma emitting nuclides (Table C–VIII.2, Appendix C). No nuclides were detected, and all required LLDs were met.

b. Food Products

Food product samples were collected at five locations (BD-Control, BD-Quad 1, BD-Quad 2, BD-Quad 3 and BD-Quad 4) when available. Four locations, (located downstream,

BD-Quad 1, BD-Quad 2, BD-Quad 3 and BD-Quad 4) could be affected by Braidwood Station's effluent releases. The following analysis was performed:

Gamma Spectrometry

Samples from all locations were analyzed for gamma emitting nuclides (Table C–IX.1, Appendix C). Cesium-137 was found in two of 10 samples. The values for both samples were 11 pCi/kg wet. No other nuclides were detected, and all required LLDs were met.

C. Ambient Gamma Radiation

Ambient gamma radiation levels were measured utilizing dual element calcium fluoride and lithium fluoride thermoluminescent dosimeters (TLD). Eighty TLD locations were established around the site. Results of TLD measurements are listed in Tables C–X.1 to C–X.3, Appendix C.

Most TLD measurements were below 40 mR/quarter, with a range of 14 to 43 mR/quarter. A comparison of the Inner Ring, Outer Ring and Other data to the Control Location data, indicate that the ambient gamma radiation levels from all locations were similar.

D. Land Use Survey

A Land Use Survey conducted during the August 2007 around the Braidwood Station was performed by Environmental Inc. (Midwest Labs) for Exelon Nuclear to comply with section 12.5.2 of the Braidwood Station's Offsite Dose Calculation Manual. The purpose of the survey was to document the nearest resident, milk producing animal and garden of greater than 500 ft^2 in each of the sixteen 22 ½ degree sectors around the site. There were no changes required to the Braidwood Station REMP, as a result of this survey. The results of this survey are summarized below.

Distance in Miles from the Braidwood Station Reactor Buildings			
Sector	Residence Miles	Livestock Miles	Milk Farm Miles
A N	0.5	2.6	-
B NNE	1.8	-	-
C NE	0.7	0.9	-
D ENE	0.8	3.3	-
E E	0.8	2.3	-
F ESE	2.2	2.3	-
G SE	2.7	2.7	11.2
H SSE	4.5	-	-
J S	4.2	4.8	-
K SSW	1.3	5.3	5.6
L SW	0.4	1.2	-
M WSW	0.5	3.8	-
N W	0.4	1.6	8.7
P WNW	0.4	5.4	-
Q NW	0.4	-	-
R NNW	0.4	-	-

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

2. ERA Evaluation Criteria

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

appropriate regulatory document.

3. DOE Evaluation Criteria

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

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

For the primary laboratory, 17 out of 19 analytes met the specified acceptance criteria. Two samples did not meet the specified acceptance criteria for the following reasons:

1. Teledyne Brown Engineering's Analytics March 2007 I-131 in charcoal result of 34.7 pCi was lower than the known value of 71.3, resulting in a found to known ratio of 0.49. A new technician counted the charcoal cartridge on the back rather than the face side. Due to decay of the I-131, recounting could not be performed. Counting the 2nd quarter Analytics charcoal cartridge on the face and the back resulted in approximately 220% more activity on the face of the cartridge. This indicates that we would have had acceptable results (ratio approximately 1.07) if the cartridge had been counted on the face side. The investigation was documented by Nonconformance Report NCR 07-02.

2. Teledyne Brown Engineering's ERA July 2007 Cs-134 result of 57.6 pCi/L exceeded the lower acceptance limit of 60.2 pCi/L. The high activity of the sample resulted in the lower acceptance limit of 8.66, although the ratio of found to known was 83.6%, which is considered acceptable by TBE. The investigation was documented by Nonconformance Report NCR 07-07.

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

1. Environmental Inc.'s ERA March 2007 air particulate Cs-137 result of 345.3 pCi/L exceeded the upper control limit of 336 pCi/L. The

reported result was calculated using composite filter geometry rather than the single filter geometry. The recalculated result of 305.8 pCi/filter fell within the acceptance limits. This was entered into their June 2007 Program Deviation Report.

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

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APPENDIX A

RADIOLOGICAL ENVIRONMENTAL MONITORING REPORT QUARTERLY AND ANNUAL SUMMARY

TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY FOR BRAIDWOOD STATION, 2007

Name of Facility: BRAIDWOOD **DOCKET NUMBER: 50-456 & 50-457**

Location of Facility: BRACEVILLE, IL **REPORTING PERIOD: ANNUAL 2007**

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR LOCATIONS MEAN(M) (F) RANGE	CONTROL LOCATION MEAN(M) (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN(M) MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
SURFACE WATER (PCI/LITER)	GR-B	71	4	6.3 (52/59) (2.3/14.8)	7.5 (12/12) (3.6/13.5)	11.6 (12/12) (8.6/14.8)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0
	H-3	24	200	373 (3/20) (219/585)	<LLD	585 (1/4)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0
	GAMMA	71						
	MN-54		15	<LLD	<LLD	-		0
	CO-58		15	<LLD	<LLD	-		0
	FE-59		30	<LLD	<LLD	-		0
	CO-60		15	<LLD	<LLD	-		0
	ZN-65		30	<LLD	<LLD	-		0

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FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F)

TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY FOR BRAIDWOOD STATION, 2007

Name of Facility: BRAIDWOOD **DOCKET NUMBER: 50-456 & 50-457**

Location of Facility: BRACEVILLE, IL **REPORTING PERIOD: ANNUAL 2007**

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SURFACE WATER (PCI/LITER)	NB-95		15	<LLD	<LLD	-		0
	ZR-95		30	<LLD	<LLD	-		0
	I-131		15	<LLD	<LLD	-		0
	CS-134		15	<LLD	<LLD	-		0
	CS-137		18	<LLD	<LLD	-		0
	BA-140		60	<LLD	<LLD	-		0
	LA-140		15	<LLD	<LLD	-		0

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PUBLIC WATER (PCI/LITER)	GR-B	12	4	4.5 (12/12) (2.8/6.8)	NA	4.5 (12/12) (2.8/6.8)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	H-3	12	200	538 (5/12) (238/1020)	NA	538 (5/12) (238/1020)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	GAMMA	12						
	MN-54		15	<LLD	NA	-		0
	CO-58		15	<LLD	NA	-		0
	FE-59		30	<LLD	NA	-		0
	CO-60		15	<LLD	NA	-		0
	ZN-65		30	<LLD	NA	-		0

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PUBLIC WATER (PCI/LITER)	NB-95		15	<LLD	NA	-		0
	ZR-95		30	<LLD	NA	-		0
	I-131		15	<LLD	NA	-		0
	CS-134		15	<LLD	NA	-		0
	CS-137		18	<LLD	NA	-		0
	BA-140		60	<LLD	NA	-		0
	LA-140		15	<LLD	NA	-		0

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GROUND WATER (PCI/LITER)	H-3	33	200	662 (3/33) (352/936)	NA	818 (2/2) (699/936)	BD-50 INDICATOR	0
	GAMMA	33						
	MN-54		15	<LLD	NA	-		0
	CO-58		15	<LLD	NA	-		0
	FE-59		30	<LLD	NA	-		0
	CO-60		15	<LLD	NA	-		0
	ZN-65		30	<LLD	NA	-		0
	NB-95		15	<LLD	NA	-		0

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GROUND WATER (PCI/LITER)	ZR-95		30	<LLD	NA	-		0
	I-131		15	<LLD	NA	-		0
	CS-134		15	<LLD	NA	-		0
	CS-137		18	<LLD	NA	-		0
	BA-140		60	<LLD	NA	-		0
	LA-140		15	<LLD	NA	-		0
FISH (PCI/KG WET)	GAMMA MN-54	12	130	<LLD	<LLD	-		0

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Location of Facility: BRACEVILLE, IL **REPORTING PERIOD: ANNUAL 2007**

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FISH (PCI/KG WET)	CO-58		130	<LLD	<LLD	-		0
	FE-59		260	<LLD	<LLD	-		0
	CO-60		130	<LLD	<LLD	-		0
	ZN-65		260	<LLD	<LLD	-		0
	NB-95		NA	<LLD	<LLD	-		0
	ZR-95		NA	<LLD	<LLD	-		0
	I-131		NA	<LLD	<LLD	-		0

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FISH (PCI/KG WET)	CS-134		130	<LLD	<LLD	-		0
	CS-137		150	<LLD	<LLD	-		0
	BA-140		NA	<LLD	<LLD	-		0
	LA-140		NA	<LLD	<LLD	-		0
SEDIMENT (PCI/KG DRY)	GAMMA MN-54	4	NA	<LLD	NA	-		0
	CO-58		NA	<LLD	NA	-		0

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SEDIMENT (PCI/KG DRY)	FE-59		NA	<LLD	NA	-		0
	CO-60		NA	<LLD	NA	-		0
	ZN-65		NA	<LLD	NA	-		0
	NB-95		NA	<LLD	NA	-		0
	ZR-95		NA	<LLD	NA	-		0
	CS-134		150	<LLD	NA	-		0

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SEDIMENT (PCI/KG DRY)	CS-137		180	134 (3/4) (105/151)	NA	149 (2/2) (146/151)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0
	BA-140		NA	<LLD	NA	-		0
	LA-140		NA	<LLD	NA	-		0
AIR PARTICULATE (E-3 PCI/CU.METER)	GR-B	422	10	22 (368/369) (4/52)	20 (53/53) (12/43)	23 (51/51) (12/49)	BD-05 INDICATOR GARDNER 5.5 MILES SW OF SITE	0
	GAMMA MN-54	32	NA	<LLD	<LLD	-		0
	CO-58		NA	<LLD	<LLD	-		0

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AIR PARTICULATE (E-3 PCI/CU.METER)	FE-59		NA	<LLD	<LLD	-		0
	CO-60		NA	<LLD	<LLD	-		0
	ZN-65		NA	<LLD	<LLD	-		0
	NB-95		NA	<LLD	<LLD	-		0
	ZR-95		NA	<LLD	<LLD	-		0
	CS-134		50	<LLD	<LLD	-		0
	CS-137		60	<LLD	<LLD	-		0

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AIR PARTICULATE (E-3 PCI/CU.METER)	BA-140		NA	<LLD	<LLD	-		0
	LA-140		NA	<LLD	<LLD	-		0
AIR IODINE (E-3 PCI/CU.METER)	GAMMA I-131	422	70	<LLD	<LLD	-		0
MILK (PCI/LITER)	I-131	38	1	<LLD	<LLD	-		0
MILK (PCI/LITER)	GAMMA MN-54	38	NA	<LLD	<LLD	-		0
	CO-58		NA	<LLD	<LLD	-		0
	FE-59		NA	<LLD	<LLD	-		0

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MILK (PCI/LITER)	CO-60		NA	<LLD	<LLD	-		0
	ZN-65		NA	<LLD	<LLD	-		0
	NB-95		NA	<LLD	<LLD	-		0
	ZR-95		NA	<LLD	<LLD	-		0
	CS-134		15	<LLD	<LLD	-		0
	CS-137		18	<LLD	<LLD	-		0
	BA-140		60	<LLD	<LLD	-		0

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MILK (PCI/LITER)	LA-140		15	<LLD	<LLD	-		0
VEGETATION (PCI/KG WET)	GAMMA MN-54	10	NA	<LLD	<LLD	-		0
	CO-58		NA	<LLD	<LLD	-		0
	FE-59		NA	<LLD	<LLD	-		0
	CO-60		NA	<LLD	<LLD	-		0
	ZN-65		NA	<LLD	<LLD	-		0
	NB-95		NA	<LLD	<LLD	-		0

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VEGETATION (PCI/KG WET)	ZR-95		NA	<LLD	<LLD	-		0
	CS-134		60	<LLD	<LLD	-		0
	CS-137		80	11.4 (2/8) (11.4/11.4)	<LLD	11.4 (2/2) (11.4/11.4)	BD-QUAD 1 INDICATOR CLARK FARM 3.8 MILES ENE OF SITE	0
	BA-140		NA	<LLD	<LLD	-		0
	LA-140		NA	<LLD	<LLD	-		0
DIRECT RADIATION (MILLI-ROENTGEN/QTR.)	TLD-QUARTERLY	320	NA	22.7 (312/312) (14/43)	22.9 (8/8) (16/37)	28.5 (4/4) (22/43)	BD-209-2 INDICATOR 4.8 MILES S	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, Braidwood Station, 2007

Location	Location Description	Distance & Direction From Site
A. Surface Water		
BD-10	Kankakee River Downstream (indicator)	5.4 miles NE
BD-25	Kankakee River Upstream (control)	9.6 miles E
BD-38	Main Drainage Ditch (indicator)	1.5 miles SW
BD-40	Braidwood Station Cooling Lake (indicator)	Onsite
BD-55	North Pond Fatlan Site (Indicator)	0.6 miles NE
BD-56	South Pond Fatlan Site (indictor)	0.6 miles NE
B. Drinking (Potable) Water		
BD-22	Wilmington (indicator)	6.0 miles NE
C. Ground/Well Water		
BD-13	Braidwood City Hall Well (indicator)	1.7 miles NNE
BD-34	Gibson Well (indicator)	4.7 miles E
BD-35	Joly Well (indicator)	4.7 miles E
BD-36	Hutton Well (indicator)	4.7 miles E
BD-37	Nurczyk Well (indicator)	4.7 miles E
BD-50	Skole Well (indicator)	4.7 miles E
BD-51	Fatlan Well (indicator)	0.6 miles NE
BD-53	Phelps Well (indicator)	0.7 miles E
BD-54	Cash Well (indicator)	0.9 miles NE
D. Milk - bi-weekly / monthly		
BD-17	Halpin's Dairy (indicator)	5.5 miles SSW
BD-18	Biros' Farm (control)	8.7 miles W
E. Air Particulates / Air Iodine		
BD-02	Custer Park (indicator)	5.0 miles E
BD-03	County Line Road (control)	6.2 miles ESE
BD-04	Essex (indicator)	4.8 miles SSE
BD-05	Gardner (indicator)	5.5 miles SW
BD-06	Godley (indicator)	0.5 miles WSW
BD-19	Nearsite NW (indicator)	0.3 miles NW
BD-20	Nearsite N (indicator)	0.6 miles N
BD-21	Nearsite NE (indicator)	0.5 miles NE
F.Fish		
BD-25	Kankakee River, Upstream (control)	5.0 miles E
BD-28	Kankakee River, Discharge (indicator)	5.4 miles E
BD-41	Cooling Lake (indicator)	1.0 mile E
G. Sediment		
BD-10	Kankakee River, Downstream (indicator)	5.4 miles NE
BD-57	Circulating Water Blowdown Discharge (indicator)	5.4 miles E

TABLE B-1: Radiological Environmental Monitoring Program - Sampling Locations, Distance and Direction, Braidwood Station, 2007

Location	Location Description	Distance & Direction From Site
H. Food Products		
Quadrant 1	Clark Farm	3.8 miles ENE
Quadrant 2	W.F. Soltwisch	4.5 miles SSE
Quadrant 3	Terri Schultz	4.8 miles SSW
Quadrant 4	Bruce Sinkular	1.9 miles NNW
Control	Gorman Farm	9.0 miles NE
I. Environmental Dosimetry - TLD		
Site Boundary		
BD-101-3 and -4		0.5 miles N
BD-102-1 and -2		1.1 miles NNE
BD-103-1 and -2		1.0 miles NE
BD-104-1 and -2		0.7 miles ENE
BD-105-1 and -2		2.2 miles E
BD-106-1 and -2		2.5 miles ESE
BD-107-1 and -2		3.2 miles SE
BD-108-1 and -2		3.2 miles SSE
BD-109-1 and -2		3.8 miles S
BD-110-1 and -2		2.8 miles SSW
BD-111a-1 and -2		1.4 miles SW
BD-112-1 and -2		0.7 miles WSW
BD-113a-1 and -2		0.5 miles W
BD-114-1 and -2		0.4 miles WNW
BD-115-1 and -2		0.3 miles NW
BD-116-1		0.4 miles NNW
BD-116-2		0.5 miles NNW
Intermediate Distance		
BD-201-1 and -2		4.2 miles N
BD-202-1 and -2		4.8 miles NNE
BD-203-1 and -2		4.9 miles NE
BD-204-1 and -2		4.3 miles ENE
BD-205-1 and -2		4.0 miles E
BD-206-1 and -2		4.5 miles ESE
BD-207-1 and -2		4.5 miles SE
BD-208-1 and -2		4.5 miles SSE
BD-209-1 and -2		4.8 miles S
BD-210-1 and -2		5.3 miles SSW
BD-211-1 and -2		4.8 miles SW
BD-212-3 and -4		5.0 miles WSW
BD-213-3 and -4		4.8 miles W
BD-214-1 and -2		4.3 miles WNW
BD-215-1 and -2		4.5 miles NW
BD-216-1 and -2		4.0 miles NNW
Other		
BD-02-1 and -2	Custer Park (indicator)	5.0 miles E
BD-04-1 and -2	Essex (indicator)	4.8 miles SSE
BD-05-1 and -2	Gardner (indicator)	5.5 miles SW
BD-06-1 and -2	Godley (indicator)	0.5 miles WSW
BD-19-1 and -2	Nearsite NW (indicator)	0.3 miles NW
BD-20-1 and -2	Nearsite N (indicator)	0.6 miles N
BD-21-1 and -2	Nearsite NE (indicator)	0.5 miles NE

TABLE B-1: Radiological Environmental Monitoring Program - Sampling Locations, Distance and Direction, Braidwood Station, 2007

Location	Location Description	Distance & Direction From Site
I. Environmental Dosimetry – TLD (cont'd)		
Control and Special Interest		
BD-03-1 and -2	Onsite 2	0.3 miles NE

TABLE B-2: Radiological Environmental Monitoring Program – Summary of Sample Collection and Analytical Methods, Braidwood Station, 2007

Sample Medium	Analysis	Sampling Method	Analytical Procedure Number
Surface Water	Gamma Spectroscopy	Monthly composite from weekly grab samples.	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
Surface Water	Gross Beta	Monthly composite from weekly grab samples.	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)
Surface Water	Tritium	Quarterly composite from weekly grab samples.	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 weekly grab samples.	TBE, TBE-2008 Gross Alpha and/or gross beta activity in various matrices Env. Inc., W(DS)-01 Determination of gross alpha and/or gross beta in water (dissolved solids or total residue)
Drinking Water	Gamma Spectroscopy	Monthly composite from weekly grab samples.	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
Drinking Water	Tritium	Quarterly composite from weekly grab samples.	TBE, TBE-2011 Tritium analysis in drinking water by liquid scintillation Env. Inc., T-02 Determination of tritium in water (direct method)
Drinking Water	Gamma Spectroscopy	Quarterly grab samples.	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
Ground/well Water	Tritium	Quarterly grab samples.	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	Samples collected twice annually via electroshocking or other techniques	TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy

TABLE B-2: Radiological Environmental Monitoring Program – Summary of Sample Collection and Analytical Methods, Braidwood Station, 2007

Sample Medium	Analysis	Sampling Method	Analytical Procedure Number
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	Weekly composite of continuous air sampling through charcoal filter	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
Milk	I-131	Bi-weekly grab sample May through October. 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
Milk	Gamma Spectroscopy	Bi-weekly grab sample May through October. Monthly all other times	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
Food Products	Gamma Spectroscopy	Annual grab samples.	TBE, TBE-2007 Gamma emitting radioisotope analysis Env. Inc., GS-01 Determination of gamma emitters by gamma spectroscopy
TLD	Thermoluminescence Dosimetry	Quarterly TLDs comprised of two Global Dosimetry CaF_2 elements.	Global Dosimetry

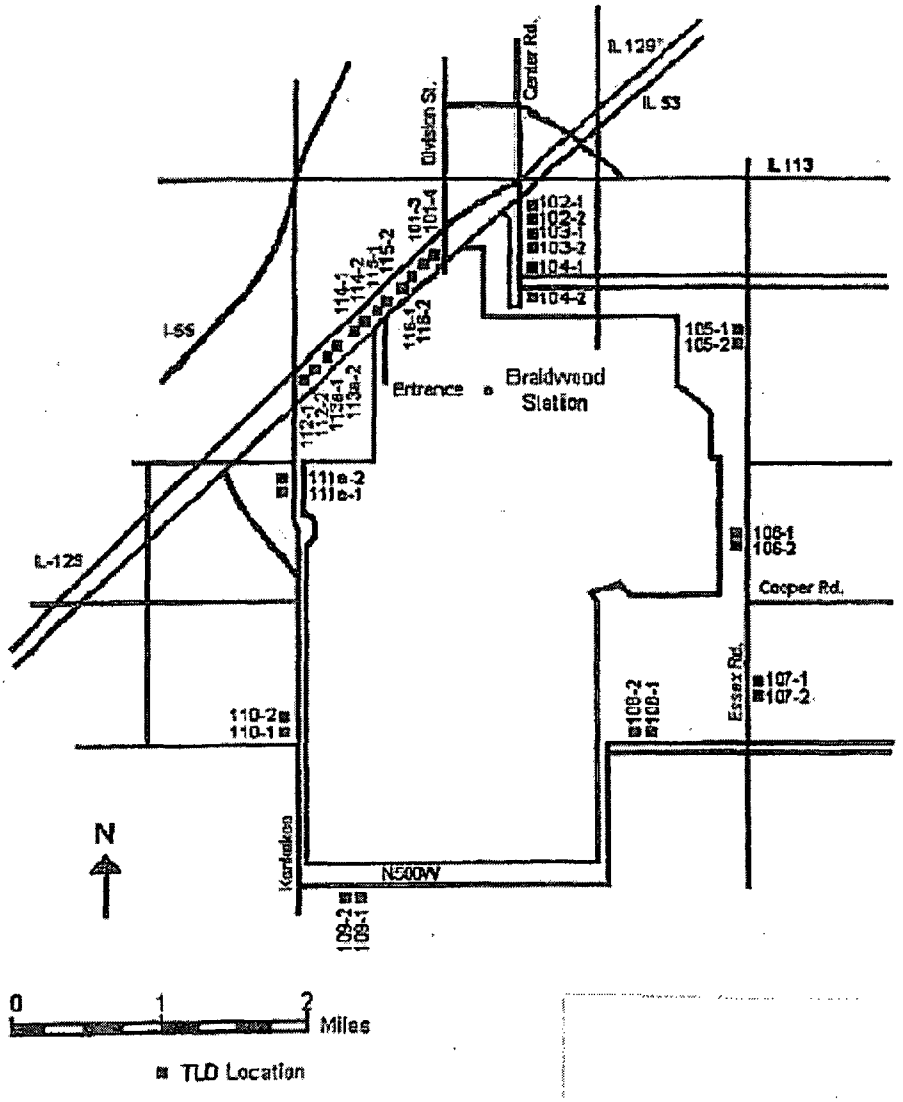


Figure B-1
Inner Ring TLD Locations of the
Braidwood Station, 2007

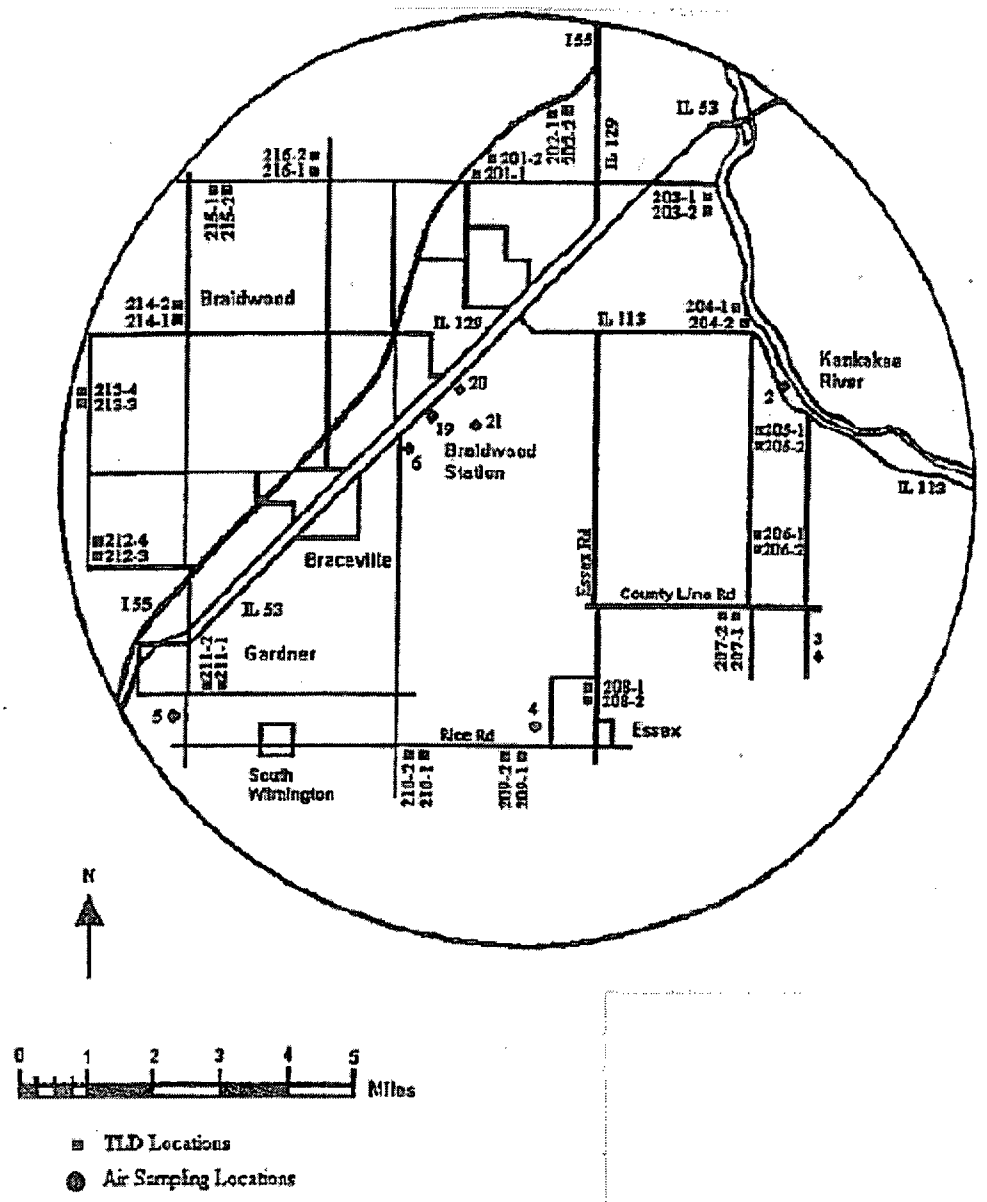


Figure B-2
Fixed Air Sampling and Outer Ring TLD Locations
of the Braidwood Station, 2007

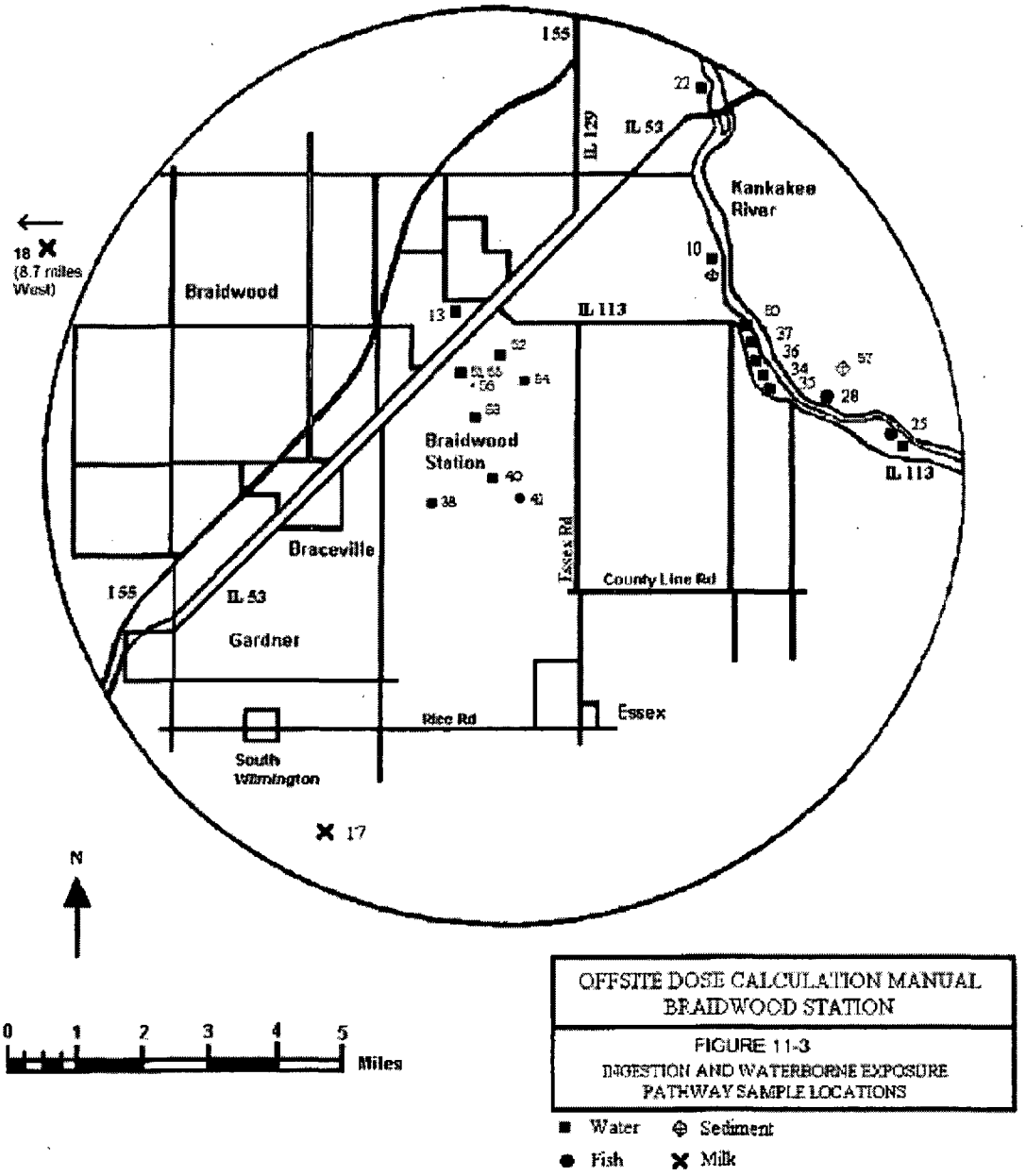


Figure B-3
Ingestion and Waterborne Exposure Pathway Sample Locations
of the Braidwood Station, 2007

APPENDIX C

DATA TABLES AND FIGURES
PRIMARY LABORATORY

TABLE C-I.1 **CONCENTRATIONS OF GROSS BETA IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	BD-10	BD-25	BD-38	BD-40	BD-55	BD-56
01/04/07 - 01/25/07	2.8 ± 1.8	7.4 ± 2.2	3.6 ± 2.1	8.6 ± 2.6	3.6 ± 1.7	3.1 ± 2.0
02/01/07 - 02/08/07	3.2 ± 1.9	11 ± 2.9	8.6 ± 2.8	12 ± 2.8	2.4 ± 1.6	4.2 ± 2.2
03/15/07 - 03/29/07	6.4 ± 2.0	6.9 ± 2.3	5.2 ± 2.1	12 ± 2.8	2.3 ± 1.5	3.1 ± 2.0
04/05/07 - 04/26/07	3.2 ± 2.0	7.6 ± 2.6	5.0 ± 2.4	11 ± 2.9	< 2.6	< 3.6
05/03/07 - 05/31/07	4.7 ± 2.1	5.7 ± 2.2	5.1 ± 2.5	12 ± 2.9	4.2 ± 1.7	5.2 ± 2.6
06/07/07 - 06/28/07	5.7 ± 1.9	4.2 ± 1.8	9.1 ± 2.5	10 ± 2.9	3.2 ± 1.4	5.5 ± 2.3
07/05/07 - 07/26/07	4.2 ± 1.9	3.6 ± 1.7	3.4 ± 1.9	9.9 ± 2.5	< 2.1	< 3.1
08/02/07 - 08/30/07	3.9 ± 1.8	5.3 ± 1.9	4.1 ± 2.0	11 ± 2.6	< 2.2	3.5 ± 2.1
09/06/07 - 09/27/07	4.6 ± 2.1	7.1 ± 2.3	6.6 ± 2.5	13 ± 2.9	< 2.4	3.8 ± 2.2
10/04/07 - 10/25/07	4.3 ± 2.1	8.2 ± 2.4	5.5 ± 2.5	12 ± 2.9	< 2.5	5.3 ± 2.5
11/01/07 - 11/29/07	5.4 ± 2.2	9.0 ± 2.4	8.3 ± 2.6	15 ± 3.1	2.8 ± 1.7	6.0 ± 2.5
12/20/07 - 12/27/07	6.1 ± 1.9	14 ± 3.0	7.7 ± 2.4	13 ± 2.7	3.5 ± 1.6	(1)
MEAN*	4.5 ± 2.4	7.5 ± 5.7	6.0 ± 4.0	12 ± 3.3	3.1 ± 1.4	4.4 ± 2.2

TABLE C-I.2 **CONCENTRATIONS OF TRITIUM IN SURFACE WATER SAMPLES COLLECTED IN THE VIICNITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	BD-10	BD-25	BD-38	BD-40	BD-55	BD-56
01/04/07 - 03/29/07	< 169	< 185	< 181	< 186	< 185	< 176
04/05/07 - 06/28/07	< 168	< 168	< 170	219 ± 115	< 167	< 167
07/05/07 - 09/27/07	585 ± 141	< 186	< 190	316 ± 125	< 188	< 189
10/04/07 - 11/30/07	< 173	< 192	< 175	< 173	< 170	< 175
MEAN*	585 ± 0	-	-	268 ± 137	-	-

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

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-I.3 **CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
BD-10	01/04/07 - 01/25/07	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 8	< 1	< 1	< 12	< 4
	02/01/07 - 02/23/07	< 3	< 3	< 6	< 3	< 5	< 3	< 5	< 14	< 3	< 3	< 25	< 7
	03/01/07 - 03/29/07	< 1	< 1	< 3	< 1	< 3	< 2	< 3	< 7	< 1	< 1	< 12	< 4
	04/05/07 - 04/26/07	< 2	< 3	< 7	< 3	< 5	< 3	< 6	< 13	< 2	< 3	< 26	< 8
	05/03/07 - 05/31/07	< 2	< 3	< 6	< 2	< 5	< 3	< 5	< 13	< 2	< 2	< 26	< 9
	06/07/07 - 06/28/07	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 12	< 1	< 1	< 19	< 6
	07/05/07 - 07/26/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 15	< 2	< 2	< 22	< 9
	08/02/07 - 08/30/07	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 15	< 1	< 1	< 19	< 6
	09/06/07 - 09/27/07	< 1	< 1	< 4	< 1	< 3	< 2	< 3	< 10	< 1	< 1	< 16	< 6
	10/04/07 - 10/25/07	< 1	< 1	< 2	< 1	< 1	< 1	< 2	< 12	< 1	< 1	< 14	< 4
	11/01/07 - 11/29/07	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 6	< 1	< 1	< 13	< 4
	12/06/07 - 12/27/07	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 14	< 1	< 1	< 16	< 5
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-25	01/04/07 - 01/25/07	< 2	< 2	< 5	< 2	< 3	< 2	< 4	< 14	< 2	< 2	< 23	< 7
	02/01/07 - 02/23/07	< 3	< 4	< 8	< 3	< 6	< 4	< 6	< 15	< 3	< 3	< 33	< 9
	03/01/07 - 03/29/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 10	< 2	< 2	< 19	< 6
	04/05/07 - 04/26/07	< 3	< 3	< 7	< 3	< 6	< 3	< 5	< 14	< 2	< 3	< 24	< 9
	05/03/07 - 05/31/07	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 9	< 1	< 2	< 16	< 5
	06/07/07 - 06/28/07	< 1	< 2	< 4	< 2	< 3	< 2	< 3	< 14	< 1	< 2	< 20	< 7
	07/05/07 - 07/26/07	< 2	< 2	< 5	< 2	< 3	< 2	< 4	< 15	< 2	< 2	< 24	< 7
	08/02/07 - 08/30/07	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 14	< 1	< 1	< 17	< 5
	09/06/07 - 09/27/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 14	< 2	< 2	< 23	< 7
	10/04/07 - 10/25/07	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 13	< 1	< 1	< 15	< 5
	11/01/07 - 11/29/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 9	< 2	< 2	< 18	< 6
	12/06/07 - 12/27/07	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 14	< 1	< 1	< 17	< 5
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-

TABLE C-I.3 **CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
BD-38	01/04/07 - 01/25/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 14	< 2	< 2	< 23	< 7
	02/01/07 - 02/08/07	< 2	< 2	< 5	< 2	< 3	< 2	< 4	< 14	< 2	< 2	< 39	< 13
	03/01/07 - 03/29/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 10	< 2	< 2	< 18	< 7
	04/05/07 - 04/26/07	< 3	< 3	< 8	< 3	< 7	< 4	< 7	< 15	< 3	< 3	< 30	< 10
	05/03/07 - 05/31/07	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 9	< 2	< 2	< 16	< 5
	06/07/07 - 06/28/07	< 1	< 2	< 4	< 2	< 3	< 2	< 4	< 14	< 1	< 2	< 22	< 7
	07/05/07 - 07/26/07	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 15	< 2	< 2	< 21	< 7
	08/02/07 - 08/30/07	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 13	< 1	< 1	< 15	< 5
	09/06/07 - 09/27/07	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 14	< 2	< 2	< 22	< 7
	10/04/07 - 10/25/07	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 15	< 1	< 1	< 19	< 5
	11/01/07 - 11/29/07	< 2	< 2	< 5	< 2	< 5	< 3	< 4	< 9	< 2	< 2	< 19	< 7
	12/06/07 - 12/27/07	< 1	< 1	< 2	< 1	< 1	< 1	< 2	< 13	< 1	< 1	< 16	< 5
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-40	01/04/07 - 01/25/07	< 1	< 2	< 4	< 2	< 3	< 2	< 3	< 13	< 1	< 1	< 19	< 7
	02/01/07 - 02/23/07	< 3	< 3	< 7	< 3	< 5	< 3	< 5	< 15	< 2	< 3	< 25	< 8
	03/01/07 - 03/29/07	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 9	< 1	< 2	< 15	< 6
	04/05/07 - 04/26/07	< 3	< 3	< 8	< 3	< 6	< 3	< 6	< 14	< 2	< 3	< 28	< 9
	05/03/07 - 05/31/07	< 3	< 3	< 7	< 3	< 5	< 3	< 5	< 15	< 3	< 3	< 27	< 8
	06/07/07 - 06/28/07	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 14	< 1	< 2	< 20	< 7
	07/05/07 - 07/26/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 14	< 2	< 2	< 21	< 7
	08/02/07 - 08/30/07	< 1	< 1	< 2	< 1	< 1	< 1	< 2	< 15	< 1	< 1	< 17	< 6
	09/06/07 - 09/27/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 14	< 2	< 2	< 23	< 8
	10/04/07 - 10/25/07	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 13	< 1	< 1	< 17	< 5
	11/01/07 - 11/29/07	< 2	< 2	< 4	< 2	< 4	< 2	< 3	< 9	< 2	< 2	< 17	< 5
	12/06/07 - 12/27/07	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 13	< 1	< 1	< 15	< 4
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-

TABLE C-I.3 **CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
BD-55	01/04/07 - 01/25/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 14	< 1	< 2	< 22	< 7
	02/01/07 - 02/08/07	< 2	< 2	< 5	< 2	< 3	< 2	< 4	< 11	< 2	< 2	< 38	< 13
	03/15/07 - 03/29/07	< 2	< 2	< 4	< 2	< 4	< 2	< 3	< 10	< 2	< 2	< 17	< 6
	04/05/07 - 04/26/07	< 3	< 3	< 7	< 3	< 6	< 3	< 6	< 14	< 2	< 3	< 26	< 8
	05/03/07 - 05/31/07	< 1	< 2	< 3	< 1	< 3	< 2	< 3	< 9	< 1	< 1	< 15	< 4
	06/07/07 - 06/28/07	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 13	< 1	< 2	< 20	< 7
	07/05/07 - 07/26/07	< 2	< 2	< 5	< 2	< 3	< 2	< 4	< 14	< 2	< 2	< 23	< 8
	08/02/07 - 08/30/07	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 13	< 1	< 1	< 15	< 5
	09/06/07 - 09/27/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 15	< 2	< 2	< 25	< 8
	10/04/07 - 10/25/07	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 12	< 1	< 1	< 18	< 6
	11/01/07 - 11/29/07	< 1	< 2	< 4	< 2	< 3	< 2	< 3	< 8	< 1	< 2	< 14	< 5
	12/20/07 - 12/27/07	< 2	< 2	< 5	< 2	< 3	< 2	< 4	< 10	< 2	< 2	< 31	< 11
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-56	01/04/07 - 01/25/07	< 1	< 1	< 4	< 1	< 3	< 2	< 3	< 11	< 1	< 1	< 17	< 6
	02/01/07 - 02/08/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 12	< 2	< 2	< 41	< 12
	03/15/07 - 03/29/07	< 2	< 2	< 5	< 2	< 4	< 3	< 5	< 12	< 2	< 2	< 22	< 7
	04/05/07 - 04/26/07	< 3	< 3	< 7	< 3	< 5	< 3	< 5	< 14	< 2	< 3	< 26	< 8
	05/03/07 - 05/31/07	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 9	< 1	< 2	< 15	< 5
	06/07/07 - 06/28/07	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 14	< 1	< 1	< 20	< 7
	07/05/07 - 07/26/07	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 14	< 1	< 2	< 21	< 7
	08/02/07 - 08/30/07	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 13	< 1	< 1	< 15	< 4
	09/06/07 - 09/27/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 15	< 2	< 2	< 23	< 7
	10/04/07 - 10/25/07	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 14	< 1	< 1	< 18	< 6
	11/01/07 - 11/29/07	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 10	< 2	< 2	< 19	< 6
	12/20/07 - 12/27/07	(1)											
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-II.1 **CONCENTRATIONS OF GROSS BETA IN PUBLIC WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	BD-22
12/28/06 - 02/01/07	2.8 ± 1.6
02/01/07 - 03/01/07	5.6 ± 1.6
03/01/07 - 03/29/07	4.3 ± 1.7
03/29/07 - 05/03/07	5.1 ± 1.6
05/03/07 - 05/31/07	3.1 ± 1.6
05/31/07 - 06/28/07	3.7 ± 1.7
06/28/07 - 08/02/07	3.4 ± 1.7
08/02/07 - 08/30/07	6.8 ± 1.8
08/30/07 - 09/27/07	4.8 ± 1.8
09/27/07 - 11/01/07	4.7 ± 1.8
11/01/07 - 11/29/07	6.1 ± 1.6
11/29/07 - 01/03/08	3.3 ± 1.5
MEAN	4.5 ± 2.5

TABLE C-II.2 **CONCENTRATIONS OF TRITIUM IN PUBLIC WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	BD-22
12/28/06 - 02/01/07	< 179
02/01/07 - 03/01/07	< 191
03/01/07 - 03/29/07	< 151
03/29/07 - 05/03/07	< 160
05/03/07 - 05/31/07	< 160
05/31/07 - 06/28/07	< 162
06/28/07 - 08/02/07	245 ± 110
08/02/07 - 08/30/07	426 ± 133
08/30/07 - 09/27/07	238 ± 120
09/27/07 - 11/01/07	1020 ± 193
11/01/07 - 11/29/07	760 ± 157
11/29/07 - 01/03/08	< 151
MEAN*	538 ± 686

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

TABLE C-II.3 **CONCENTRATIONS OF GAMMA EMITTERS IN PUBLIC WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
BD-22	12/28/06 - 02/01/07	< 5	< 5	< 12	< 4	< 7	< 6	< 8	< 10	< 5	< 5	< 27	< 11
	02/01/07 - 03/01/07	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 11	< 1	< 1	< 17	< 6
	03/01/07 - 03/29/07	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 7	< 1	< 1	< 11	< 4
	03/29/07 - 05/03/07	< 3	< 3	< 6	< 2	< 5	< 3	< 4	< 6	< 2	< 2	< 16	< 5
	05/03/07 - 05/31/07	< 2	< 3	< 5	< 2	< 5	< 3	< 5	< 6	< 2	< 3	< 16	< 6
	05/31/07 - 06/28/07	< 1	< 1	< 4	< 1	< 2	< 2	< 3	< 9	< 1	< 1	< 44	< 13
	06/28/07 - 08/02/07	< 1	< 1	< 2	< 1	< 1	< 1	< 2	< 11	< 1	< 1	< 12	< 4
	08/02/07 - 08/30/07	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 15	< 1	< 1	< 17	< 6
	08/30/07 - 09/27/07	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 15	< 1	< 1	< 22	< 7
	09/27/07 - 11/01/07	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 13	< 1	< 1	< 19	< 6
	11/01/07 - 11/29/07	< 1	< 1	< 3	< 1	< 2	< 2	< 2	< 8	< 1	< 1	< 14	< 4
	11/29/07 - 01/03/08	< 2	< 3	< 5	< 2	< 5	< 3	< 4	< 13	< 2	< 2	< 22	< 7
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-

TABLE C-III.1 CONCENTRATIONS OF TRITIUM IN GROUND/WELL WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	BD-13	BD-34	BD-35	BD-36	BD-37	BD-50	BD-51	BD-53	BD-54
01/12/07 - 01/12/07	< 186	< 186	< 184	352 ± 125	< 184	936 ± 169	< 189	< 184	< 188
04/13/07 - 04/13/07	< 165	< 170	< 169	< 167	< 170	(1)	< 168	< 169	< 168
07/12/07 - 07/12/07	< 160	< 160	< 161	< 165	< 164	(1)	< 166	< 162	< 159
10/18/07 - 10/18/07	< 192	(1)	< 195	< 187	< 192	699 ± 148	< 194	< 192	< 194
MEAN*	-	-	-	308 ± 97	-	914 ± 306	-	-	-

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

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-III.2 **CONCENTRATIONS OF GAMMA EMITTERS IN GROUND/WELL WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
BD-13	01/11/07	< 5	< 5	< 12	< 8	< 12	< 6	< 11	< 13	< 5	< 5	< 36	< 11
	04/12/07	< 4	< 4	< 8	< 5	< 8	< 4	< 8	< 10	< 4	< 4	< 22	< 8
	07/12/07	< 4	< 4	< 8	< 3	< 7	< 4	< 6	< 8	< 3	< 4	< 22	< 8
	10/11/07	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 13	< 1	< 1	< 19	< 6
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-34	01/12/07	< 6	< 6	< 13	< 6	< 11	< 7	< 10	< 14	< 6	< 6	< 32	< 12
	04/13/07	< 4	< 4	< 11	< 5	< 8	< 5	< 7	< 10	< 4	< 5	< 27	< 8
	07/12/07	< 4	< 5	< 8	< 4	< 9	< 4	< 7	< 11	< 4	< 5	< 28	< 8
	10/11/07	(1)							-				
	MEAN	-	-	-	-	-	-	-	< 12	-	-	-	-
BD-35	01/12/07	< 6	< 5	< 13	< 6	< 13	< 5	< 12	< 10	< 5	< 5	< 33	< 9
	04/13/07	< 4	< 4	< 8	< 4	< 9	< 5	< 8	< 8	< 4	< 5	< 26	< 9
	07/12/07	< 3	< 3	< 6	< 3	< 6	< 3	< 5	< 14	< 3	< 3	< 17	< 5
	10/11/07	< 1	< 2	< 3	< 1	< 3	< 2	< 3	-	< 1	< 1	< 20	< 7
	MEAN	-	-	-	-	-	-	-	< 14	-	-	-	-
BD-36	01/12/07	< 6	< 5	< 11	< 6	< 8	< 6	< 11	< 13	< 5	< 5	< 29	< 10
	04/13/07	< 5	< 5	< 11	< 5	< 11	< 6	< 10	< 6	< 5	< 5	< 34	< 10
	07/12/07	< 3	< 3	< 5	< 3	< 5	< 3	< 4	< 14	< 2	< 3	< 18	< 3
	10/11/07	< 1	< 2	< 4	< 2	< 3	< 2	< 3	-	< 1	< 2	< 22	< 7
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-III.2 **CONCENTRATIONS OF GAMMA EMITTERS IN GROUND/WELL WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
BD-37	01/12/07	< 4	< 4	< 9	< 4	< 9	< 5	< 8	< 10	< 4	< 4	< 25	< 8
	04/13/07	< 7	< 6	< 15	< 6	< 10	< 6	< 12	< 15	< 6	< 6	< 42	< 13
	07/12/07	< 3	< 3	< 6	< 3	< 6	< 3	< 6	< 8	< 3	< 3	< 20	< 7
	10/11/07	< 1	< 1	< 3	< 1	< 3	< 2	< 3	< 12	< 1	< 1	< 17	< 6
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-50	01/12/07	< 7	< 7	< 14	< 6	< 15	< 9	< 15	< 14	< 8	< 6	< 41	< 13
	04/13/07	(1)											
	07/12/07	(1)											
	10/18/07	< 2	< 2	< 4	< 13	< 4	< 2	< 4	< 13	< 2	< 2	< 21	< 6
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-51	01/11/07	< 6	< 6	< 13	< 7	< 12	< 7	< 11	< 14	< 6	< 6	< 35	< 9
	04/12/07	< 5	< 5	< 9	< 4	< 9	< 5	< 7	< 13	< 4	< 4	< 30	< 9
	07/12/07	< 5	< 5	< 13	< 5	< 9	< 6	< 10	< 14	< 5	< 5	< 34	< 11
	10/11/07	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 11	< 1	< 1	< 16	< 5
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-53	01/11/07	< 7	< 7	< 14	< 8	< 15	< 7	< 13	< 15	< 8	< 7	< 40	< 14
	04/12/07	< 5	< 5	< 12	< 6	< 10	< 5	< 9	< 14	< 5	< 5	< 27	< 11
	07/12/07	< 4	< 4	< 8	< 4	< 7	< 4	< 7	< 12	< 4	< 4	< 26	< 9
	10/11/07	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 12	< 1	< 1	< 17	< 6
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-III.2 **CONCENTRATIONS OF GAMMA EMITTERS IN GROUND/WELL WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
BD-54	01/11/07	< 6	< 6	< 13	< 6	< 10	< 7	< 11	< 13	< 6	< 6	< 33	< 11
	04/12/07	< 3	< 4	< 8	< 4	< 7	< 4	< 7	< 9	< 3	< 4	< 24	< 6
	07/12/07	< 5	< 5	< 11	< 6	< 11	< 5	< 10	< 14	< 5	< 5	< 34	< 10
	10/11/07	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 11	< 1	< 1	< 16	< 4
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-

TABLE C-IV.1 **CONCENTRATIONS OF GAMMA EMITTERS IN FISH SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PC/KG WET ± 2 SIGMA

STC	COLLECTION PERIOD		Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
BD-25														
	05/08/07	Golden Redhorse	< 26	< 29	< 78	< 25	< 61	< 33	< 56	< 326	< 27	< 27	< 460	< 132
	05/08/07	Smallmouth Bass	< 36	< 40	< 89	< 30	< 69	< 40	< 79	< 382	< 31	< 34	< 559	< 178
	10/17/07	Golden Redhorse	< 29	< 35	< 81	< 28	< 64	< 35	< 65	< 317	< 28	< 27	< 468	< 122
	10/17/07	Rock Bass	< 33	< 40	< 98	< 32	< 67	< 45	< 68	< 374	< 30	< 36	< 537	< 155
	MEAN		-	-	-	-	-	-	-	-	-	-	-	-
BD-28														
	05/08/07	Common Carp	< 44	< 56	< 146	< 44	< 115	< 69	< 103	< 872	< 59	< 46	< 1010	< 359
	05/08/07	Largemouth Bass	< 33	< 42	< 108	< 33	< 76	< 45	< 71	< 432	< 31	< 39	< 583	< 160
	10/17/07	Golden Redhorse	< 31	< 38	< 83	< 31	< 75	< 40	< 62	< 370	< 29	< 30	< 519	< 126
	10/17/07	Largemouth Bass	< 25	< 32	< 65	< 23	< 54	< 34	< 52	< 292	< 22	< 25	< 388	< 115
	MEAN		-	-	-	-	-	-	-	-	-	-	-	-
BD-41														
	05/08/07	Channel Catfish	< 35	< 36	< 101	< 30	< 64	< 39	< 64	< 402	< 31	< 36	< 516	< 149
	05/08/07	Largemouth Bass	< 25	< 33	< 80	< 27	< 57	< 33	< 61	< 311	< 24	< 27	< 402	< 154
	10/17/07	Bluegill	< 51	< 64	< 142	< 53	< 108	< 65	< 117	< 616	< 47	< 55	< 858	< 241
	10/17/07	Common Carp	< 25	< 28	< 75	< 24	< 53	< 30	< 56	< 268	< 24	< 24	< 382	< 124
	MEAN		-	-	-	-	-	-	-	-	-	-	-	-

TABLE C-V.1 CONCENTRATIONS OF GAMMA EMITTERS IN SEDIMENT SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007

RESULTS IN UNITS OF PC/KG DRY ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	Cs-134	Cs-137	Ba-140	La-140
BD-10	05/10/07	< 31	< 32	< 83	< 32	< 65	< 39	< 59	< 27	151 ± 41	< 410	< 121
	10/04/07	< 134	< 103	< 380	< 121	< 302	< 150	< 248	< 94	146 ± 99	< 1120	< 244
	MEAN*	-	-	-	-	-	-	-	-	149 ± 7	-	-
BD-57	05/10/07	< 25	< 28	< 75	< 25	< 65	< 37	< 54	< 23	105 ± 25	< 343	< 93
	10/04/07	< 68	< 89	< 191	< 101	< 195	< 107	< 163	< 72	< 88	< 716	< 104
	MEAN*	-	-	-	-	-	-	-	-	105 ± 0	-	-

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

TABLE C-VI.1 CONCENTRATIONS OF GROSS BETA IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007

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

COLLECTION PERIOD	GROUP I				GROUP II			GROUP III
	BD-06	BD-19	BD-20	BD-21	BD-02	BD-04	BD-05	BD-03
12/28/06 - 01/04/07	24 ± 5	29 ± 5	23 ± 4	26 ± 5	24 ± 5	23 ± 4	24 ± 5	21 ± 4
01/04/07 - 01/11/07	18 ± 4	22 ± 4	22 ± 5	19 ± 4	16 ± 4	21 ± 4	16 ± 4	13 ± 4
01/11/07 - 01/18/07	17 ± 4	19 ± 4	17 ± 4	18 ± 4	16 ± 4	18 ± 4	15 ± 4	15 ± 4
01/18/07 - 01/25/07	32 ± 5	34 ± 5	35 ± 5	30 ± 5	28 ± 5	37 ± 6	33 ± 5	31 ± 5
01/25/07 - 02/01/07	19 ± 4	25 ± 5	24 ± 5	22 ± 5	22 ± 5	20 ± 4	23 ± 5	22 ± 5
02/01/07 - 02/08/07	20 ± 5	23 ± 5	26 ± 5	26 ± 5	22 ± 5	18 ± 4	22 ± 5	20 ± 5
02/08/07 - 02/15/07	23 ± 4	18 ± 4	25 ± 5	29 ± 5	22 ± 4	17 ± 4	21 ± 4	20 ± 4
02/15/07 - 02/23/07	22 ± 4	26 ± 4	23 ± 4	25 ± 4	26 ± 4	30 ± 5	30 ± 5	27 ± 4
02/23/07 - 03/01/07	12 ± 4	16 ± 5	13 ± 4	15 ± 5	12 ± 4	11 ± 4	12 ± 4	15 ± 5
03/01/07 - 03/07/07	16 ± 4	16 ± 4	17 ± 4	17 ± 4	22 ± 5	21 ± 5	20 ± 5	14 ± 4
03/07/07 - 03/15/07	18 ± 4	17 ± 4	19 ± 4	20 ± 4	18 ± 4	21 ± 4	16 ± 4	16 ± 4
03/15/07 - 03/22/07	18 ± 4	23 ± 5	19 ± 4	21 ± 4	17 ± 4	20 ± 4	17 ± 4	16 ± 4
03/22/07 - 03/29/07	16 ± 4	13 ± 4	12 ± 4	12 ± 4	13 ± 4	14 ± 4	15 ± 4	12 ± 4
03/29/07 - 04/05/07	14 ± 4	14 ± 4	16 ± 4	13 ± 4	14 ± 4	14 ± 4	17 ± 4	13 ± 4
04/05/07 - 04/12/07	17 ± 4	18 ± 4	4 ± 3	16 ± 4	18 ± 4	20 ± 4	16 ± 4	16 ± 4
04/12/07 - 04/19/07	22 ± 5	19 ± 4	19 ± 4	21 ± 4	19 ± 4	20 ± 4	20 ± 4	14 ± 4
04/19/07 - 04/26/07	13 ± 4	14 ± 4	17 ± 4	11 ± 4	18 ± 4	15 ± 4	13 ± 4	16 ± 4
04/26/07 - 05/03/07	18 ± 4	16 ± 4	17 ± 4	14 ± 4	14 ± 4	11 ± 3	18 ± 4	15 ± 4
05/03/07 - 05/10/07	21 ± 5	18 ± 4	20 ± 5	17 ± 4	19 ± 5	17 ± 4	21 ± 5	19 ± 5
05/10/07 - 05/17/07	19 ± 4	< 5	13 ± 4	14 ± 4	16 ± 4	15 ± 4	12 ± 4	13 ± 4
05/17/07 - 05/24/07	24 ± 5	26 ± 5	25 ± 5	24 ± 5	18 ± 4	21 ± 4	19 ± 4	23 ± 5
05/24/07 - 05/31/07	21 ± 4	21 ± 5	23 ± 5	23 ± 5	18 ± 4	17 ± 4	20 ± 4	23 ± 5
05/31/07 - 06/07/07	18 ± 4	16 ± 4	14 ± 4	13 ± 4	13 ± 4	16 ± 4	15 ± 4	14 ± 4
06/07/07 - 06/14/07	18 ± 4	19 ± 4	20 ± 4	21 ± 4	20 ± 4	16 ± 4	24 ± 5	20 ± 4
06/14/07 - 06/21/07	26 ± 5	25 ± 5	25 ± 5	23 ± 5	20 ± 5	23 ± 5	26 ± 5	25 ± 5
06/21/07 - 06/28/07	18 ± 4	15 ± 4	15 ± 4	18 ± 4	18 ± 4	19 ± 5	20 ± 4	14 ± 4
06/28/07 - 07/05/07	12 ± 4	11 ± 4	15 ± 4	12 ± 4	15 ± 4	12 ± 4	12 ± 4	14 ± 4
07/05/07 - 07/12/07	21 ± 5	20 ± 5	18 ± 4	20 ± 5	20 ± 5	19 ± 5	21 ± 5	18 ± 4
07/12/07 - 07/19/07	12 ± 4	10 ± 4	13 ± 4	11 ± 4	15 ± 4	15 ± 4	18 ± 5	16 ± 4
07/19/07 - 07/26/07	19 ± 4	17 ± 4	16 ± 4	20 ± 5	20 ± 5	19 ± 4	19 ± 4	20 ± 5
07/26/07 - 08/02/07	29 ± 5	27 ± 5	32 ± 5	23 ± 4	30 ± 5	29 ± 5	31 ± 5	17 ± 4
08/02/07 - 08/09/07	24 ± 4	16 ± 4	23 ± 4	25 ± 5	23 ± 4	26 ± 5	31 ± 5	23 ± 4
08/09/07 - 08/16/07	26 ± 5	30 ± 5	25 ± 5	25 ± 5	22 ± 5	27 ± 5	30 ± 5	21 ± 5
08/16/07 - 08/23/07	16 ± 4	17 ± 4	17 ± 4	17 ± 4	12 ± 4	17 ± 4	15 ± 4	16 ± 4
08/23/07 - 08/30/07	14 ± 4	25 ± 7	25 ± 5	23 ± 5	24 ± 5	18 ± 4	22 ± 5	20 ± 5
08/30/07 - 09/06/07	33 ± 5	25 ± 5	25 ± 5	26 ± 5	26 ± 5	25 ± 5	31 ± 5	28 ± 5
09/06/07 - 09/13/07	15 ± 4	16 ± 4	17 ± 4	16 ± 4	18 ± 4	13 ± 4	20 ± 4	13 ± 4
09/13/07 - 09/20/07	22 ± 4	26 ± 5	24 ± 5	26 ± 5	26 ± 5	27 ± 5	29 ± 5	26 ± 5
09/20/07 - 09/27/07	24 ± 5	28 ± 5	30 ± 5	25 ± 5	30 ± 5	23 ± 5	20 ± 5	23 ± 5
09/27/07 - 10/04/07	29 ± 5	32 ± 5	29 ± 5	33 ± 5	27 ± 5	34 ± 5	30 ± 5	32 ± 5
10/04/07 - 10/11/07	11 ± 4	12 ± 4	9 ± 4	12 ± 4	9 ± 4	16 ± 4	13 ± 4	13 ± 4
10/11/07 - 10/18/07	26 ± 5	21 ± 5	22 ± 5	22 ± 5	25 ± 5	20 ± 5	28 ± 5	22 ± 5
10/18/07 - 10/25/07	25 ± 5	19 ± 4	16 ± 4	20 ± 5	21 ± 4	18 ± 4	23 ± 5	19 ± 4
10/25/07 - 11/01/07	20 ± 5	20 ± 5	17 ± 4	16 ± 4	17 ± 4	19 ± 4	(1)	18 ± 4
11/01/07 - 11/08/07	17 ± 4	25 ± 5	21 ± 5	23 ± 5	17 ± 4	21 ± 5	(1)	22 ± 5
11/08/07 - 11/15/07	36 ± 5	30 ± 5	30 ± 5	30 ± 5	29 ± 5	32 ± 5	25 ± 2	27 ± 5
11/15/07 - 11/21/07	22 ± 5	27 ± 5	24 ± 5	22 ± 5	22 ± 5	21 ± 5	19 ± 5	19 ± 5
11/21/07 - 11/29/07	28 ± 4	26 ± 4	23 ± 4	24 ± 4	26 ± 4	26 ± 4	23 ± 4	24 ± 4
11/29/07 - 12/06/07	21 ± 5	22 ± 5	22 ± 5	24 ± 5	22 ± 5	24 ± 5	21 ± 5	18 ± 5
12/06/07 - 12/13/07	35 ± 5	33 ± 5	33 ± 5	36 ± 5	37 ± 5	36 ± 5	41 ± 6	30 ± 5
12/13/07 - 12/20/07	45 ± 6	46 ± 6	42 ± 5	49 ± 6	45 ± 6	52 ± 6	49 ± 6	43 ± 6
12/20/07 - 12/27/07	38 ± 5	35 ± 5	37 ± 5	35 ± 5	34 ± 5	35 ± 5	37 ± 5	33 ± 5
12/27/07 - 01/03/08	39 ± 6	32 ± 5	35 ± 5	32 ± 5	28 ± 5	36 ± 6	39 ± 6	36 ± 5
MEAN*	22 ± 15	22 ± 14	22 ± 15	22 ± 15	21 ± 13	22 ± 16	23 ± 16	20 ± 13

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

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-VI.2 MONTHLY AND YEARLY VALUES OF GROSS BETA CONCENTRATIONS (E-3 PCI/CU METER) IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007

GROUP I - NEAR FIELD LOCATIONS				GROUP II - FAR FIELD LOCATIONS				GROUP III - CONTROL LOCATIONS			
COLLECTION PERIOD	MIN	MAX	MEAN ± 2SD	COLLECTION PERIOD	MIN	MAX	MEAN ± 2SD	COLLECTION PERIOD	MIN	MAX	MEAN ± 2SD
12/28/06 - 02/01/07	17	35	24 ± 11	12/28/06 - 02/01/07	15	37	22 ± 13	12/28/06 - 02/01/07	13	31	20 ± 14
02/01/07 - 03/01/07	12	29	21 ± 10	02/01/07 - 03/01/07	11	30	20 ± 13	02/01/07 - 03/01/07	15	27	20 ± 10
03/01/07 - 03/29/07	12	23	17 ± 6	03/01/07 - 03/29/07	13	22	18 ± 6	03/01/07 - 03/29/07	12	16	15 ± 3
03/29/07 - 05/03/07	4	22	16 ± 8	03/29/07 - 05/03/07	11	20	17 ± 6	03/29/07 - 05/03/07	13	16	15 ± 2
05/03/07 - 05/31/07	< 5	26	21 ± 8	05/03/07 - 05/31/07	12	21	18 ± 5	05/03/07 - 05/31/07	13	23	20 ± 9
05/31/07 - 06/28/07	13	26	19 ± 8	05/31/07 - 06/28/07	13	26	19 ± 8	05/31/07 - 06/28/07	14	25	18 ± 10
06/28/07 - 08/02/07	10	32	18 ± 13	06/28/07 - 08/02/07	12	31	20 ± 12	06/28/07 - 08/02/07	14	20	17 ± 5
08/02/07 - 08/30/07	14	30	22 ± 9	08/02/07 - 08/30/07	12	31	22 ± 12	08/02/07 - 08/30/07	16	23	20 ± 6
08/30/07 - 09/27/07	15	33	24 ± 11	08/30/07 - 09/27/07	13	31	24 ± 11	08/30/07 - 09/27/07	13	28	22 ± 13
09/27/07 - 11/01/07	9	33	21 ± 14	09/27/07 - 11/01/07	9	34	21 ± 14	09/27/07 - 11/01/07	13	32	21 ± 14
11/01/07 - 11/29/07	17	36	25 ± 9	11/01/07 - 11/29/07	17	32	24 ± 9	11/01/07 - 11/29/07	19	27	23 ± 7
11/29/07 - 01/03/08	21	49	35 ± 16	11/29/07 - 01/03/08	21	52	36 ± 18	11/29/07 - 01/03/08	18	43	32 ± 18
12/28/06 - 01/03/08	4	49	22 ± 14	12/28/06 - 01/03/08	9	52	22 ± 15	12/28/06 - 01/03/08	12	43	20 ± 13

TABLE C-VI.3 **CONCENTRATIONS OF GAMMA EMITTERS IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

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

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	Cs-134	Cs-137	Ba-140	La-140
BD-02	12/28/06 - 03/29/07	< 2	< 3	< 8	< 2	< 7	< 3	< 5	< 2	< 2	< 48	< 15
	03/29/07 - 06/28/07	< 3	< 4	< 11	< 3	< 7	< 5	< 9	< 3	< 2	< 310	< 148
	06/28/07 - 09/27/07	< 3	< 5	< 15	< 3	< 11	< 5	< 10	< 4	< 3	< 366	< 79
	09/27/07 - 01/03/08	< 3	< 4	< 9	< 4	< 7	< 4	< 6	< 3	< 3	< 61	< 24
	MEAN	-	-	-	-	-	-	-	-	-	-	-
BD-03	12/28/06 - 03/29/07	< 4	< 4	< 10	< 4	< 8	< 5	< 8	< 5	< 3	< 98	< 38
	03/29/07 - 06/28/07	< 2	< 4	< 10	< 3	< 7	< 5	< 9	< 3	< 2	< 360	< 119
	06/28/07 - 09/27/07	< 4	< 5	< 16	< 3	< 14	< 7	< 9	< 4	< 3	< 395	< 176
	09/27/07 - 01/03/08	< 2	< 2	< 6	< 1	< 6	< 3	< 4	< 2	< 2	< 33	< 12
	MEAN	-	-	-	-	-	-	-	-	-	-	-
BD-04	12/28/06 - 03/29/07	< 4	< 4	< 7	< 4	< 10	< 5	< 9	< 4	< 3	< 84	< 35
	03/29/07 - 06/28/07	< 3	< 6	< 19	< 4	< 9	< 6	< 12	< 3	< 4	< 489	< 165
	06/28/07 - 09/27/07	< 2	< 5	< 13	< 3	< 7	< 6	< 7	< 3	< 3	< 245	< 66
	09/27/07 - 01/03/08	< 2	< 3	< 7	< 2	< 5	< 2	< 5	< 2	< 1	< 34	< 17
	MEAN	-	-	-	-	-	-	-	-	-	-	-
BD-05	12/28/06 - 03/29/07	< 3	< 4	< 12	< 4	< 6	< 5	< 6	< 4	< 4	< 80	< 25
	03/29/07 - 06/28/07	< 2	< 5	< 17	< 3	< 10	< 7	< 11	< 4	< 3	< 462	< 145
	06/28/07 - 09/27/07	< 2	< 4	< 12	< 2	< 9	< 4	< 7	< 3	< 2	< 250	< 72
	09/27/07 - 01/03/08	< 3	< 3	< 9	< 2	< 6	< 3	< 5	< 3	< 2	< 43	< 17
	MEAN	-	-	-	-	-	-	-	-	-	-	-

TABLE C-VI.3 **CONCENTRATIONS OF GAMMA EMITTERS IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

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

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	Cs-134	Cs-137	Ba-140	La-140
BD-06	12/28/06 - 03/29/07	< 3	< 5	< 12	< 3	< 8	< 4	< 8	< 4	< 4	< 69	< 40
	03/29/07 - 06/28/07	< 3	< 4	< 16	< 3	< 6	< 4	< 7	< 3	< 2	< 318	< 134
	06/28/07 - 09/27/07	< 3	< 6	< 17	< 3	< 8	< 6	< 8	< 4	< 3	< 331	< 81
	09/27/07 - 01/03/08	< 2	< 2	< 7	< 3	< 5	< 3	< 4	< 1	< 2	< 32	< 15
	MEAN	-	-	-	-	-	-	-	-	-	-	-
BD-19	12/28/06 - 03/29/07	< 3	< 4	< 13	< 3	< 9	< 5	< 7	< 3	< 3	< 83	< 33
	03/29/07 - 06/28/07	< 3	< 5	< 18	< 3	< 10	< 6	< 7	< 3	< 2	< 386	< 117
	06/28/07 - 09/27/07	< 2	< 3	< 10	< 2	< 7	< 5	< 10	< 3	< 3	< 279	< 91
	09/27/07 - 01/03/08	< 3	< 3	< 7	< 4	< 7	< 4	< 8	< 4	< 3	< 56	< 25
	MEAN	-	-	-	-	-	-	-	-	-	-	-
BD-20	12/28/06 - 03/29/07	< 3	< 4	< 9	< 3	< 3	< 5	< 9	< 4	< 3	< 81	< 35
	03/29/07 - 06/28/07	< 2	< 3	< 13	< 2	< 5	< 3	< 8	< 3	< 2	< 373	< 117
	06/28/07 - 09/27/07	< 4	< 6	< 16	< 5	< 12	< 4	< 10	< 5	< 4	< 361	< 172
	09/27/07 - 01/03/08	< 3	< 4	< 9	< 4	< 6	< 4	< 7	< 3	< 2	< 49	< 14
	MEAN	-	-	-	-	-	-	-	-	-	-	-
BD-21	12/28/06 - 03/29/07	< 4	< 5	< 12	< 4	< 9	< 4	< 7	< 4	< 3	< 86	< 21
	03/29/07 - 06/28/07	< 3	< 6	< 18	< 3	< 10	< 6	< 7	< 3	< 3	< 403	< 136
	06/28/07 - 09/27/07	< 3	< 6	< 19	< 3	< 9	< 7	< 8	< 5	< 4	< 342	< 184
	09/27/07 - 01/03/08	< 3	< 3	< 8	< 2	< 5	< 4	< 5	< 3	< 3	< 42	< 16
	MEAN	-	-	-	-	-	-	-	-	-	-	-

TABLE C-VII.1 **CONCENTRATIONS OF I-131 IN AIR IODINE SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

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

COLLECTION PERIOD	GROUP I				GROUP II			GROUP III
	BD-06	BD-19	BD-20	BD-21	BD-02	BD-04	BD-05	BD-03
12/28/06 - 01/04/07	< 29	< 29	< 30	< 30	< 29	< 29	< 29	< 29
01/04/07 - 01/11/07	< 27	< 33	< 34	< 33	< 15	< 27	< 27	< 27
01/11/07 - 01/18/07	< 37	< 38	< 38	< 38	< 48	< 48	< 48	< 48
01/18/07 - 01/25/07	< 41	< 41	< 44	< 44	< 49	< 53	< 49	< 49
01/25/07 - 02/01/07	< 33	< 35	< 35	< 35	< 39	< 39	< 39	< 39
02/01/07 - 02/08/07	< 31	< 31	< 31	< 31	< 29	< 29	< 29	< 29
02/08/07 - 02/15/07	< 30	< 33	< 33	< 34	< 30	< 23	< 30	< 30
02/15/07 - 02/23/07	< 54	< 55	< 55	< 55	< 43	< 43	< 36	< 43
02/23/07 - 03/01/07	< 41	< 41	< 41	< 41	< 33	< 33	< 33	< 33
03/01/07 - 03/07/07	< 33	< 61	< 61	< 61	< 69	< 69	< 61	< 69
03/07/07 - 03/15/07	< 21	< 21	< 21	< 21	< 28	< 28	< 28	< 28
03/15/07 - 03/22/07	< 44	< 44	< 45	< 44	< 45	< 45	< 45	< 45
03/22/07 - 03/29/07	< 40	< 40	< 40	< 40	< 49	< 50	< 50	< 50
03/29/07 - 04/05/07	< 40	< 43	< 43	< 34	< 41	< 41	< 43	< 41
04/05/07 - 04/12/07	< 32	< 33	< 33	< 33	< 39	< 39	< 39	< 39
04/12/07 - 04/19/07	< 57	< 42	< 53	< 53	< 60	< 60	< 60	< 60
04/19/07 - 04/26/07	< 14	< 14	< 14	< 14	< 15	< 15	< 15	< 15
04/26/07 - 05/03/07	< 60	< 58	< 46	< 58	< 58	< 58	< 58	< 58
05/03/07 - 05/10/07	< 29	< 35	< 38	< 38	< 52	< 52	< 52	< 52
05/10/07 - 05/17/07	< 24	< 36	< 25	< 25	< 34	< 34	< 24	< 34
05/17/07 - 05/24/07	< 29	< 28	< 29	< 29	< 58	< 58	< 58	< 58
05/24/07 - 05/31/07	< 44	< 44	< 44	< 44	< 35	< 35	< 35	< 35
05/31/07 - 06/07/07	< 15	< 15	< 15	< 15	< 32	< 32	< 32	< 32
06/07/07 - 06/14/07	< 24	< 24	< 25	< 20	< 26	< 26	< 24	< 26
06/14/07 - 06/21/07	< 36	< 26	< 26	< 26	< 36	< 36	< 36	< 36
06/21/07 - 06/28/07	< 42	< 45	< 45	< 45	< 37	< 37	< 35	< 37
06/28/07 - 07/05/07	< 32	< 32	< 32	< 32	< 31	< 31	< 31	< 31
07/05/07 - 07/12/07	< 60	< 60	< 59	< 60	< 45	< 45	< 46	< 45
07/12/07 - 07/19/07	< 14	< 14	< 14	< 14	< 18	< 18	< 19	< 18
07/19/07 - 07/26/07	< 31	< 47	< 47	< 47	< 31	< 19	< 31	< 31
07/26/07 - 08/02/07	< 55	< 57	< 59	< 57	< 45	< 45	< 45	< 45
08/02/07 - 08/09/07	< 28	< 28	< 28	< 34	< 24	< 24	< 24	< 24
08/09/07 - 08/16/07	< 23	< 54	< 54	< 54	< 34	< 34	< 34	< 34
08/16/07 - 08/23/07	< 63	< 63	< 62	< 63	< 60	< 59	< 59	< 59
08/23/07 - 08/30/07	< 36	< 54	< 34	< 34	< 33	< 23	< 31	< 32
08/30/07 - 09/06/07	< 69	< 68	< 68	< 68	< 63	< 63	< 64	< 63
09/06/07 - 09/13/07	< 58	< 34	< 58	< 58	< 56	< 56	< 56	< 56
09/13/07 - 09/20/07	< 34	< 34	< 34	< 34	< 42	< 42	< 35	< 42
09/20/07 - 09/27/07	< 51	< 51	< 28	< 51	< 46	< 46	< 58	< 46
09/27/07 - 10/04/07	< 57	< 57	< 57	< 57	< 62	< 62	< 62	< 62
10/04/07 - 10/11/07	< 64	< 64	< 64	< 64	< 59	< 60	< 60	< 60
10/11/07 - 10/18/07	< 37	< 38	< 37	< 25	< 67	< 68	< 37	< 68
10/18/07 - 10/25/07	< 20	< 20	< 20	< 20	< 39	< 42	< 42	< 42
10/25/07 - 11/01/07	< 41	< 17	< 17	< 17	< 23	< 41	(1)	< 41
11/01/07 - 11/08/07	< 61	< 59	< 61	< 61	< 60	< 61	(1)	< 60
11/08/07 - 11/15/07	< 65	< 65	< 65	< 65	< 64	< 65	< 22	< 36
11/15/07 - 11/21/07	< 53	< 53	< 53	< 53	< 56	< 56	< 56	< 56
11/21/07 - 11/29/07	< 26	< 39	< 39	< 39	< 26	< 14	< 26	< 26
11/29/07 - 12/06/07	< 43	< 43	< 43	< 43	< 50	< 50	< 50	< 50
12/06/07 - 12/13/07	< 21	< 22	< 22	< 22	< 21	< 11	< 21	< 21
12/13/07 - 12/20/07	< 20	< 20	< 20	< 20	< 18	< 21	< 18	< 18
12/20/07 - 12/27/07	< 36	< 36	< 36	< 37	< 34	< 34	< 34	< 34
12/27/07 - 01/03/08	< 53	< 55	< 55	< 55	< 34	< 35	< 35	< 35
MEAN	-	-	-	-	-	-	-	-

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

TABLE C-VIII.1 **CONCENTRATIONS OF I-131 IN MILK SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

	CONTROL FARM	INDICATOR FARM
COLLECTION PERIOD	BD-18	BD-17
01/04/07	< 0.8	< 0.7
02/01/07	< 0.4	< 0.4
03/01/07	< 0.6	< 0.8
04/05/07	< 0.7	< 0.5
05/04/07	< 0.6	< 0.5
05/18/07	< 0.5	< 0.5
06/01/07	< 0.6	< 0.6
06/15/07	< 0.6	< 0.6
06/29/07	< 0.7	< 0.8
07/13/07	< 0.6	< 0.7
07/27/07	< 0.5	< 0.5
08/09/07	< 0.5	< 0.9
08/24/07	< 0.8	< 0.6
09/06/07	< 0.5	< 0.6
09/21/07	< 0.4	< 0.6
10/05/07	< 0.7	< 0.7
10/19/07	< 0.7	< 0.5
11/01/07	< 0.9	< 0.8
12/06/07	< 0.7	< 0.8
MEAN	-	-

TABLE C-VIII.2 **CONCENTRATIONS OF GAMMA EMITTERS IN MILK SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	Cs-134	Cs-137	Ba-140	La-140
BD-17	01/04/07	< 6	< 5	< 12	< 5	< 13	< 6	< 9	< 4	< 5	< 20	< 8
	02/01/07	< 6	< 7	< 14	< 5	< 16	< 5	< 9	< 5	< 6	< 27	< 8
	03/01/07	< 5	< 6	< 13	< 6	< 11	< 5	< 10	< 5	< 6	< 25	< 9
	04/05/07	< 6	< 7	< 14	< 7	< 16	< 7	< 12	< 5	< 7	< 36	< 11
	05/03/07	< 5	< 5	< 12	< 4	< 12	< 5	< 9	< 4	< 4	< 29	< 8
	05/17/07	< 6	< 8	< 14	< 8	< 15	< 7	< 13	< 6	< 7	< 36	< 7
	05/31/07	< 4	< 4	< 10	< 4	< 9	< 5	< 7	< 4	< 4	< 29	< 10
	06/14/07	< 3	< 4	< 11	< 3	< 9	< 4	< 7	< 3	< 3	< 31	< 9
	06/28/07	< 6	< 7	< 16	< 7	< 15	< 7	< 11	< 5	< 6	< 59	< 14
	07/12/07	< 3	< 5	< 10	< 4	< 11	< 5	< 7	< 4	< 5	< 27	< 6
	07/26/07	< 5	< 6	< 13	< 5	< 14	< 6	< 9	< 5	< 5	< 31	< 11
	08/09/07	< 5	< 6	< 14	< 7	< 15	< 6	< 10	< 5	< 6	< 34	< 9
	08/23/07	< 4	< 5	< 13	< 5	< 10	< 5	< 8	< 4	< 5	< 57	< 13
	09/06/07	< 6	< 7	< 15	< 7	< 14	< 7	< 13	< 6	< 6	< 41	< 10
	09/20/07	< 5	< 5	< 14	< 5	< 12	< 5	< 10	< 5	< 6	< 30	< 10
	10/04/07	< 7	< 7	< 21	< 9	< 19	< 10	< 17	< 8	< 8	< 53	< 14
	10/18/07	< 2	< 2	< 6	< 3	< 6	< 3	< 4	< 2	< 2	< 20	< 7
	11/01/07	< 6	< 6	< 16	< 7	< 15	< 7	< 12	< 5	< 6	< 42	< 15
	12/06/07	< 5	< 5	< 14	< 6	< 12	< 6	< 10	< 5	< 5	< 36	< 13
	MEAN	-	-	-	-	-	-	-	-	-	-	-

TABLE C-VIII.2 CONCENTRATIONS OF GAMMA EMITTERS IN MILK SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	Cs-134	Cs-137	Ba-140	La-140
BD-18	01/04/07	< 7	< 7	< 16	< 9	< 17	< 7	< 11	< 6	< 6	< 29	< 12
	02/01/07	< 6	< 10	< 18	< 8	< 21	< 8	< 15	< 7	< 8	< 39	< 15
	03/01/07	< 5	< 5	< 13	< 5	< 13	< 5	< 8	< 4	< 6	< 23	< 7
	04/05/07	< 5	< 5	< 13	< 6	< 12	< 5	< 9	< 5	< 5	< 29	< 10
	05/04/07	< 4	< 5	< 11	< 5	< 10	< 5	< 8	< 4	< 5	< 31	< 7
	05/18/07	< 5	< 5	< 11	< 5	< 11	< 5	< 8	< 4	< 5	< 23	< 6
	06/01/07	< 5	< 6	< 14	< 5	< 11	< 6	< 9	< 5	< 5	< 40	< 12
	06/15/07	< 4	< 5	< 12	< 4	< 12	< 5	< 9	< 4	< 4	< 44	< 13
	06/29/07	< 5	< 3	< 12	< 5	< 10	< 5	< 9	< 3	< 4	< 35	< 13
	07/13/07	< 6	< 6	< 15	< 7	< 14	< 7	< 11	< 5	< 6	< 38	< 9
	07/27/07	< 6	< 5	< 16	< 6	< 14	< 7	< 12	< 5	< 6	< 38	< 13
	08/08/07	< 6	< 6	< 13	< 7	< 13	< 7	< 11	< 5	< 6	< 35	< 12
	08/24/07	< 4	< 4	< 11	< 3	< 9	< 5	< 9	< 4	< 3	< 37	< 14
	09/06/07	< 8	< 9	< 22	< 9	< 19	< 7	< 14	< 7	< 7	< 43	< 15
	09/21/07	< 4	< 5	< 11	< 5	< 12	< 5	< 9	< 4	< 5	< 27	< 7
	10/05/07	< 7	< 8	< 17	< 8	< 16	< 7	< 10	< 7	< 8	< 45	< 13
	10/19/07	< 2	< 2	< 6	< 2	< 5	< 2	< 4	< 2	< 2	< 18	< 6
	11/01/07	< 7	< 7	< 19	< 8	< 17	< 8	< 11	< 6	< 6	< 44	< 14
	12/06/07	< 6	< 8	< 19	< 6	< 17	< 8	< 14	< 6	< 7	< 54	< 13
	MEAN	-	-	-	-	-	-	-	-	-	-	-

TABLE C-IX.1 **CONCENTRATIONS OF GAMMA EMITTERS IN VEGETATION SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PC/KG WET ± 2 SIGMA

STC	COLLECTION PERIOD		Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	Cs-134	Cs-137	Ba-140	La-140
BD-CONTROL	09/13/07	Leeks	< 4	< 5	< 14	< 5	< 11	< 5	< 9	< 4	< 5	< 40	< 13
	09/13/07	Swiss Chard	< 6	< 7	< 18	< 6	< 17	< 7	< 12	< 5	< 6	< 51	< 13
	MEAN		-	-	-	-	-	-	-	-	-	-	-
BD-QUAD 1	09/13/07	Cabbage	< 6	< 6	< 16	< 6	< 14	< 6	< 11	< 5	11 ± 6	< 52	< 12
	09/13/07	Turniips	< 6	< 6	< 15	< 6	< 13	< 7	< 10	< 5	11 ± 5	< 49	< 13
	MEAN*		-	-	-	-	-	-	-	-	11 ± 0	-	-
BD-QUAD 2	09/08/07	Cabbage	< 15	< 11	< 35	< 13	< 31	< 14	< 20	< 12	< 13	< 60	< 21
	09/08/07	Onions	< 16	< 17	< 34	< 19	< 38	< 16	< 30	< 15	< 18	< 76	< 21
	MEAN		-	-	-	-	-	-	-	-	-	-	-
BD-QUAD 3	09/08/07	Cabbage	< 14	< 12	< 43	< 17	< 38	< 17	< 24	< 12	< 16	< 84	< 15
	09/08/07	Sweet potatoes	< 21	< 17	< 56	< 19	< 36	< 25	< 33	< 14	< 24	< 113	< 41
	MEAN		-	-	-	-	-	-	-	-	-	-	-
BD-QUAD 4	09/13/07	Beet greens	< 6	< 7	< 21	< 7	< 17	< 8	< 14	< 5	< 7	< 53	< 13
	09/13/07	Beets	< 8	< 9	< 24	< 8	< 19	< 10	< 17	< 7	< 8	< 75	< 20
	MEAN		-	-	-	-	-	-	-	-	-	-	-

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

TABLE C-X.1 QUARTERLY TLD RESULTS FOR BRAIDWOOD STATION, 2007

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

STATION CODE	MEAN ±- 2 S.D.	JAN - MAR	APR - JUN	JUL - SEP	OCT - DEC
BD-02-1	21.8 ± 15.3	33	20	17	17
BD-02-2	21.5 ± 15.9	33	20	15	18
BD-03-1	22.3 ± 18.6	36	20	16	17
BD-03-2	23.5 ± 18.5	37	21	16	20
BD-04-1	22.3 ± 18.6	36	20	16	17
BD-04-2	22.8 ± 18.0	36	20	16	19
BD-05-1	24.5 ± 15.8	36	22	18	22
BD-05-2	23.8 ± 13.9	34	22	20	19
BD-06-1	20.8 ± 15.4	32	19	15	17
BD-06-2	20.8 ± 15.3	32	18	15	18
BD-19-1	23.5 ± 18.2	37	21	18	18
BD-19-2	21.5 ± 15.7	33	20	16	17
BD-20-1	22.0 ± 15.1	33	20	16	19
BD-20-2	22.5 ± 14.1	33	19	18	20
BD-21-1	21.5 ± 15.7	33	20	16	17
BD-21-2	22.0 ± 16.2	34	20	17	17
BD-101-3	22.0 ± 15.2	33	21	16	18
BD-101-4	23.0 ± 19.1	37	21	16	18
BD-102-1	21.3 ± 14.5	32	19	16	18
BD-102-2	22.8 ± 13.8	33	20	18	20
BD-103-1	22.3 ± 16.2	34	21	16	18
BD-103-2	23.3 ± 14.9	34	22	17	20
BD-104-1	20.8 ± 16.7	33	19	15	16
BD-104-2	21.8 ± 19.2	36	18	15	18
BD-105-1	21.0 ± 15.1	32	20	16	16
BD-105-2	22.5 ± 18.2	36	19	16	19
BD-106-1	21.8 ± 13.9	32	20	18	17
BD-106-2	23.3 ± 17.2	36	20	17	20
BD-107-1	22.0 ± 16.3	34	20	16	18
BD-107-2	20.8 ± 15.4	32	19	15	17
BD-108-1	21.0 ± 15.1	32	19	15	18
BD-108-2	23.5 ± 19.4	38	20	18	18
BD-109-1	26.3 ± 19.7	41	22	21	21
BD-109-2	25.3 ± 18.8	39	23	18	21
BD-110-1	22.0 ± 14.9	33	20	18	17
BD-110-2	22.0 ± 16.6	34	21	16	17
BD-112-1	21.5 ± 18.5	35	19	14	18
BD-112-2	21.3 ± 15.9	33	19	16	17
BD-114-1	22.0 ± 15.1	33	20	16	19
BD-114-2	22.5 ± 15.4	34	20	18	18
BD-115-1	23.3 ± 18.5	37	20	17	19
BD-115-2	21.5 ± 17.2	34	20	15	17
BD-116-1	23.3 ± 12.4	32	20	18	23
BD-116-2	21.5 ± 14.3	32	19	16	19

TABLE C-X.1 QUARTERLY TLD RESULTS FOR BRAIDWOOD STATION, 2007

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

STATION CODE	MEAN ±- 2 S.D.	JAN - MAR	APR - JUN	JUL - SEP	OCT - DEC
BD-201-1	25.5 ± 15.5	37	23	20	22
BD-201-2	24.3 ± 18.5	38	21	18	20
BD-202-1	23.5 ± 17.2	36	22	17	19
BD-202-2	21.8 ± 13.8	32	19	17	19
BD-203-1	22.3 ± 16.0	34	20	16	19
BD-203-2	21.8 ± 16.5	34	19	16	18
BD-204-1	22.3 ± 18.4	36	19	17	17
BD-204-2	21.0 ± 17.4	34	18	16	16
BD-205-1	21.0 ± 15.1	32	19	15	18
BD-205-2	21.3 ± 13.3	31	20	17	17
BD-206-1	23.0 ± 14.7	34	20	19	19
BD-206-2	23.0 ± 14.8	34	20	18	20
BD-207-1	21.0 ± 13.9	31	19	15	19
BD-207-2	23.3 ± 16.2	35	19	17	22
BD-208-1	22.0 ± 16.2	34	20	17	17
BD-208-2	21.5 ± 14.4	32	20	18	16
BD-209-1	24.8 ± 13.8	35	22	20	22
BD-209-2	28.5 ± 19.5	43	25	22	24
BD-210-1	25.5 ± 14.1	36	22	21	23
BD-210-2	22.8 ± 18.0	36	20	16	19
BD-211-1	25.8 ± 15.6	37	24	19	23
BD-211-2	26.3 ± 15.3	37	25	19	24
BD-212-3	21.8 ± 15.4	33	20	16	18
BD-212-4	26.8 ± 12.6	36	25	22	24
BD-213-3	21.3 ± 16.2	33	20	15	17
BD-213-4	21.8 ± 14.5	32	20	15	20
BD-214-1	24.0 ± 18.8	38	21	18	19
BD-214-2	25.5 ± 14.3	36	23	20	23
BD-215-1	21.5 ± 15.5	33	19	16	18
BD-215-2	21.0 ± 16.1	33	18	16	17
BD-216-1	23.3 ± 14.5	34	20	18	21
BD-216-2	24.8 ± 17.8	38	22	20	19
BD-111A-1	21.8 ± 13.8	32	19	17	19
BD-111A-2	22.0 ± 15.1	33	19	16	20
BD-113A-1	22.3 ± 15.8	34	19	17	19
BD-113A-2	21.8 ± 13.8	32	19	17	19

TABLE C-X.2 **MEAN QUARTLY TLD RESULTS FOR THE INNER RING, OUTER RING, OTHER AND CONTROL LOCATIONS FOR BRAIDWOOD STATION, 2007**

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

COLLECTION PERIOD	SITE BOUNDARY ± 2 S.D.	INTERMEDIATE DISTANCE	OTHER	CONTROL
JAN-MAR	34.1 ± 4.6	34.8 ± 5.1	33.9 ± 3.3	36.5 ± 1.4
APR-JUN	19.9 ± 2.2	20.8 ± 4.0	20.1 ± 2.1	20.5 ± 1.4
JUL-SEP	16.6 ± 2.7	17.7 ± 4.0	16.6 ± 2.9	16.0 ± 0.0
OCT-DEC	18.5 ± 3.0	19.7 ± 4.9	18.2 ± 3.0	18.5 ± 4.2

TABLE C-X.3 **SUMMARY OF THE AMBIENT DOSIMETRY PROGRAM FOR BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF MILLI-ROENTGEN/QUARTER

LOCATION	SAMPLES ANALYZED	PERIOD MINIMUM	PERIOD MAXIMUM	PERIOD MEAN ± 2 S.D.
SITE BOUNDARY	128	14.0	41.0	22.3 ± 14.3
INTERMEDIATE DISTANCE	128	15.0	43.0	23.2 ± 14.3
OTHER	56	15.0	37.0	22.2 ± 14.1
CONTROL	8	16.0	37.0	22.9 ± 17.3

SITE BOUNDARY STATIONS - BD-101-3, BD-101-4, BD-102-1, BD-102-2, BD-103-1, BD-103-2, BD-104-1, BD-104-2, BD-105-1, BD-105-2, BD-106-1, BD-106-2, BD-107-1, BD-107-2, BD-108-1, BD-108-2, BD-109-1, BD-109-2, BD-110-1, BD-110-2, BD-111A-1, BD-111A-2, BD-112-1, BD-112-2, BD-113A-1, BD-113A-2, BD-114-1, BD-114-2, BD-115-1, BD-115-2, BD-116-1, BD-116-2

INTERMEDIATE DISTANCE STATIONS - BD-201-1, BD-201-2, BD-202-1, BD-202-2, BD-203-1, BD-203-2, BD-204-1, BD-204-2, BD-205-1, BD-205-2, BD-206-1, BD-206-2, BD-207-1, BD-207-2, BD-208-1, BD-208-2, BD-209-1, BD-209-2, BD-210-1, BD-210-2, BD-211-1, BD-211-2, BD-212-3, BD-212-4, BD-213-3, BD-213-4, BD-214-1, BD-214-2, BD-215-1, BD-215-2, BD-216-1, BD-216-2

OTHER STATIONS - BD-02-1, BD-02-2, BD-04-1, BD-04-2, BD-05-1, BD-05-2, BD-06-1, BD-06-2, BD-19-1, BD-19-2, BD-20-1, BD-20-2, BD-21-1, BD-21-2

CONTROL STATIONS - BD-03-1, BD-03-2

FIGURE C-1
Surface Water - Gross Beta - Stations BD-10 and BD-25 (C)
Collected in the Vicinity of Braidwood Station, 2000 - 2004

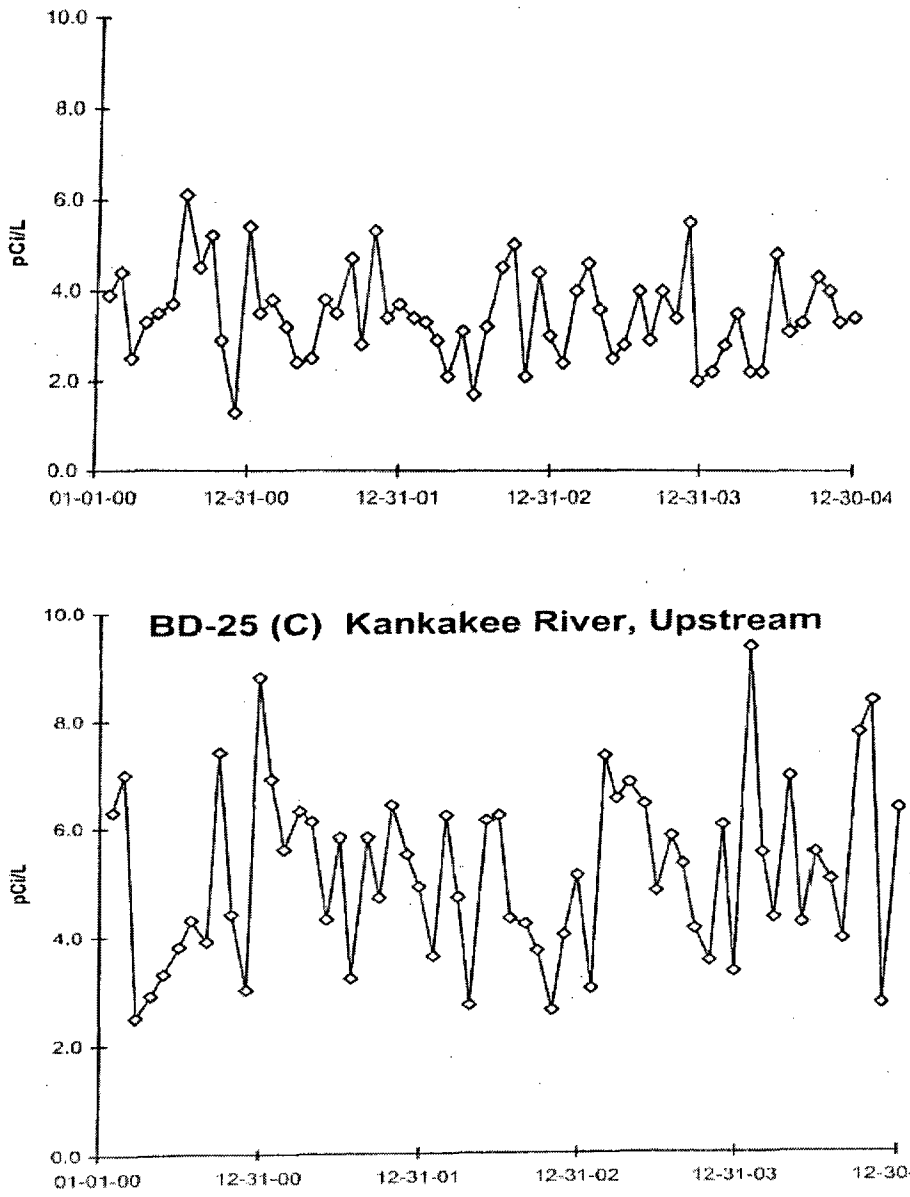
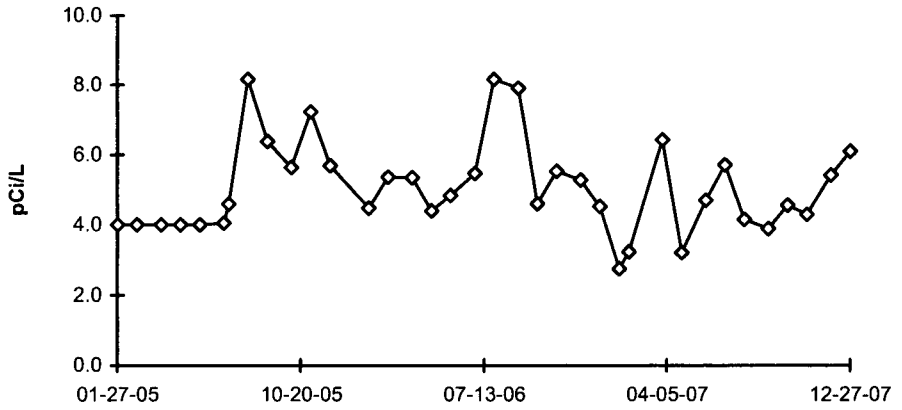
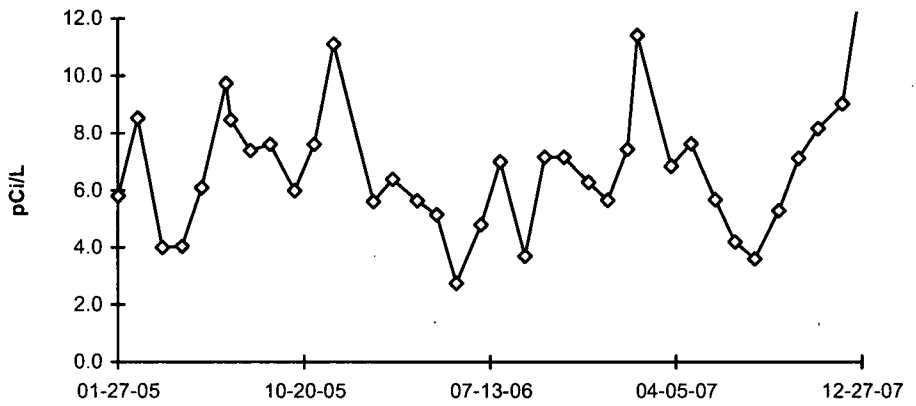


FIGURE C-1 (cont.)
Surface Water - Gross Beta - Stations BD-10 and BD-25 (C) Collected in the Vicinity of Braidwood Station, 2005 - 2007

BD-10 Kankaee River, Downstream



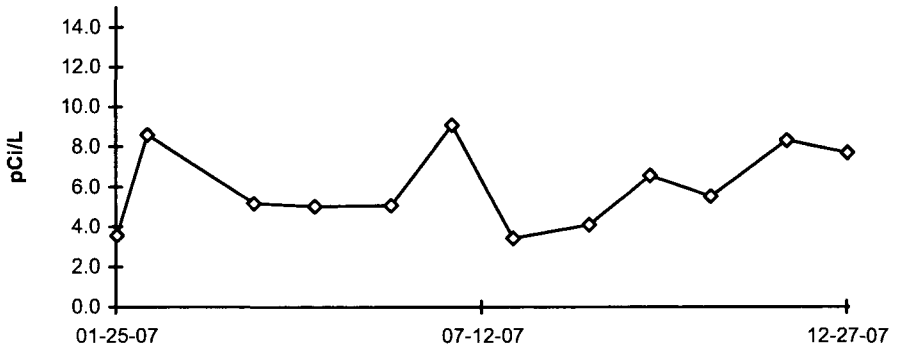
BD-25 (C) Kankakee River, Upstream



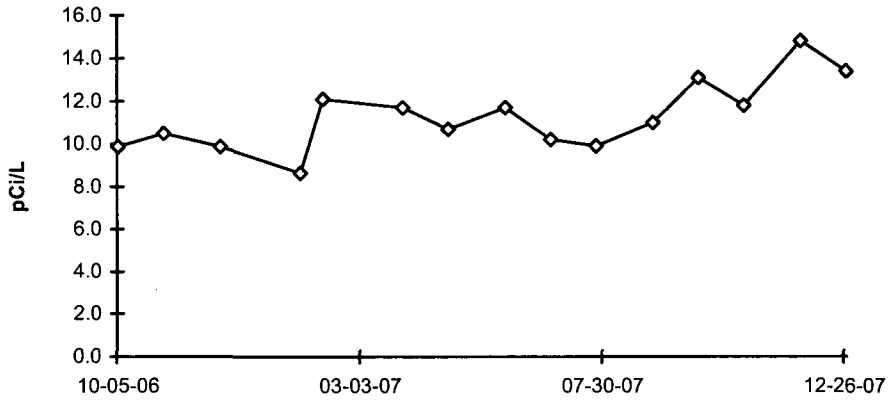
DUE TO VENDOR CHANGE IN 2005, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE 2005 AND MDC VALUES AFTER JUNE 2005

FIGURE C-2
Surface Water - Gross Beta - Stations BD-38 and BD-40 Collected in the Vicinity of Braidwood Station, 2007

BD-38 Main Drainage Ditch



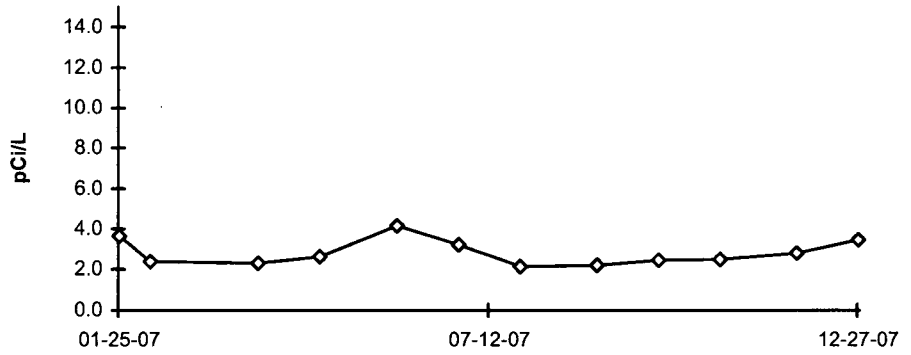
BD-40 Braidwood Station Cooling Lake



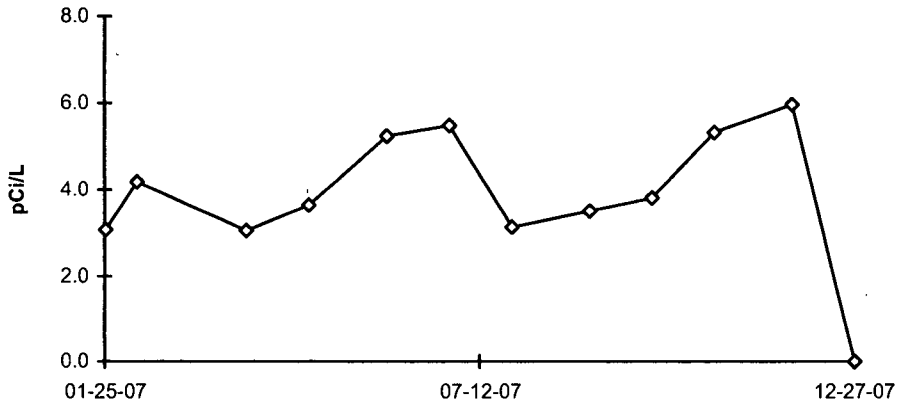
NEW STATION BD-40 ADDED ON 10/05/06
NEW STATION BD-38 ADDED ON 01/25/07

FIGURE C-3
Surface Water - Gross Beta - Stations BD-55 and BD-56
Collected in the Vicinity of Braidwood Station, 2007

BD-55 North Pond Fatlan Site

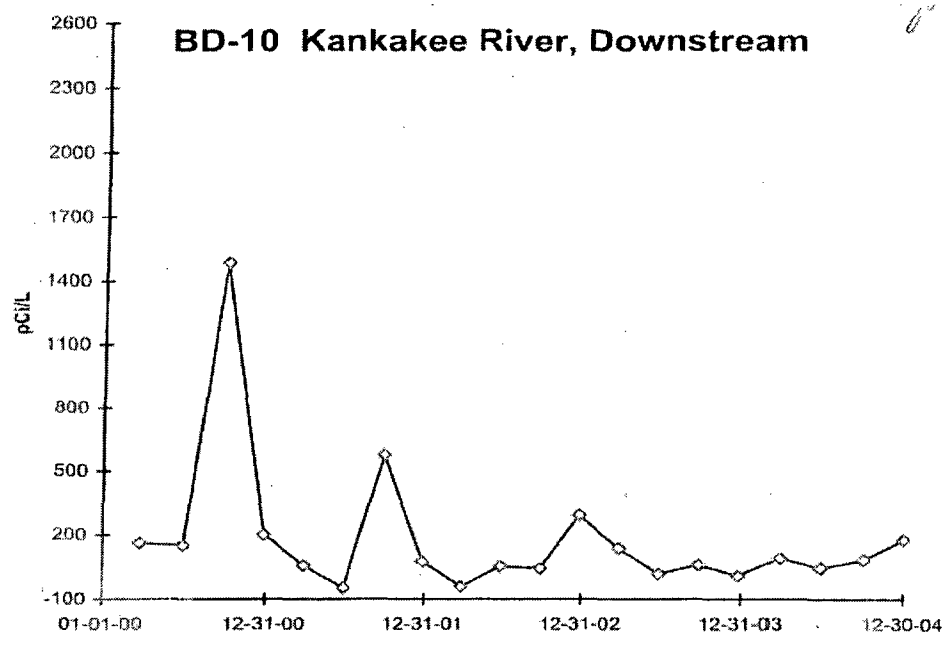


BD-56 South Pond Fatlan Site



NEW STATIONS BD-55 AND BD-56 ADDED ON 01/04/07

FIGURE C-4
Surface Water - Tritium - Stations BD-10 and BD-25 (C)
Collected in the Vicinity of Braidwood Station, 2000 - 2004



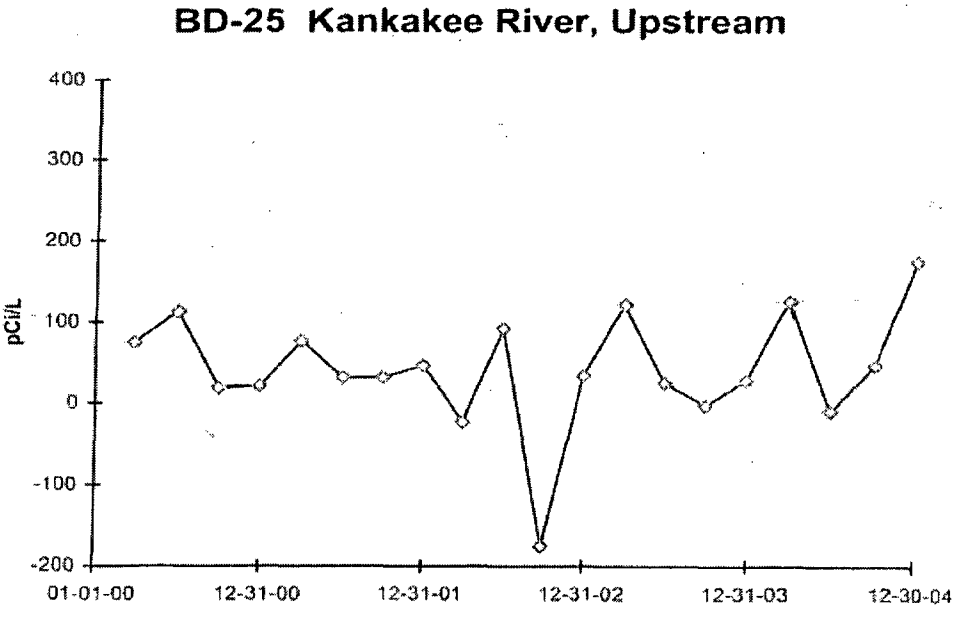
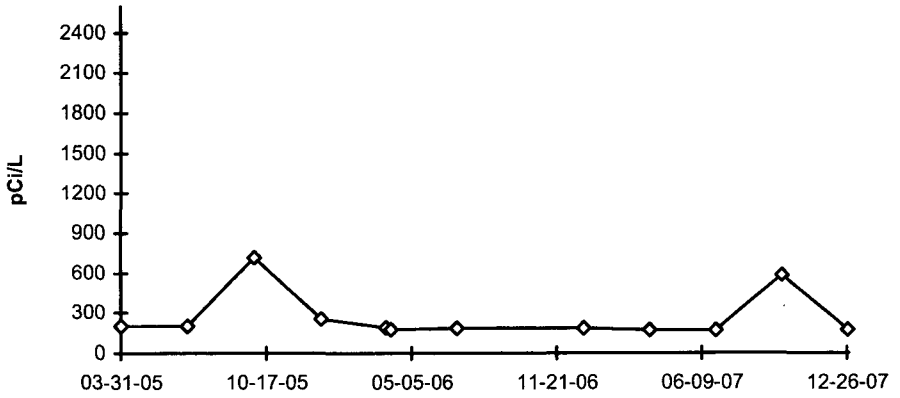
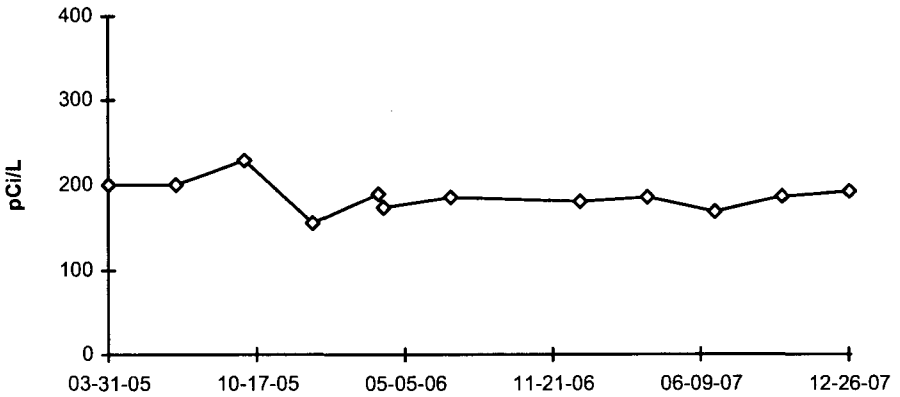


FIGURE C-4 (cont.)
Surface Water - Tritium - Stations BD-10 and BD-25 (C)
Collected in the Vicinity of Braidwood Station, 2005 - 2007

BD-10 Kankakee River, Downstream



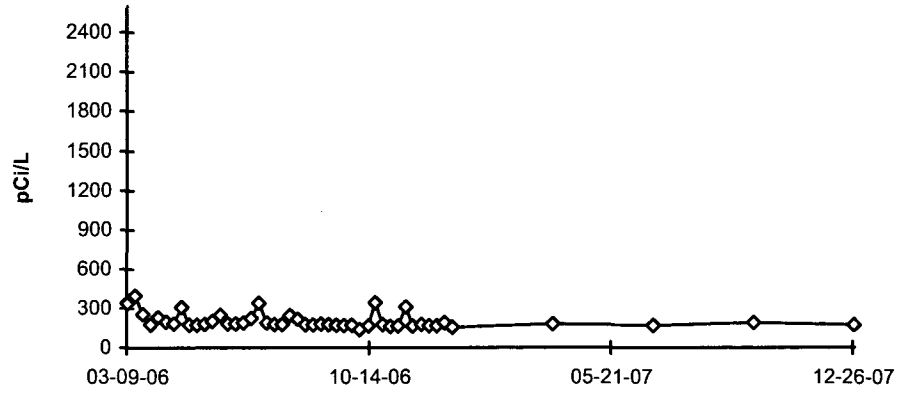
BD-25 (C) Kankakee River, Upstream



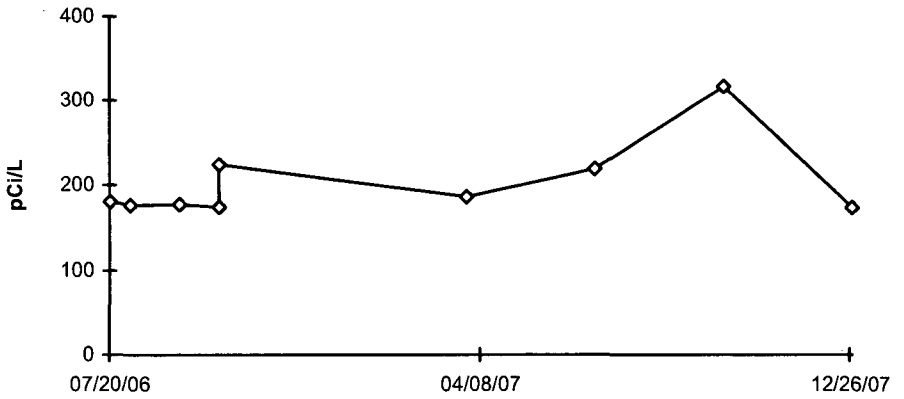
DUE TO VENDOR CHANGE IN 2005, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE 2005 AND MDC VALUES AFTER JUNE 2005

FIGURE C-5
Surface Water - Tritium - Stations BD-38 (C) and BD-40 Collected in the Vicinity of Braidwood Station, 2006 - 2007

BD-38 Main Drainage Ditch

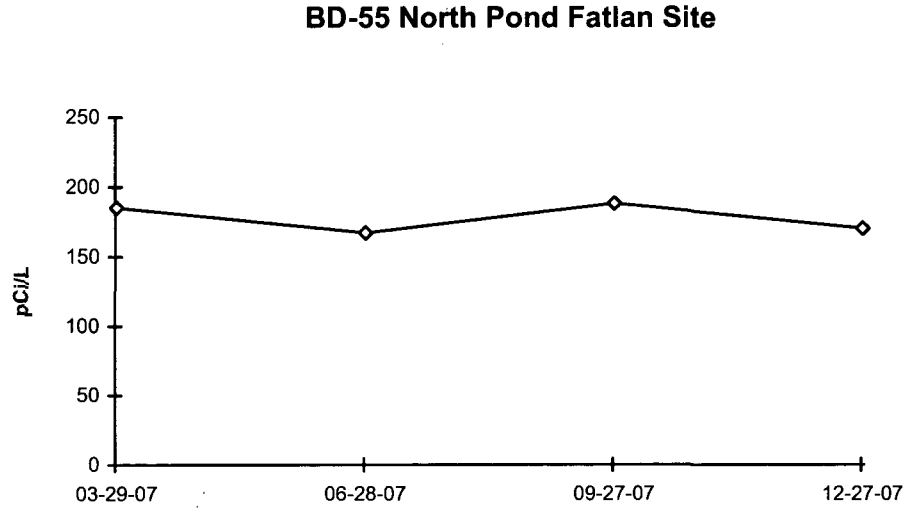


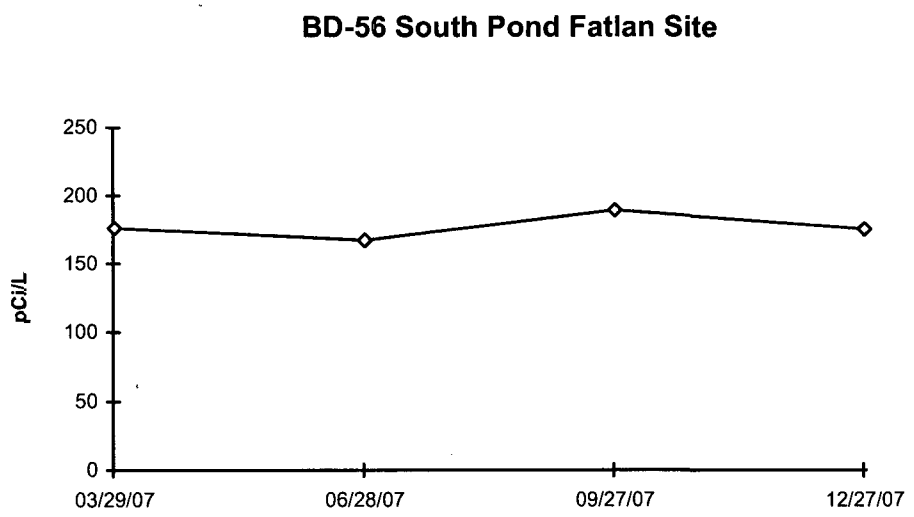
BD-40 Braidwood Station Cooling Lake



NEW STATIONS BD-38 AND BD-40 ADDED IN 2006

FIGURE C-6
Surface Water - Tritium - Stations BD-55 and BD-56 Collected in the Vicinity of Braidwood Station, 2007





NEW STATIONS BD-55 AND BD-56 ADDED IN 2007

FIGURE C-7
Public Water - Gross Beta - Station BD-22
Collected in the Vicinity of Braidwood Station, 2000 - 2004

BD-22 Wilmington

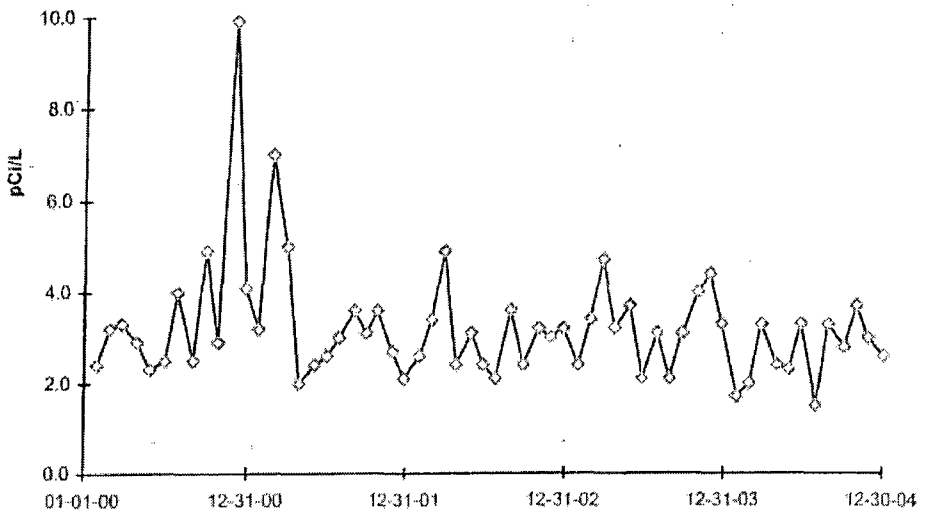
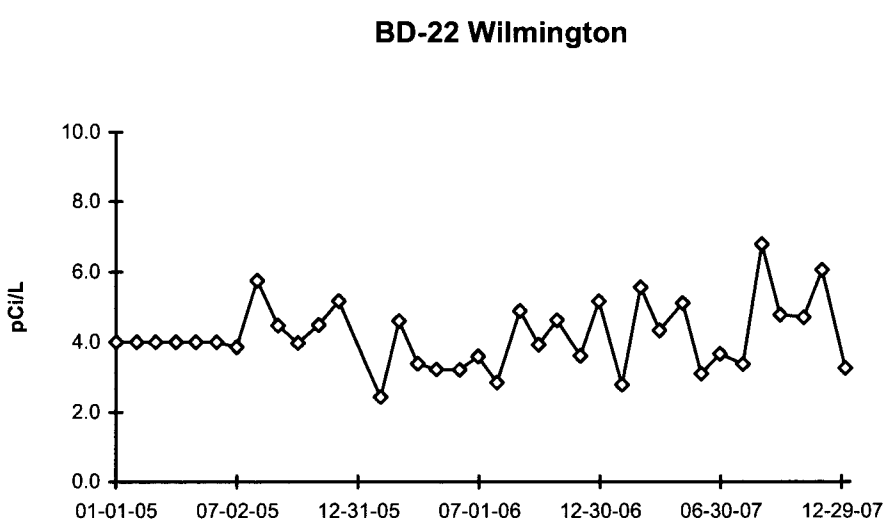


FIGURE C-7 (cont.)
Public Water - Gross Beta - Station BD-22
Collected in the Vicinity of Braidwood Station, 2005 - 2007



DUE TO VENDOR CHANGE, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE 2005 AND MDC VALUES AFTER JUNE 2005

FIGURE C-8
Public Water - Tritium - Station BD-22
Collected in the Vicinity of Braidwood Station, 2000 - 2004

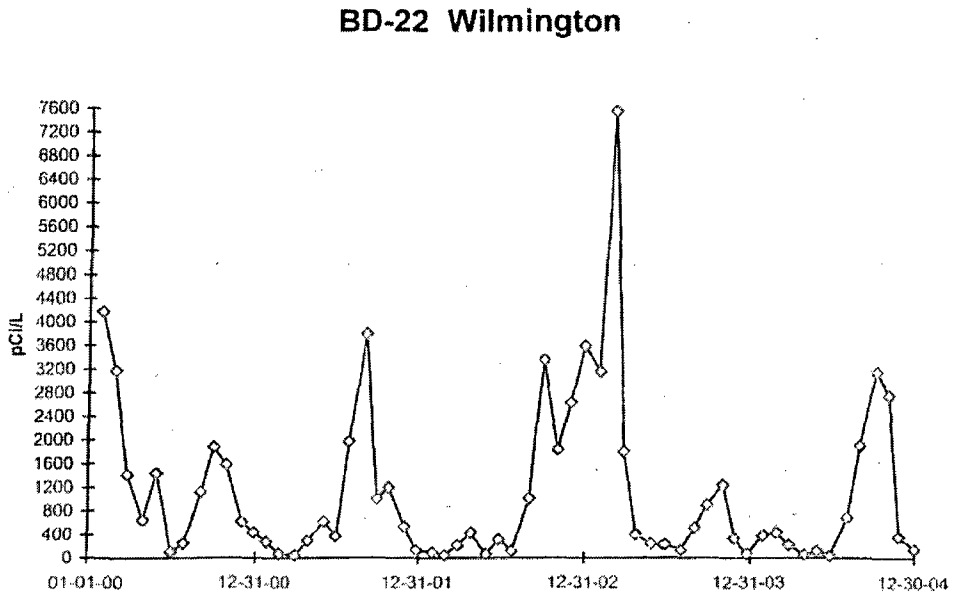
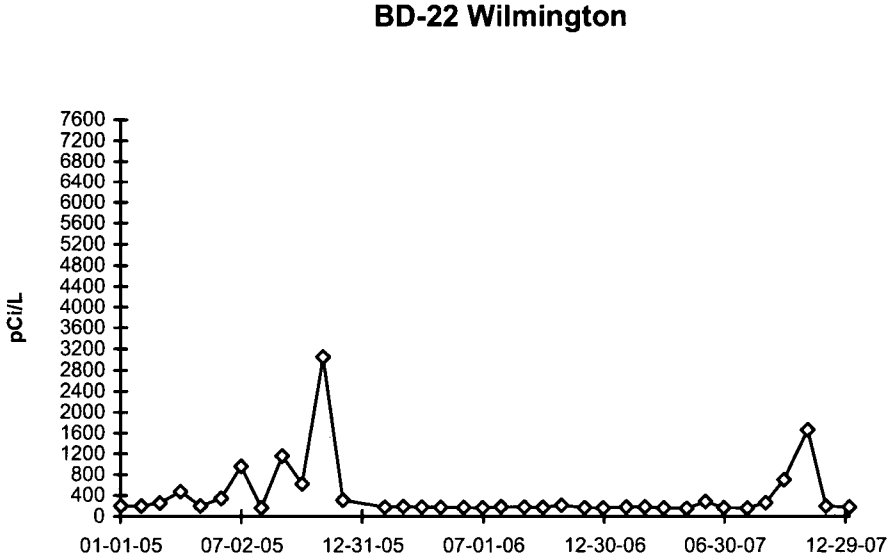
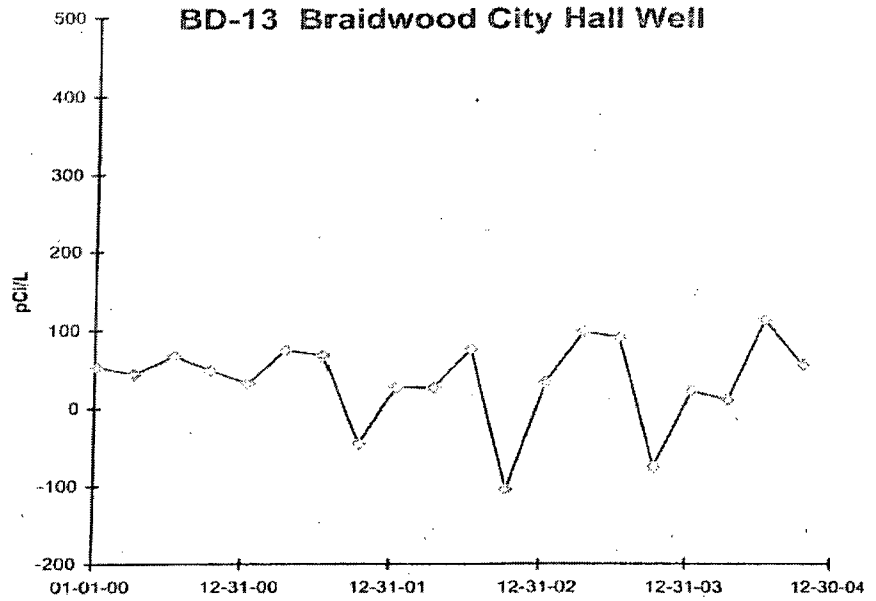


FIGURE C-8 (cont.)
Public Water - Tritium - Station BD-22
Collected in the Vicinity of Braidwood Station, 2005 - 2007



DUE TO VENDOR CHANGE, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE 2005 AND MDC VALUES AFTER JUNE 2005

FIGURE C-9
Ground/Well Water - Tritium - Stations BD-13 and BD-34 Collected in the Vicinity of Braidwood Station, 2000 - 2004



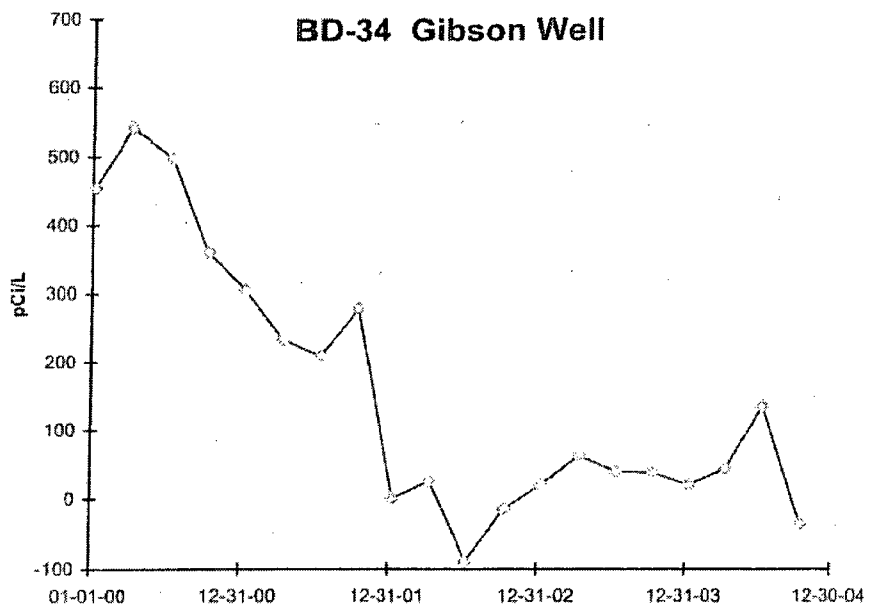
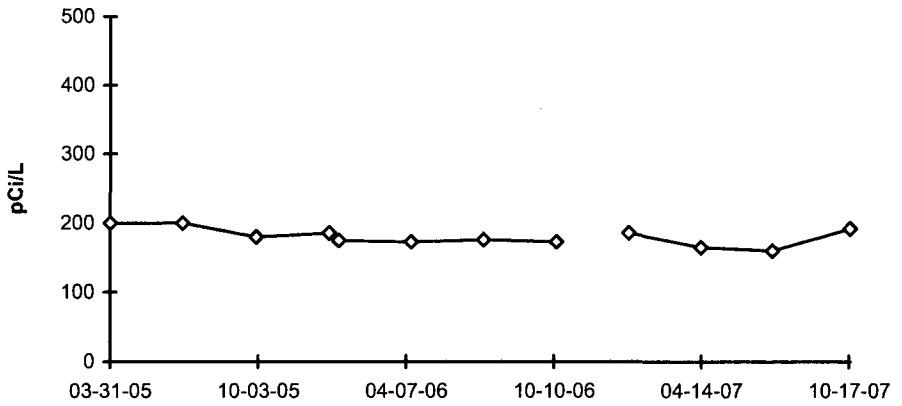
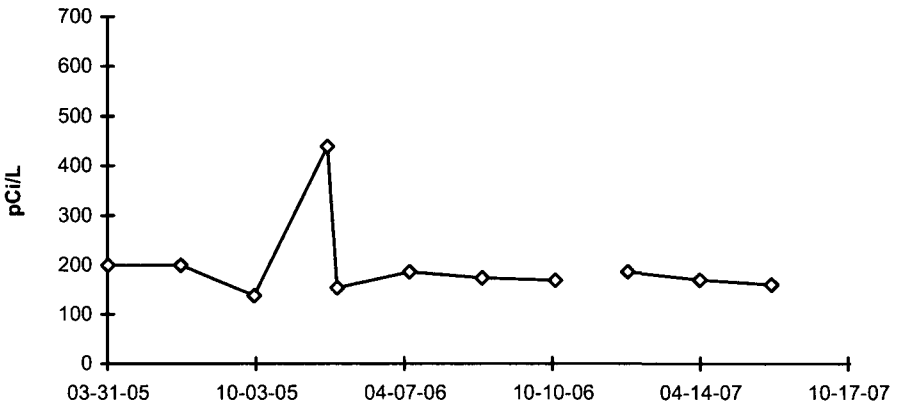


FIGURE C-9 (cont.)
Ground/Well Water - Tritium - Stations BD-13 and BD-34 Collected in the Vicinity of Braidwood Station, 2005 - 2007

BD-13 Braidwood City Hall Well

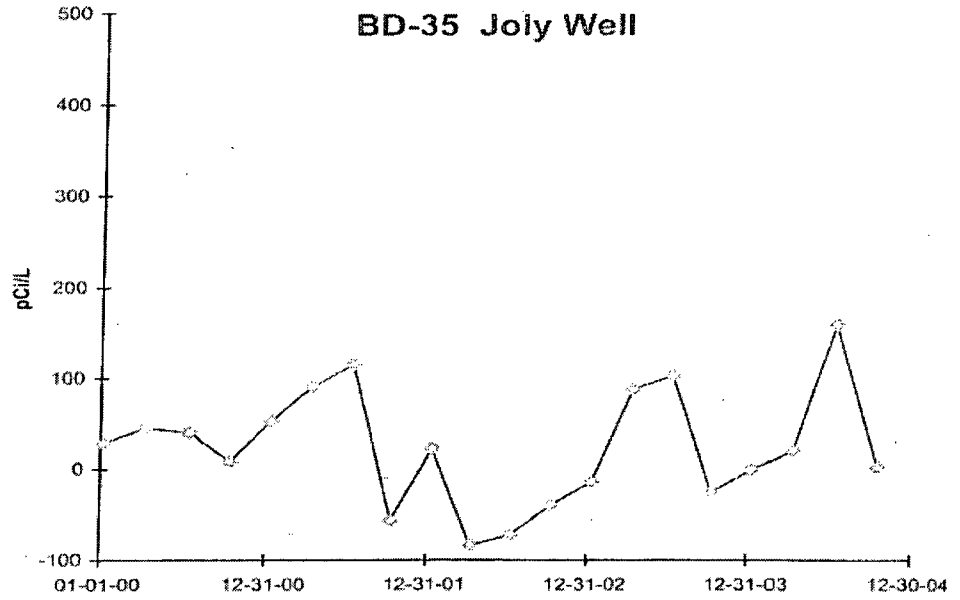


BD-34 Gibson Well



DUE TO VENDOR CHANGE IN 2005, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE AND MDC VALUES JULY THROUGH DECEMBER

FIGURE C-10
Ground/Well Water - Tritium - Stations BD-35 and BD-36 Collected in the Vicinity of Braidwood Station, 2000 - 2004



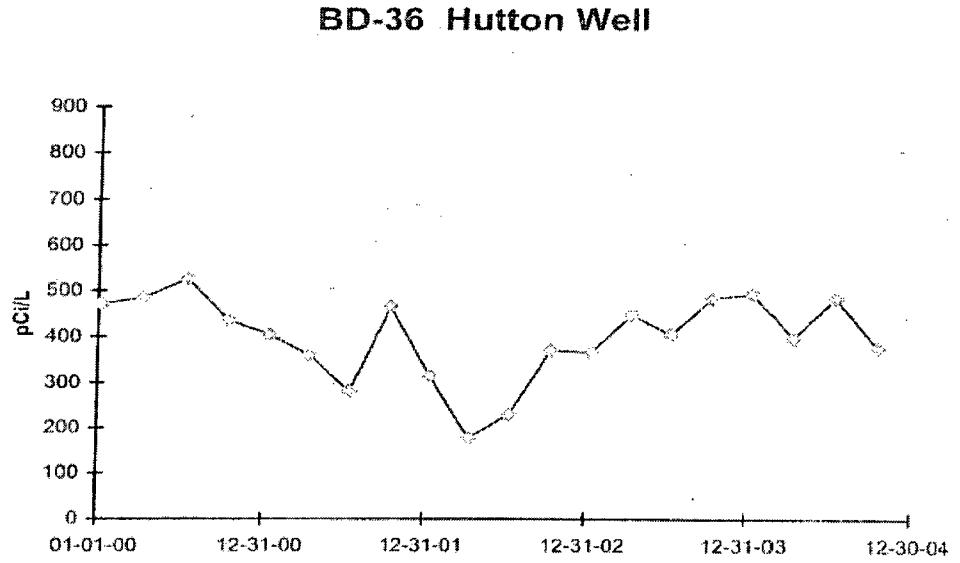
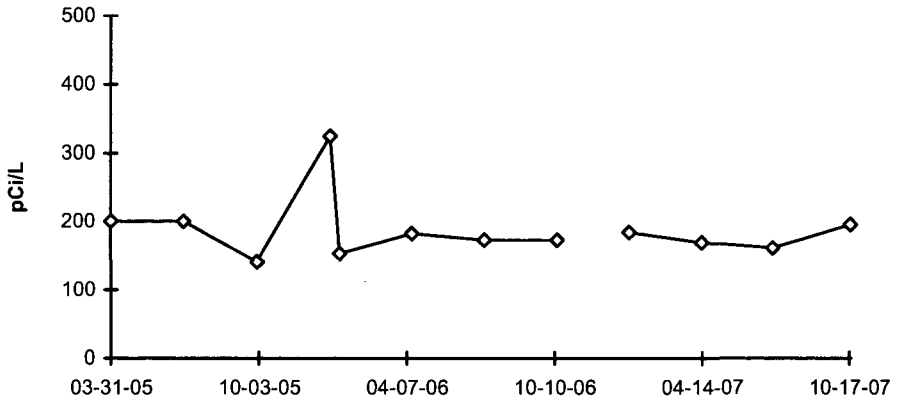
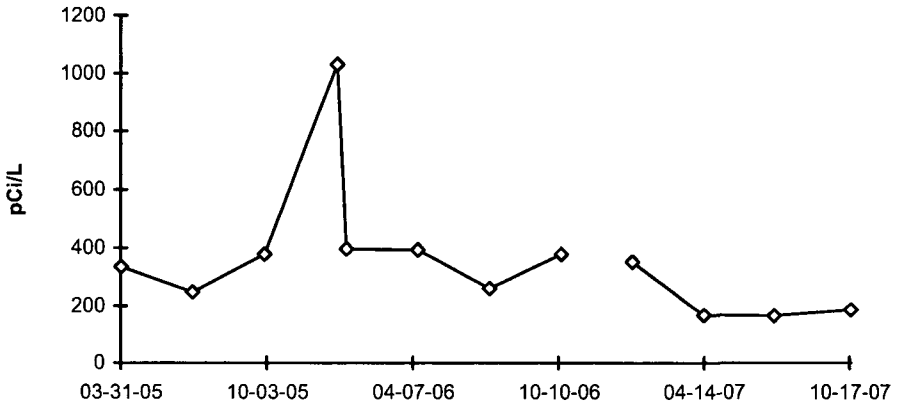


FIGURE C-10 (cont.)
Ground/Well Water - Tritium - Stations BD-35 and BD-36
Collected in the Vicinity of Braidwood Station, 2005 - 2007

BD-35 Joly Well



BD-36 Hutton Well



DUE TO VENDOR CHANGE, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE AND MDC VALUES JULY THROUGH DECEMBER

FIGURE C-11
Ground/Well Water - Tritium - Station BD-37
Collected in the Vicinity of Braidwood Station, 2000 - 2004

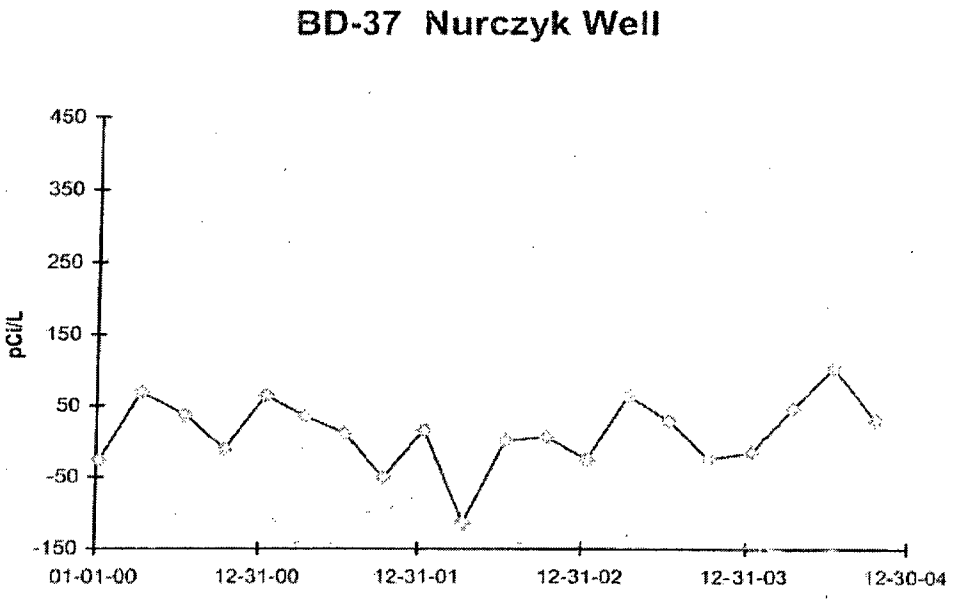
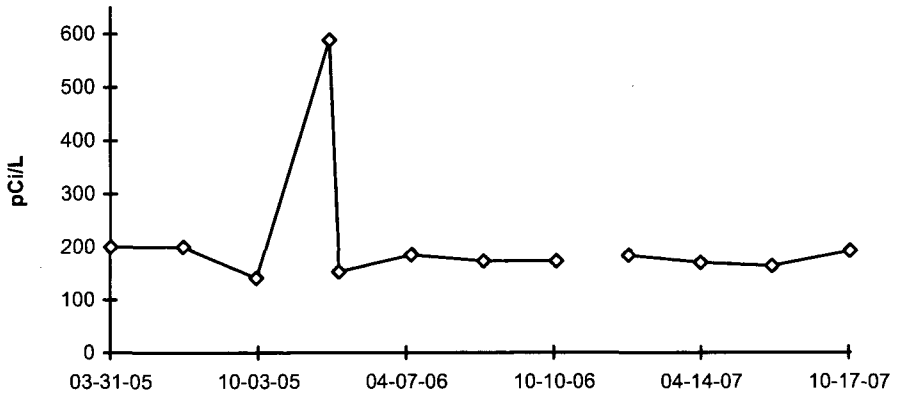


FIGURE C-11 (cont.)
Ground/Well Water - Tritium - Station BD-37
Collected in the Vicinity of Braidwood Station, 2005 - 2007

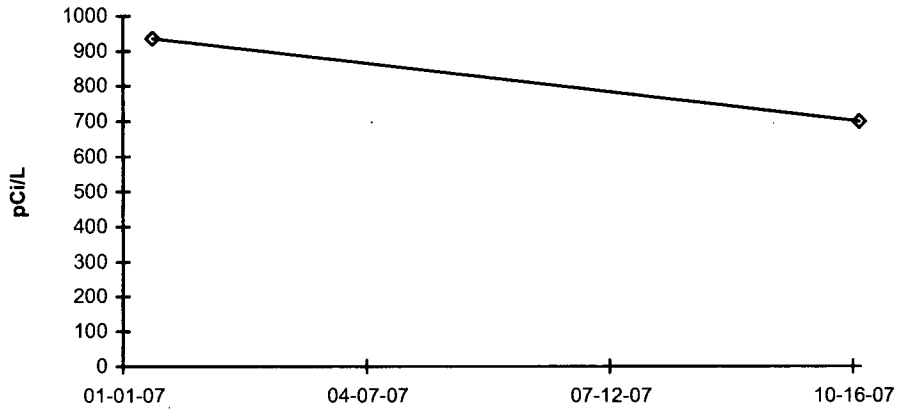
BD-37 Nurczyk Well



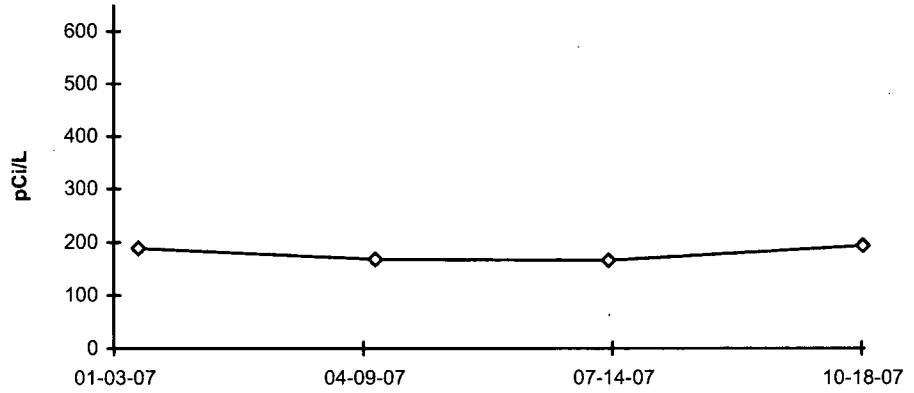
DUE TO VENDOR CHANGE IN 2005, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE AND MDC VALUES JULY THROUGH DECEMBER

FIGURE C-12
Ground/Well Water - Tritium - Station BD-50 and BD-51 Collected in the Vicinity of Braidwood Station, 2007

BD-50 Skole Well



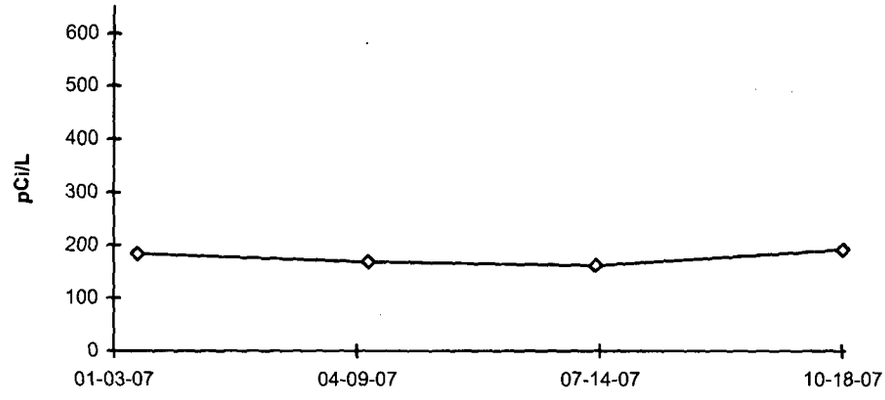
BD-51 Fatlan Well



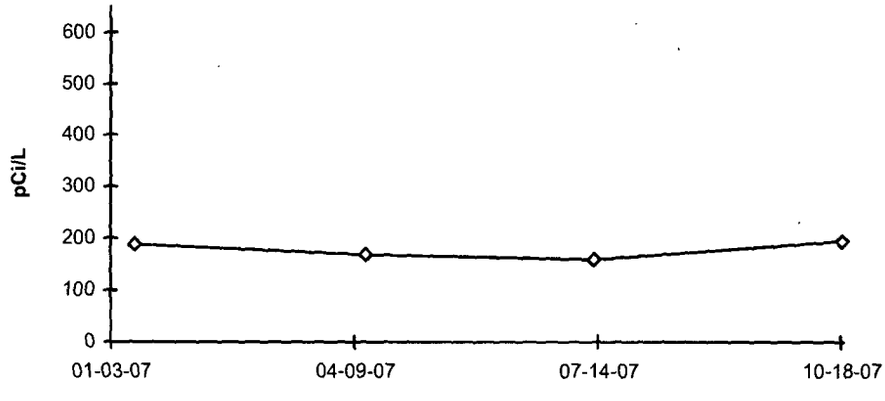
NEW STATIONS BD-50 AND BD-51 ADDED IN 2007

FIGURE C-13
Ground/Well Water - Tritium - Station BD-53 and BD-54 Collected in the Vicinity of Braidwood Station, 2007

BD-53 Phelps Well



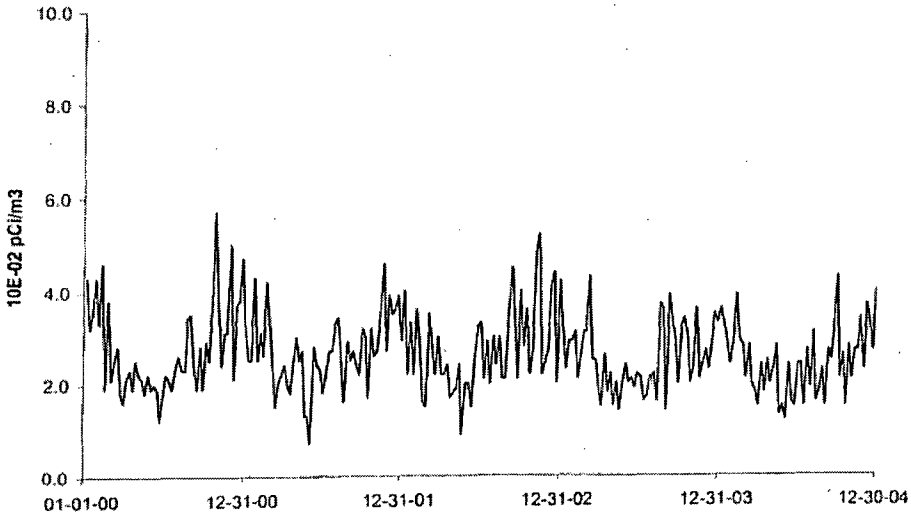
BD-54 Cash Well



NEW STATIONS BD-53 AND BD-54 ADDED IN 2007

FIGURE C-14
Air Particulates - Gross Beta- Stations BD-03 (C) and BD-06 Collected in the Vicinity of Braidwood Station, 2000 - 2004

BD-03 (C) County Line Road



BD-06 Godley

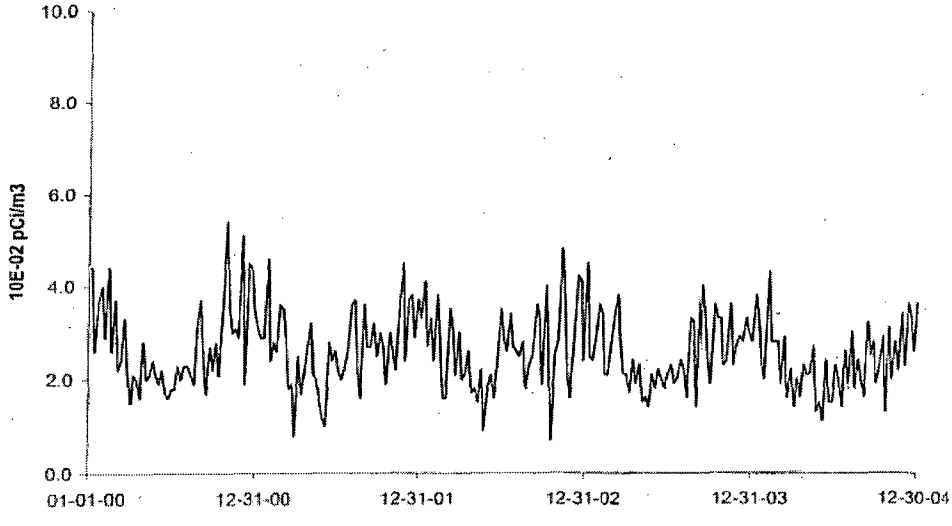
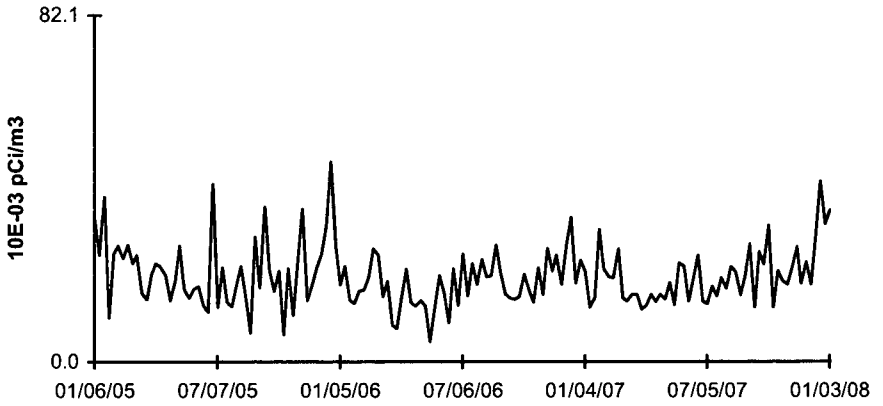
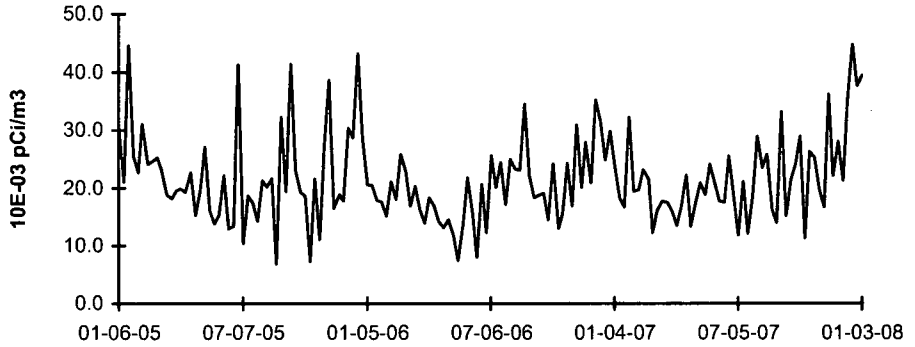


FIGURE C-14 (cont.)
Air Particulates - Gross Beta- Stations BD-03 (C) and BD-06 Collected in the Vicinity of Braidwood Station, 2005 - 2007

BD-03 (C) County Line Road



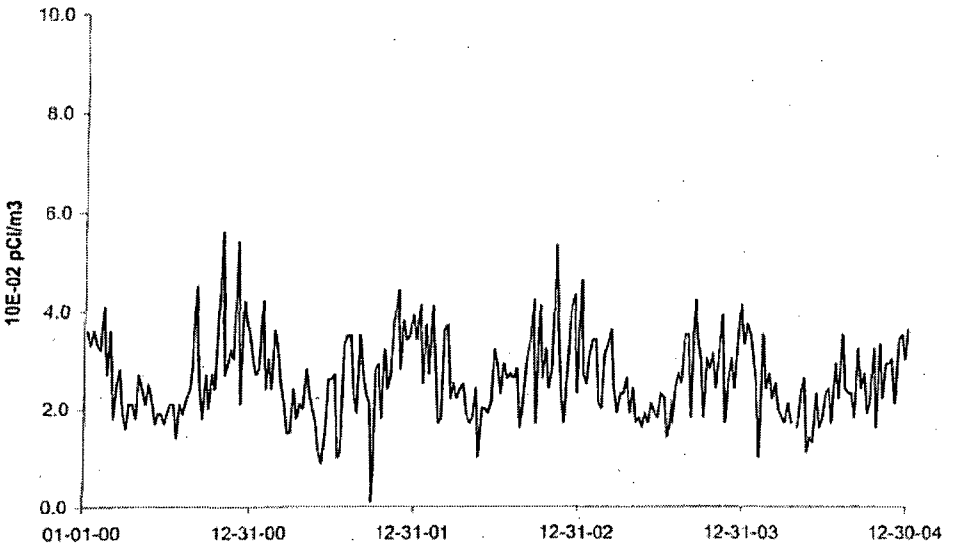
BD-06 Godley



DUE TO VENDOR CHANGE, THE REPORTED UNITS CHANGED FROM E-02 PCI/M3 TO E-03 PCI/M3

FIGURE C-15
Air Particulates - Gross Beta- Stations BD-19 and BD-20 Collected in the Vicinity of Braidwood Station, 2000 - 2004

BD-19 Nearsite, NW



BD-20 Nearsite, N

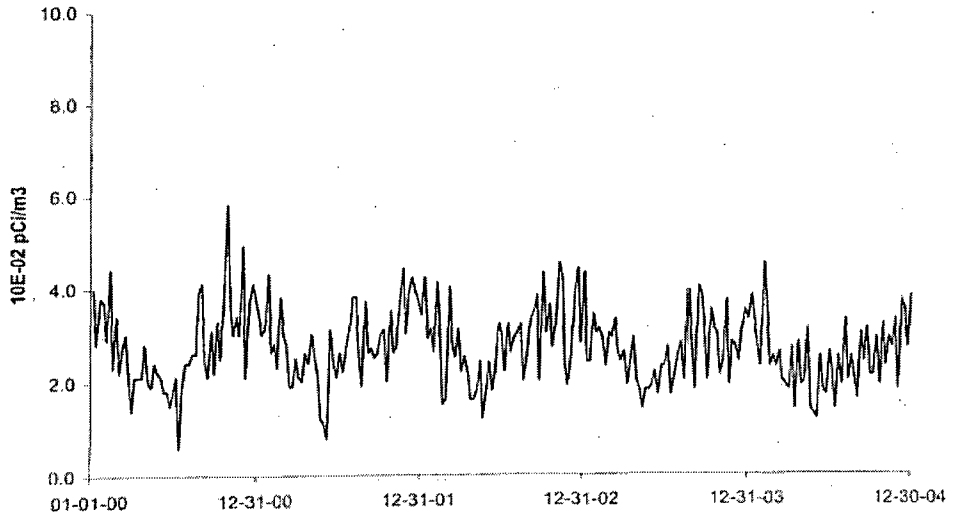
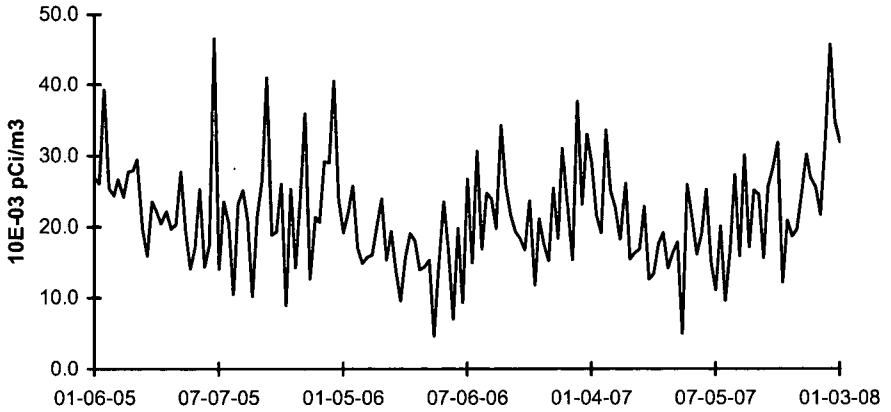
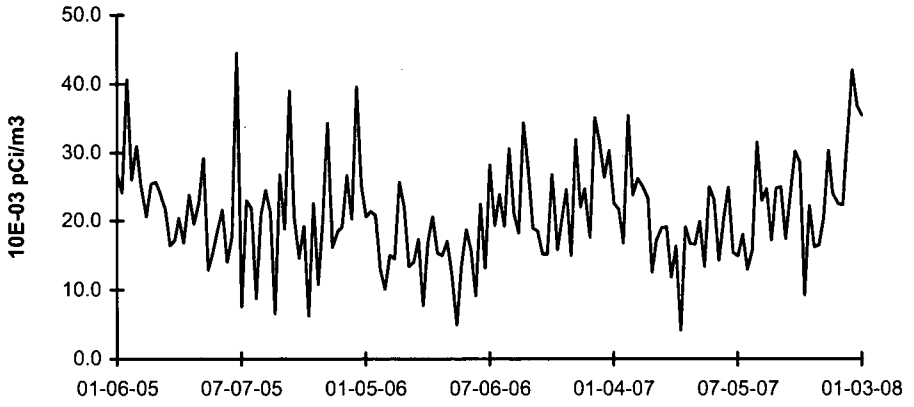


FIGURE C-15 (cont.)
Air Particulates - Gross Beta- Stations BD-19 and BD-20 Collected in the Vicinity of Braidwood Station, 2005 - 2007

BD-19 Nearsite, NW



BD-20 Neasite, N



DUE TO VENDOR CHANGE, THE REPORTED UNITS CHANGED FROM E-02 PCI/M3 TO E-03 PCI/M3

FIGURE C-16
Air Particulates - Gross Beta- Station BD-21
Collected in the Vicinity of Braidwood Station, 2000 - 2004

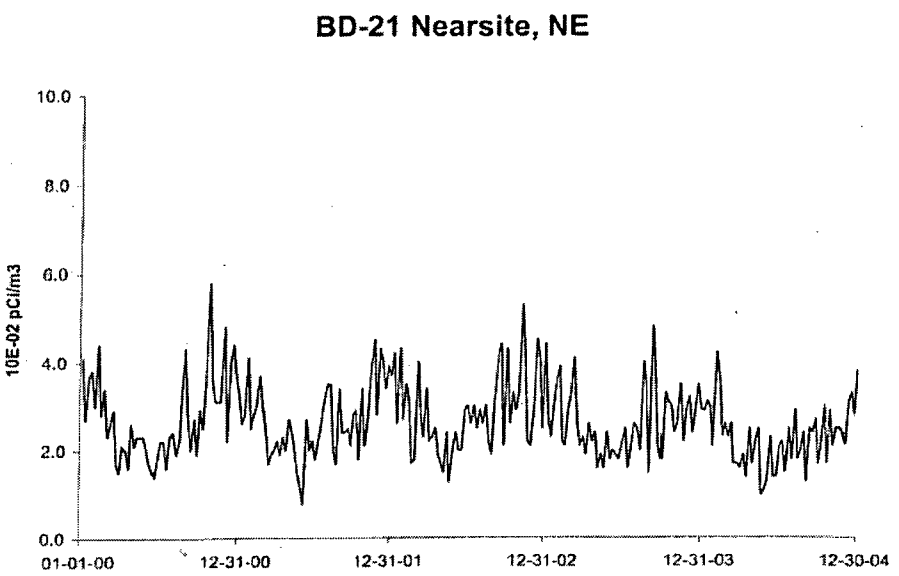
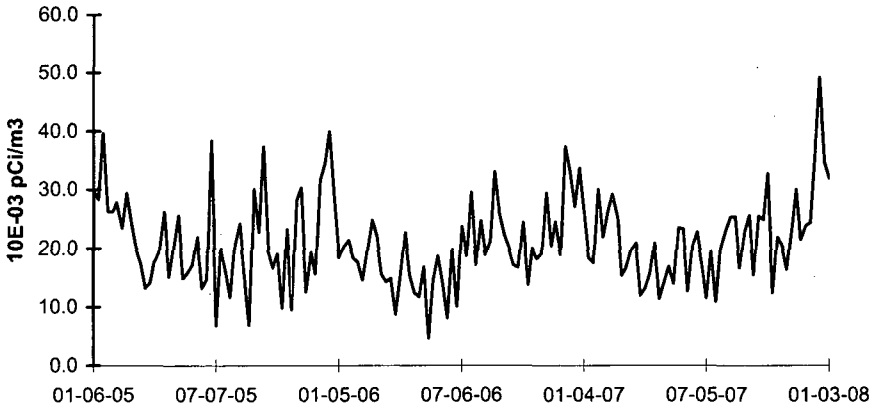


FIGURE C-16 (cont.)
Air Particulates - Gross Beta- Station BD-21
Collected in the Vicinity of Braidwood Station, 2005 - 2007

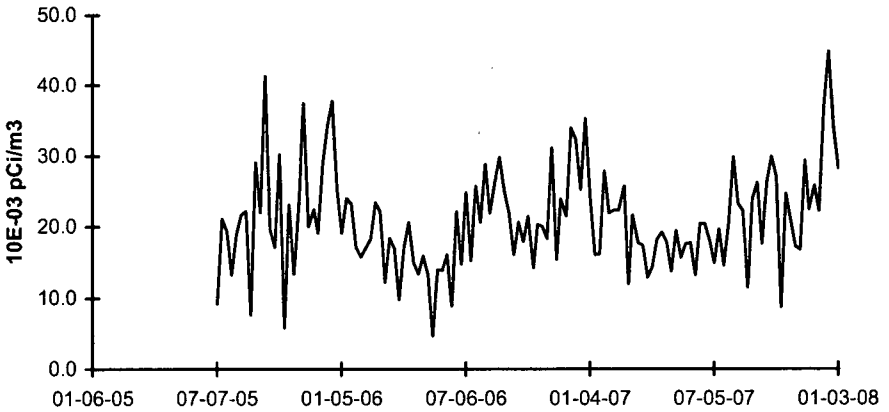
BD-21 Nearsite, NE



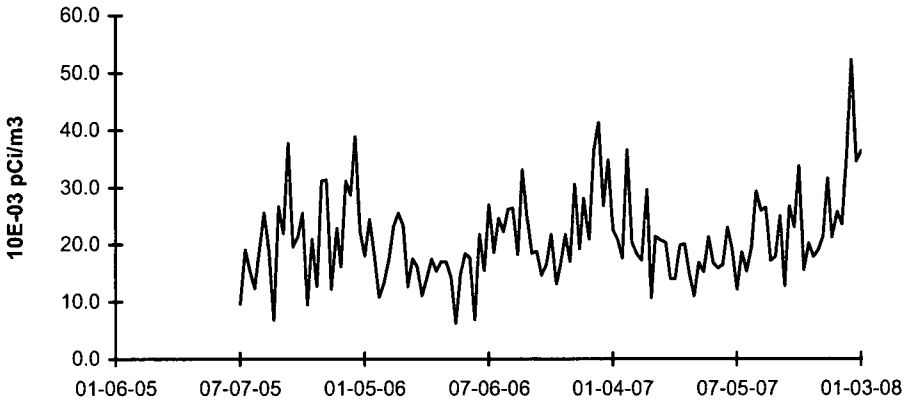
DUE TO VENDOR CHANGE, THE REPORTED UNITS CHANGED FROM E-02 PCI/M3 TO E-03 PCI/M3

FIGURE C-17
Air Particulates - Gross Beta- Stations BD-02 and BD-04 Collected in the Vicinity of Braidwood Station, 2005 - 2007

BD-02 Nearsite, NW



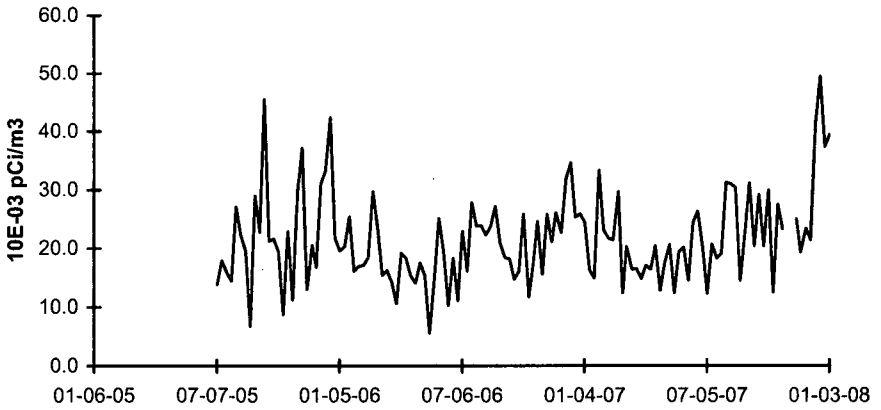
BD-04 Neasite, N



DUE TO VENDOR CHANGE, THE REPORTED UNITS CHANGED FROM E-02 PCI/M3 TO E-03 PCI/M3

FIGURE C-18
Air Particulates - Gross Beta- Station BD-05
Collected in the Vicinity of Braidwood Station, 2005 - 2007

BD-05 Nearsite, NE



DUE TO VENDOR CHANGE, THE REPORTED UNITS CHANGED FROM E-02 PCI/M3 TO E-03 PCI/M3

APPENDIX D

INTER-LABORATORY COMPARISON PROGRAM

TABLE D-1 ANALYTICS ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM
TELEDYNE BROWN ENGINEERING, 2007
(PAGE 1 OF 3)

Month/Year	Identification Number	Matrix	Nuclide	Units	Reported Value (a)	Known Value (b)	Ratio (c) TBE/Analytics	Evaluation (d)
March 2007	E5255-396	Milk	Sr-89	pCi/L	125	137	0.91	A
			Sr-90	pCi/L	10.8	10	1.08	A
	E5256-396	Milk	I-131	pCi/L	107	85.2	1.26	W
			Ce-141	pCi/L	269	297	0.91	A
			Cr-51	pCi/L	244	245	1.00	A
			Cs-134	pCi/L	98.1	112	0.88	A
			Cs-137	pCi/L	227	234	0.97	A
			Co-58	pCi/L	92.5	98.8	0.94	A
			Mn-54	pCi/L	182.0	182	1.00	A
			Fe-59	pCi/L	108.0	106	1.02	A
			Zn-65	pCi/L	985	1000	0.99	A
			Co-60	pCi/L	143	152	0.94	A
	E5258-396	AP	Ce-141	pCi	252	245	1.03	A
			Cr-51	pCi	204	202	1.01	A
			Cs-134	pCi	74.9	92.3	0.81	A
			Cs-137	pCi	190.0	197.0	0.96	A
			Co-58	pCi	79.7	81.6	0.98	A
			Mn-54	pCi	156	151	1.03	A
			Fe-59	pCi	99.1	87.2	1.14	A
			Zn-65	pCi	894	826	1.08	A
			Co-60	pCi	122	126	0.97	A
	E5257-396	Charcoal	I-131	pCi	34.7	71.3	0.49	N (1)
June 2007	E5384-396	Milk	Sr-89	pCi/L	98.3	95.2	1.03	A
			Sr-90	pCi/L	16.1	12.9	1.25	W
	E5385-396	Milk	I-131	pCi/L	71.0	70.1	1.01	A
			Ce-141	pCi/L	176	200	0.88	A
			Cr-51	pCi/L	459	512	0.90	A
			Cs-134	pCi/L	197	242	0.81	A
			Cs-137	pCi/L	158	169	0.93	A
			Co-58	pCi/L	180	198	0.91	A
			Mn-54	pCi/L	163	166	0.98	A
			Fe-59	pCi/L	158	167	0.95	A
			Zn-65	pCi/L	318	334	0.95	A
			Co-60	pCi/L	212	238	0.89	A
	E5387-396	AP	Ce-141	pCi	87.5	105	0.83	A
			Cr-51	pCi	232	268	0.87	A
			Cs-134	pCi	101	127	0.80	A
			Cs-137	pCi	78.9	88.5	0.89	A
			Co-58	pCi	91.8	104.0	0.88	A
			Mn-54	pCi	85.6	87	0.99	A
			Fe-59	pCi	89.8	87.3	1.03	A
			Zn-65	pCi	178	175	1.02	A
			Co-60	pCi	111	125	0.89	A
	E5386-396	Charcoal	I-131	pCi	79.3	79.1	1.00	A

TABLE D-1 ANALYTICS ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM
TELEDYNE BROWN ENGINEERING, 2007
(PAGE 2 OF 3)

Month/Year	Identification Number	Matrix	Nuclide	Units	Reported Value (a)	Known Value (b)	Ratio (c) TBE/Analytics	Evaluation (d)
September 2007	E5492-396	Milk	Sr-89	pCi/L	99.0	94.9	1.04	A
			Sr-90	pCi/L	13.9	13.1	1.06	A
	E5493-396	Milk	I-131	pCi/L	81.9	85.2	0.96	A
			Ce-141	pCi/L	200	211	0.95	A
			Cr-51	pCi/L	271	289	0.94	A
			Cs-134	pCi/L	131	147	0.89	A
			Cs-137	pCi/L	131	131	1.00	A
			Co-58	pCi/L	114	114	1.00	A
			Mn-54	pCi/L	171	168	1.02	A
			Fe-59	pCi/L	117	111	1.05	A
			Zn-65	pCi/L	212	202	1.05	A
			Co-60	pCi/L	143	148	0.97	A
	E5495-396	AP	Ce-141	pCi	128	136	0.94	A
			Cr-51	pCi	181	186	0.97	A
			Cs-134	pCi	85.9	94.7	0.91	A
			Cs-137	pCi	83.2	83.9	0.99	A
			Co-58	pCi	69.4	73.3	0.95	A
			Mn-54	pCi	112	108	1.04	A
			Fe-59	pCi	79.6	71.1	1.12	A
			Zn-65	pCi	159	130	1.22	W
			Co-60	pCi	92.0	95.2	0.97	A
	E5494-396	Charcoal	I-131	pCi	70.8	69.5	1.02	A
December 2007	E5749-396	Milk	Sr-89	pCi/L	87.6	93.7	0.93	A
			Sr-90	pCi/L	15.5	15.2	1.02	A
	E5750-396	Milk	I-131	pCi/L	60.6	60.8	1.00	A
			Ce-141	pCi/L	137	141	0.97	A
			Cr-51	pCi/L	497	512	0.97	A
			Cs-134	pCi/L	117	137	0.85	A
			Cs-137	pCi/L	166	166	1.00	A
			Co-58	pCi/L	159	174	0.91	A
			Mn-54	pCi/L	190	190	1.00	A
			Fe-59	pCi/L	149	148	1.01	A
			Zn-65	pCi/L	231	234	0.99	A
			Co-60	pCi/L	198	211	0.94	A
	E5752-396	AP	Ce-141	pCi	88.6	93.4	0.95	A
			Cr-51	pCi	352	340	1.04	A
			Cs-134	pCi	84.6	91.2	0.93	A
			Cs-137	pCi	111	110.0	1.01	A
			Co-58	pCi	114	116.0	0.98	A
			Mn-54	pCi	135	126	1.07	A
			Fe-59	pCi	119	98.5	1.21	W
			Zn-65	pCi	172	155	1.11	A
			Co-60	pCi	137	141	0.97	A

TABLE D-1 **ANALYTICS ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM**
TELEDYNE BROWN ENGINEERING, 2007
(PAGE 3 OF 3)

Month/Year	Identification Number	Matrix	Nuclide	Units	Reported Value (a)	Known Value (b)	Ratio (c) TBE/Analytics	Evaluation (d)
December 2007	E5751-396	Charcoal	I-131	pCi	65.8	74.1	0.89	A

(1) New technician counted charcoal cartridge on the back rather than the face, resulting in low activity. If the charcoal cartridge had been counted on the face, the ratio would have been approximately 1.07, which is acceptable. NCR 07-02

(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, 2007
(PAGE 1 OF 1)

Month/Year	Identification Number	Media	Nuclide	Units	Reported Value (a)	Known Value (b)	Control Limits	Evaluation (c)
July 2007	Rad 70	Water	Sr-89	pCi/L	58.6	58.2	49.5 - 66.9	A
			Sr-90	pCi/L	18.7	19.0	10.3 - 27.7	A
			Ba-133	pCi/L	18.6	19.4	10.7 - 28.1	A
			Cs-134	pCi/L	57.6	68.9	60.2 - 77.6	N (1)
			Cs-137	pCi/L	55.4	61.3	52.6 - 70.0	A
			Co-60	pCi/L	31.3	33.5	24.8 - 42.2	A
			Zn-65	pCi/L	49.0	54.6	45.2 - 64.0	A
			Gr-A	pCi/L	26.8	27.1	15.4 - 38.8	A
			Gr-B	pCi/L	12	11.5	2.84 - 20.2	A
			I-131	pCi/L	31.1	26.5	21.3 - 31.7	A
			H-3	pCi/L	1700	1770	1180 - 2360	A
October 2007	RAD 71	Water	Sr-89	pCi/L	27.07	27.4	19.3 - 33.9	A
			Sr-90	pCi/L	17.40	18.2	12.9 - 21.6	A
			Ba-133	pCi/L	12.57	12.6	8.64 - 15.5	A
			Cs-134	pCi/L	63.33	71.1	58.0 - 78.2	A
			Cs-137	pCi/L	168	180	162 - 200	A
			Co-60	pCi/L	21.93	23.2	19.9 - 28.3	A
			Zn-65	pCi/L	245.33	251	226 - 294	A
			Gr-A	pCi/L	55.60	58.6	30.6 - 72.9	A
			Gr-B	pCi/L	15.23	9.73	4.26 - 18.2	A
			I-131	pCi/L	27.43	28.9	24.0 - 33.8	A
			H-3	pCi/L	9263.3	9700	8430 - 10700	A

(1) The Cs-134 TBE found/ERA known ratio is 83.6%, which TBE considers acceptable. NCR 07-07

(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, 2007
(PAGE 1 OF 1)

Month/Year	Identification Number	Media	Nuclide	Units	Reported Value (a)	Known Value (b)	Acceptance Range	Evaluation (c)
February 2007	07-MaW17	Water	Cs-134	Bq/L	74.5	83.5	58.5 - 108.6	A
			Cs-137	Bq/L	162	163.0	114-1 - 211.9	A
			Co-57	Bq/L	140	143.7	100.6 - 186.8	A
			Co-60	Bq/L	27.9	26.9	18.8 - 35.0	A
			H-3	Bq/L	346	283.0	198.1 - 367.9	W
			Mn-54	Bq/L	125	123.8	86.7 - 160.9	A
			Sr-90	Bq/L	8.90	8.87	6.21- 11.53	A
			Zn-65	Bq/L	117	114.8	80.4 - 149.2	A
	07-GrW17	Water	Gr-A	Bq/L	0.502	0.327	>0.0 - 0.654	A
			Gr-B	Bq/L	0.975	0.851	0.426 - 1.277	A
	07-MaS17	Soil	Cs-134	Bq/kg	322	327.4	229.2 - 425.6	A
			Cs-137	Bq/kg	893	799.7	559.8 - 1039.6	A
			Co-57	Bq/kg	508.3	471.2	329.8 - 612.6	A
			Co-60	Bq/kg	300.3	274.7	192.3 - 357.1	A
			Mn-54	Bq/kg	779	685.2	479.6 - 890.8	A
			K-40	Bq/kg	682	602	421 - 783	A
			Sr-90	Bq/kg	293	319.0	223.3 - 414.7	A
			Zn-65	Bq/kg	618.7	536.8	375.8 - 697.8	A
	07-RdF17	AP	Cs-134	Bq/sample	3.230	1.4960	2.9372 - 5.4548	W
			Cs-137	Bq/sample	2.453	2.5693	1.7985 - 3.3401	A
			Co-57	Bq/sample	3.067	2.8876	2.0213 - 3.7539	A
			Co-60	Bq/sample	2.767	2.9054	2.0338 - 3.7770	A
			Mn-54	Bq/sample	3.557	3.5185	2.4630 - 4.5741	A
			Sr-90	Bq/sample	0.584	0.6074	0.4252 - 0.7896	A
			Zn-65	Bq/sample	2.463	2.6828	1.8780 - 3.4876	A
	07-GrF17	AP	Gr-A	Bq/sample	0.353	0.601	>0.0 - 1.202	A
			Gr-B	Bq/sample	0.500	0.441	0.221 - 0.662	A
February 2007	07-RdV17	Vegetation	Cs-134	Bq/sample	6.207	6.2101	4.3471 - 8.0731	A
			Cs-137	Bq/sample	7.80	6.9949	4.8964 - 9.0934	A
			Co-57	Bq/sample	8.64	8.1878	5.7315 - 10.6441	A
			Co-60	Bq/sample	6.10	5.8215	4.0751 - 7.5680	A
			Mn-54	Bq/sample	9.41	8.4492	5.9144 - 10.9840	A
			K-40	Bq/sample	63.5	Not evaluated by MAPEP		
			Sr-90	Bq/sample	1.51	1.5351	1.0746 - 1.9956	A
			Zn-65	Bq/sample	7.15	5.6991	3.9894 - 7.4088	W

(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., 2007

Lab Code *	Date	Concentration (pCi/L) Analysis	Laboratory Result[b]	ERA Result[c]	Control Limits	Acceptance
STAP-1116	03/19/07	Gr. Alpha	34.64 ± 2.56	25.8	12.4 - 39	Pass
STAP-1116	03/19/07	Gr. Beta	93.41 ± 3.20	79.5	48.8 - 116	Pass
STAP-1117	03/19/07	Co-60	1610.00 ± 8.40	1300.0	1010.0 - 1620	Pass
STAP-1117	03/19/07	Cs-134	1340.40 ± 48.84	1120.0	732.0 - 1380	Pass
STAP-1117 [e]	03/19/07	Cs-137	345.30 ± 8.20	255.0	192.0 - 336	Fail
STAP-1117 [f]	03/19/07	Mn-54	< 5.0	0.0		Pass
STAP-1117	03/19/07	Sr-90	156.10 ± 6.60	156.0	66.6 - 246	Pass
STAP-1117	03/19/07	Zn-65	363.80 ± 11.90	245.0	208.0 - 412	Pass
STSO-1118	03/19/07	Ac-228	3097.77 ± 94.96	2790.0	1790.0 - 3930	Pass
STSO-1118	03/19/07	Bi-212	2467.87 ± 114.33	2500.0	658.0 - 3730	Pass
STSO-1118	03/19/07	Co-60	7847.40 ± 86.60	7330.0	5340.0 - 9820	Pass
STSO-1118	03/19/07	Cs-134	7910.60 ± 356.88	7560.0	4850.0 - 9070	Pass
STSO-1118	03/19/07	Cs-137	4635.00 ± 99.10	4300.0	3290.0 - 5580	Pass
STSO-1118	03/19/07	K-40	12201.60 ± 423.20	11100.0	8050.0 - 15000	Pass
STSO-1118 [f]	03/19/07	Mn-54	< 34.0	0.0		Pass
STSO-1118	03/19/07	Pb-212	2046.80 ± 127.20	1730.0	1120.0 - 2430	Pass
STSO-1118	03/19/07	Pb-214	4142.80 ± 110.40	3330.0	1980.0 - 4980	Pass
STSO-1118	03/19/07	Sr-90	6163.30 ± 791.60	7500.0	2610.0 - 12400	Pass
STSO-1118	03/19/07	Th-234	4329.40 ± 569.10	3590.0	2190.0 - 4560	Pass
STSO-1118 [f]	03/19/07	Zn-65	0.00 ± 0.00	0.0	0.0 - 0	Pass
STVE-1119	03/19/07	Co-60	2827.90 ± 62.40	2600.0	1760.0 - 3720	Pass
STVE-1119	03/19/07	Cs-134	654.80 ± 48.40	579.0	308.0 - 822	Pass
STVE-1119	03/19/07	Cs-137	3307.30 ± 58.80	2920.0	2150.0 - 4060	Pass
STVE-1119	03/19/07	K-40	40814.20 ± 618.80	37900.0	27200.0 - 53600	Pass
STVE-1119 [f]	03/19/07	Mn-54	< 27.6	0.0		Pass
STVE-1119	03/19/07	Sr-90	8999.70 ± 580.90	8890.0	4900.0 - 11800	Pass
STVE-1119	03/19/07	Zn-65	474.30 ± 45.70	366.0	267.0 - 500	Pass
STW-1120	03/19/07	Co-60	541.40 ± 9.00	536.0	467.0 - 631	Pass
STW-1120	03/19/07	Cs-134	1623.80 ± 66.10	1750.0	1290.0 - 2020	Pass
STW-1120	03/19/07	Cs-137	1839.10 ± 17.90	1850.0	1570.0 - 2220	Pass
STW-1120 [f]	03/19/07	Mn-54	< 8.1	0.0		Pass
STW-1120	03/19/07	Sr-90	949.40 ± 16.70	989.0	630.0 - 1320	Pass
STW-1120	03/19/07	Zn-65	2009.00 ± 36.40	1910.0	1600.0 - 2410	Pass
STW-1121	04/09/07	Sr-89	30.7 ± 4.3	35.4	26.7 - 44.1	Pass
STW-1121	04/09/07	Sr-90	39.3 ± 1.8	42.1	33.4 - 50.8	Pass

TABLE D-4 ERA[a] STATISTICAL SUMMARY PROFICIENCY TESTING PROGRAM ENVIRONMENTAL, INC., 2007

Lab Code *	Date	Analysis	Concentration (pCi/L) Laboratory Result[b]	ERA Result[c]	Control Limits	Acceptance
STW-1122	04/09/07	Ba-133	30.0 ± 2.4	29.3	20.6 - 38.0	Pass
STW-1122	04/09/07	Co-60	118.5 ± 3.9	119.0	109.0 - 129.0	Pass
STW-1122	04/09/07	Cs-134	52.6 ± 2.3	54.3	45.6 - 63.0	Pass
STW-1122	04/09/07	Cs-137	49.5 ± 3.8	50.3	41.6 - 59.0	Pass
STW-1122	04/09/07	Zn-65	91.7 ± 6.3	88.6	73.3 - 104.0	Pass
STW-1123	04/09/07	Gr. Alpha	33.8 ± 3.5	56.5	32.0 - 81.0	Pass
STW-1123	04/09/07	Gr. Beta	24.2 ± 2.3	25.3	16.6 - 34.0	Pass
STW-1124	04/09/07	I-131	19.2 ± 1.2	18.9	13.7 - 24.1	Pass
STW-1125	04/09/07	H-3	7540.0 ± 255.0	8060.0	6660.0 - 9450.0	Pass
STW-1127	07/09/07	Sr-89	51.7 ± 5.0	58.2	49.5 - 66.9	Pass
STW-1127	07/09/07	Sr-90	21.4 ± 2.3	19.0	10.3 - 27.7	Pass
STW-1128	07/09/07	Ba-133	19.4 ± 2.2	19.4	10.7 - 28.1	Pass
STW-1128	07/09/07	Co-60	32.8 ± 2.0	33.5	24.8 - 42.2	Pass
STW-1128	07/09/07	Cs-134	67.0 ± 2.9	68.9	60.2 - 77.6	Pass
STW-1128	07/09/07	Cs-137	61.6 ± 3.8	61.3	52.6 - 70.0	Pass
STW-1128	07/09/07	Zn-65	55.6 ± 7.5	54.6	45.2 - 64.0	Pass
STW-1129	07/09/07	Gr. Alpha	19.2 ± 1.6	27.1	15.4 - 38.8	Pass
STW-1129	07/09/07	Gr. Beta	9.1 ± 0.9	11.5	2.8 - 20.2	Pass
STW-1131	10/05/07	Sr-89	27.3 ± 3.3	27.4	19.3 - 33.9	Pass
STW-1131	10/05/07	Sr-90	17.7 ± 1.2	18.2	12.9 - 21.6	Pass
STW-1132	10/05/07	Ba-133	12.2 ± 3.3	12.6	8.6 - 15.5	Pass
STW-1132	10/05/07	Co-60	23.8 ± 1.4	23.2	19.9 - 28.3	Pass
STW-1132	10/05/07	Cs-134	70.5 ± 4.2	71.1	58.0 - 78.2	Pass
STW-1132	10/05/07	Cs-137	178.2 ± 3.3	180.0	162.0 - 200.0	Pass
STW-1132	10/05/07	Zn-65	263.9 ± 6.9	251.0	226.0 - 294.0	Pass
STW-1133	10/05/07	Gr. Alpha	54.7 ± 2.1	58.6	30.6 - 72.9	Pass
STW-1133	10/05/07	Gr. Beta	11.9 ± 0.9	9.7	4.3 - 18.2	Pass
STW-1134	10/05/07	I-131	33.0 ± 1.5	28.9	24.0 - 33.8	Pass
STW-1135	10/05/07	H-3	9965.0 ± 250.0	9700.0	8430.0 - 10700.0	Pass

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

[a] Results obtained by Environmental, Inc., Midwest Laboratory as a participant in the crosscheck program for proficiency testing administered by Environmental Resources Associates, serving as a replacement for studies conducted previously by the Environmental Measurements Laboratory Quality Assessment Program (EML).

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

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

[e] A high bias (~ 20%) was observed in gamma results for air filters. A composite filter geometry was used in the calculations vs. a single filter geometry. Result of recalculation. Cs-137, 305.8 ± 6.0 pCi/filter.

[f] Included in the testing series as a "false positive". No activity expected.

TABLE D-5 DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)[a] ENVIRONMENTAL, INC., 2007

		Concentration [b]				
Lab Code[c]	Date	Analysis	Laboratory result	Known Activity	Control Limits [d]	Acceptance
STW-1110	01/01/07	Gr. Alpha	0.45 ± 0.08	0.33	0.00 - 0.65	Pass
STW-1110	01/01/07	Gr. Beta	0.90 ± 0.14	0.85	0.43 - 1.28	Pass
STW-1111	01/01/07	Co-57	151.60 ± 10.00	143.70	100.60 - 186.80	Pass
STW-1111	01/01/07	Cs-134	79.20 ± 8.00	83.50	58.50 - 108.60	Pass
STW-1111	01/01/07	Cs-137	168.70 ± 12.10	163.00	114.10 - 211.90	Pass
STW-1111	01/01/07	H-3	262.20 ± 9.10	283.00	198.10 - 367.90	Pass
STW-1111	01/01/07	Mn-54	130.60 ± 11.50	123.80	86.70 - 160.90	Pass
STW-1111	01/01/07	Sr-90	9.60 ± 1.40	8.87	6.21 - 11.53	Pass
STW-1111	01/01/07	Zn-65	123.70 ± 17.00	114.80	80.40 - 149.20	Pass
STSO-1112	01/01/07	Co-57	501.20 ± 2.90	471.20	329.80 - 612.60	Pass
STSO-1112	01/01/07	Co-60	285.90 ± 2.10	274.70	192.30 - 357.10	Pass
STSO-1112	01/01/07	Cs-134	325.90 ± 7.40	327.40	229.20 - 425.60	Pass
STSO-1112	01/01/07	Cs-137	855.70 ± 4.60	799.70	559.80 - 1039.60	Pass
STSO-1112	01/01/07	Mn-54	750.90 ± 4.70	685.20	479.60 - 890.80	Pass
STAP-1113	01/01/07	Gr. Alpha	0.27 ± 0.04	0.60	0.00 - 1.20	Pass
STAP-1113	01/01/07	Gr. Beta	0.57 ± 0.05	0.44	0.22 - 0.66	Pass
STAP-1114	01/01/07	Co-57	3.51 ± 0.07	2.89	2.02 - 3.75	Pass
STAP-1114	01/01/07	Co-60	2.98 ± 0.10	2.91	2.03 - 3.78	Pass
STAP-1114	01/01/07	Cs-134	4.02 ± 0.16	4.20	2.94 - 5.45	Pass
STAP-1114	01/01/07	Cs-137	2.75 ± 0.12	2.57	1.80 - 3.34	Pass
STAP-1114	01/01/07	Mn-54	3.94 ± 0.12	3.52	2.46 - 4.57	Pass
STAP-1114	01/01/07	Sr-90	0.58 ± 0.18	0.61	0.43 - 0.79	Pass
STAP-1114	01/01/07	Zn-65	2.70 ± 0.10	2.68	1.88 - 3.49	Pass
STVE-1115	01/01/07	Co-57	8.90 ± 0.20	8.19	5.73 - 10.64	Pass
STVE-1115	01/01/07	Co-60	6.50 ± 0.20	5.82	4.08 - 7.57	Pass
STVE-1115	01/01/07	Cs-134	6.90 ± 0.30	6.21	4.35 - 8.07	Pass
STVE-1115	01/01/07	Cs-137	8.20 ± 0.30	6.99	4.90 - 9.09	Pass
STVE-1115	01/01/07	Mn-54	10.10 ± 0.30	8.46	5.91 - 10.98	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).

[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.

APPENDIX E

EFFLUENT DATA

TABLE OF CONTENTS

Table of Contents (cont.)

INTRODUCTION

Braidwood Station, a two-unit PWR station, is located in Will County, Illinois, fifteen (15) miles south-southwest of Joliet, Illinois. Each reactor is designed to have a capacity of 3586.6 thermal megawatts. Units No. 1 went critical on May 29, 1987, and unit No. 2 went critical on March 8, 1988. The station has been designed to keep releases to the environment at levels below those specified in the regulations.

Liquid effluents from Braidwood Station are released to the Kankakee River in controlled batches after radioassay of each batch. Gaseous effluents are released to the atmosphere and are calculated on the basis of analyses of grab samples of noble gases and tritium, as well as continuously collected composite samples of iodine and particulate activity sampled during the course of the year. The results of effluent analyses are summarized on a monthly basis. Airborne concentrations of noble gases, I-131, and particulate radioactivity in offsite areas are calculated using effluent and meteorological data.

Environmental monitoring is conducted by sampling at indicator and control (background) locations in the vicinity of Braidwood Station to measure changes in radiation or radioactivity levels that may be attributable to station operations. If significant changes attributable to Braidwood Station are measured, these changes are correlated with effluent releases. External gamma radiation exposure from noble gases and internal dose from I-131 in milk are the critical pathways at this site; however, an environmental monitoring program is conducted which also includes other pathways.

SUMMARY

Calculations based on gaseous and liquid effluents, Kankakee River Flow and meteorological data indicate that public dose due to radioactive material attributable to Braidwood Station during the period does not exceed regulatory or Offsite Dose Calculation Manual (ODCM) limits.

The Total Effective Dose Equivalent (TEDE) due to licensed activities at Braidwood Station calculated for the maximally exposed individual for the period is 2.09E+00 mrem. The annual limit on TEDE is 100 mrem.

The assessment of radiation doses to the public is performed in accordance with the ODCM. The results of these analyses confirm that the station is operating in compliance with 10CFR50 Appendix I, 10CFR20 and 40CFR190.

1.0 EFFLUENTS

1.1 Gaseous Effluents to the Atmosphere

Measured concentrations of noble gases, radioiodine, and particulate radioactivity released to the atmosphere during the year, are listed in Table 1.1-1.

A total of 1.78E+01 curies of fission and activation gases were released with a maximum quarterly average release rate of 5.75E-01 µCi/sec at Unit 1 and 5.49E-01 µCi/sec at Unit 2.

A total of 4.68E-04 curies of 1-131 were released during the year with a maximum average quarterly release rate of 2.34E-05 µCi/sec for Unit 1 and 3.07E-05 µCi/sec for Unit 2.

A total of 3.26E-05 curies of beta-gamma emitters were released as airborne particulate matter with a maximum average release rate of 2.85E-06 µCi/sec at Unit 1 and 8.54E-07 µCi/sec at Unit 2. Alpha-emitting radionuclides were below the lower limit of detection (LLD) for the year.

A total of 5.34E+01 curies of tritium were released with a maximum average quarterly release rate of 1.78E+00 uCi/sec at Unit 1 and 8.60E-01 uCi/sec at Unit 2.

1.2 Liquids Released to Kankakee River

A total of 2.05E+06 liters of radioactive liquid wastes (prior to dilution) containing 3.36E-03 curies (excluding tritium, noble gases and alpha) were discharged from the station. These wastes were released at a maximum quarterly diluted average concentration of 2.87E-10 µCi/ml. Alpha-emitting radionuclides were less than the LLD for the year. A total of 8.85E+02 curies of tritium was released from the station. Quarterly release activities are given in Table 1.2-1.

2.0 SOLID RADIOACTIVE WASTE

Solid radioactive wastes were shipped by truck to the Envirocare of Utah disposal facility; the Barnwell, South Carolina disposal facility and various waste processors. For detail, refer the Braidwood Station 2007 Radioactive Effluent Release Report.

3.0 DOSE TO MAN

3.1 Gaseous Effluent Pathways

Table 3.1-1 summarizes the doses resulting from releases of airborne radioactivity via the different exposure pathways.

3.1.1 Noble Gases

3.1.1.1 Gamma Dose Rates

Offsite Gamma air and total body dose rates are shown in Table 3.1-1 and were calculated based on measured effluents and average meteorological data. Based on measured effluents and average meteorological data, the maximum total body dose to an individual would be 1.15E-02 mrem for the year (Table 3.1-1) with an occupancy or shielding factor of 0.7 used. The maximum total body dose based on measured effluents and concurrent meteorological data would be 4.76E-05 mrem (Table 3.4-1). The maximum gamma air dose was 1.05E-04 mrad (Table 3.1-1) based on measured effluents and average meteorological data and 9.72E-05 mrad based on concurrent meteorological date (Table 3.4-1).

3.1.1.2 Beta Air and Skin Dose Rates

The range of beta particles in air is relatively small (on the order of a few meters or less); consequently, plumes of gaseous effluents may be considered "infinite" for purpose of calculating the dose from beta radiation incident on the skin. However, the actual dose to sensitive skin tissues is difficult to calculate due to the effect of the beta particle energies, thickness of inert skin and clothing covering sensitive tissues. For purposes of this report the skin is taken to have a thickness of 7.0 mg/cm^2 and an occupancy factor of 1.0 is used. The skin dose from beta and gamma radiation for the year was 5.79E-04 mrem based on concurrent meteorological data (Table 3.4-1).

The maximum offsite beta air dose for the year was 8.67E-04 mrad (Table 3.1-1) based on measured effluents and average meteorological data and 1.32E-03 mrad based on concurrent meteorological data (Table 3.4-1).

3.1.2 Radioactive Iodine

The human thyroid exhibits a significant capacity to concentrate ingested or inhaled iodine and the radionuclide I-131. Minimal levels of radioiodine released during routine operation of the station may be made available to man, thus resulting in a dose to the thyroid. The principal pathway of interest for this radionuclide is ingestion of radioiodine in milk. Calculations performed in 2007 and previous years indicate that contributions to doses from inhalation of I-131 and I-133, and ingestion of I-133 in milk are negligible.

3.1.2.1 Dose to Thyroid

The hypothetical thyroid dose to the maximum exposed individual living near the station via ingestion of milk was calculated. The radionuclide considered was I-131 and the source of milk was taken to be the nearest dairy farm with the cows pastured from May through October. The maximum thyroid dose did not exceed 1.04E-01 mrem during the year (Table 3.1-1[infant]).

3.2 Liquid Effluent Pathways

The three principal pathways through the aquatic environment for potential doses to man from liquid waste are ingestion of potable water, eating aquatic foods, and exposure while on the shoreline. Not all of these pathways are significant or applicable at a given time or station but a reasonable approximation of the dose can be made by adjusting the dose formula for season of the year or type and degree of use of the aquatic environment. NRC developed equations* were used to calculate the doses to the whole body, lower GI tracts, thyroid, bone and skin; specific parameters for use in the equations are given in the Exelon Offsite Dose Calculation Manual. The maximum whole body dose for the year was 2.90E-01 mrem and no organ dose exceeded 2.90E-01 mrem (Table 3.2-1 [child]).

3.3 Assessment of Dose to Member of Public

During the period January to December, 2007, Braidwood Station did not exceed the following limits as shown in Table 3.1-1 and Table 3.2-1 (based on annual average meteorological data), Figure 3.1-1 (based on concurrent meteorological data), and Table 3.3-1:

- The RETS limits on dose or dose commitment to an individual due to radioactive materials in liquid effluents from each reactor unit (1.5 mrem to the whole body or 5 mrem to any organ during any calendar year; 3 mrem to the whole body or 10 mrem to any organ during the calendar year).

- The RETS limits on air dose in noble gases released in gaseous effluents to a member of the public from each reactor unit (5 mrads for gamma radiation or 10 mrad for beta radiation during any calendar quarter; 10 mrad for gamma radiation or 20 mrad for beta radiation during a calendar year).

- The RETS limits on dose to a member of the public due to iodine-131, iodine-133, tritium, and radionuclides in particulate form with half-lives greater than eight days in gaseous effluents released from each reactor unit (7.5 mrem to any organ during any calendar quarter; 15 mrem to any organ during any calendar year).

- The 10CFR20 limit on Total Effective Dose Equivalent to individual members of the public (100 mrem) during any calendar year.

4.0 SITE METEOROLOGY

A summary of the site meteorological measurements taken during each calendar quarter of the year is given in Appendix E. The data are presented as cumulative joint frequency distributions of the wind direction for the 203' level and wind speed class by atmospheric stability class determined from the temperature difference between the 199' and 30' levels. Data recovery for these measurements was 99.7% during 2007.

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*Nuclear Regulatory Commission, Regulatory Guide 1.109 (Rev. 1)

APPENDIX E - 1

DATA TABLES AND FIGURES

Table 1.1-1

GASEOUS EFFLUENTS SUMMATION OF ALL RELEASES

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2007
GAS RELEASES
UNIT 1 (Docket Number 50-456)
SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Est. Total Error%
A. Fission and Activation Gas Releases						
1. Total Release Activity	Ci	2.23E+00	1.13E+00	1.29E+00	4.57E+00	7.59
2. Average Release Rate	uCi/sec	2.87E-01	1.44E-01	1.62E-01	5.75E-01	
3. Percent of ODCM Limit - gamma	%	3.07E-04	6.59E-05	1.34E-04	5.95E-04	
4. Percent of ODCM Limit - beta	%	9.62E-04	6.84E-04	6.75E-07	2.13E-03	
B. Iodine Releases						
1. Total I-131 Activity	Ci	7.94E-06	2.08E-05	8.89E-06	1.86E-04	33.20
2. Average Release Rate	uCi/sec	1.02E-06	2.65E-06	1.12E-06	2.34E-05	
3. Percent of ODCM Limit - gamma	%	3.44E-02	6.14E-02	2.87E-02	4.07E-01	
C. Particulate (> 8 day half-life) Releases						
1. Gross Activity	Ci	2.22E-05	<LLD	2.54E-06	<LLD	19.80
2. Average Release Rate	uCi/sec	2.85E-06	<LLD	3.20E-07	<LLD	
3. Percent of ODCM Limit	%	3.44E-02	N/A	2.87E-02	N/A	
4. Gross Alpha Activity	Ci	<LLD	<LLD	<LLD	<LLD	
D. Tritium Releases						
1. Total Release Activity	Ci	1.01E+01	1.40E+01	5.84E+00	6.45E+00	8.07
2. Average Release Rate	uCi/sec	1.30E+00	1.78E+00	7.35E-01	8.11E-01	
3. Percent of ODCM Limit	%	3.44E-02	6.14E-02	2.87E-02	4.07E-01	

Note: LLD Values are included in Appendix A of this report.

Table 1.1-1 (continued)

GASEOUS EFFLUENTS SUMMATION OF ALL RELEASES

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2007
GAS RELEASES
UNIT 2 (Docket Number 50-457)
SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Est. Total Error%
A. Fission and Activation Gas Releases						
1. Total Activity Released	Ci	2.34E+00	8.50E-01	1.06E+00	4.36E+00	7.59
2. Average Release Rate	uCi/sec	3.01E-01	1.08E-01	1.33E-01	5.49E-01	
3. Percent of ODCM Limit - gamma	%	3.25E-04	2.18E-05	9.78E-05	5.61E-04	
4. Percent of ODCM Limit - beta	%	1.01E-03	5.77E-04	5.86E-04	2.05E-03	
B. Iodine Releases						
1. Total I-131 Activity	Ci	<LLD	<LLD	<LLD	2.44E-04	33.20
2. Average Release Rate	uCi/sec	0.00E+00	0.00E+00	0.00E+00	3.07E-05	
3. Percent of ODCM Limit	%	N/A	N/A	N/A	9.06E-01	
C. Particulate (> 8 day half-life) Releases						
1. Gross Activity	Ci	<LLD	1.10E-06	<LLD	6.79E-06	19.80
2. Average Release Rate	uCi/sec	0.00E+00	1.41E-07	0.00E+00	8.54E-07	
3. Percent of OCDM Limit	%	N/A	1.92E-02	N/A	9.06E-01	
4. Gross Alpha Activity	Ci	<LLD	<LLD	<LLD	<LLD	
D. Tritium Releases						
1. Total Release Activity	Ci	5.41E-01	6.76E+00	4.05E+00	5.66E+00	8.07
2. Average Release Rate	uCi/sec	6.96E-02	8.60E-01	5.10E-01	7.12E-01	
3. Percent of ODCM Limit	%	1.54E-03	1.92E-02	1.15E-02	9.06E-01	

Note: LLD Values are included in Appendix A of this report.

Table 1.2-1

LIQUID EFFLUENTS SUMMATION OF ALL RELEASES

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2007
LIQUID RELEASES
UNIT 1 (Docket Number 50-456)
SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Est. Total Error %
A. Fission and Activation Products						
1. Total Activity Released	Ci	3.72E-05	2.14E-04	2.68E-05	1.40E-03	2.64
2. Average Concentration Released	uCi/ml	1.16E-11	7.38E-11	9.08E-12	2.87E-10	
3. Percent of limit	%	*	*	*	*	
B. Tritium						
1. Total Activity Released	Ci	7.36E+01	1.07E+02	1.12E+02	1.50E+02	5.85
2. Average Concentration Released	uCi/ml	2.29E-05	3.69E-05	3.80E-05	3.07E-05	
3. % of Limit (1E-2 uCi/ml)	%	2.29E-01	3.69E-01	3.80E-01	3.07E-01	
C. Dissolved Noble Gases						
1. Total Activity Released	Ci	0.00E+00	0.00E+00	1.54E-06	0.00E+00	2.64
2. Average Concentration Released	uCi/ml	0.00E+00	0.00E+00	5.22E-13	0.00E+00	
3. % of Limit (2E-4 uCi/ml)	%	0.00E+00	0.00E+00	2.61E-07	0.00E+00	
D. Gross Alpha						
1. Total Activity Released	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	14.70
2. Average Concentration Released	uCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
E. Volume of Releases						
1. Volume of Liquid Waste to Discharge	liters	2.46E+05	2.85E+05	2.34E+05	2.61E+05	
2. Volume of Dilution Water	liters	3.21E+09	2.90E+09	2.95E+09	4.88E+09	

Note: LLD Values are included in Appendix A of this report.

*This limit is equal to 10 times the concentration values in Appendix B, Table 2, Column 2 to 10CFR20.1001-20.2402.

Table 1.2-1 (continued)

LIQUID EFFLUENTS SUMMATION OF ALL RELEASES

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2007
LIQUID RELEASES
UNIT 2 (Docket Number 50-457)
SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Est. Total Error %
A. Fission and Activation Products						
1. Total Activity Released	Ci	3.72E-05	2.14E-04	2.68E-05	1.40E-03	2.64
2. Average Concentration Released	uCi/ml	1.16E-11	7.38E-11	9.08E-12	2.87E-10	
3. Percent of Limit	%	*	*	*	*	
B. Tritium						
1. Total Activity Released	Ci	7.36E+01	1.07E+02	1.12E+02	1.50E+02	5.85
2. Average Concentration Released	uCi/ml	2.29E-05	3.69E-05	3.80E-05	3.07E-05	
3. % of Limit (1E-3 uCi/ml)	%	2.29E-01	3.69E-01	3.80E-01	3.07E-01	
C. Dissolved Noble Gases						
1. Total Activity Released	Ci	0.00E+00	0.00E+00	1.54E-06	0.00E+00	2.64
2. Average Concentration Released	uCi/ml	0.00E+00	0.00E+00	5.22E-13	0.00E+00	
3. % of Limit (2E-4 uCi/ml)	%	0.00E+00	0.00E+00	2.61E-07	0.00E+00	
D. Gross Alpha						
1. Total Activity Released	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	14.70
2. Average Concentration Released	uCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
E. Volume of Releases						
1. Volume of Liquid Waste to Discharge	liters	2.46E+05	2.85E+05	2.34E+05	2.61E+05	
2. Volume of Dilution Water	liters	3.21E+09	2.90E+09	2.95E+09	4.88E+09	

Note: LLD Values are included in Appendix A of this report.

*This limit is equal to 10 times the concentration values in Appendix B, Table 2, Column 2 to 10CFR20.1001-2402.

Table 3.1-1

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2007 00:00
Period End Date.....: 01/01/2008 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 1
Receptor.....: 5 Composite Crit. Receptor - IP
Distance (meters)....: 0.0
Compass Point.....: 0.0

=== MAXIMUM PERIOD DOSE TO LIMIT (Any Organ) ==========

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	INFANT	THYROID	3.99E-02	31-day	2.25E-01	1.77E+01	3.00E-01	1.33E+01
Qrtr->End	INFANT	THYROID	3.99E-02	Quarter	5.63E+00	7.09E-01	7.50E+00	5.32E-01
Year->End	INFANT	THYROID	3.99E-02	Annual	1.13E+01	3.55E-01	1.50E+01	2.66E-01

Critical Pathway.....: 3 Grs/Goat/Milk (GMILK)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	1.51E+01
I-131	8.27E+01
I-132	2.05E-03
I-133	2.18E+00

=== MAXIMUM PERIOD DOSE TO LIMIT (Tot Body)) ==========

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	TBODY	7.78E-03	31-day	1.50E-01	5.19E+00	2.00E-01	3.89E+00
Qrtr->End	CHILD	TBODY	7.78E-03	Quarter	5.25E+00	1.48E-01	7.50E+00	1.04E-01
Year->End	CHILD	TBODY	7.78E-03	Annual	1.05E+01	7.41E-02	1.50E+01	5.19E-02

Critical Pathway.....: 2 Vegetation (VEG)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	9.97E+01
I-131	3.20E-01
I-132	1.09E-03
I-133	1.17E-02

Date/Time: 04/26/2008 06:45 retdasID: Retdas

Table 3.1-1 (continued)

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2007 00:00
Period End Date.....: 01/01/2008 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 1
Receptor.....: 4 Composite Crit. Receptor - NG
Distance (meters)....: 0.0
Compass Point.....: 0.0

=== MAXIMUM PERIOD NG DOSE TO LIMIT (Gamma) ==========

Dose Period	Dose Type	Dose (mrad)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	Gamma	5.51E-05	31-day	1.50E-01	3.68E-02	2.00E-01	2.76E-02
Qrtr->End	Gamma	5.51E-05	Quarter	3.75E+00	1.47E-03	5.00E+00	1.10E-03
Year->End	Gamma	5.51E-05	Annual	7.50E+00	7.35E-04	1.00E+01	5.51E-04

Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
AR-41	2.65E-01
KR-85M	2.13E-02
KR-85	1.82E+00
KR-87	6.61E-02
XE-133M	5.59E-01
KR-88	1.39E-04
XE-131M	7.25E-01
XE-135	2.89E+00
XE-133	9.33E+01
XE-138	3.99E-01

=== MAXIMUM PERIOD NG DOSE TO LIMIT (Beta)) ==========

Dose Period	Dose Type	Dose (mrad)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	Beta	4.45E-04	31-day	3.00E-01	1.48E-01	4.00E-01	1.11E-01
Qrtr->End	Beta	4.45E-04	Quarter	7.50E+00	5.94E-03	1.00E+01	4.45E-03
Year->End	Beta	4.45E-04	Annual	1.50E+01	2.97E-03	2.00E+01	2.23E-03

Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
AR-41	1.88E-02
KR-85M	6.88E-03
KR-85	4.16E+01
KR-87	2.23E-02
XE-133M	5.11E-01
KR-88	5.42E-06
XE-131M	1.04E+00
XE-135	7.47E-01
XE-133	5.60E+01

Date/Time: 04/26/2008 06:45 retdasID: Retdas

Table 3.1-1 (continued)

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2007 00:00
Period End Date.....: 01/01/2008 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 2
Receptor.....: 5 Composite Crit. Receptor - IP
Distance (meters)....: 0.0
Compass Point.....: 0.0

=== MAXIMUM PERIOD DOSE TO LIMIT (Any Organ) ==========

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	INFANT	THYROID	6.98E-02	31-day	2.25E-01	3.10E+01	3.00E-01	2.33E+01
Qrtr->End	INFANT	THYROID	6.98E-02	Quarter	5.63E+00	1.24E+00	7.50E+00	9.31E-01
Year->End	INFANT	THYROID	6.98E-02	Annual	1.13E+01	6.21E-01	1.50E+01	4.66E-01

Critical Pathway.....: 3 Grs/Goat/Milk (GMILK)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	4.04E+00
I-131	9.56E+01
I-132	1.69E-03
I-133	2.63E-01
ND-147	4.01E-05

=== MAXIMUM PERIOD DOSE TO LIMIT (Tot Body)) ==========

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	TBODY	3.68E-03	31-day	1.50E-01	2.45E+00	2.00E-01	1.84E+00
Qrtr->End	CHILD	TBODY	3.68E-03	Quarter	5.25E+00	7.00E-02	7.50E+00	4.90E-02
Year->End	CHILD	TBODY	3.68E-03	Annual	1.05E+01	3.50E-02	1.50E+01	2.45E-02

Critical Pathway.....: 2 Vegetation (VEG)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	9.87E+01
I-131	1.37E+00
I-132	3.35E-03
I-133	5.22E-03
ND-147	7.67E-04

Date/Time: 04/26/2008 06:47 retdasID: Retdas

Table 3.1-1 (continued)

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2007 00:00
Period End Date.....: 01/01/2008 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 2
Receptor.....: 4 Composite Crit. Receptor - NG
Distance (meters)....: 0.0
Compass Point.....: 0.0

=== MAXIMUM PERIOD NG DOSE TO LIMIT (Gamma) ==========

Dose Period	Dose Type	Dose (mrad)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	Gamma	5.03E-05	31-day	1.50E-01	3.35E-02	2.00E-01	2.52E-02
Qrtr->End	Gamma	5.03E-05	Quarter	3.75E+00	1.34E-03	5.00E+00	1.01E-03
Year->End	Gamma	5.03E-05	Annual	7.50E+00	6.71E-04	1.00E+01	5.03E-04

Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
AR-41	2.90E-01
KR-85M	2.33E-02
KR-85	1.99E+00
KR-87	7.24E-02
XE-133M	6.13E-01
KR-88	1.53E-04
XE-131M	7.94E-01
XE-135	3.16E+00
XE-133	9.26E+01
XE-138	4.37E-01

=== MAXIMUM PERIOD NG DOSE TO LIMIT (Beta)) ==========

Dose Period	Dose Type	Dose (mrad)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	Beta	4.22E-04	31-day	3.00E-01	1.41E-01	4.00E-01	1.05E-01
Qrtr->End	Beta	4.22E-04	Quarter	7.50E+00	5.62E-03	1.00E+01	4.22E-03
Year->End	Beta	4.22E-04	Annual	1.50E+01	2.81E-03	2.00E+01	2.11E-03

Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
AR-41	1.99E-02
KR-85M	7.26E-03
KR-85	4.39E+01
KR-87	2.35E-02
XE-133M	5.39E-01
KR-88	5.72E-06
XE-131M	1.10E+00
XE-135	7.88E-01
XE-133	5.36E+01

Date/Time: 04/26/2008 06:47 retdasID: Retdas

Table 3.2-1

MAXIMUM DOSES RESULTING FROM LIQUID EFFLUENTS

LIQUID RELEASE AND DOSE SUMMARY REPORT
------ (PERIOD BASIS - BY UNIT) ------

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2007 00:00
Period End Date.....: 01/01/2008 00:00
Period Duration (mins): 5.256E+05
Unit.....: 1
Receptor.....: 0 Liquid Receptor

=== MAXIMUM PERIOD DOSE TO LIMIT (Any Organ) ==========

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	LIVER	1.45E-01	31-day	1.50E-01	9.68E+01	2.00E-01	7.26E+01
Qrtr->End	CHILD	LIVER	1.45E-01	Quarter	3.75E+00	3.87E+00	5.00E+00	2.90E+00
Year->End	CHILD	LIVER	1.45E-01	Annual	7.50E+00	1.94E+00	1.00E+01	1.45E+00

Critical Pathway.....: 0 Potable Water (PWtr)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	9.92E+01
CR-51	0.00E+00
MN-54	2.17E-03
FE-59	1.23E-02
CO-58	6.96E-04
CO-60	1.50E-03
ZR-95	1.39E-07
NB-95	2.20E-04
TC-99M	6.45E-10
TE-132	1.30E-04
I-131	3.74E-05
CS-134	3.55E-01
CS-136	3.66E-03
CS-137	1.93E-01

=== MAXIMUM PERIOD DOSE TO LIMIT (Tot Body)) ==========

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	TBODY	1.45E-01	31-day	4.50E-02	3.21E+02	6.00E-02	2.41E+02
Qrtr->End	CHILD	TBODY	1.45E-01	Quarter	1.13E+00	1.28E+01	1.50E+00	9.63E+00
Year->End	CHILD	TBODY	1.45E-01	Annual	2.25E+00	6.42E+00	3.00E+00	4.82E+00

Critical Pathway.....: 0 Potable Water (PWtr)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	9.96E+01
CR-51	1.18E-05
MN-54	5.80E-04
FE-59	6.17E-03

Date/Time: 04/26/2008 06:48 retdasID: Retdas

Table 3.2-1 (continued)

MAXIMUM DOSES RESULTING FROM LIQUID EFFLUENTS

LIQUID RELEASE AND DOSE SUMMARY REPORT
------ (PERIOD BASIS - BY UNIT) ------

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2007 00:00
Period End Date.....: 01/01/2008 00:00
Period Duration (mins): 5.256E+05
Unit.....: 2
Receptor.....: 0 Liquid Receptor

=== MAXIMUM PERIOD DOSE TO LIMIT (Any Organ) ==========

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	LIVER	1.45E-01	31-day	1.50E-01	9.68E+01	2.00E-01	7.26E+01
Qrtr->End	CHILD	LIVER	1.45E-01	Quarter	3.75E+00	3.87E+00	5.00E+00	2.90E+00
Year->End	CHILD	LIVER	1.45E-01	Annual	7.50E+00	1.94E+00	1.00E+01	1.45E+00

Critical Pathway.....: 0 Potable Water (PWtr)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	9.92E+01
CR-51	0.00E+00
MN-54	2.17E-03
FE-59	1.23E-02
CO-58	6.96E-04
CO-60	1.50E-03
ZR-95	1.39E-07
NB-95	2.20E-04
TC-99M	6.45E-10
TE-132	1.30E-04
I-131	3.74E-05
CS-134	3.55E-01
CS-136	3.66E-03
CS-137	1.93E-01

=== MAXIMUM PERIOD DOSE TO LIMIT (Tot Body)) ==========

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	TBODY	1.45E-01	31-day	4.50E-02	3.21E+02	6.00E-02	2.41E+02
Qrtr->End	CHILD	TBODY	1.45E-01	Quarter	1.13E+00	1.28E+01	1.50E+00	9.63E+00
Year->End	CHILD	TBODY	1.45E-01	Annual	2.25E+00	6.42E+00	3.00E+00	4.82E+00

Critical Pathway.....: 0 Potable Water (PWtr)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	9.96E+01
CR-51	1.18E-05
MN-54	5.80E-04
FE-59	6.17E-03

Date/Time: 04/26/2008 06:49 retdasID: Retdas

Table 3.3-1

10CFR20 COMPLIANCE ASSESSMENT

Braidwood Nuclear Station

Unit 1

10 CFR 20 Compliance Assessment

Period of Assessment: 1/1/07 through 12/31/07
Calculated 4/24/08

10 CFR 20.1301(A)(1) COMPLIANCE

Total Effective Dose Equivalent (TEDE)	mrem/year	8.43E-01
10 CFR 20.1301(a)(1) limit	mrem/year	100.00
	% of limit	0.84

COMPLIANCE SUMMARY

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
TEDE (mrem)	7.43E-02	2.90E-01	5.05E-02	4.28E-02	8.43E-01

Table 3.3-1 (continued)

10CFR20 COMPLIANCE ASSESSMENT

Braidwood Nuclear Station

Unit 2

10 CFR 20 Compliance Assessment

Period of Assessment: 1/1/07 through 12/31/07
Calculated 4/24/08

10 CFR 20.1301(A)(1) COMPLIANCE

Total Effective Dose Equivalent (TEDE)	mrem/year	1.25E+00
10 CFR 20.1301(a)(1) limit	mrem/year	100.00
	% of limit	1.25

COMPLIANCE SUMMARY

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
TEDE (mrem)	4.15E-02	2.48E-01	3.38E-02	9.27E-012	1.25E+00

Table 3.4-1

Braidwood Station - Unit 1

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

2007

TYPE OF DOSE	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	ANNUAL
GAMMA AIR (mrad)	1.640E-05(W)	5.720E-06(W)	1.110E-05(W)	3.750E-05(NNW)	5.532E-05(NNW)
BETA AIR (mrad)	1.670E-04(W)	1.670E-04(W)	2.100E-04(W)	4.030E-04(NNW)	7.350E-04(WNW)
WHOLE BODY (mrem)	7.890E-06(W)	2.590E-06(W)	5.270E-06(W)	1.850E-05(NNW)	2.694E-05(NNW)
SKIN (mrem)	6.970E-05(W)	8.520E-05(W)	9.510E-05(W)	1.780E-04(NNW)	3.187E-04(W)
ORGAN (mrem)	4.120E-04(W)	8.290E-04(W)	4.310E-04(W)	3.030E-04(NNW)	1.788E-03(W)
CRITICAL PERSON	Teenager	Teenager	Teenager	Teenager	Teenager
CRITICAL ORGAN	Thyroid	Thyroid	Thyroid	Thyroid	Thyroid

COMPLIANCE STATUS

TYPE OF DOSE	10 CFR 50 APP. I QUARTERLY OBJECTIVE	% OF APP. I	10 CFR 50 APP.I YEARLY OBJECTIVE	% OF APP. I
GAMMA AIR (mrad)	5.0	0.00	10.0	0.00
BETA AIR (mrad)	10.0	0.00	20.0	0.00
WHOLE BODY (mrem)	2.5	0.00	5.0	0.00
SKIN (mrem)	7.5	0.00	15.0	0.00
ORGAN (mrem)	7.5	0.01	15.0	0.01
CRITICAL PERSON		Teenager		Teenager
CRITICAL ORGAN		Thyroid		Thyroid

Calculation used release data from the following:
Unit 1 - Vent

Date of calculation: 4/21/2008

Table 3.4-1 (continued)

Braidwood Station - Unit 2

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

2007

TYPE OF DOSE	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	ANNUAL
GAMMA AIR (mrad)	4.250E-07(W)	1.960E-06(W)	8.100E-06(W)	3.550E-05(NNW)	4.184E-05(NNW)
BETA AIR (mrad)	4.040E-05(W)	1.410E-04(W)	1.820E-04(W)	3.880E-04(NNW)	5.895E-04(WNW)
WHOLE BODY (mrem)	3.510E-08(W)	6.740E-07(W)	3.780E-06(W)	1.790E-05(NNW)	2.067E-05(NNW)
SKIN (mrem)	2.190E-05(W)	7.530E-05(W)	8.590E-05(W)	1.720E-04(NNW)	2.598E-04(WNW)
ORGAN (mrem)	2.200E-05(W)	3.980E-04(W)	2.970E-04(W)	2.820E-04(NNW)	8.240E-04(W)
CRITICAL PERSON	Teenager	Teenager	Teenager	Teenager	Teenager
CRITICAL ORGAN	Liver	Liver	Liver	Thyroid	Thyroid

COMPLIANCE STATUS

TYPE OF DOSE	10 CFR 50 APP. I QUARTERLY OBJECTIVE	% OF APP. I	10 CFR 50 APP.I YEARLY OBJECTIVE	% OF APP. I
GAMMA AIR (mrad)	5.0	0.00	10.0	0.00
BETA AIR (mrad)	10.0	0.00	20.0	0.00
WHOLE BODY (mrem)	2.5	0.00	5.0	0.00
SKIN (mrem)	7.5	0.00	15.0	0.00
ORGAN (mrem)	7.5	0.01	15.0	0.01
CRITICAL PERSON		Teenager		Teenager
CRITICAL ORGAN		Liver		Thyroid

Calculation used release data from the following:
Unit 2 - Vent

Date of calculation: 4/21/2008

APPENDIX F

METEOROLOGICAL

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	2	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	0	0	4	0	0	0	4
ENE	0	0	6	0	0	0	6
E	0	3	3	0	0	0	6
ESE	0	0	2	0	0	0	2
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	2	3	0	0	5
SW	0	1	1	2	0	0	4
WSW	0	0	0	4	0	0	4
W	0	0	2	4	3	0	9
WNW	0	3	12	4	0	0	19
NW	0	2	15	0	0	0	17
NNW	0	0	9	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	0	9	58	17	3	0	87

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	1	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	0	1	0	0	0	1
ENE	0	1	0	0	0	0	1
E	0	2	0	0	0	0	2
ESE	0	1	3	0	0	0	4
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	1	2	2	0	0	5
SW	0	0	5	4	0	0	9
WSW	0	3	2	3	0	0	8
W	0	0	1	2	1	0	4
WNW	0	1	8	5	0	0	14
NW	0	2	4	3	0	0	9
NNW	0	1	2	1	0	0	4
Variable	0	0	0	0	0	0	0
Total	0	12	29	20	1	0	62

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	0	0	0	0	1
NNE	0	0	0	1	0	0	1
NE	0	1	1	0	0	0	2
ENE	0	1	0	0	0	0	1
E	0	4	0	0	0	0	4
ESE	0	2	2	0	0	0	4
SE	0	0	4	0	0	0	4
SSE	0	0	6	0	0	0	6
S	0	1	1	0	0	0	2
SSW	0	1	3	1	0	0	5
SW	0	2	6	2	0	0	10
WSW	0	2	4	2	0	0	8
W	0	5	8	5	1	0	19
WNW	0	5	2	6	0	0	13
NW	0	1	4	1	0	0	6
NNW	0	0	6	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	0	26	47	18	1	0	92

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	12	3	4	0	0	20
NNE	4	21	17	9	0	0	51
NE	6	33	35	4	0	0	78
ENE	5	22	8	0	0	0	35
E	5	27	41	0	0	0	73
ESE	1	26	26	2	0	0	55
SE	0	12	7	0	0	0	19
SSE	0	16	16	4	0	0	36
S	0	5	33	34	4	0	76
SSW	0	9	37	52	17	0	115
SW	1	8	72	32	6	0	119
WSW	1	21	58	24	10	0	114
W	0	47	53	28	1	0	129
WNW	1	32	46	17	0	0	96
NW	3	26	30	2	0	0	61
NNW	2	14	17	0	0	0	33
Variable	0	0	0	0	0	0	0
Total	30	331	499	212	38	0	1110

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	10	0	0	0	0	11
NNE	1	7	3	0	0	0	11
NE	1	10	1	9	0	0	21
ENE	8	8	0	0	0	0	16
E	13	14	12	1	0	0	40
ESE	7	22	11	1	0	0	41
SE	4	16	9	0	0	0	29
SSE	2	10	9	4	0	0	25
S	1	10	11	15	0	0	37
SSW	1	12	27	19	1	0	60
SW	2	15	25	6	0	0	48
WSW	7	36	9	1	0	0	53
W	14	47	22	4	0	0	87
WNW	11	62	23	1	0	0	97
NW	10	32	5	0	0	0	47
NNW	6	13	9	0	0	0	28
Variable	0	0	0	0	0	0	0
Total	89	324	176	61	1	0	651

Hours of calm in this stability class: 7
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	0	0	0	0	1
NNE	1	0	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	1	0	0	0	0	0	1
SE	0	2	0	0	0	0	2
SSE	0	4	0	0	0	0	4
S	0	0	0	0	0	0	0
SSW	0	2	11	0	0	0	13
SW	1	2	0	0	0	0	3
WSW	6	23	0	0	0	0	29
W	13	21	0	0	0	0	34
WNW	17	10	0	0	0	0	27
NW	4	1	0	0	0	0	5
NNW	1	1	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	44	67	11	0	0	0	122

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	1	0	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	0	0	1	0	0	0	1
SW	1	0	0	0	0	0	1
WSW	4	0	0	0	0	0	4
W	2	2	0	0	0	0	4
WNW	1	0	0	0	0	0	1
NW	2	0	0	0	0	0	2
NNW	6	0	0	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	18	2	1	0	0	0	21

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	1	0	0	0	1
NNE	0	0	0	1	0	0	1
NE	0	0	0	3	0	0	3
ENE	0	0	0	5	0	0	5
E	0	0	3	2	0	0	5
ESE	0	0	1	4	0	0	5
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	3	1	2	0	6
SW	0	1	0	0	0	0	1
WSW	0	0	0	2	2	0	4
W	0	0	1	3	2	3	9
WNW	0	0	7	5	5	1	18
NW	0	0	11	7	2	0	20
NNW	0	0	5	4	0	0	9
Variable	0	0	0	0	0	0	0
Total	0	1	32	37	13	4	87

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	1	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	0	0	1	0	0	1
ENE	0	0	1	0	0	0	1
E	0	1	1	0	0	0	2
ESE	0	0	1	3	0	0	4
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	2	3	2	0	7
SW	0	0	1	3	2	0	6
WSW	0	2	1	1	0	0	4
W	0	0	0	3	3	1	7
WNW	0	0	2	4	9	0	15
NW	0	0	3	2	4	0	9
NNW	0	1	0	3	1	0	5
Variable	0	0	0	0	0	0	0
Total	0	4	12	24	21	1	62

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	0	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	1	0	1	1	0	3
ENE	0	1	0	0	0	0	1
E	0	0	2	2	0	0	4
ESE	0	0	4	2	0	0	6
SE	0	0	2	0	0	0	2
SSE	0	0	5	1	0	0	6
S	0	0	2	0	0	0	2
SSW	0	0	1	6	1	0	8
SW	0	1	1	4	0	0	6
WSW	0	2	0	3	1	0	6
W	0	1	6	2	5	0	14
WNW	0	1	8	1	7	1	18
NW	0	1	3	2	2	0	8
NNW	0	0	2	4	1	0	7
Variable	0	0	0	0	0	0	0
Total	0	9	36	28	18	1	92

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	3	8	3	3	0	18
NNE	0	3	22	6	6	3	40
NE	1	9	24	34	12	2	82
ENE	1	10	21	9	0	0	41
E	0	4	15	28	18	9	74
ESE	0	2	21	22	7	2	54
SE	0	5	11	4	5	0	25
SSE	0	4	13	9	8	1	35
S	0	3	7	28	27	21	86
SSW	0	2	13	38	43	28	124
SW	1	1	28	46	17	7	100
WSW	0	4	28	38	23	17	110
W	0	7	38	33	13	5	96
WNW	0	3	38	36	42	4	123
NW	0	5	23	28	6	0	62
NNW	0	3	14	18	1	0	36
Variable	0	0	0	0	0	0	0
Total	4	68	324	380	231	99	1106

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 6
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	15	2	0	0	18
NNE	0	1	9	2	0	0	12
NE	0	0	7	1	6	4	18
ENE	0	2	5	0	0	1	8
E	0	6	11	7	2	4	30
ESE	0	4	15	14	9	1	43
SE	1	3	6	16	1	0	27
SSE	0	8	7	4	9	0	28
S	0	1	10	12	9	10	42
SSW	0	2	6	12	32	5	57
SW	0	8	15	16	10	2	51
WSW	0	3	18	12	3	0	36
W	0	4	24	25	2	0	55
WNW	0	7	26	65	11	3	112
NW	0	9	33	19	0	0	61
NNW	0	1	23	12	0	0	36
Variable	0	0	0	0	0	0	0
Total	1	60	230	219	94	30	634

Hours of calm in this stability class: 6
Hours of missing wind measurements in this stability class: 18
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	2	1	0	0	3
NNE	0	0	1	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	1	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	2	4	0	0	6
S	0	1	0	0	0	0	1
SSW	0	1	0	0	2	0	3
SW	0	0	2	1	8	0	11
WSW	0	0	5	3	0	0	8
W	0	2	8	15	0	0	25
WNW	0	2	15	13	0	0	30
NW	0	0	19	10	0	0	29
NNW	0	0	3	1	0	0	4
Variable	0	0	0	0	0	0	0
Total	0	6	58	48	10	0	122

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: January - March 2007
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	5	0	0	0	5
NNE	0	0	1	0	0	0	1
NE	0	0	1	0	0	0	1
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	1	0	0	0	1
SW	0	0	0	0	1	0	1
WSW	0	1	0	0	0	0	1
W	0	0	5	2	0	0	7
WNW	0	0	0	2	0	0	2
NW	0	0	0	0	0	0	0
NNW	0	0	2	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	0	1	15	4	1	0	21

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 1
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	2	0	0	0	3
NNE	0	3	9	1	0	0	13
NE	0	13	23	0	0	0	36
ENE	1	18	1	0	0	0	20
E	0	14	9	0	0	0	23
ESE	1	10	6	0	0	0	17
SE	0	9	3	0	0	0	12
SSE	0	4	7	0	0	0	11
S	0	1	18	2	1	0	22
SSW	0	0	4	8	5	0	17
SW	0	2	3	4	0	0	9
WSW	0	4	11	2	2	0	19
W	0	9	6	2	0	0	17
WNW	0	6	19	3	0	0	28
NW	0	11	17	11	0	0	39
NNW	0	7	11	1	0	0	19
Variable	0	0	0	0	0	0	0
Total	2	112	149	34	8	0	305

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	1	1	0	0	4
NNE	1	4	3	0	0	0	8
NE	2	5	6	0	0	0	13
ENE	2	2	0	0	0	0	4
E	0	7	6	0	0	0	13
ESE	0	2	1	0	0	0	3
SE	0	8	0	0	0	0	8
SSE	0	8	2	0	0	0	10
S	0	3	4	1	1	0	9
SSW	0	2	2	2	4	0	10
SW	0	2	4	2	0	0	8
WSW	0	2	11	2	1	0	16
W	0	2	4	2	1	0	9
WNW	1	3	5	0	0	0	9
NW	1	4	3	2	0	0	10
NNW	0	4	2	1	0	0	7
Variable	0	0	0	0	0	0	0
Total	7	60	54	13	7	0	141

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	5	0	0	0	0	5
NNE	0	1	5	1	0	0	7
NE	2	4	4	0	0	0	10
ENE	1	3	4	0	0	0	8
E	1	5	0	0	0	0	6
ESE	0	3	1	0	0	0	4
SE	0	4	1	0	0	0	5
SSE	0	8	3	0	0	0	11
S	0	6	3	1	0	0	10
SSW	0	3	3	3	2	0	11
SW	0	3	1	0	2	0	6
WSW	0	4	4	0	0	0	8
W	0	3	2	3	1	0	9
WNW	0	8	2	1	0	0	11
NW	0	5	3	0	0	0	8
NNW	0	4	3	0	0	0	7
Variable	0	0	0	0	0	0	0
Total	4	69	39	9	5	0	126

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	6	7	0	0	0	13
NNE	1	15	31	1	0	0	48
NE	2	24	23	5	0	0	54
ENE	12	38	22	3	0	0	75
E	10	41	14	0	0	0	65
ESE	4	16	12	0	0	0	32
SE	1	13	4	0	0	0	18
SSE	0	18	4	1	0	0	23
S	0	12	25	6	1	0	44
SSW	0	10	16	6	11	0	43
SW	2	15	20	12	2	0	51
WSW	1	20	17	1	0	0	39
W	1	29	20	12	0	0	62
WNW	2	17	43	13	3	0	78
NW	5	17	15	3	0	0	40
NNW	5	8	14	0	0	0	27
Variable	0	0	0	0	0	0	0
Total	46	299	287	63	17	0	712

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	9	3	0	0	0	13
NNE	11	17	10	0	0	0	38
NE	12	23	1	3	0	0	39
ENE	33	18	0	1	0	0	52
E	38	22	0	0	0	0	60
ESE	10	24	8	0	0	0	42
SE	7	32	5	0	0	0	44
SSE	5	41	16	1	0	0	63
S	1	34	34	10	2	0	81
SSW	1	7	19	8	0	0	35
SW	2	17	11	0	0	0	30
WSW	5	35	4	0	0	0	44
W	8	24	3	0	0	0	35
WNW	13	16	5	0	0	0	34
NW	6	12	2	0	0	0	20
NNW	4	12	1	0	0	0	17
Variable	0	0	0	0	0	0	0
Total	157	343	122	23	2	0	647

Hours of calm in this stability class: 7
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	0	0	0	0	1
NNE	2	1	0	0	0	0	3
NE	3	0	0	0	0	0	3
ENE	20	0	0	0	0	0	20
E	10	3	0	0	0	0	13
ESE	11	1	0	0	0	0	12
SE	3	3	0	0	0	0	6
SSE	5	0	0	0	0	0	5
S	1	1	0	0	0	0	2
SSW	0	1	1	0	0	0	2
SW	3	1	0	0	0	0	4
WSW	2	7	0	0	0	0	9
W	4	3	0	0	0	0	7
WNW	10	1	0	0	0	0	11
NW	6	0	0	0	0	0	6
NNW	2	6	0	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	82	29	1	0	0	0	112

Hours of calm in this stability class: 19
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	5	0	0	0	0	0	5
ENE	2	0	0	0	0	0	2
E	7	2	0	0	0	0	9
ESE	6	0	0	0	0	0	6
SE	3	0	0	0	0	0	3
SSE	0	0	0	0	0	0	0
S	2	0	0	0	0	0	2
SSW	2	2	0	0	0	0	4
SW	3	0	0	0	0	0	3
WSW	6	2	0	0	0	0	8
W	4	2	0	0	0	0	6
WNW	4	0	0	0	0	0	4
NW	4	0	0	0	0	0	4
NNW	4	0	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	52	8	0	0	0	0	60

Hours of calm in this stability class: 52
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	1	3	5	1	0	10
NE	0	5	5	21	2	0	33
ENE	1	12	12	0	0	0	25
E	2	7	7	8	0	0	24
ESE	1	5	8	2	5	0	21
SE	0	1	7	3	0	0	11
SSE	0	1	3	6	0	0	10
S	0	0	6	13	2	1	22
SSW	0	0	1	2	6	8	17
SW	0	2	0	4	3	0	9
WSW	0	3	2	9	0	2	16
W	0	3	7	3	2	0	15
WNW	0	3	7	15	4	0	29
NW	0	3	10	13	17	0	43
NNW	0	6	11	4	1	0	22
Variable	0	0	0	0	0	0	0
Total	4	52	89	108	43	11	307

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	2	0	1	0	4
NNE	0	1	1	1	0	0	3
NE	1	5	4	4	0	0	14
ENE	3	1	1	2	0	0	7
E	0	3	0	8	1	0	12
ESE	0	1	1	0	0	1	3
SE	0	5	3	0	0	0	8
SSE	1	2	4	1	0	0	8
S	0	3	4	4	1	1	13
SSW	0	3	1	1	1	5	11
SW	0	1	0	2	2	0	5
WSW	0	2	6	5	1	1	15
W	0	1	4	4	1	1	11
WNW	0	1	4	2	1	1	9
NW	0	4	0	2	3	0	9
NNW	0	3	5	1	0	0	9
Variable	0	0	0	0	0	0	0
Total	5	37	40	37	12	10	141

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	2	0	0	0	4
NNE	0	2	0	4	0	0	6
NE	1	1	1	5	1	0	9
ENE	0	5	1	3	0	0	9
E	0	3	3	2	0	0	8
ESE	0	2	1	2	0	0	5
SE	0	2	2	0	0	0	4
SSE	0	1	6	0	0	0	7
S	0	4	6	3	0	0	13
SSW	0	1	4	1	3	3	12
SW	0	2	1	0	0	2	5
WSW	0	1	3	4	0	0	8
W	0	2	2	0	1	1	6
WNW	0	5	3	2	0	3	13
NW	0	3	4	2	2	0	11
NNW	0	3	1	1	1	0	6
Variable	0	0	0	0	0	0	0
Total	1	39	40	29	8	9	126

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	8	2	0	0	11
NNE	1	2	18	19	2	0	42
NE	0	5	14	27	10	0	56
ENE	0	15	23	21	5	0	64
E	1	14	24	33	7	2	81
ESE	0	7	12	6	5	3	33
SE	0	0	6	9	0	0	15
SSE	0	8	8	1	0	0	17
S	0	3	11	23	8	4	49
SSW	0	2	8	14	5	16	45
SW	2	5	16	9	12	3	47
WSW	0	3	23	14	1	0	41
W	0	7	17	8	6	1	39
WNW	1	7	14	33	8	20	83
NW	1	8	10	21	20	1	61
NNW	0	10	5	11	1	0	27
Variable	0	0	0	0	0	0	0
Total	6	97	217	251	90	50	711

Hours of calm in this stability class: 2
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	8	3	0	0	12
NNE	0	3	13	10	1	0	27
NE	0	7	21	7	3	1	39
ENE	3	15	35	1	1	0	55
E	1	7	31	16	0	0	55
ESE	0	3	21	15	5	0	44
SE	0	5	23	14	2	0	44
SSE	1	4	15	14	10	0	44
S	0	0	26	46	20	6	98
SSW	1	2	10	24	12	6	55
SW	1	2	13	8	2	0	26
WSW	0	3	17	18	0	0	38
W	1	1	18	12	0	0	32
WNW	0	4	18	13	1	0	36
NW	0	7	15	8	0	0	30
NNW	2	5	11	1	0	0	19
Variable	0	0	0	0	0	0	0
Total	10	69	295	210	57	13	654

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	6	3	0	0	10
NNE	1	1	1	0	0	0	3
NE	1	2	4	0	0	0	7
ENE	0	7	6	0	0	0	13
E	1	3	13	1	0	0	18
ESE	0	1	6	2	0	0	9
SE	1	1	5	2	0	0	9
SSE	0	3	4	1	0	0	8
S	0	0	1	0	0	0	1
SSW	2	1	1	2	0	0	6
SW	0	2	1	1	0	0	4
WSW	0	0	0	5	0	0	5
W	0	2	6	1	0	0	9
WNW	0	3	5	3	0	0	11
NW	1	2	5	0	0	0	8
NNW	1	1	7	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	8	30	71	21	0	0	130

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2007
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	5	3	0	0	0	8
NNE	0	5	1	0	0	0	6
NE	0	2	3	0	0	0	5
ENE	0	3	2	0	0	0	5
E	2	2	3	0	0	0	7
ESE	1	3	3	2	0	0	9
SE	0	2	0	1	0	0	3
SSE	0	2	1	0	0	0	3
S	0	5	0	0	0	0	5
SSW	0	7	2	0	0	0	9
SW	0	6	2	2	0	0	10
WSW	1	2	0	0	0	0	3
W	1	0	3	1	0	0	5
WNW	1	5	2	8	0	0	16
NW	1	4	5	0	0	0	10
NNW	1	5	2	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	8	58	32	14	0	0	112

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	3	4	0	0	0	7
NE	0	18	1	0	0	0	19
ENE	2	17	0	0	0	0	19
E	0	4	0	0	0	0	4
ESE	0	5	0	0	0	0	5
SE	0	2	2	0	0	0	4
SSE	0	3	1	0	0	0	4
S	0	1	12	2	0	0	15
SSW	0	7	24	5	0	0	36
SW	0	0	8	2	0	0	10
WSW	0	9	5	3	0	0	17
W	0	11	5	3	0	0	19
WNW	0	19	3	0	0	0	22
NW	1	14	6	0	0	0	21
NNW	0	10	4	0	0	0	14
Variable	0	0	0	0	0	0	0
Total	3	123	75	15	0	0	216

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	0	0	0	0	4
NNE	0	7	5	0	0	0	12
NE	1	15	0	0	0	0	16
ENE	1	13	0	0	0	0	14
E	0	5	0	0	0	0	5
ESE	1	7	0	0	0	0	8
SE	2	3	0	0	0	0	5
SSE	0	2	2	0	0	0	4
S	1	4	3	2	0	0	10
SSW	0	11	13	2	0	0	26
SW	0	4	6	3	0	0	13
WSW	1	8	6	0	0	0	15
W	0	10	1	1	0	0	12
WNW	0	3	0	1	0	0	4
NW	1	10	1	0	0	0	12
NNW	0	10	2	0	0	0	12
Variable	0	0	0	0	0	0	0
Total	8	116	39	9	0	0	172

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	0	0	0	0	3
NNE	2	5	2	0	0	0	9
NE	0	7	1	0	0	0	8
ENE	2	5	0	0	0	0	7
E	4	2	0	0	0	0	6
ESE	0	3	0	0	0	0	3
SE	2	6	1	0	0	0	9
SSE	1	8	0	0	0	0	9
S	0	9	3	0	0	0	12
SSW	0	5	8	1	0	0	14
SW	0	4	9	1	0	0	14
WSW	0	7	2	0	0	0	9
W	0	8	4	0	0	0	12
WNW	3	4	0	0	0	0	7
NW	0	8	0	0	0	0	8
NNW	0	10	2	0	0	0	12
Variable	0	0	0	0	0	0	0
Total	14	94	32	2	0	0	142

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	7	2	0	0	0	12
NNE	6	25	7	0	0	0	38
NE	12	31	2	0	0	0	45
ENE	19	20	0	0	0	0	39
E	16	5	0	0	0	0	21
ESE	4	10	1	0	0	0	15
SE	2	20	4	0	0	0	26
SSE	2	22	4	0	0	0	28
S	1	10	34	7	0	0	52
SSW	1	16	25	4	0	0	46
SW	1	23	34	5	0	0	63
WSW	4	21	5	1	0	0	31
W	2	23	7	0	0	0	32
WNW	6	16	2	0	0	0	24
NW	7	11	2	0	0	0	20
NNW	3	13	18	0	0	0	34
Variable	0	0	0	0	0	0	0
Total	89	273	147	17	0	0	526

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	8	19	2	0	0	0	29
NNE	15	23	2	0	0	0	40
NE	24	13	1	0	0	0	38
ENE	37	7	0	0	0	0	44
E	32	8	0	0	0	0	40
ESE	10	35	0	0	0	0	45
SE	7	49	6	0	0	0	62
SSE	7	53	22	0	0	0	82
S	6	48	20	0	0	0	74
SSW	5	18	33	2	0	0	58
SW	7	10	19	0	0	0	36
WSW	9	18	1	0	0	0	28
W	15	13	1	0	0	0	29
WNW	17	8	2	0	0	0	27
NW	10	10	0	0	0	0	20
NNW	2	20	4	0	0	0	26
Variable	0	0	0	0	0	0	0
Total	211	352	113	2	0	0	678

Hours of calm in this stability class: 9
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	9	1	0	0	0	0	10
NNE	14	5	0	0	0	0	19
NE	14	0	0	0	0	0	14
ENE	17	0	0	0	0	0	17
E	43	2	0	0	0	0	45
ESE	22	15	0	0	0	0	37
SE	2	10	0	0	0	0	12
SSE	3	7	0	0	0	0	10
S	5	3	0	0	0	0	8
SSW	3	3	0	0	0	0	6
SW	4	2	1	0	0	0	7
WSW	9	12	0	0	0	0	21
W	11	0	0	0	0	0	11
WNW	19	1	0	0	0	0	20
NW	9	2	0	0	0	0	11
NNW	6	1	0	0	0	0	7
Variable	0	0	0	0	0	0	0
Total	190	64	1	0	0	0	255

Hours of calm in this stability class: 24
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	14	0	0	0	0	0	14
NNE	12	1	0	0	0	0	13
NE	5	0	0	0	0	0	5
ENE	13	0	0	0	0	0	13
E	15	0	0	0	0	0	15
ESE	9	0	0	0	0	0	9
SE	4	0	0	0	0	0	4
SSE	2	0	0	0	0	0	2
S	1	0	0	0	0	0	1
SSW	4	0	0	0	0	0	4
SW	2	0	0	0	0	0	2
WSW	6	1	0	0	0	0	7
W	15	0	0	0	0	0	15
WNW	7	0	0	0	0	0	7
NW	8	0	0	0	0	0	8
NNW	4	0	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	121	2	0	0	0	0	123

Hours of calm in this stability class: 50
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	1	0	0	0	1
NNE	0	2	5	0	0	0	7
NE	0	9	7	0	0	0	16
ENE	1	10	11	0	0	0	22
E	0	4	0	0	0	0	4
ESE	0	1	2	0	0	0	3
SE	0	2	3	1	0	0	6
SSE	0	1	2	0	0	0	3
S	0	0	5	7	2	0	14
SSW	0	0	18	12	5	0	35
SW	0	1	2	8	2	0	13
WSW	0	3	2	4	2	0	11
W	0	6	9	3	3	1	22
WNW	0	9	17	2	0	0	28
NW	1	8	7	5	0	0	21
NNW	0	4	5	1	0	0	10
Variable	0	0	0	0	0	0	0
Total	2	60	96	43	14	1	216

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	0	0	0	0	3
NNE	0	5	6	2	0	0	13
NE	0	8	6	0	0	0	14
ENE	1	10	5	0	0	0	16
E	0	3	1	0	0	0	4
ESE	1	6	2	0	0	0	9
SE	1	2	0	0	0	0	3
SSE	0	3	0	0	0	0	3
S	0	2	3	4	1	0	10
SSW	1	4	8	7	1	2	23
SW	0	3	5	7	2	0	17
WSW	1	3	4	4	0	0	12
W	0	6	4	3	1	0	14
WNW	0	3	3	0	1	0	7
NW	0	5	5	2	0	0	12
NNW	0	7	4	1	0	0	12
Variable	0	0	0	0	0	0	0
Total	5	73	56	30	6	2	172

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	2	0	0	0	4
NNE	0	4	3	1	0	0	8
NE	2	2	5	1	0	0	10
ENE	0	4	3	0	0	0	7
E	0	3	0	0	0	0	3
ESE	2	5	0	0	0	0	7
SE	1	7	0	1	0	0	9
SSE	0	3	3	0	0	0	6
S	1	2	8	1	0	0	12
SSW	0	2	4	4	1	0	11
SW	0	2	6	8	1	0	17
WSW	0	3	2	2	0	0	7
W	0	5	4	4	0	0	13
WNW	1	4	1	1	0	0	7
NW	1	3	5	0	0	0	9
NNW	0	8	4	0	0	0	12
Variable	0	0	0	0	0	0	0
Total	8	59	50	23	2	0	142

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	6	4	2	0	0	14
NNE	3	13	16	3	0	0	35
NE	1	11	17	8	0	0	37
ENE	6	23	11	0	0	0	40
E	6	14	6	0	0	0	26
ESE	2	6	8	2	0	0	18
SE	2	9	8	6	0	0	25
SSE	2	5	11	4	0	0	22
S	0	4	9	20	15	1	49
SSW	1	3	17	18	7	3	49
SW	2	4	28	29	4	1	68
WSW	0	8	14	3	3	0	28
W	1	12	12	7	0	0	32
WNW	1	4	14	3	2	0	24
NW	2	9	4	7	0	0	22
NNW	3	10	15	9	0	0	37
Variable	0	0	0	0	0	0	0
Total	34	141	194	121	31	5	526

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	3	21	5	0	0	30
NNE	3	4	19	4	0	0	30
NE	1	5	27	2	0	0	35
ENE	2	15	26	1	0	0	44
E	1	13	25	3	0	0	42
ESE	2	7	17	9	0	0	35
SE	1	5	26	26	0	0	58
SSE	0	4	37	40	9	0	90
S	1	6	21	29	6	0	63
SSW	1	6	19	44	7	1	78
SW	2	11	8	22	3	0	46
WSW	3	5	13	6	1	0	28
W	1	8	8	5	0	0	22
WNW	0	10	15	5	0	0	30
NW	2	6	12	4	0	0	24
NNW	0	3	20	9	0	0	32
Variable	0	0	0	0	0	0	0
Total	21	111	314	214	26	1	687

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	1	5	0	0	0	7
NNE	1	4	5	6	0	0	16
NE	2	2	13	3	0	0	20
ENE	2	8	9	0	0	0	19
E	0	5	21	3	0	0	29
ESE	1	4	13	21	0	0	39
SE	0	6	12	11	0	0	29
SSE	0	1	5	1	0	0	7
S	0	1	5	2	0	0	8
SSW	3	2	9	0	0	0	14
SW	2	3	5	1	0	0	11
WSW	2	3	6	6	0	0	17
W	2	3	6	1	0	0	12
WNW	1	0	15	0	0	0	16
NW	1	7	7	2	0	0	17
NNW	0	1	16	0	0	0	17
Variable	0	0	0	0	0	0	0
Total	18	51	152	57	0	0	278

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: July - September 2007
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	10	0	0	0	13
NNE	0	1	5	2	0	0	8
NE	1	5	3	5	0	0	14
ENE	1	1	4	0	0	0	6
E	1	7	7	1	0	0	16
ESE	2	4	10	3	0	0	19
SE	3	2	1	2	0	0	8
SSE	4	3	0	0	0	0	7
S	2	3	0	0	0	0	5
SSW	3	10	1	0	0	0	14
SW	2	5	3	0	0	0	10
WSW	1	3	3	0	0	0	7
W	3	4	6	1	0	0	14
WNW	0	2	4	1	0	0	7
NW	0	4	9	1	0	0	14
NNW	2	2	4	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	25	59	70	16	0	0	170

Hours of calm in this stability class: 3
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 11

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	0	0	2	0	0	2
NE	0	0	0	0	0	0	0
ENE	0	1	0	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	1	0	0	0	1
S	0	0	1	0	0	0	1
SSW	0	0	5	2	0	0	7
SW	0	0	1	0	0	0	1
WSW	0	0	1	1	0	0	2
W	0	0	1	4	0	0	5
WNW	0	0	12	2	0	0	14
NW	0	5	15	2	0	0	22
NNW	0	0	2	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	0	6	39	13	0	0	58

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	1	0	0	0	1
NNE	0	0	2	1	0	0	3
NE	1	0	1	0	0	0	2
ENE	1	0	0	0	0	0	1
E	0	1	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	1	0	0	0	0	1
S	0	2	7	1	0	0	10
SSW	0	0	6	0	0	0	6
SW	0	2	8	0	0	0	10
WSW	0	2	0	1	0	0	3
W	0	1	1	0	0	0	2
WNW	0	3	5	1	0	0	9
NW	1	3	7	1	0	0	12
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	3	15	38	5	0	0	61

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	3	3	1	0	0	8
NNE	0	3	0	0	0	0	3
NE	1	2	1	0	0	0	4
ENE	0	3	0	0	0	0	3
E	3	2	0	0	0	0	5
ESE	0	1	0	0	0	0	1
SE	0	0	1	0	0	0	1
SSE	0	3	2	0	0	0	5
S	0	5	1	0	0	0	6
SSW	0	3	8	0	4	0	15
SW	0	2	7	1	1	0	11
WSW	1	3	1	0	3	0	8
W	0	6	2	2	0	0	10
WNW	0	3	6	1	0	0	10
NW	0	1	4	0	0	0	5
NNW	0	5	7	1	0	0	13
Variable	0	0	0	0	0	0	0
Total	6	45	43	6	8	0	108

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	18	18	6	0	0	45
NNE	4	34	24	2	0	0	64
NE	6	24	22	0	0	0	52
ENE	9	14	0	0	0	0	23
E	11	16	0	0	0	0	27
ESE	1	11	12	1	0	0	25
SE	2	29	27	6	0	0	64
SSE	2	41	48	9	1	0	101
S	0	20	37	17	3	0	77
SSW	0	20	41	26	8	0	95
SW	2	24	45	5	0	0	76
WSW	4	27	33	16	14	0	94
W	8	26	35	17	1	0	87
WNW	7	42	44	16	0	0	109
NW	10	12	26	2	0	0	50
NNW	5	36	39	8	0	0	88
Variable	0	0	0	0	0	0	0
Total	74	394	451	131	27	0	1077

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 6
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	6	9	7	0	0	0	22
NNE	5	6	2	0	0	0	13
NE	14	6	1	0	0	0	21
ENE	18	9	0	0	0	0	27
E	8	9	0	0	0	0	17
ESE	14	33	4	0	0	0	51
SE	4	35	11	1	0	0	51
SSE	9	42	20	1	0	0	72
S	1	50	49	16	0	0	116
SSW	3	13	42	11	0	0	69
SW	4	15	15	0	0	0	34
WSW	6	32	4	1	0	0	43
W	11	16	3	0	0	0	30
WNW	17	34	11	0	0	0	62
NW	9	19	5	0	0	0	33
NNW	5	13	0	0	0	0	18
Variable	0	0	0	0	0	0	0
Total	134	341	174	30	0	0	679

Hours of calm in this stability class: 5
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	1	0	0	0	0	4
NNE	1	0	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	1	0	0	0	0	0	1
E	8	0	0	0	0	0	8
ESE	6	3	0	0	0	0	9
SE	6	8	0	0	0	0	14
SSE	6	9	0	0	0	0	15
S	2	4	0	0	0	0	6
SSW	3	6	5	0	0	0	14
SW	3	2	0	0	0	0	5
WSW	5	7	0	0	0	0	12
W	11	6	0	0	0	0	17
WNW	15	2	0	0	0	0	17
NW	12	0	0	0	0	0	12
NNW	3	0	0	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	85	48	5	0	0	0	138

Hours of calm in this stability class: 4
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	1	0	0	0	0	0	1
NE	1	0	0	0	0	0	1
ENE	0	0	0	0	0	0	0
E	1	0	0	0	0	0	1
ESE	9	1	0	0	0	0	10
SE	4	2	0	0	0	0	6
SSE	2	0	0	0	0	0	2
S	1	0	0	0	0	0	1
SSW	1	0	0	0	0	0	1
SW	1	0	0	0	0	0	1
WSW	4	4	0	0	0	0	8
W	10	1	0	0	0	0	11
WNW	9	0	0	0	0	0	9
NW	4	0	0	0	0	0	4
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	49	8	0	0	0	0	57

Hours of calm in this stability class: 10
Hours of missing wind measurements in this stability class: 1
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	0	0	1	1	0	2
NE	0	0	0	0	0	0	0
ENE	0	1	0	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	1	0	0	1
S	0	0	1	0	1	0	2
SSW	0	0	2	3	0	0	5
SW	0	0	0	2	0	0	2
WSW	0	0	0	1	0	0	1
W	0	0	0	2	4	0	6
WNW	0	0	1	7	4	1	13
NW	0	2	5	8	8	0	23
NNW	0	0	2	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	0	3	11	25	18	1	58

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	1	1	0	2
NNE	0	0	0	2	0	0	2
NE	0	1	0	1	0	0	2
ENE	0	1	0	0	0	0	1
E	0	0	1	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	1	0	0	0	1
S	0	0	6	5	1	0	12
SSW	0	0	3	1	1	0	5
SW	0	0	5	4	0	0	9
WSW	0	0	1	1	1	0	3
W	0	0	1	1	0	0	2
WNW	0	3	0	5	1	0	9
NW	0	4	0	5	3	0	12
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	9	18	26	8	0	61

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	1	3	0	0	6
NNE	0	0	3	0	0	0	3
NE	0	2	1	1	0	0	4
ENE	1	1	0	0	0	0	2
E	0	4	1	0	0	0	5
ESE	0	0	2	0	0	0	2
SE	0	0	0	1	0	0	1
SSE	0	2	1	1	0	0	4
S	0	2	4	1	0	0	7
SSW	0	2	5	4	0	4	15
SW	0	0	3	6	0	0	9
WSW	0	3	3	1	0	4	11
W	0	1	1	2	1	0	5
WNW	0	3	2	3	4	0	12
NW	0	4	0	6	1	0	11
NNW	0	3	4	3	0	0	10
Variable	0	0	0	0	0	0	0
Total	1	29	31	32	6	8	107

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 1
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	10	14	14	5	1	44
NNE	5	9	19	17	7	0	57
NE	1	11	24	18	4	0	58
ENE	0	10	12	0	1	0	23
E	1	10	10	3	0	0	24
ESE	0	2	11	13	2	0	28
SE	2	3	21	17	15	2	60
SSE	0	9	39	29	12	4	93
S	0	1	29	30	13	8	81
SSW	0	5	25	31	31	10	102
SW	2	5	31	26	7	0	71
WSW	1	9	23	23	14	16	86
W	2	12	23	27	20	4	88
WNW	0	11	17	29	24	10	91
NW	5	3	19	28	23	5	83
NNW	1	15	28	31	7	0	82
Variable	0	0	0	0	0	0	0
Total	20	125	345	336	185	60	1071

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 13
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	5	11	8	0	0	24
NNE	0	5	3	5	0	0	13
NE	0	12	8	3	0	0	23
ENE	0	12	13	0	1	0	26
E	0	3	3	6	0	0	12
ESE	0	2	25	23	2	0	52
SE	0	1	22	14	3	1	41
SSE	0	10	24	15	4	0	53
S	0	4	28	52	24	9	117
SSW	2	4	18	41	17	5	87
SW	0	5	16	24	4	0	49
WSW	1	9	16	11	1	0	38
W	1	5	11	9	0	0	26
WNW	2	3	17	22	4	0	48
NW	0	3	26	20	7	0	56
NNW	2	1	12	2	0	0	17
Variable	0	0	0	0	0	0	0
Total	8	84	253	255	67	15	682

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	0	7	0	0	0	8
NNE	0	1	1	0	0	0	2
NE	0	0	0	0	0	0	0
ENE	0	1	1	0	0	0	2
E	0	0	3	1	0	0	4
ESE	0	0	2	4	0	0	6
SE	0	1	1	3	0	0	5
SSE	0	1	6	5	0	0	12
S	0	4	10	3	0	0	17
SSW	0	2	7	0	2	0	11
SW	0	4	2	3	2	0	11
WSW	0	2	4	1	0	0	7
W	0	0	6	4	0	0	10
WNW	0	2	11	4	0	0	17
NW	0	1	7	4	0	0	12
NNW	0	1	15	2	0	0	18
Variable	0	0	0	0	0	0	0
Total	1	20	83	34	4	0	142

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2007
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	2	0	0	0	4
NNE	0	2	1	0	0	0	3
NE	0	2	0	0	0	0	2
ENE	0	1	0	0	0	0	1
E	0	2	0	0	0	0	2
ESE	1	0	1	0	0	0	2
SE	0	1	1	6	0	0	8
SSE	0	3	3	0	0	0	6
S	0	1	3	0	0	0	4
SSW	0	0	0	0	0	0	0
SW	0	2	1	0	0	0	3
WSW	1	0	2	1	0	0	4
W	0	2	3	2	0	0	7
WNW	0	1	3	1	0	0	5
NW	0	6	2	2	0	0	10
NNW	0	3	2	2	0	0	7
Variable	0	0	0	0	0	0	0
Total	2	28	24	14	0	0	68

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

APPENDIX G

ANNUAL RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM REPORT (ARGPPR)

Docket No: 50-456
50-457

BRAIDWOOD STATION
UNITS 1 and 2

Annual Radiological
Groundwater Protection Program Report

1 January Through 31 December 2007

Prepared By

Teledyne Brown Engineering
Environmental Services

Exelon SM
Nuclear

Braidwood Station
Braceville, IL 60407

May 2008

Table Of Contents

Appendices

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I. Summary and Conclusions

In 2007, Exelon continued a comprehensive program that evaluates the impact of station operations on groundwater and surface water in the vicinity of Braidwood Station. This evaluation involved numerous station personnel and contractor support personnel. This report covers groundwater and surface water samples, collected from the environment, both on and off station property in 2007. During that time period, 1012 analyses were performed on 964 samples from 295 locations.

In assessing all the data gathered for this report, it was concluded that the operation of Braidwood Station had no adverse radiological impact on the environment. There were two known releases to soil at Braidwood Station in 2007. These releases did not impact the environment beyond the site boundary.

Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective Lower Limits of Detection (LLDs) as specified in the Offsite Dose Calculation Manual (ODCM) in any of the groundwater or surface water samples except for Potassium-40. In the case of tritium, Exelon specified that it's laboratories achieve a lower limit of detection 10 times lower than that required by federal regulation.

Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 picoCuries per liter (pCi/L) in any of the groundwater or surface water samples tested.

Tritium was detected in the groundwater samples at concentrations greater than the United States Environmental Protection Agency (USEPA) drinking water standard (and the Nuclear Regulatory Commission Reporting Limit) of 20,000 pCi/L. Tritium greater than 20,000 pCi/L was detected in 9 of 998 analyses. Tritium was not detected in any surface water samples greater than 20,000 pCi/L. Low levels of tritium were detected at concentrations greater than the LLD of 200 pCi/L in 338 of 998 analyses. The tritium concentrations ranged from 201 ± 100 pCi/L to 78,123 ± 757 pCi/L. The tritium that was detected in the groundwater is believed to be the result of isolated historical releases and/or background from external sources greater than 200 pCi/L. With ongoing investigation of the site groundwater, the Radiological Groundwater Protection Program (RGPP) will continue to expand as needed.

II. Introduction

The Braidwood Station, consisting of two 3587 MWt pressurized water reactors owned and operated by Exelon Corporation, is located in Will County, Illinois. Unit No. 1 went critical on 29 May 1987. Unit No. 2 went critical on 08 March 1988. The site is located in northeastern Illinois, 15 miles south-southwest of Joliet, Illinois and 60 miles southwest of Chicago and southwest of the Kankakee River.

This report covers those analyses performed by Teledyne Brown Engineering (TBE) and Environmental Inc. Midwest Labs (EIML) on samples collected in 2007.

A. Objective of the RGPP

The long-term objectives of the RGPP are as follows:

1. Identify suitable locations to monitor and evaluate potential impacts from station operations before significant radiological impact to the environment and potential drinking water sources.

2. Understand the local hydrogeologic regime in the vicinity of the station and maintain up-to-date knowledge of flow patterns on the surface and shallow subsurface.

3. Perform routine water sampling and radiological analysis of water from selected locations.

4. Report new leaks, spills, or other detections with potential radiological significance to stakeholders in a timely manner.

5. Regularly assess analytical results to identify adverse trends.

6. Take necessary corrective actions to protect groundwater resources.

B. Implementation of the Objectives

The objectives identified have been implemented at Braidwood Station as discussed below:

1. Exelon identified locations to monitor and evaluate potential impacts from station operations.

2. The Braidwood Station reports describe the local hydrogeologic regime. Periodically, the flow patterns on the surface and shallow subsurface are updated based on ongoing measurements.

3. Braidwood Station will continue to perform routine sampling and radiological analysis of water from selected locations.

4. Braidwood Station has implemented procedures to identify and report new leaks, spills, or other detections with potential radiological significance in a timely manner.

5. Assessed results to monitor for adverse trends.

6. Braidwood Station staff and consulting hydrogeologist assess analytical results on an ongoing basis to identify adverse trends.

C. Program Description

1. Sample Collection

Sample locations can be found in Table A-1 and Figures A-1 through A-4, Appendix A.

Groundwater and Surface Water

Samples of water are collected, managed, transported and analyzed in accordance with approved procedures following EPA methods. Both groundwater and surface water are collected. Sample locations, sample collection frequencies and analytical frequencies are controlled in accordance with approved station procedures. Contractor and/or station personnel are trained in the collection, preservation management, and shipment of samples, as well as in documentation of sampling events. Analytical laboratories are subject to internal quality assurance programs, industry cross-check programs, as well as nuclear industry audits. Station personnel review and evaluate all analytical data deliverables as data are received.

Analytical data results are reviewed by both station personnel and an independent hydrogeologist for adverse trends or changes to hydrogeologic conditions.

D. Characteristics of Tritium (H-3)

Tritium (chemical symbol H-3) is a radioactive isotope of hydrogen. The most common form of tritium is tritium oxide, which is also called "tritiated water." The chemical properties of tritium are essentially those of ordinary hydrogen.

Tritiated water behaves the same as ordinary water in both the environment and the body. Tritium can be taken into the body by drinking water, breathing air, eating food, or absorption through the skin. Once tritium enters the body, it disperses quickly and is uniformly distributed throughout the body. Tritium is excreted primarily through urine with a clearance rate characterized by an effective biological half-life of about 14 days. Within one month or so after ingestion, essentially all tritium is cleared. Organically bound tritium (tritium that is incorporated in organic compounds) can remain in the body for a longer period.

Tritium is produced naturally in the upper atmosphere when cosmic rays strike air molecules. Tritium is also produced during nuclear weapons explosions, as a by-product in reactors producing electricity, and in special production reactors, where the isotopes lithium-7 and/or boron-10 are activated to produce tritium. Like normal water, tritiated water is colorless and odorless. Tritiated water behaves chemically and physically like non-tritiated water in the subsurface, and therefore tritiated water will travel at the same velocity as the average groundwater velocity.

Tritium has a half-life of approximately 12.3 years. It decays spontaneously to helium-3 (3He). This radioactive decay releases a beta particle (low-energy electron). The radioactive decay of tritium is the source of the health risk from exposure to tritium. Tritium is one of the least dangerous radionuclides because it emits very weak radiation and leaves the body relatively quickly. Since tritium is almost always found as water, it goes directly into soft tissues and organs. The associated dose to these tissues is generally uniform and is dependent on the water content of the specific tissue.

III. Program Description

A. Sample Analysis

This section describes the general analytical methodologies used by Teledyne Brown Engineering (TBE) and Environmental Incorporated Midwest Laboratory (EIML) to analyze the environmental samples for radioactivity for the Braidwood Station RGPP in 2007.

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

1. Concentrations of gamma emitters in groundwater and surface water.

2. Concentrations of strontium in groundwater and surface water.

3. Concentrations of tritium in groundwater and surface water.

B. Data Interpretation

The radiological data collected prior to Braidwood Station becoming operational were used as a baseline with which these operational data were compared. For the purpose of this report, Braidwood Station was considered operational at initial criticality. Several factors were important in the interpretation of the data:

1. Lower Limit of Detection and Minimum Detectable Concentration

The lower limit of detection (LLD) is specified by federal regulation as a minimum sensitivity value that must be achieved routinely by the analytical parameter.

2. Laboratory Measurements Uncertainty

The estimated uncertainty in measurement of tritium in environmental samples is frequently on the order of 50% of the measurement value.

Statistically, the exact value of a measurement is expressed as a range with a stated level of confidence. The convention is to report results with a 95% level of confidence. The uncertainty comes from calibration standards, sample volume or weight measurements, sampling uncertainty and other factors. Exelon reports the uncertainty of a measurement created by statistical process (counting error) as well as all sources of error (Total Propagated Uncertainty or TPU). Each result has two values calculated. Exelon reports the TPU by following the result with plus or minus (±) the estimated sample standard deviation, as TPU, that is obtained by propagating all sources of analytical uncertainty in measurements.

Analytical uncertainties are reported at the 95% confidence level in this report for reporting consistency with the AREOR.

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

For groundwater and surface water 14 nuclides, 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 and La-140 were reported.

C. Background Analysis

A pre-operational radiological environmental monitoring program (pre-operational REMP) was conducted to establish background radioactivity levels prior to operation of the Station. The environmental media sampled and analyzed during the pre-operational REMP were atmospheric radiation, fall-out, domestic water, surface water, marine life, and foodstuffs. The results of the monitoring were detailed in the report entitled, Environmental Radiological Monitoring for Braidwood Nuclear Power Station, Commonwealth Edison Company, Annual Report 1986, May 1987.

The pre-operational REMP contained analytical results from samples collected from the surface water and groundwater.

At the upstream Kankakee River collection point, BD-7, monthly composites of weekly sample collections from all surface water locations indicated tritium concentrations were not detectable above the LLD (<200 pCi/L). Monthly composites of weekly sample collections from all surface water locations indicate strontium-89, strontium-90, cesium-134 and cesium-137 concentrations were less than their specified LLDs.

Groundwater was collected from one off-site well on a quarterly basis. Gamma isotopic, radiostrontium and tritium analyses were performed on all samples. Strontium-89, strontium-90, tritium and gamma emitters were below their respective LLDs.

1. Background Concentrations of Tritium

The purpose of the following discussion is to summarize background measurements of tritium in various media performed by others.

a. Tritium Production

Tritium is created in the environment from naturally occurring processes both cosmic and subterranean, as well as from anthropogenic (i.e., man-made) sources. In the upper atmosphere, "Cosmogenic" tritium is produced from the bombardment of stable nuclides and combines with oxygen to form tritiated water, which will then enter the hydrologic cycle. Below ground, "lithogenic" tritium is produced by the bombardment of natural lithium present in crystalline rocks by neutrons produced by the radioactive decay of naturally abundant uranium and thorium. Lithogenic production of tritium is usually negligible compared to other sources due to the limited abundance of lithium in rock. The lithogenic tritium is introduced directly to groundwater.

A major anthropogenic source of tritium and strontium-90 comes from the former atmospheric testing of thermonuclear weapons. Levels of tritium in precipitation increased significantly during the 1950s and early 1960s, and later with additional testing, resulting in the release of significant amounts of tritium to the atmosphere. The Canadian heavy water nuclear power reactors, other commercial power reactors, nuclear research and weapons production continue to influence tritium concentrations in the environment.

b. Precipitation Data

Precipitation samples are routinely collected at stations around the world for the analysis of tritium and other radionuclides. Two publicly available databases that provide tritium concentrations in precipitation are Global Network of Isotopes in Precipitation (GNIP) and USEPA's RadNet database. GNIP provides tritium precipitation concentration data for samples collected world wide from 1960 to 2007. RadNet provides tritium precipitation concentration data for samples collected at stations through out the U.S. from 1960 up to and including 2007. Based on GNIP data for sample stations located in the U.S. Midwest, tritium concentrations peaked around 1963. This peak, which approached 10,000 pCi/L for some stations, coincided with the atmospheric testing of thermonuclear weapons. Tritium concentrations in surface water showed a sharp decline up until 1975 followed by a gradual decline since that time. Tritium concentrations in Midwest precipitation have typically been below 100 pCi/L

since around 1980. Tritium concentrations in wells may still be above the 200 pCi/L detection limit from the external causes described above. Water from previous years and decades is naturally captured in groundwater, so some well water sources today are affected by the surface water from the 1960s that was elevated in tritium.

c. Surface Water Data

Tritium concentrations are routinely measured in large surface water bodies, including Lake Michigan and the Mississippi River. Illinois surface water data were typically less than 100 pCi/L.

The USEPA RadNet surface water data typically has a reported 'Combined Standard Uncertainty' of 35 to 50 pCi/L. According to USEPA, this corresponds to a ±70 to 100 pCi/L 95% confidence bound on each given measurement. Therefore, the typical background data provided may be subject to measurement uncertainty of approximately ± 70 to 100 pCi/L.

The radio-analytical laboratory is counting tritium results to an Exelon specified LLD of 200 pCi/L. Typically, the lowest positive measurement will be reported within a range of 40 – 240 pCi/L or 140 ± 100 pCi/L. Clearly, these sample results cannot be distinguished as different from background at this concentration.

IV. Results and Discussion

A. Groundwater Results

Groundwater

Samples were collected from on and off-site wells throughout the year in accordance with the station radiological groundwater protection program. Analytical results and anomalies are discussed below.

Tritium

Samples from all locations were analyzed for tritium activity (Table B-I.1, Appendix B). Tritium values ranged from the detection limit to 78,123 pCi/l. The location of the 78,123 pCi/liter sample is within the Exelon owned property. This H-3 is a result of a spill from a failed vacuum breaker. Due to the location of this contamination, additional monitoring is ongoing.

Strontium

Strontium-90 was analyzed for in seven samples and was less than the required detection limit of 2.0 pCi/liter. (Table B-I.2, Appendix B).

Gamma Emitters

Potassium-40 was detected in 1 of 7 samples. The concentration in the one sample was 71 pCi/L. No other gamma emitting nuclides were detected. (Table B-I.3, Appendix B).

B. Surface Water Results

Surface Water

Samples were collected from fourteen surface water locations throughout the year in accordance with the station radiological groundwater protection program. Analytical results and anomalies are discussed below.

Tritium

Samples from all locations were analyzed for tritium activity (Table B-II.1, Appendix B). Tritium values ranged from the detection limit to 352 pCi/l.

C. Samples from all locations were analyzed for tritium activity (Table B-I.1, Appendix B). Tritium values ranged from the detection limit to 78,123 pCi/l. The location of the 78,123 pCi/liter sample is within the Exelon owned property. This H-3 is a result of a spill from a failed vacuum breaker. Due to the location of this contamination, additional monitoring is ongoing.

D. Drinking Water Well Survey

Drinking water wells near Braidwood Station were sampled quarterly in 2007.

E. Summary of Results – Inter-Laboratory Comparison Program

Inter-Laboratory Comparison Program results for TBE are presented in the AREOR.

F. Leaks, Spills, and Releases

Previously identified contaminated groundwater plumes are being addressed by the Braidwood Station tritium remediation activities.

On April 23, 2007 an unlicensed release occurred due to a spill of approximately 5 gallons of water containing 561,300 pCi/L tritium from a Sea/Land container. No gamma emitting radionuclides were detected.

On May 23, 2007 an unlicensed release occurred due to high winds pushing water from the Waste Water Treatment Lagoon and onto the ground. Approximately 1500 gallons of water at 75,000 pCi/L spilled onto the ground. No gamma emitting radionuclides were detected. All reporting requirements have been met.

G. Trends

Monitoring of remediation activities indicate that tritium concentrations in affected areas is trending down.

H. Investigations

Investigation of historic spills and the groundwater contamination has resulted in groundwater remediation activities at Braidwood Station.

I. Actions Taken

1. Compensatory Actions

All Circulating Water Blowdown valve vaults were coated to prevent any leakage of water from the vaults to the groundwater. A remote leakage detection system has been installed which provides continuous monitoring of the vaults. Operations procedures are in place for actions to take in the event the leak detection system alarms. Walkdowns of the Circulating Water Blowdown pipeline and vaults were performed weekly.

2. Installation of Monitoring Wells

   Exelon has installed a permanent monitoring well network that ensures that ground water will be appropriately monitored around the plant and at the various remediation sites. Monitoring well locations were based on the kind of up gradient potential contamination source, ground flow direction, and source concentration. Some monitoring points are not primarily used for sampling but rather to measure ground water elevation. Water elevation is used extensively around active remediation sites to verify that ground water is still flowing toward extraction wells.

3. Actions to Recover/Reverse Plumes

   Vacuum Breaker 1 area: Three extraction wells have been installed in this area to remove contaminated ground water. Monitoring of this activity indicates the remediation is proceeding acceptably.

   Vacuum Breakers 4, 6, & 7: Monitoring wells have been installed within and down gradient of these plumes which originated from vacuum breaker valves along the blowdown line. These sites are being remediated by monitored natural attenuation.

   Exelon Pond area: The combination of groundwater sample monitoring and water level monitoring ensures that the active remedial pumping of Exelon Pond continues to capture the tritium that spilled from vacuum breakers 2 and 3 almost ten years ago. Monitoring to date has shown marked reduction in the most contaminated area and the station continues to monitor plume capture to determine whether adjustments are needed in the pumping rate.

APPENDIX A

LOCATION DESIGNATION

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Braidwood Station, 2007

Station Code	Sample Description
A-1	Monitoring Well
A-1D	Monitoring Well
BL-03	Monitoring Well
BL-05	Monitoring Well
BL-06	Monitoring Well
BL-06D	Monitoring Well
BL-07	Monitoring Well
CL-08	Monitoring Well
BL-09	Monitoring Well
BL-09D	Monitoring Well
BL-10	Monitoring Well
BL-10D	Monitoring Well
BL-11	Monitoring Well
BL-11D	Monitoring Well
BL-12	Monitoring Well
BL-12D	Monitoring Well
BL-13	Monitoring Well
BL-13D	Monitoring Well
BL-14	Monitoring Well
BL-14D	Monitoring Well
BL-15	Monitoring Well
BL-15D	Monitoring Well
BL-16	Monitoring Well
BL-16D	Monitoring Well
BL-17	Monitoring Well
BL-17D	Monitoring Well
BL-18	Monitoring Well
BL-18D	Monitoring Well
BL-19D	Monitoring Well
BL-19R	Monitoring Well
BL-20D	Monitoring Well
BL-21	Monitoring Well
BL-22	Monitoring Well
BL-23	Monitoring Well
BL-24	Monitoring Well
BL-25	Monitoring Well
BL-26	Monitoring Well
BL-27	Monitoring Well
BL-28	Monitoring Well
C-1	Monitoring Well
C-1D	Monitoring Well
C-2	Monitoring Well
C-2D	Monitoring Well
CB-1	Monitoring Well
CB-1D	Monitoring Well
CB-2	Monitoring Well
CB-2D	Monitoring Well
CB-3	Monitoring Well
CB-3D	Monitoring Well
CB-4	Monitoring Well
CB-4D	Monitoring Well
CD-1	Monitoring Well
CD-1D	Monitoring Well
D-1D	Monitoring Well
D-2D	Monitoring Well
D-3D	Monitoring Well
DIAMOND LAKE	Surface Water
DITCH DS-2	Surface Water
DN-1	Monitoring Well

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Braidwood Station, 2007

Station Code	Sample Description
DN-1D	Monitoring Well
DN-2	Monitoring Well
DN-2D	Monitoring Well
DN-3	Monitoring Well
DN-3D	Monitoring Well
F-1	Monitoring Well
F-1D	Monitoring Well
F-3D	Monitoring Well
F-4D	Monitoring Well
F-5D	Monitoring Well
F-6D	Monitoring Well
F-7D	Monitoring Well
F-8D	Monitoring Well
F-9D	Monitoring Well
G1	Monitoring Well
G2	Monitoring Well
G2D	Monitoring Well
G3	Monitoring Well
G-4S	Monitoring Well
G-5S	Monitoring Well
G-6S	Monitoring Well
G-7S	Monitoring Well
H DITCH	Surface Water
LAKE DISCHARGE CANAL	Surface Water
MW-101	Monitoring Well
MW-102R	Monitoring Well
MW-103	Monitoring Well
MW-104	Monitoring Well
MW-105	Monitoring Well
MW-105D	Monitoring Well
MW-106D	Monitoring Well
MW-107	Monitoring Well
MW-109D	Monitoring Well
MW-11	Monitoring Well
MW-110	Monitoring Well
MW-111DR	Monitoring Well
MW-112D	Monitoring Well
MW-113	Monitoring Well
MW-113DR	Monitoring Well
MW-13	Monitoring Well
MW-130D	Monitoring Well
MW-131D	Monitoring Well
MW-132D	Monitoring Well
MW-133D	Monitoring Well
MW-134D	Monitoring Well
MW-135D	Monitoring Well
MW-136D	Monitoring Well
MW-137D	Monitoring Well
MW-138D	Monitoring Well
MW-139D	Monitoring Well
MW-14	Monitoring Well
MW-140D	Monitoring Well

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Braidwood Station, 2007

Station Code	Sample Description
MW-141D	Monitoring Well
MW-142D	Monitoring Well
MW-143D	Monitoring Well
MW-144D	Monitoring Well
MW-145D	Monitoring Well
MW-148D	Monitoring Well
MW-149D	Monitoring Well
MW-150D	Monitoring Well
MW-151D	Monitoring Well
MW-154	Monitoring Well
MW-155	Monitoring Well
MW-156	Monitoring Well
MW-157D	Monitoring Well
MW-158D	Monitoring Well
MW-159D	Monitoring Well
MW-160D	Monitoring Well
MW-161D	Monitoring Well
MW-162D	Monitoring Well
MW-2	Monitoring Well
MW-22	Monitoring Well
MW-4	Monitoring Well
MW-5	Monitoring Well
MW-6	Monitoring Well
MW-7	Monitoring Well
MW-9	Monitoring Well
MW-BW-201BD	Monitoring Well
MW-BW-201I	Monitoring Well
MW-BW-201S	Monitoring Well
MW-BW-202I	Distant Well
MW-BW-202S	Distant Well
MW-BW-203I	Distant Well
MW-BW-203S	Distant Well
MW-BW-204I	Distant Well
MW-BW-205I	Distant Well
MW-BW-206I	Distant Well
MW-BE-207I	Distant Well
MW-BW-208BD	Distant Well
P-1	Monitoring Well
P-10	Monitoring Well
P-11	Monitoring Well
P-13D	Monitoring Well
P-14	Monitoring Well
P-14D	Monitoring Well
P-2	Monitoring Well
P-2D	Monitoring Well
P-3	Monitoring Well
P-4	Monitoring Well
P-4D	Monitoring Well
P-5	Monitoring Well
P-5D	Monitoring Well
P-6	Monitoring Well
P-9	Monitoring Well
PW-001	Monitoring Well
PW-002	Monitoring Well
PW-003	Monitoring Well
PW-006	Monitoring Well
PW-006A	Monitoring Well
PW-006B	Monitoring Well
PW-006P	Surface Water
PW-8	Monitoring Well
PW-011	Monitoring Well
PW-014	Monitoring Well
PW-015	Monitoring Well

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Braidwood Station, 2007

Station Code	Sample Description
PW-015 P1	Surface Water
Pw-015 P2	Surface Water
PW-016	Monitoring Well
PW-13P	Surface Water
PW-601 POND	Surface Water
RW-5	Monitoring Well
RW-6	Monitoring Well
RW-7	Monitoring Well
RW-8	Monitoring Well
S-1	Monitoring Well
S-1D	Monitoring Well
S-2	Monitoring Well
S-2D	Monitoring Well
S-3	Monitoring Well
S-4	Monitoring Well
S-4D	Monitoring Well
S-5	Monitoring Well
S-6	Monitoring Well
S-7	Monitoring Well
S-7D	Monitoring Well
S-8	Monitoring Well
S-8DR	Monitoring Well
SC-1D	Monitoring Well
SC-2D	Monitoring Well
SG-BW-105	Surface Water
SW-101	Surface Water
SW-102 "C" DITCH	Surface Water
SW-103	Surface Water
SW-104 "A" DITCH	Surface Water
TB-20	Monitoring Well
TB-20D	Monitoring Well
TB-21	Monitoring Well
TB-21D	Monitoring Well
TB-22	Monitoring Well
TB-22D	Monitoring Well
TB-23	Monitoring Well
TB-23D	Monitoring Well
TB-24	Monitoring Well
TB-24D	Monitoring Well
TB-25	Monitoring Well
TB-25D	Monitoring Well
TB-26D	Monitoring Well
VB1-1	Monitoring Well
VB1-10D	Monitoring Well
VB11-1	Monitoring Well
VB1-11D	Monitoring Well
VB1-12D	Monitoring Well
VB1-2	Monitoring Well
VB1-2D	Monitoring Well
VB1-3D	Monitoring Well
VB1-4D	Monitoring Well
VB1-5	Monitoring Well
VB1-5D	Monitoring Well
VB1-7D	Monitoring Well
VB1-8D	Monitoring Well
VB1-9D	Monitoring Well
VB2-1	Monitoring Well
VB2-10	Monitoring Well
VB2-10D	Monitoring Well
VB2-11	Monitoring Well
VB2-11D	Monitoring Well
VB2-12	Monitoring Well
VB2-12D	Monitoring Well

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Braidwood Station, 2007

Station Code	Sample Description
VB2-13	Monitoring Well
VB2-13D	Monitoring Well
VB2-14	Monitoring Well
VB2-14D	Monitoring Well
VB2-15D	Monitoring Well
VB2-16	Monitoring Well
VB2-16D	Monitoring Well
VB2-17	Monitoring Well
VB2-17D	Monitoring Well
VB2-2	Monitoring Well
VB2-2D	Monitoring Well
VB2-3	Monitoring Well
VB2-4	Monitoring Well
VB2-5	Monitoring Well
VB2-5D	Monitoring Well
VB2-6	Monitoring Well
VB2-6D	Monitoring Well
VB2-7	Monitoring Well
VB2-7D	Monitoring Well
VB2-8	Monitoring Well
VB2-9	Monitoring Well
VB2-9D	Monitoring Well
VB3-1	Monitoring Well
VB3-10	Monitoring Well
VB3-10D	Monitoring Well
VB3-2	Monitoring Well
VB3-3	Monitoring Well
VB3-4	Monitoring Well
VB3-4D	Monitoring Well
VB3-5	Monitoring Well
VB3-6	Monitoring Well
VB3-7	Monitoring Well
VB3-7D	Monitoring Well
VB3-8	Monitoring Well
VB3-9D	Monitoring Well
VB4-1	Monitoring Well
VB4-5D	Monitoring Well
VB4-6D	Monitoring Well
VB5-2	Monitoring Well
VB6-1	Monitoring Well
VB7-1	Monitoring Well
VB8-2	Monitoring Well
VB9-1	Monitoring Well
VB9-10	Monitoring Well
VB9-5	Monitoring Well
VB9-5D	Monitoring Well
VB9-6	Monitoring Well
VB9-6D	Monitoring Well
VB9-7	Monitoring Well
VB9-7D	Monitoring Well
VB9-8	Monitoring Well
VB9-8D	Monitoring Well
VB9-9	Monitoring Well
WCFP-1D	Monitoring Well
WCFP-2DR	Monitoring Well

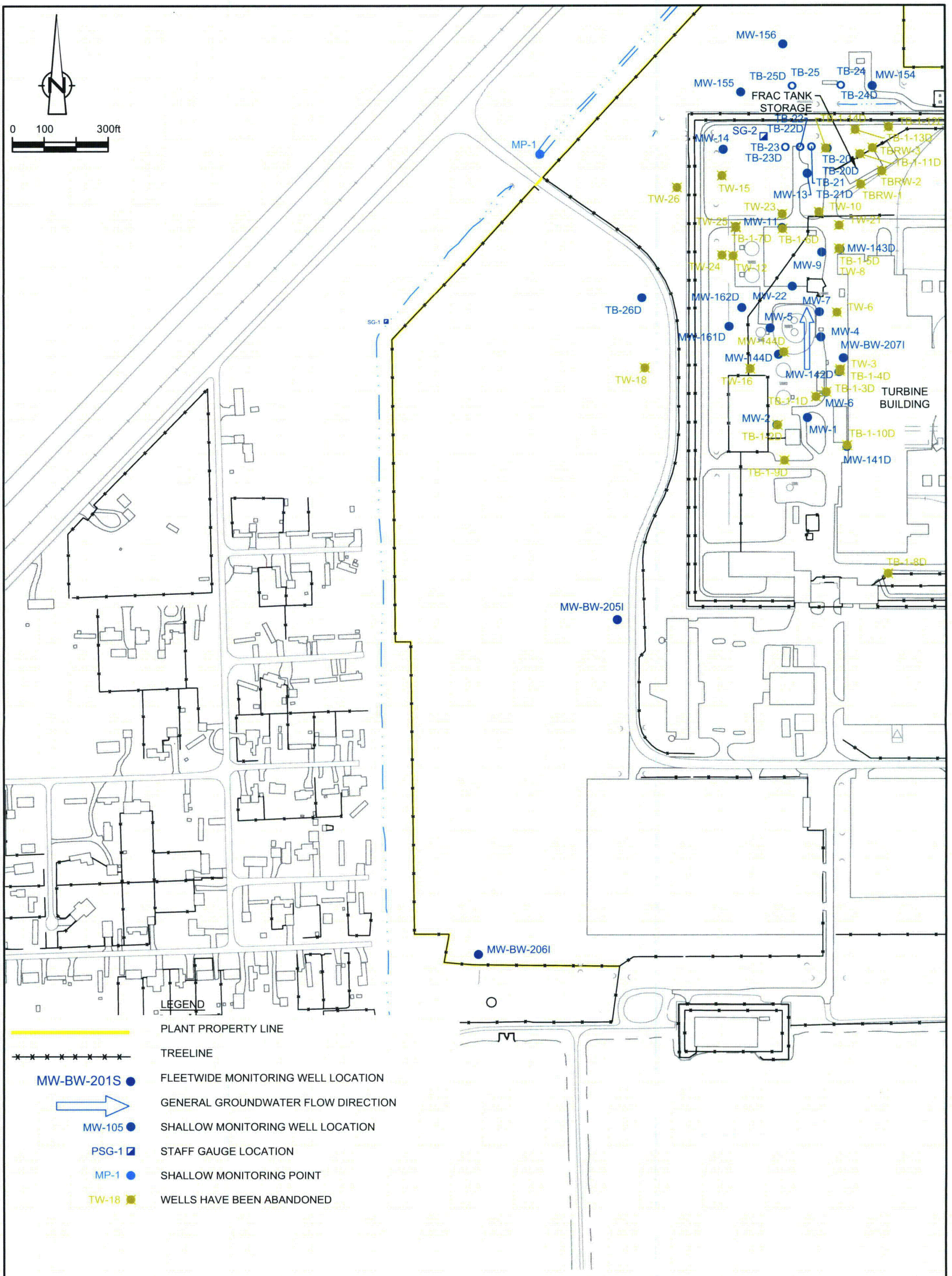


Figure A-1
Sampling Location Near the Site Boundary of the Braidwood Station, West Side, 2007
Braidwood Generating Station
Exelon Generation Company, LLC

Braceville, Illinois

16841-37(PRES038)GN-CO002 DEC 10/2007

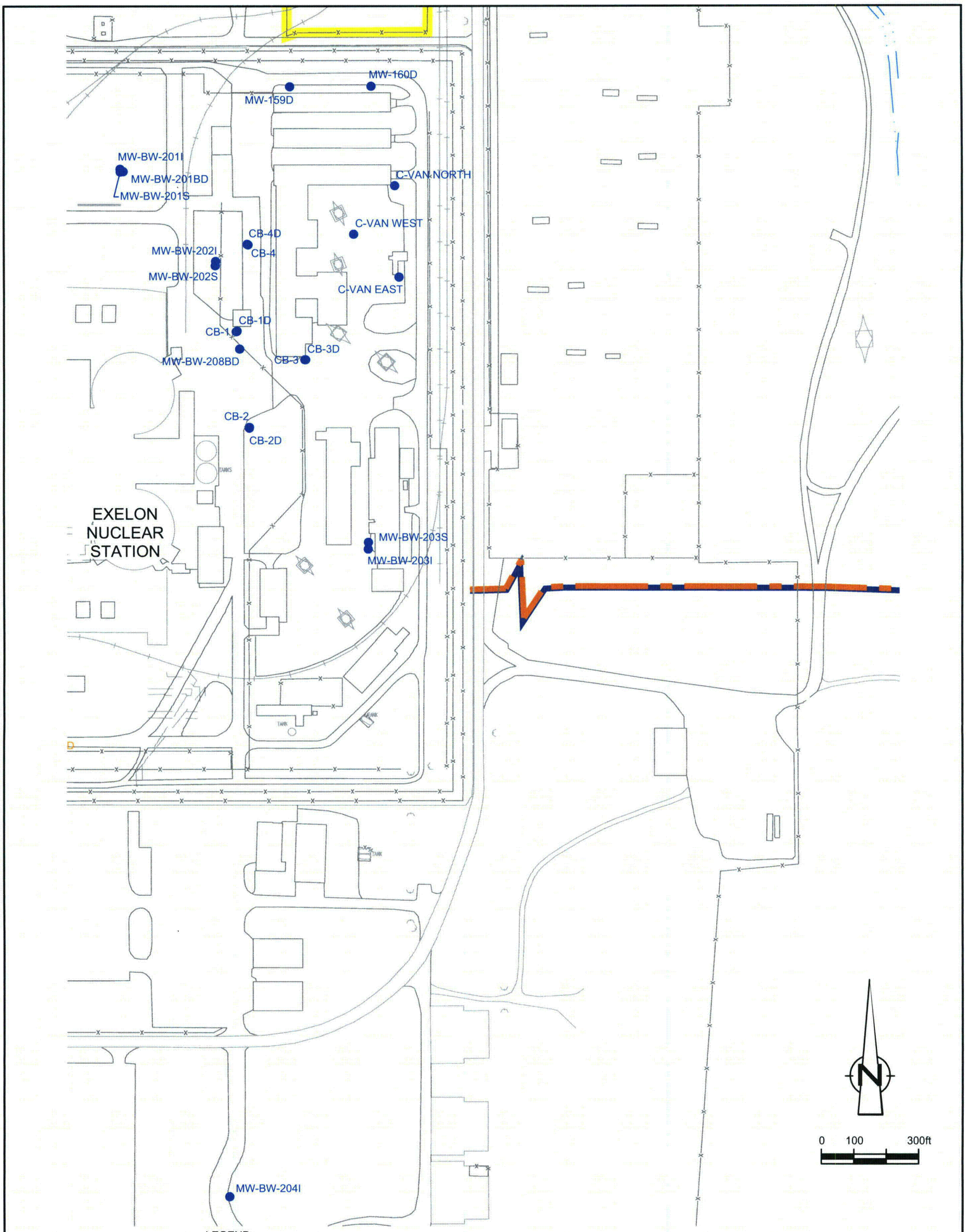


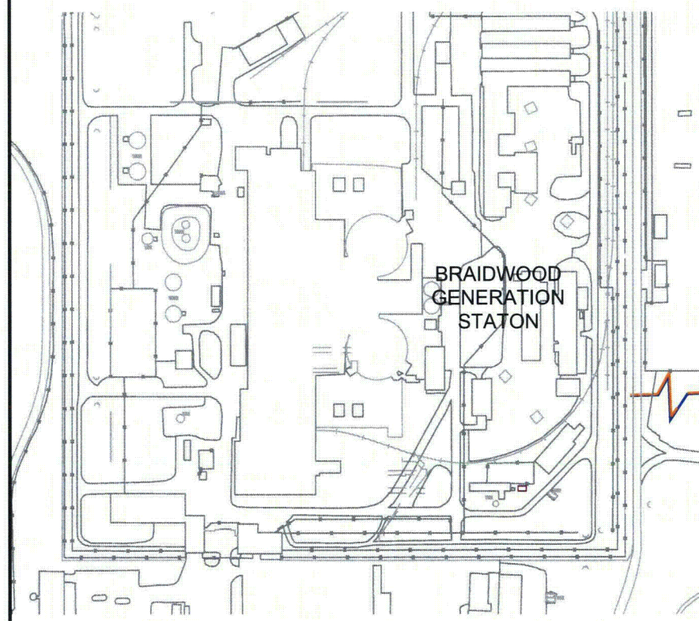
Figure A-2
Sampling Location Near the Site Boundary of the Braidwood Station, East Side, 2007
Braidwood Generating Station
Exelon Generation Company, LLC

Braceville, Illinois

16841-37(PRES038)GN-CO001 DEC 11/2007

LEGEND

- BLOWDOWN LINE
- TREELINE
- VB-1 — VACUUM BREAKER LOCATION
- MW-109D — AUGUST 2006 PERMANENT MONITORING WELL LOCATION
- MW-107 — EXISTING MONITORING WELL LOCATION
- BL-1 — BLOWDOWN LINE MONITORING
- MW-105 — SHALLOW MONITORING WELL LOCATION
- MW-113D — DEEP MONITORING WELL LOCATION
- PW-5 — PRIVATE WELL LOCATION
- P-11 — SHALLOW TEMPORARY WELL LOCATION
- P-4D — DEEP TEMPORARY WELL LOCATION
- PSG-1 — STAFF GAUGE LOCATION
- VB-1-2 — SHALLOW VACUUM BREAKER SAMPLING LOCATION
- VB-1-2D — DEEP VACUUM BREAKER SAMPLING LOCATION
- RW-5 — RECOVERY WELL LOCATION
- D-2 — WELLS HAVE BEEN ABANDONED



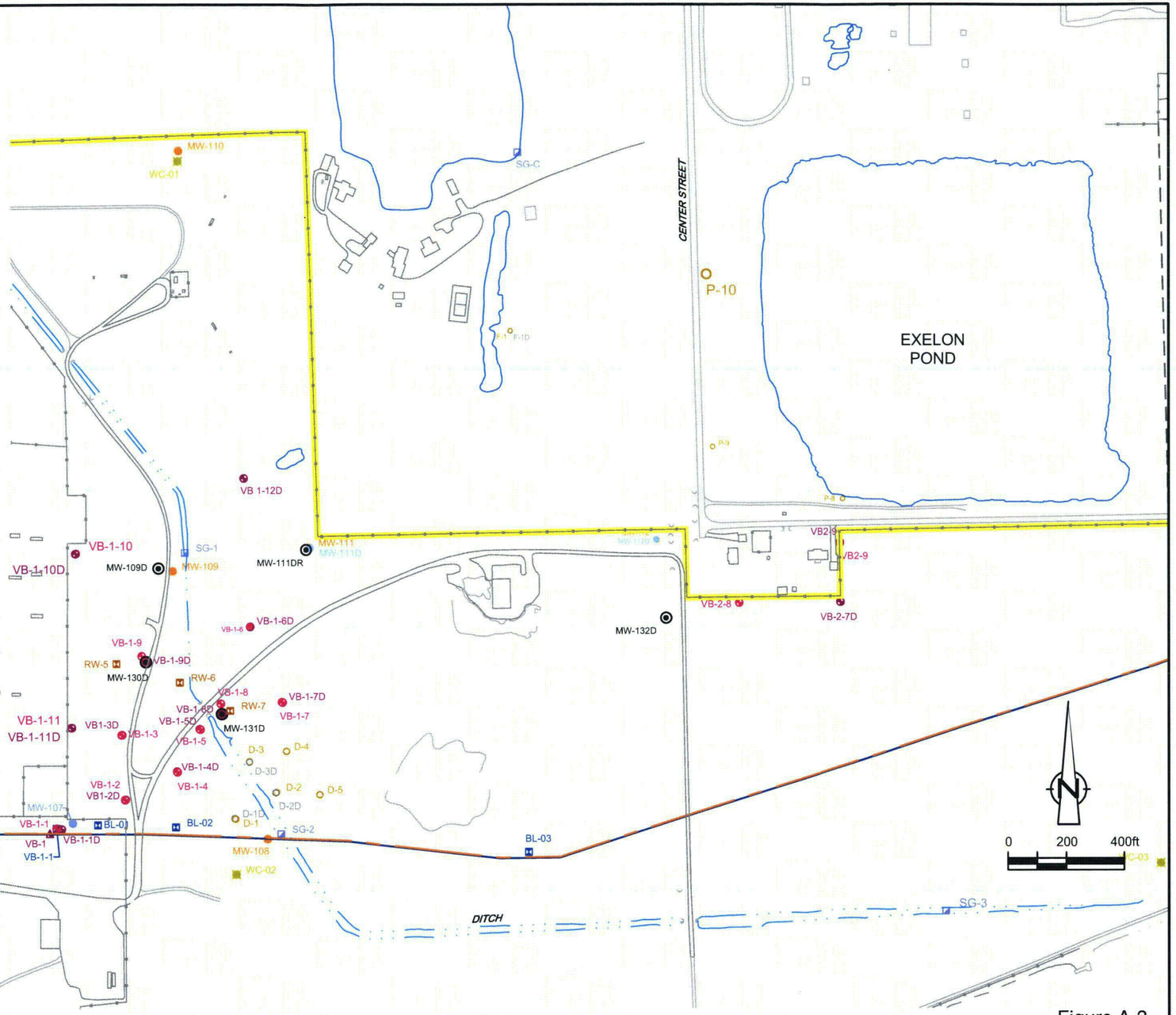


Figure A-3
Sampling Location NearVacuum Breaker #1
Braidwood Generating Station
Exelon Generation Company, LLC
Braceville, Illinois

16841-37(PRES038)GN-CO004 DEC 11/2007

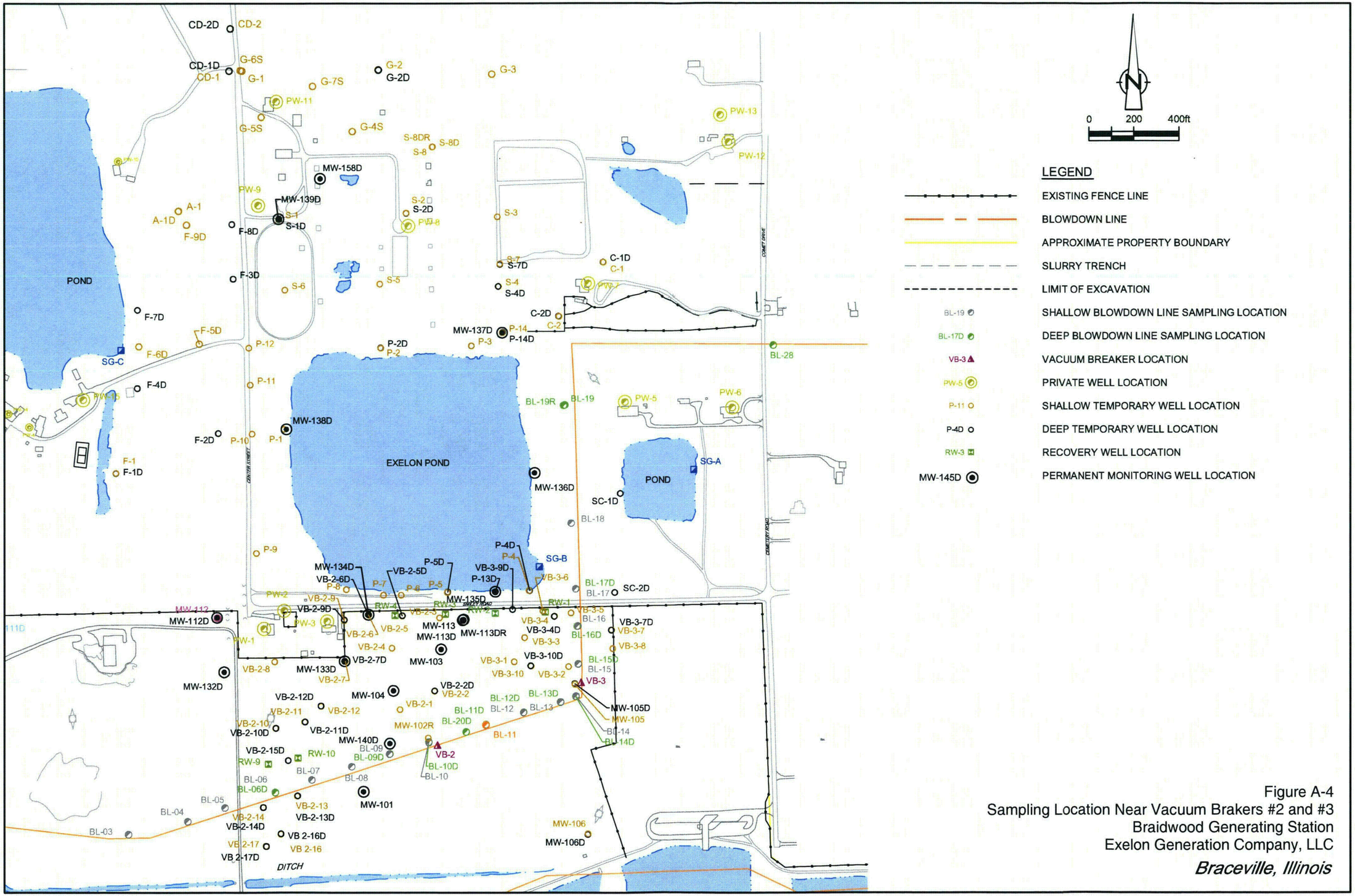


Figure A-4
Sampling Location Near Vacuum Brakers #2 and #3
Braidwood Generating Station
Exelon Generation Company, LLC
Braceville, Illinois

16841-37(037)GN-CO005 OCT 04/2007

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APPENDIX B

DATA TABLES

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
A-1		02/23/07	< 190
A-1D		02/23/07	309 ± 110
BL-03		01/08/07	< 174
BL-03		02/13/07	< 191
BL-03		03/12/07	< 168
BL-03	ORIGINAL	04/12/07	< 182
BL-03	DUPLICATE	04/12/07	< 182
BL-03		05/14/07	< 141
BL-03		06/11/07	< 145
BL-03		07/09/07	< 144
BL-03		08/13/07	< 197
BL-03	ORIGINAL	09/12/07	< 160
BL-03	DUPLICATE	09/12/07	< 160
BL-03		10/18/07	< 195
BL-03		11/14/07	< 194
BL-03		12/13/07	< 179
BL-05	ORIGINAL	08/14/07	< 158
BL-05	DUPLICATE	08/14/07	< 158
BL-06		01/09/07	645 ± 125
BL-06		03/13/07	699 ± 116
BL-06		04/12/07	443 ± 106
BL-06		05/17/07	685 ± 110
BL-06		06/13/07	804 ± 114
BL-06		07/09/07	652 ± 103
BL-06		08/13/07	1183 ± 142
BL-06		09/12/07	1222 ± 139
BL-06		11/14/07	3620 ± 376
BL-06		12/11/07	4380 ± 511
BL-06D		10/02/07	8786 ± 274
BL-06D		12/11/07	6670 ± 735
BL-07		01/09/07	< 174
BL-07		08/13/07	322 ± 115
BL-07		09/13/07	< 175
BL-07	ORIGINAL	09/13/07	< 175
BL-07	DUPLICATE	09/13/07	< 175
BL-08		01/10/07	314 ± 107
BL-08		08/13/07	334 ± 116
BL-08		09/13/07	< 189
BL-09		01/10/07	7552 ± 253
BL-09		09/13/07	693 ± 117
BL-09D		01/10/07	4296 ± 203
BL-09D		09/13/07	3101 ± 175
BL-10		01/10/07	< 175
BL-10D		01/10/07	< 175
BL-10D		09/14/07	< 190
BL-11		01/08/07	< 174
BL-11		02/13/07	< 191
BL-11		03/12/07	< 176

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
BL-11		04/12/07	< 182
BL-11		05/15/07	< 172
BL-11		06/11/07	< 178
BL-11		07/09/07	< 180
BL-11		08/14/07	220 ± 112
BL-11		09/12/07	< 193
BL-11		10/18/07	< 192
BL-11		11/14/07	< 194
BL-11		12/11/07	< 183
BL-11D		01/10/07	< 175
BL-11D		09/18/07	< 190
BL-12		01/10/07	< 175
BL-12D		01/10/07	< 175
BL-12D		09/20/07	< 190
BL-13		01/10/07	< 175
BL-13D		01/10/07	< 175
BL-13D		09/18/07	< 190
BL-14		01/10/07	< 151
BL-14D		01/10/07	< 151
BL-14D		09/18/07	< 190
BL-15		01/11/07	416 ± 91
BL-15D		01/11/07	< 146
BL-15D		09/19/07	< 190
BL-16		01/11/07	272 ± 85
BL-16D		01/11/07	< 146
BL-16D		09/19/07	< 190
BL-17		01/17/07	< 152
BL-17D		01/17/07	< 152
BL-17D		09/18/07	< 190
BL-18		01/17/07	< 152
BL-18D	ORIGINAL	01/17/07	188 ± 84
BL-18D	DUPLICATE	01/17/07	287 ± 89
BL-18D		09/19/07	< 190
BL-19D		01/17/07	< 143
BL-19D		09/19/07	< 190
BL-19R		01/08/07	< 174
BL-19R		02/15/07	< 191
BL-19R		03/13/07	< 187
BL-19R		04/11/07	< 182
BL-19R		05/15/07	< 172
BL-19R		06/14/07	< 174
BL-19R	ORIGINAL	07/09/07	< 180
BL-19R	DUPLICATE	07/09/07	< 180
BL-19R		08/14/07	< 197
BL-19R		09/12/07	202 ± 109
BL-19R		09/26/07	< 188
BL-19R		09/26/07	< 187
BL-19R		10/18/07	< 196

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3
BL-19R	11/14/07	< 188
BL-19R	12/13/07	< 175
BL-20D	01/10/07	< 175
BL-20D	09/26/07	< 188
BL-20D	09/26/07	< 188
BL-21	01/09/07	< 172
BL-21	02/15/07	< 191
BL-21	03/13/07	< 187
BL-21	04/13/07	< 182
BL-21	05/14/07	< 169
BL-21	06/12/07	< 178
BL-21	07/10/07	< 180
BL-21	08/15/07	< 152
BL-21	09/12/07	194 ± 109
BL-21	10/18/07	< 189
BL-21	11/14/07	< 189
BL-21	12/14/07	< 195
BL-22	05/16/07	< 174
BL-22	01/09/07	< 179
BL-22	02/14/07	< 191
BL-22	03/14/07	< 173
BL-22	04/11/07	< 147
BL-22	06/12/07	< 178
BL-22	07/10/07	< 180
BL-22	08/15/07	< 152
BL-22	09/12/07	342 ± 114
BL-22	09/26/07	< 188
BL-22	09/26/07	< 186
BL-22	10/18/07	< 190
BL-22	11/14/07	< 192
BL-22	12/13/07	< 190
BL-23	01/09/07	< 174
BL-23	02/14/07	< 169
BL-23	03/15/07	< 173
BL-23	04/13/07	< 182
BL-23	05/15/07	< 172
BL-23	06/12/07	< 178
BL-23	07/10/07	< 180
BL-23	08/14/07	< 152
BL-23	09/12/07	< 160
BL-23	10/17/07	< 189
BL-23	11/14/07	< 191
BL-23	12/13/07	< 195
BL-24	01/09/07	< 174
BL-24	02/14/07	< 169
BL-24	03/12/07	< 187
BL-24	04/11/07	< 147
BL-24	05/16/07	< 174

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
BL-24		06/12/07	< 178
BL-24	ORIGINAL	06/12/07	< 178
BL-24	DUPLICATE	06/12/07	< 178
BL-24		07/10/07	< 180
BL-24		08/14/07	< 152
BL-24		09/12/07	269 ± 112
BL-24		09/26/07	< 188
BL-24		09/26/07	< 191
BL-24		10/17/07	< 186
BL-24		11/14/07	< 191
BL-24		12/13/07	< 190
BL-25		01/09/07	< 174
BL-25		02/13/07	< 144
BL-25		03/15/07	< 173
BL-25		04/09/07	< 147
BL-25		05/16/07	< 174
BL-25		06/12/07	< 178
BL-25		07/10/07	< 180
BL-25		08/14/07	< 152
BL-25		09/12/07	222 ± 110
BL-25	ORIGINAL	09/26/07	< 188
BL-25	DUPLICATE	09/26/07	< 188
BL-25		09/26/07	< 187
BL-25		10/17/07	< 183
BL-25		11/13/07	< 197
BL-25		12/13/07	< 184
BL-26		01/08/07	< 174
BL-26		02/13/07	< 144
BL-26		03/15/07	< 173
BL-26		04/09/07	< 147
BL-26		05/14/07	< 141
BL-26		06/11/07	< 145
BL-26		07/09/07	< 144
BL-26		08/13/07	< 152
BL-26		09/10/07	< 182
BL-26		11/13/07	< 193
BL-26		12/11/07	< 192
BL-27		01/09/07	< 179
BL-27		02/12/07	< 144
BL-27		03/12/07	< 187
BL-27		04/09/07	< 147
BL-27		05/15/07	< 172
BL-27		06/12/07	< 178
BL-27		07/10/07	< 180
BL-27		08/14/07	< 152
BL-27		09/10/07	< 182
BL-27		11/13/07	< 196
BL-27		12/11/07	< 173

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
BL-28		01/17/07	< 143
C-1		01/12/07	< 143
C-1		08/16/07	241 ± 102
C-1D		01/12/07	< 143
C-1D	ORIGINAL	08/16/07	216 ± 101
C-1D	DUPLICATE	08/16/07	268 ± 103
C-1D		09/18/07	< 190
C-2		01/12/07	< 143
C-2		08/16/07	261 ± 103
C-2D		01/12/07	< 143
C-2D		08/16/07	336 ± 105
C-2D		09/18/07	< 192
CB-1		04/16/07	< 186
CB-1D		04/16/07	< 171
CB-2		04/16/07	< 171
CB-2D		04/16/07	< 171
CB-3		04/16/07	< 180
CB-3D		04/16/07	< 180
CB-4		04/16/07	< 186
CB-4D		04/16/07	< 180
CD-1		01/16/07	1363 ± 123
CD-1D		01/16/07	< 146
CD-1D		09/18/07	< 189
D-1D		09/26/07	< 189
D-2D		09/18/07	< 189
D-2D	ORIGINAL	09/18/07	< 189
D-2D	DUPLICATE	09/18/07	< 189
D-3D		09/18/07	1829 ± 147
DN-1		02/15/07	< 191
DN-1		03/12/07	< 187
DN-1		08/15/07	174 ± 84
DN-1		09/20/07	272 ± 120
DN-1D		02/15/07	< 191
DN-1D		03/12/07	< 187
DN-1D		08/15/07	< 152
DN-1D		09/20/07	< 182
DN-2		02/15/07	< 191
DN-2		03/12/07	< 187
DN-2		08/15/07	272 ± 88
DN-2		09/20/07	450 ± 124
DN-2D		02/15/07	< 191
DN-2D		03/12/07	< 187
DN-2D		08/15/07	< 152
DN-2D		09/20/07	< 182
DN-3	ORIGINAL	02/15/07	196 ± 107
DN-3	DUPLICATE	02/15/07	< 191
DN-3		03/12/07	< 187
DN-3		08/15/07	248 ± 87

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
DN-3		09/20/07	187 ± 117
DN-3D		02/15/07	< 191
DN-3D		03/12/07	< 187
DN-3D		08/15/07	< 152
DN-3D		09/20/07	< 178
F-1		01/09/07	< 179
F-1D		01/09/07	< 179
F-1D		09/13/07	< 192
F-3D		01/10/07	1415 ± 145
F-3D		09/13/07	1248 ± 149
F-4D		01/09/07	< 179
F-4D		09/13/07	< 189
F-5D		01/10/07	1623 ± 150
F-5D		06/13/07	1098 ± 123
F-5D		09/11/07	1291 ± 133
F-5D		12/12/07	896 ± 173
F-6D	ORIGINAL	01/09/07	693 ± 120
F-6D	DUPLICATE	01/09/07	805 ± 124
F-6D		03/14/07	588 ± 109
F-6D		04/12/07	622 ± 112
F-6D		05/17/07	707 ± 111
F-6D		06/13/07	689 ± 111
F-6D	ORIGINAL	06/13/07	689 ± 111
F-6D	DUPLICATE	06/13/07	696 ± 111
F-6D		07/10/07	707 ± 117
F-6D		08/14/07	662 ± 104
F-6D		09/13/07	591 ± 114
F-6D		10/17/07	701 ± 148
F-6D		11/14/07	491 ± 141
F-6D		12/11/07	369 ± 127
F-7D		01/12/07	992 ± 111
F-7D		09/13/07	961 ± 125
F-8D	ORIGINAL	01/10/07	716 ± 127
F-8D	DUPLICATE	01/10/07	618 ± 125
F-8D		09/13/07	< 189
F-9D		11/27/07	1040 ± 143
F-9D		12/13/07	1520 ± 226
G1		02/12/07	< 141
G2		02/12/07	< 141
G2D		02/12/07	< 141
G3		02/12/07	< 141
G-4S		05/16/07	< 174
G-5S		05/16/07	< 174
G-6S		05/16/07	< 174
G-7S		05/16/07	< 174
MW-101		01/10/07	< 175
MW-102R		01/08/07	< 174
MW-102R		02/13/07	< 191

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3
MW-102R	03/12/07	< 176
MW-102R	04/12/07	< 182
MW-102R	05/14/07	< 141
MW-102R	06/11/07	< 145
MW-102R	07/09/07	< 180
MW-102R	08/13/07	214 ± 111
MW-102R	09/12/07	249 ± 111
MW-102R	09/26/07	< 189
MW-102R	09/26/07	< 188
MW-102R	10/18/07	< 193
MW-102R	11/14/07	< 196
MW-102R	12/11/07	< 181
MW-103	01/16/07	836 ± 106
MW-103	06/14/07	< 145
MW-103	09/13/07	< 175
MW-104	01/15/07	< 152
MW-105	01/11/07	< 146
MW-105	06/13/07	< 178
MW-105	09/11/07	< 160
MW-105	12/12/07	< 170
MW-105D	01/11/07	< 146
MW-105D	09/19/07	< 190
MW-106D	09/18/07	< 190
MW-107	09/25/07	< 189
MW-109D	03/12/07	257 ± 111
MW-109D	07/26/07	906 ± 109
MW-109D	09/14/07	516 ± 107
MW-109D	12/12/07	< 190
MW-11	06/15/07	< 188
MW-11	11/06/07	< 193
MW-110	06/13/07	< 174
MW-110	09/11/07	< 182
MW-110	12/12/07	< 173
MW-111DR	03/12/07	< 168
MW-111DR	06/11/07	< 145
MW-111DR	09/11/07	< 180
MW-111DR	12/12/07	< 171
MW-112D	03/12/07	< 176
MW-112D	06/13/07	< 178
MW-112D	09/11/07	< 182
MW-112D	12/12/07	< 172
MW-113	01/12/07	3220 ± 170
MW-113	06/14/07	3142 ± 171
MW-113	09/13/07	4174 ± 200
MW-113	12/13/07	3260 ± 397
MW-113DR	01/12/07	225 ± 83
MW-113DR	01/12/07	2270 ± 148
MW-113DR	06/14/07	719 ± 103

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
MW-113DR		09/11/07	1139 ± 128
MW-113DR		12/12/07	294 ± 111
MW-13		01/11/07	2747 ± 164
MW-13		01/29/07	2464 ± 154
MW-13		02/14/07	3599 ± 191
MW-13		03/14/07	9244 ± 280
MW-13		04/12/07	604 ± 111
MW-13		05/14/07	2506 ± 158
MW-13		06/18/07	10200 ± 1070
MW-13		07/25/07	4910 ± 220
MW-13		08/15/07	5163 ± 228
MW-13		09/11/07	1283 ± 141
MW-13		10/07/07	2620 ± 332
MW-13		11/06/07	5140 ± 586
MW-13		12/27/07	1730 ± 243
MW-130D		03/12/07	< 168
MW-130D		06/21/07	526 ± 110
MW-130D		09/14/07	< 175
MW-130D		12/12/07	423 ± 138
MW-131D		03/12/07	413 ± 116
MW-131D		06/11/07	< 145
MW-131D		09/11/07	< 180
MW-131D		12/12/07	< 173
MW-132D		03/12/07	< 168
MW-132D		06/11/07	< 145
MW-132D		09/11/07	< 180
MW-132D		12/12/07	< 175
MW-133D		01/15/07	< 152
MW-133D		01/15/07	451 ± 93
MW-133D		06/11/07	< 178
MW-133D		09/11/07	< 182
MW-133D		12/12/07	< 186
MW-134D		06/11/07	222 ± 98
MW-134D		09/11/07	232 ± 95
MW-134D		09/26/07	< 188
MW-134D		09/26/07	192 ± 106
MW-134D		12/12/07	258 ± 122
MW-135D		01/16/07	78123 ± 757
MW-135D		06/14/07	19605 ± 379
MW-135D	ORIGINAL	09/11/07	16273 ± 376
MW-135D	DUPLICATE	09/11/07	15937 ± 372
MW-135D		12/12/07	5100 ± 580
MW-136D		01/15/07	< 151
MW-136D		06/14/07	< 174
MW-136D		09/11/07	< 160
MW-136D		12/12/07	< 188
MW-137D		01/12/07	1975 ± 137
MW-137D		06/14/07	438 ± 103

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3
MW-137D	09/11/07	364 ± 100
MW-137D	12/12/07	< 185
MW-138D	01/15/07	938 ± 110
MW-138D	06/25/07	< 145
MW-138D	09/11/07	< 160
MW-138D	12/12/07	< 189
MW-139D	01/10/07	276 ± 115
MW-139D	06/13/07	< 174
MW-139D	09/11/07	< 160
MW-139D	12/12/07	< 186
MW-14	06/14/07	< 191
MW-14	12/27/07	< 179
MW-140D	01/10/07	4734 ± 210
MW-140D	06/13/07	2684 ± 173
MW-140D	09/11/07	801 ± 122
MW-140D	12/12/07	3230 ± 396
MW-141D	06/12/07	305 ± 120
MW-141D	09/12/07	< 175
MW-141D	11/09/07	255 ± 122
MW-142D	06/20/07	502 ± 129
MW-142D	09/12/07	678 ± 113
MW-142D	11/09/07	881 ± 168
MW-143D	06/12/07	259 ± 118
MW-143D	09/12/07	268 ± 98
MW-143D	11/07/07	680 ± 158
MW-144D	06/12/07	322 ± 119
MW-144D	10/08/07	456 ± 136
MW-144D	11/09/07	600 ± 142
MW-145D	03/13/07	10319 ± 285
MW-145D	06/14/07	< 174
MW-145D	09/11/07	8440 ± 277
MW-145D	12/12/07	7560 ± 821
MW-148D	03/15/07	< 173
MW-148D	06/12/07	< 178
MW-148D	09/13/07	< 175
MW-148D	12/13/07	< 196
MW-149D	03/15/07	270 ± 97
MW-149D	06/11/07	< 145
MW-149D	09/13/07	< 175
MW-149D	12/13/07	< 187
MW-150D	03/15/07	1352 ± 133
MW-150D	06/11/07	403 ± 91
MW-150D	09/13/07	290 ± 99
MW-150D	12/13/07	< 190
MW-151D	03/15/07	4850 ± 211
MW-151D	06/11/07	2873 ± 165
MW-151D	09/13/07	2129 ± 155
MW-151D	12/13/07	4010 ± 474

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3
MW-154	06/21/07	166 ± 106
MW-154	09/27/07	< 189
MW-154	11/14/07	< 196
MW-155	06/21/07	< 163
MW-155	09/27/07	< 189
MW-155	11/14/07	< 199
MW-156	06/21/07	< 152
MW-156	09/27/07	< 189
MW-156	11/14/07	< 197
MW-157D	03/15/07	12275 ± 299
MW-157D	06/14/07	1519 ± 134
MW-157D	09/11/07	15399 ± 373
MW-157D	12/12/07	17000 ± 1750
MW-158D	01/17/07	< 143
MW-158D	03/14/07	< 173
MW-158D	04/11/07	< 182
MW-158D	05/17/07	< 174
MW-158D	06/13/07	< 174
MW-158D	07/10/07	< 180
MW-158D	08/15/07	214 ± 86
MW-158D	09/12/07	420 ± 117
MW-158D	09/26/07	< 187
MW-158D	09/26/07	< 188
MW-158D	11/13/07	< 194
MW-158D	12/11/07	< 176
MW-159D	06/14/07	< 150
MW-159D	09/12/07	< 175
MW-159D	11/13/07	< 196
MW-160D	06/14/07	< 150
MW-160D	09/12/07	< 175
MW-160D	09/24/07	305 ± 105
MW-160D	11/13/07	< 196
MW-161D	12/27/07	334 ± 122
MW-162D	09/24/07	335 ± 106
MW-162D	12/27/07	419 ± 128
MW-2	06/12/07	207 ± 127
MW-2	11/08/07	333 ± 128
MW-22	06/12/07	273 ± 131
MW-22	11/07/07	276 ± 127
MW-4	06/13/07	715 ± 140
MW-4	12/27/07	479 ± 123
MW-5	06/20/07	584 ± 146
MW-5	11/08/07	497 ± 134
MW-6	06/13/07	1440 ± 208
MW-6	11/07/07	1080 ± 195
MW-7	06/12/07	720 ± 141
MW-7	11/07/07	569 ± 149
MW-9	06/11/07	< 187

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
MW-9		11/07/07	< 194
MW-BW-201BD		06/18/07	< 161
MW-BW-201BD		11/27/07	< 197
MW-BW-201I		06/14/07	< 164
MW-BW-201I		11/27/07	< 196
MW-BW-201S		06/14/07	177 ± 111
MW-BW-201S		11/26/07	< 180
MW-BW-201S		11/27/07	240 ± 122
MW-BW-202I		06/11/07	219 ± 116
MW-BW-202I		11/13/07	< 195
MW-BW-202S		06/11/07	189 ± 112
MW-BW-202S		11/13/07	< 193
MW-BW-203I		06/11/07	< 162
MW-BW-203I		11/13/07	< 199
MW-BW-203S		06/11/07	287 ± 118
MW-BW-203S		11/13/07	< 193
MW-BW-204I		06/19/07	223 ± 115
MW-BW-204I		11/27/07	< 191
MW-BW-205I		06/19/07	248 ± 117
MW-BW-205I		11/14/07	< 194
MW-BW-206I		06/19/07	< 165
MW-BW-206I		11/27/07	< 192
MW-BW-207I		06/18/07	1070 ± 159
MW-BW-207I		11/09/07	815 ± 161
MW-BW-208BD		06/18/07	< 162
MW-BW-208BD		11/09/07	< 189
P-1		01/15/07	< 147
P-10		01/16/07	< 147
P-11		01/17/07	1004 ± 111
P-13D		01/16/07	29146 ± 466
P-13D		08/14/07	5805 ± 228
P-13D		09/13/07	5014 ± 210
P-14		01/12/07	1635 ± 129
P-14D		01/12/07	1983 ± 137
P-14D		08/15/07	403 ± 108
P-14D		09/13/07	< 190
P-2		01/15/07	1328 ± 128
P-2D		01/15/07	2334 ± 150
P-2D		08/14/07	2437 ± 173
P-2D		09/13/07	1932 ± 150
P-3	ORIGINAL	01/15/07	1255 ± 120
P-3	DUPLICATE	01/15/07	1598 ± 131
P-4		01/16/07	22641 ± 412
P-4D		01/16/07	2658 ± 157
P-4D		08/14/07	2623 ± 177
P-4D		09/13/07	2764 ± 168
P-5		01/16/07	6712 ± 234
P-5D		01/15/07	287 ± 86

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
P-5D		08/14/07	283 ± 114
P-5D		09/13/07	< 190
P-6		01/17/07	< 143
P-9		01/16/07	< 147
PW-001		07/12/07	< 141
PW-002		04/03/07	< 137
PW-002		07/12/07	< 141
PW-003		04/03/07	< 137
PW-003		07/12/07	< 141
PW-006		05/15/07	< 172
PW-006		07/12/07	< 141
PW-006		10/15/07	< 192
PW-006A		05/15/07	< 172
PW-006A		07/12/07	< 141
PW-006A		10/15/07	< 193
PW-006B		05/15/07	< 172
PW-006B		07/12/07	< 141
PW-8		01/12/07	1320 ± 120
PW-011		04/03/07	< 155
PW-011		07/12/07	< 141
PW-014		01/16/07	< 146
PW-014		04/03/07	< 137
PW-014		04/03/07	< 169
PW-014		07/12/07	< 141
PW-015		04/27/07	< 151
PW-015		07/12/07	< 141
PW-016		04/03/07	< 137
PW-016		07/12/07	< 141
RW-5		09/14/07	1313 ± 133
RW-5		12/21/07	1030 ± 178
RW-6	ORIGINAL	09/14/07	4437 ± 205
RW-6	DUPLICATE	09/14/07	4912 ± 214
RW-7		09/14/07	526 ± 108
RW-7		12/21/07	388 ± 128
RW-8		08/27/07	998 ± 128
RW-8		11/08/07	699 ± 154
S-1		01/10/07	< 172
S-1D		01/10/07	1649 ± 150
S-1D		03/14/07	1516 ± 138
S-1D		04/11/07	1222 ± 129
S-1D		05/17/07	1251 ± 127
S-1D		06/13/07	1204 ± 126
S-1D		07/10/07	1095 ± 130
S-1D		08/15/07	1343 ± 137
S-1D		09/13/07	1097 ± 146
S-1D		10/17/07	1060 ± 148
S-1D		11/13/07	945 ± 172
S-1D		12/11/07	915 ± 174

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
S-2		01/10/07	< 172
S-2D		01/10/07	295 ± 114
S-2D		09/13/07	291 ± 112
S-3		01/12/07	< 143
S-4		01/12/07	1423 ± 123
S-4D		01/10/07	1623 ± 149
S-4D		09/13/07	770 ± 128
S-5		01/10/07	1473 ± 145
S-6		01/10/07	< 172
S-7		01/10/07	1356 ± 143
S-7D		01/10/07	1663 ± 150
S-7D		03/13/07	1482 ± 138
S-7D		04/11/07	1300 ± 131
S-7D		05/17/07	1173 ± 125
S-7D		06/13/07	1192 ± 126
S-7D		07/10/07	1106 ± 131
S-7D		08/15/07	487 ± 98
S-7D		09/13/07	744 ± 127
S-7D		10/17/07	< 200
S-7D		11/13/07	< 189
S-7D		12/11/07	< 187
S-8		01/15/07	< 151
S-8		02/15/07	< 146
S-8		04/11/07	< 182
S-8DR		01/15/07	416 ± 97
S-8DR		02/15/07	294 ± 90
S-8DR		03/13/07	275 ± 102
S-8DR		05/16/07	< 174
S-8DR	ORIGINAL	05/16/07	< 174
S-8DR	DUPLICATE	05/16/07	186 ± 93
S-8DR		06/13/07	183 ± 93
S-8DR		07/10/07	259 ± 100
S-8DR		08/15/07	216 ± 86
S-8DR		09/13/07	371 ± 115
S-8DR		09/26/07	< 191
S-8DR		09/26/07	216 ± 106
S-8DR		11/13/07	< 192
S-8DR		12/11/07	< 189
SC-1D		09/11/07	< 160
SC-1D		10/15/07	< 192
SC-2D		09/11/07	< 160
SC-2D		10/15/07	< 193
TB-20		05/08/07	< 175
TB-20		06/13/07	< 178
TB-20		07/25/07	< 141
TB-20		08/14/07	295 ± 104
TB-20		09/10/07	231 ± 104
TB-20		10/09/07	< 186

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
TB-20		11/05/07	< 189
TB-20		12/21/07	< 159
TB-20D		05/08/07	< 175
TB-20D		06/13/07	< 178
TB-20D		07/25/07	215 ± 84
TB-20D		08/14/07	536 ± 112
TB-20D		09/10/07	1176 ± 137
TB-20D		10/09/07	809 ± 161
TB-20D		11/05/07	574 ± 149
TB-20D		12/26/07	223 ± 105
TB-21		05/08/07	< 175
TB-21		06/15/07	232 ± 98
TB-21		07/25/07	197 ± 83
TB-21		08/14/07	470 ± 110
TB-21		09/10/07	307 ± 107
TB-21		10/10/07	220 ± 126
TB-21		11/05/07	210 ± 125
TB-21		12/27/07	< 158
TB-21D		05/08/07	< 172
TB-21D		06/20/07	437 ± 106
TB-21D		07/25/07	241 ± 85
TB-21D		08/15/07	555 ± 113
TB-21D	ORIGINAL	09/10/07	576 ± 117
TB-21D	DUPLICATE	09/10/07	597 ± 118
TB-21D		10/10/07	< 195
TB-21D		11/05/07	194 ± 124
TB-21D		12/26/07	< 154
TB-22		05/09/07	< 175
TB-22		06/20/07	< 177
TB-22		07/25/07	< 179
TB-22		08/15/07	407 ± 108
TB-22		09/10/07	337 ± 108
TB-22		10/10/07	< 186
TB-22		11/05/07	213 ± 126
TB-22		12/26/07	< 160
TB-22D		05/09/07	< 175
TB-22D		06/20/07	< 177
TB-22D		07/25/07	< 179
TB-22D		08/15/07	324 ± 105
TB-22D		09/11/07	326 ± 108
TB-22D		10/10/07	< 194
TB-22D		11/06/07	< 191
TB-22D		12/26/07	< 156
TB-23		05/09/07	< 175
TB-23		06/15/07	< 177
TB-23		07/25/07	< 179
TB-23		08/15/07	< 180
TB-23		09/11/07	< 180

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
TB-23		10/08/07	< 189
TB-23		11/06/07	< 189
TB-23		12/26/07	< 158
TB-23D		05/09/07	< 175
TB-23D		06/14/07	< 177
TB-23D	ORIGINAL	07/25/07	< 179
TB-23D	DUPLICATE	07/25/07	194 ± 97
TB-23D		08/15/07	< 180
TB-23D		09/11/07	210 ± 103
TB-23D		10/08/07	< 192
TB-23D		11/06/07	< 189
TB-23D		12/26/07	< 161
TB-24		05/10/07	< 175
TB-24D		05/10/07	< 175
TB-25		05/10/07	< 175
TB-25D		05/10/07	< 141
TB-26D		09/12/07	< 160
VB10-1		01/09/07	< 174
VB10-1	ORIGINAL	02/13/07	< 144
VB10-1	DUPLICATE	02/13/07	< 144
VB10-1		03/14/07	< 173
VB10-1		04/09/07	< 147
VB10-1		05/14/07	< 172
VB10-1		06/11/07	< 145
VB10-1	ORIGINAL	06/11/07	< 145
VB10-1	DUPLICATE	06/11/07	< 145
VB10-1		07/09/07	< 144
VB10-1		08/13/07	< 152
VB10-1		09/10/07	< 182
VB10-1		11/13/07	< 196
VB10-1		12/11/07	< 179
VB1-1		01/09/07	< 172
VB1-1		02/15/07	< 191
VB1-1		03/14/07	< 173
VB1-1		04/12/07	< 182
VB1-1		05/14/07	< 174
VB1-1		06/21/07	< 177
VB1-1		07/27/07	< 146
VB1-1		08/15/07	230 ± 101
VB1-1		09/14/07	< 175
VB1-1		10/09/07	< 190
VB1-1		11/21/07	< 195
VB1-1		12/12/07	< 189
VB1-10D		09/26/07	< 189
VB11-1		01/09/07	189 ± 111
VB11-1		02/12/07	195 ± 85
VB11-1		04/09/07	< 147
VB11-1		05/15/07	< 153

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
VB11-1		06/12/07	< 178
VB11-1		09/11/07	< 182
VB11-1		10/16/07	< 178
VB11-1		11/13/07	< 197
VB11-1		03/12/07	< 187
VB11-1		07/10/07	< 180
VB11-1		08/14/07	170 ± 84
VB11-1		12/11/07	< 171
VB1-11D		09/26/07	< 189
VB1-12D		11/27/07	< 191
VB1-12D		12/13/07	< 186
VB1-2		09/25/07	< 189
VB1-2D		09/25/07	< 189
VB1-2D		09/25/07	< 193
VB1-2D		09/25/07	< 189
VB1-2D	ORIGINAL	09/25/07	214 ± 101
VB1-2D	DUPLICATE	09/25/07	< 193
VB1-3D		09/26/07	4018 ± 192
VB1-4D		09/13/07	416 ± 108
VB1-4D		09/26/07	310 ± 105
VB1-5		09/24/07	< 189
VB1-5D		09/24/07	1282 ± 133
VB1-7D		09/14/07	< 189
VB1-8D		09/14/07	< 189
VB1-9D		09/13/07	6744 ± 245
VB1-9D		09/24/07	7401 ± 246
VB1-9D		10/09/07	7260 ± 791
VB1-9D		12/21/07	5160 ± 577
VB2-1		01/15/07	< 152
VB2-10		05/15/07	< 172
VB2-10		06/14/07	< 145
VB2-10	ORIGINAL	07/11/07	< 141
VB2-10	DUPLICATE	07/11/07	< 141
VB2-10		08/15/07	201 ± 100
VB2-10		09/10/07	< 180
VB2-10		11/13/07	< 196
VB2-10		12/10/07	< 188
VB2-10D		05/15/07	< 172
VB2-10D		06/14/07	< 145
VB2-10D		07/11/07	< 141
VB2-10D		08/15/07	188 ± 100
VB2-10D		09/10/07	< 180
VB2-10D		11/13/07	< 187
VB2-10D		12/10/07	< 185
VB2-11		05/11/07	< 141
VB2-11		06/14/07	< 174
VB2-11		07/10/07	< 180
VB2-11		08/15/07	238 ± 102

TABLE B-I.1 CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3
VB2-11	09/10/07	< 180
VB2-11	11/13/07	< 188
VB2-11	12/11/07	< 179
VB2-11D	05/11/07	< 169
VB2-11D	06/14/07	< 145
VB2-11D	07/10/07	< 180
VB2-11D	08/15/07	332 ± 105
VB2-11D	09/10/07	< 180
VB2-11D	11/13/07	< 194
VB2-11D	12/11/07	< 182
VB2-12	06/14/07	< 145
VB2-12	07/10/07	< 180
VB2-12	08/15/07	< 186
VB2-12	09/12/07	< 180
VB2-12	11/13/07	< 189
VB2-12	05/15/07	< 172
VB2-12	12/10/07	< 178
VB2-12D	05/16/07	< 172
VB2-12D	06/14/07	< 145
VB2-12D	07/10/07	< 180
VB2-12D	08/15/07	230 ± 101
VB2-12D	09/12/07	< 180
VB2-12D	11/13/07	< 192
VB2-12D	12/10/07	< 181
VB2-13	10/02/07	20754 ± 409
VB2-13	10/18/07	22000 ± 2250
VB2-13	12/13/07	22800 ± 2340
VB2-13 PREPURGE	10/18/07	21900 ± 2240
VB2-13D	10/02/07	2658 ± 167
VB2-13D	10/18/07	2060 ± 273
VB2-13D	12/13/07	4860 ± 552
VB2-14	10/02/07	13188 ± 330
VB2-14	12/13/07	11300 ± 1200
VB2-14D	10/02/07	3388 ± 183
VB2-14D	12/13/07	1970 ± 274
VB2-15D	10/02/07	< 176
VB2-15D	10/17/07	< 194
VB2-15D	12/13/07	< 189
VB2-15D PREPURGE	10/17/07	< 190
VB2-16	11/27/07	229 ± 121
VB2-16	12/14/07	< 183
VB2-16D	11/27/07	228 ± 121
VB2-16D	12/14/07	429 ± 131
VB2-17	11/27/07	< 191
VB2-17	12/14/07	< 177
VB2-17D	11/27/07	521 ± 127
VB2-17D	12/14/07	744 ± 155
VB2-2	01/16/07	1463 ± 132

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
VB2-2D		01/16/07	2984 ± 170
VB2-2D		09/19/07	3696 ± 186
VB2-3		01/12/07	4820 ± 202
VB2-4		01/16/07	8163 ± 254
VB2-5		01/12/07	3486 ± 176
VB2-5D		01/12/07	41255 ± 556
VB2-5D		09/18/07	17357 ± 378
VB2-6		01/15/07	1175 ± 118
VB2-6D		01/15/07	464 ± 93
VB2-6D		09/20/07	< 175
VB2-7		01/15/07	< 152
VB2-7D		01/15/07	< 152
VB2-7D		09/19/07	< 190
VB2-8		01/16/07	< 146
VB2-9	ORIGINAL	01/15/07	< 147
VB2-9	DUPLICATE	01/15/07	< 147
VB2-9D		01/15/07	< 147
VB2-9D		09/20/07	< 190
VB3-1		01/12/07	477 ± 94
VB3-10		01/12/07	361 ± 89
VB3-10D		01/12/07	< 147
VB3-10D		09/19/07	< 190
VB3-2		02/15/07	7554 ± 255
VB3-2		03/12/07	3689 ± 186
VB3-2		04/12/07	2208 ± 153
VB3-2		05/15/07	1785 ± 149
VB3-2		06/13/07	1514 ± 134
VB3-2		07/09/07	1384 ± 139
VB3-2		08/14/07	1283 ± 144
VB3-2		09/12/07	495 ± 119
VB3-2		10/18/07	615 ± 149
VB3-2		11/14/07	494 ± 145
VB3-2		01/08/07	5785 ± 226
VB3-2		12/11/07	228 ± 124
VB3-3		01/12/07	4586 ± 198
VB3-4	ORIGINAL	01/11/07	11466 ± 298
VB3-4	DUPLICATE	01/11/07	11411 ± 297
VB3-4D		01/11/07	709 ± 102
VB3-4D		09/19/07	442 ± 105
VB3-4D	ORIGINAL	09/19/07	442 ± 105
VB3-4D	DUPLICATE	09/19/07	533 ± 108
VB3-5		01/11/07	< 146
VB3-6		01/11/07	37239 ± 526
VB3-7		01/16/07	< 146
VB3-7D		01/16/07	< 146
VB3-7D		09/20/07	< 190
VB3-8		01/16/07	< 146
VB3-9D		01/11/07	10789 ± 289

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
VB3-9D		09/19/07	< 190
VB4-1		01/09/07	< 172
VB4-1		02/15/07	< 191
VB4-1		03/13/07	< 187
VB4-1		04/11/07	< 182
VB4-1		05/14/07	< 141
VB4-1	ORIGINAL	05/14/07	< 141
VB4-1	DUPLICATE	05/14/07	< 141
VB4-1		06/12/07	< 178
VB4-1		07/09/07	< 180
VB4-1	ORIGINAL	08/15/07	170 ± 84
VB4-1	DUPLICATE	08/15/07	< 152
VB4-1		09/12/07	208 ± 109
VB4-1		10/18/07	< 194
VB4-1		11/14/07	< 190
VB4-1		12/13/07	< 178
VB4-5D		03/15/07	< 170
VB4-5D		06/14/07	< 174
VB4-5D		09/12/07	< 160
VB4-5D		12/12/07	< 168
VB4-6D		03/15/07	< 170
VB4-6D		06/14/07	677 ± 110
VB4-6D		09/12/07	2787 ± 179
VB4-6D		09/26/07	2187 ± 158
VB4-6D		12/12/07	3060 ± 379
VB4-6D		09/26/07	2310 ± 304
VB5-2		01/09/07	< 179
VB5-2		02/15/07	< 190
VB5-2		03/13/07	< 187
VB5-2	ORIGINAL	03/13/07	< 187
VB5-2	DUPLICATE	03/13/07	< 187
VB5-2		04/13/07	< 182
VB5-2		05/14/07	< 141
VB5-2		06/12/07	< 178
VB5-2		07/10/07	< 180
VB5-2		08/15/07	< 152
VB5-2		09/12/07	196 ± 109
VB5-2		10/18/07	< 188
VB5-2		11/14/07	< 191
VB5-2		12/14/07	< 195
VB6-1		01/09/07	< 174
VB6-1		02/14/07	< 169
VB6-1		03/15/07	< 173
VB6-1	ORIGINAL	03/15/07	< 173
VB6-1	DUPLICATE	03/15/07	< 173
VB6-1		04/11/07	< 147
VB6-1		05/15/07	< 172
VB6-1		06/11/07	< 145

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3
VB6-1	07/09/07	< 144
VB6-1	08/14/07	< 152
VB6-1	09/12/07	< 160
VB6-1	10/17/07	< 200
VB6-1	11/13/07	< 196
VB6-1	12/13/07	< 195
VB7-1	01/09/07	1449 ± 145
VB7-1	02/14/07	1604 ± 144
VB7-1	03/14/07	1628 ± 141
VB7-1	04/10/07	1321 ± 124
VB7-1	05/16/07	704 ± 111
VB7-1	06/11/07	732 ± 104
VB7-1	07/10/07	882 ± 123
VB7-1	08/14/07	1357 ± 128
VB7-1	09/12/07	1085 ± 127
VB7-1	10/17/07	1480 ± 213
VB7-1	11/13/07	998 ± 180
VB7-1	12/13/07	928 ± 178
VB8-2	01/09/07	< 174
VB8-2	02/14/07	< 169
VB8-2	03/15/07	< 173
VB8-2	04/09/07	< 147
VB8-2	05/15/07	< 172
VB8-2	06/11/07	< 145
VB8-2	07/09/07	< 144
VB8-2	09/12/07	< 160
VB8-2	10/17/07	< 189
VB8-2	11/13/07	< 200
VB8-2	08/13/07	< 152
VB8-2	12/11/07	< 170
VB9-1	01/08/07	< 174
VB9-1	02/14/07	< 144
VB9-1	03/15/07	< 173
VB9-1	04/09/07	< 147
VB9-1	05/15/07	< 172
VB9-1	06/12/07	< 178
VB9-1	07/09/07	< 144
VB9-1	08/14/07	< 152
VB9-1	09/12/07	< 160
VB9-1	11/13/07	< 196
VB9-1	12/11/07	< 161
VB9-10	01/11/07	< 152
VB9-5	01/11/07	< 152
VB9-5D	01/11/07	< 152
VB9-6	01/11/07	< 152
VB9-6D	01/11/07	< 152
VB9-7	01/11/07	160 ± 83
VB9-7D	01/11/07	< 152

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3
VB9-8	01/11/07	< 152
VB9-8D	01/11/07	< 152
VB9-9	01/11/07	< 152
WCFP-1D	03/15/07	< 173
WCFP-1D	06/13/07	< 178
WCFP-1D	09/13/07	< 183
WCFP-1D	12/14/07	690 ± 159
WCFP-2DR	03/15/07	< 173
WCFP-2DR	06/13/07	< 178
WCFP-2DR	09/13/07	< 175
WCFP-2DR	12/14/07	< 179

TABLE B-I.2 **CONCENTRATIONS OF STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	SR-90
MW-14	12/27/07	< 0.9
MW-159D	11/13/07	< 1.5
MW-159D	06/14/07	< 0.7
MW-160D	06/14/07	< 0.7
MW-161D	12/27/07	< 0.8
MW-162D	12/27/07	< 1.4
MW-BW-201S	11/26/07	< 1.4

TABLE B-II.1 **CONCENTRATIONS OF TRITIUM IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2007**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE		COLLECTION DATE	H-3
DIAMOND LAKE		05/29/07	< 176
DITCH DS-2		09/14/07	< 175
DITCH DS-2		12/12/07	< 186
H DITCH		10/16/07	< 184
H DITCH		10/17/07	352 ± 129
H DITCH		10/18/07	< 185
H DITCH		12/13/07	< 191
LAKE DISCHARGE CANAL		11/15/07	210 ± 127
LAKE DISCHARGE CANAL		11/15/07	< 177
LAKE DISCHARGE CANAL		12/21/07	< 171
PW-006P		05/15/07	< 172
PW-006P	ORIGINAL	05/15/07	< 172
PW-006P	DUPLICATE	05/15/07	< 172
PW-006P		07/12/07	< 141
PW-006P		10/15/07	< 194
PW-015 P1	ORIGINAL	10/17/07	228 ± 125
PW-015 P1	RERUN	10/17/07	< 181
PW-015 P2	ORIGINAL	10/17/07	264 ± 124
PW-015 P2	RERUN	10/17/07	< 174
PW-13P		10/18/07	< 191
PW-601 POND		04/16/07	< 186
SG-BW-105		11/05/07	< 194
SW-101		06/21/07	339 ± 134
SW-101		11/08/07	< 192
SW-102 "C" DITCH		07/26/07	< 146
SW-103		11/08/07	188 ± 122
SW-104 "A" DITCH		07/26/07	< 146

TABLE B-I.3 **CONCENTRATIONS OF GAMMA EMITTERS IN GROUNDWATER SAMPLES COLLECTED IN THE VICNITY OF BRAIDWOOD STATION, 2007**

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	I-131	Cs-134	Cs-137	Ba-140	La-140
BW-MW-159D	06/14/07	< 38	< 33	< 4	< 4	< 10	< 4	< 10	< 5	< 8	< 22	< 4	< 4	< 41	< 13
BW-MW-160D	06/14/07	< 32	< 64	< 3	< 4	< 8	< 3	< 7	< 4	< 7	< 18	< 3	< 4	< 35	< 12
MW-14	12/27/07	< 51	< 58	< 4	< 6	< 12	< 4	< 12	< 7	< 9	< 17	< 6	< 6	< 39	< 14
MW-159D	11/13/07	< 27	< 54	< 2	< 3	< 7	< 3	< 5	< 4	< 6	< 31	< 2	< 3	< 43	< 15
MW-161D	12/27/07	< 40	71 ± 38	< 4	< 5	< 11	< 4	< 9	< 6	< 8	< 11	< 4	< 5	< 31	< 10
MW-162D	12/27/07	< 39	< 88	< 4	< 5	< 8	< 5	< 8	< 5	< 9	< 12	< 4	< 4	< 24	< 5
MW-BW-201S	11/26/07	< 24	< 39	< 2	< 2	< 6	< 2	< 4	< 2	< 4	< 47	< 2	< 2	< 46	< 13