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

www.exeloncorp.com

Exelon Nuclear

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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: 2008 Annual Radiological Environmental Operating Report

Attached is the 2008 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: 2008 Annual Radiological Environmental Operating Report

Docket No: 50-456
50-457

BRAIDWOOD STATION
UNITS 1 and 2

Annual Radiological
Environmental Operating Report

1 January Through 31 December 2008

Prepared By

Teledyne Brown Engineering
Environmental Services

Exelon SM
Nuclear

Braidwood Station
Braceville, IL 60407

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I. Summary and Conclusions

This report on the Radiological Environmental Monitoring Program conducted for the Braidwood Station by Exelon covers the period 1 January 2008 through 31 December 2008. During that time period, 1,550 analyses were performed on 1329 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. No tritium was detected in surface water. Gross beta 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. 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 2008 through 31 December 2008.

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 2008. 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 eight locations (BD-13, BD-34, BD-35, BD-36, BD-37, 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, golden redhorse, channel catfish, quillback, walleye, 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-Control, BD-Quad 1, BD-Quad 2, BD-Quad 3, and BD-Quad 4). The control location was BD-Control. 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 2008. 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 2008 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-19	02/14/08	No apparent reason for low timer reading: possible power outage.
A/I	BD-03, BD-04	06/19/08	No apparent reason for low timer reading; possible power outage in area.
A/I	BD-04	07/24/08	Low reading due to pump malfunction.
A/I	BD-03, BD-21	08/07/08	Low timer reading possibly due to severe weather.
A/I	BD-05	12/24/08	No apparent reason for low timer reading: possible power outage in area.

Table D-2 LISTING OF MISSED SAMPLES

Sample Type	Location Code	Collection Date	Reason
WT	BD-55, BD-56	01/03/08	No sample. Water frozen.
WG	BD-50	01/10/08	No sample. Water Homeowner no longer participating.
WG	BD-34, BD-35	01/11/08	No sample. Water Homeowner away.
WT	BD-56	01/17/08	No sample. Water frozen.
WT	BD-25, BD-55 BD-56	01/24/08	No samples. Water frozen.
WT	BD-38, BD-55 BD-56	01/31/08	No samples. Water frozen.
WT	BD-55, BD-56	02/07/08	No samples. Water Frozen
WT	BD-25, BD-55 BD-56	02/14/08	No samples. Water Frozen
WT	BD-25, BD-55 BD-56	02/21/08	No samples. Water frozen.
WT	BD-55, BD-56	02/28/08	No samples. Water Frozen
WT	BD-55, BD-56	03/06/08	No samples. Water frozen.
WT	BD-55	03/06/08	No sample. Water frozen.
WG	BD-50	04/10/08	No sample. Water Homeowner no longer participating.
WG	BD-50	07/10/08	No sample. Water Homeowner no longer participating.
WG	BD-50	10/09/08	No sample. Water Homeowner no longer participating.
WT	BD-55, BD-56	12/11/08	No samples. Water frozen.
WT	BD-38, BD-55 BD-56	12/18/08	No samples. Water frozen.

Table D-2 LISTING OF MISSED SAMPLES

Sample Type	Location Code	Collection Date	Reason
WT	BD-38, BD-55 BD-56	12/24/08	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-50 did not have a sample collection in 2008 because the homeowner is no longer participating. This sample collection will be removed from the REMP at the next ODCM change.

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, BD-38, and BD-40 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 66 of 70 samples. The values ranged from 2.9 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). No tritium activity was detected. (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 2.9 to 5.6 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 three of 12 samples. The values ranged from 291 to 524 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 eight locations (BD-13, BD-34, BD-35, BD-36, BD-37, 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 two of 31 samples. The values ranged from 162 to 230 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, golden redhorse, channel catfish, walleye, quillback, and common carp were collected at three locations (BD-25, BD-28, and BD-41) semiannually. Locations BD-28 and BD-41 could be affected by Braidwood Station's effluent releases. The following analysis was performed:

Gamma Spectrometry

The edible portion of fish samples from all three 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, at the Braidwood Station outfall to the Kanakakee River and downstream of the outfall, could be affected by the 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 54 to

171 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 10 to 43 E–3 pCi/m^3 with a mean of 20 E–3 pCi/m^3. The results from the far field (Group II) ranged from 7 to 41 E–3 pCi/m^3 with a mean of 20 E–3 pCi/m^3. The results from the Control location (Group III) ranged from 7 to 40 E–3 pCi/m^3 with a mean of 19 E–3 pCi/m^3. Comparison of the 2008 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 2008 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). No 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 30 mR/quarter, with a range of 13 to 30 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 August 2008 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	-	-
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, 16 out of 18 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 December 2008 Sr-89 in milk result of 18.0 pCi/L was higher than the known value of 12.6 pCi/L, resulting in a found to known ratio of 1.43. NCR 09-02 was initiated to investigate this failure.

2. Teledyne Brown Engineering's Analytics' ERA Quik Response water sample January 2008 Sr-89 result of 37.33 pCi/L exceeded the upper acceptance limit of 25.2 pCi/L. No cause could be found for the failure. Studies bracketing these results, RAD 71 and RAD 72 had acceptable Sr-89 results. NCR 08-03 was initiated to investigate this failure.

For the secondary laboratory, all of the 15 analytes met the specified acceptance criteria.

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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, 2008

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

Location of Facility: BRACEVILLE, IL | **REPORTING PERIOD: ANNUAL 2008**

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	70	4	6.9 (54/58) (2.9/14.7)	7 (12/12) (3.3/11.9)	11.6 (12/12) (8.1/14.7)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0
	H-3	24	200	<LLD	<LLD	-		0
	GAMMA	70						
	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
	NB-95		15	<LLD	<LLD	-		0

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

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SURFACE WATER (PCI/LITER)	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
PUBLIC WATER (PCI/LITER)	GR-B	12	4	4.7 (12/12) (2.9/5.6)	NA	4.7 (12/12) (2.9/5.6)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	H-3	12	200	373 (3/12) (291/524)	NA	373 (3/12) (291/524)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0

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PUBLIC WATER (PCI/LITER)	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
	NB-95		15	<LLD	NA	-		0
	ZR-95		30	<LLD	NA	-		0
	I-131		15	<LLD	NA	-		0

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PUBLIC WATER (PCI/LITER)	CS-134		15	<LLD	NA	-		0
	CS-137		18	<LLD	NA	-		0
	BA-140		60	<LLD	NA	-		0
	LA-140		15	<LLD	NA	-		0
GROUND WATER (PCI/LITER)	H-3	31	200	196 (2/31) (162/230)	NA	196 (2/4) (162/230)	BD-36 INDICATOR HUTTON WELL 4.7 MILES E OF SITE	0
	GAMMA MN-54	31	15	<LLD	NA	-		0
	CO-58		15	<LLD	NA	-		0
	FE-59		30	<LLD	NA	-		0

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GROUND WATER (PCI/LITER)	CO-60		15	<LLD	NA	-		0
	ZN-65		30	<LLD	NA	-		0
	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

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GROUND WATER (PCI/LITER)	LA-140		15	<LLD	NA	-		0
FISH (PCI/KG WET)	GAMMA	12						
	MN-54		130	<LLD	<LLD	-		0
	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

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FISH (PCI/KG WET)	I-131		NA	<LLD	<LLD	-		0
	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
	FE-59		NA	<LLD	NA	-		0

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SEDIMENT (PCI/KG DRY)	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
	CS-137		180	104 (3/4) (54/171)	NA	171 (1/2)	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

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AIR PARTICULATE (E-3 PCI/CU.METER)	GR-B	415	10	20 (362/363) (6/43)	19 (51/52) (7/40)	20 (52/52) (7/39)	BD-02 INDICATOR CUSTER PARK 5.0 MILES E OF SITE	0
	GAMMA	32						
	MN-54		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
	ZR-95		NA	<LLD	<LLD	-		0

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AIR PARTICULATE (E-3 PCI/CU.METER)	CS-134		50	<LLD	<LLD	-		0
	CS-137		60	<LLD	<LLD	-		0
	BA-140		NA	<LLD	<LLD	-		0
	LA-140		NA	<LLD	<LLD	-		0
AIR IODINE (E-3 PCI/CU.METER)	GAMMA I-131	415	70	<LLD	<LLD	-		0
MILK (PCI/LITER)	I-131	40	1	<LLD	<LLD	-		0
	GAMMA MN-54	40	NA	<LLD	<LLD	-		0
	CO-58		NA	<LLD	<LLD	-		0

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MILK (PCI/LITER)	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		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	10						
	MN-54		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
	ZR-95		NA	<LLD	<LLD	-		0

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VEGETATION (PCI/KG WET)	CS-134		60	<LLD	<LLD	-		0
	CS-137		80	<LLD	<LLD	-		0
	BA-140		NA	<LLD	<LLD	-		0
	LA-140		NA	<LLD	<LLD	-		0
DIRECT RADIATION (MILLI-ROENTGEN/QTR.)	TLD-QUARTERLY	320	NA	19.1 (312/312) (13/30)	19.8 (8/8) (16/24)	24.8 (4/4) (21/30)	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, 2008

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, 2008

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, 2008

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, 2008

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, 2008

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

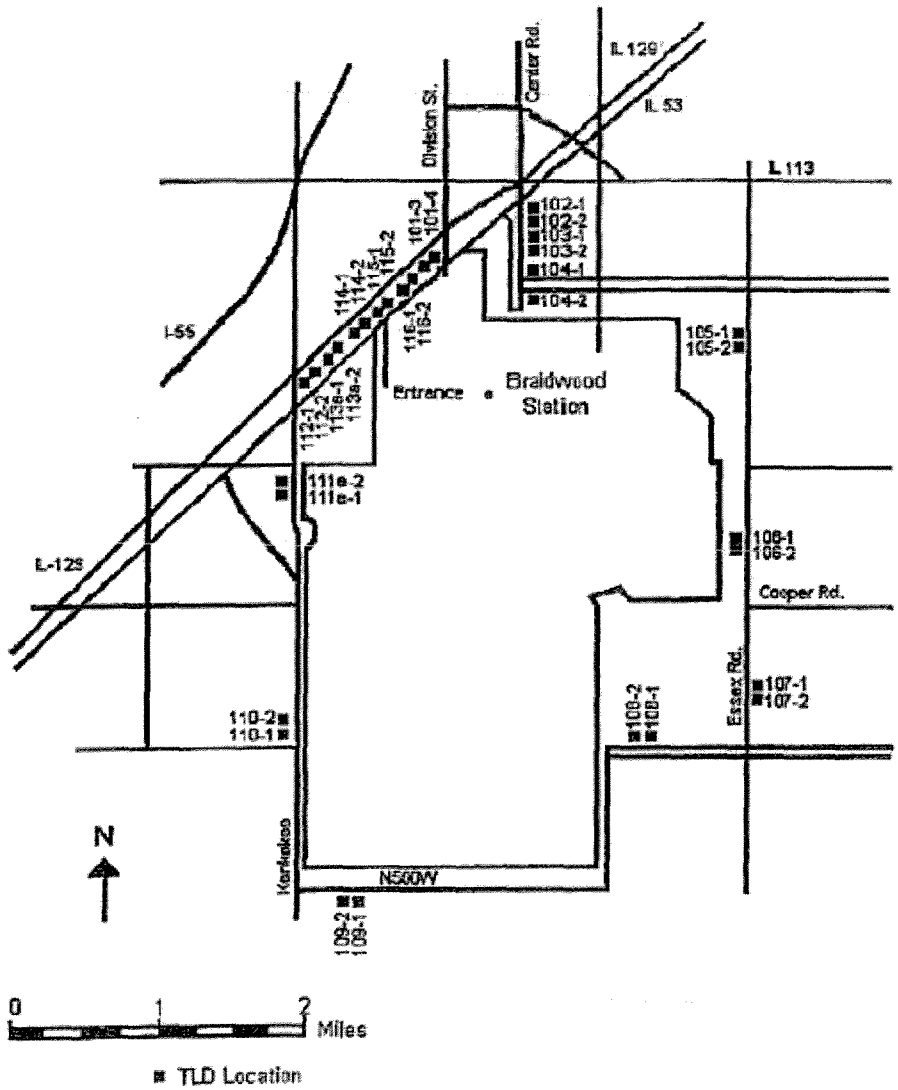


Figure B-1
Inner Ring TLD Locations of the
Braidwood Station, 2008

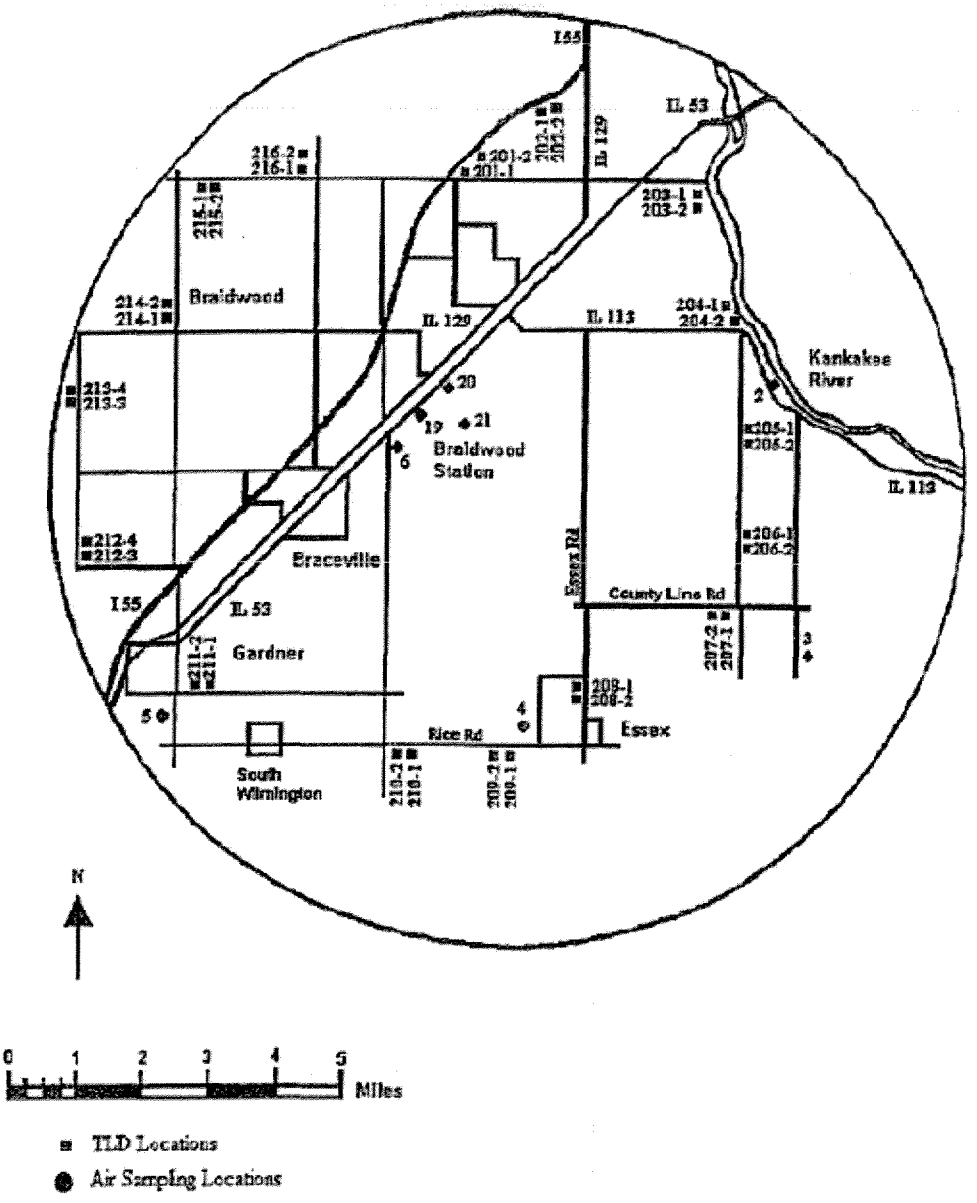


Figure B-2
Fixed Air Sampling and Outer Ring TLD Locations
of the Braidwood Station, 2008

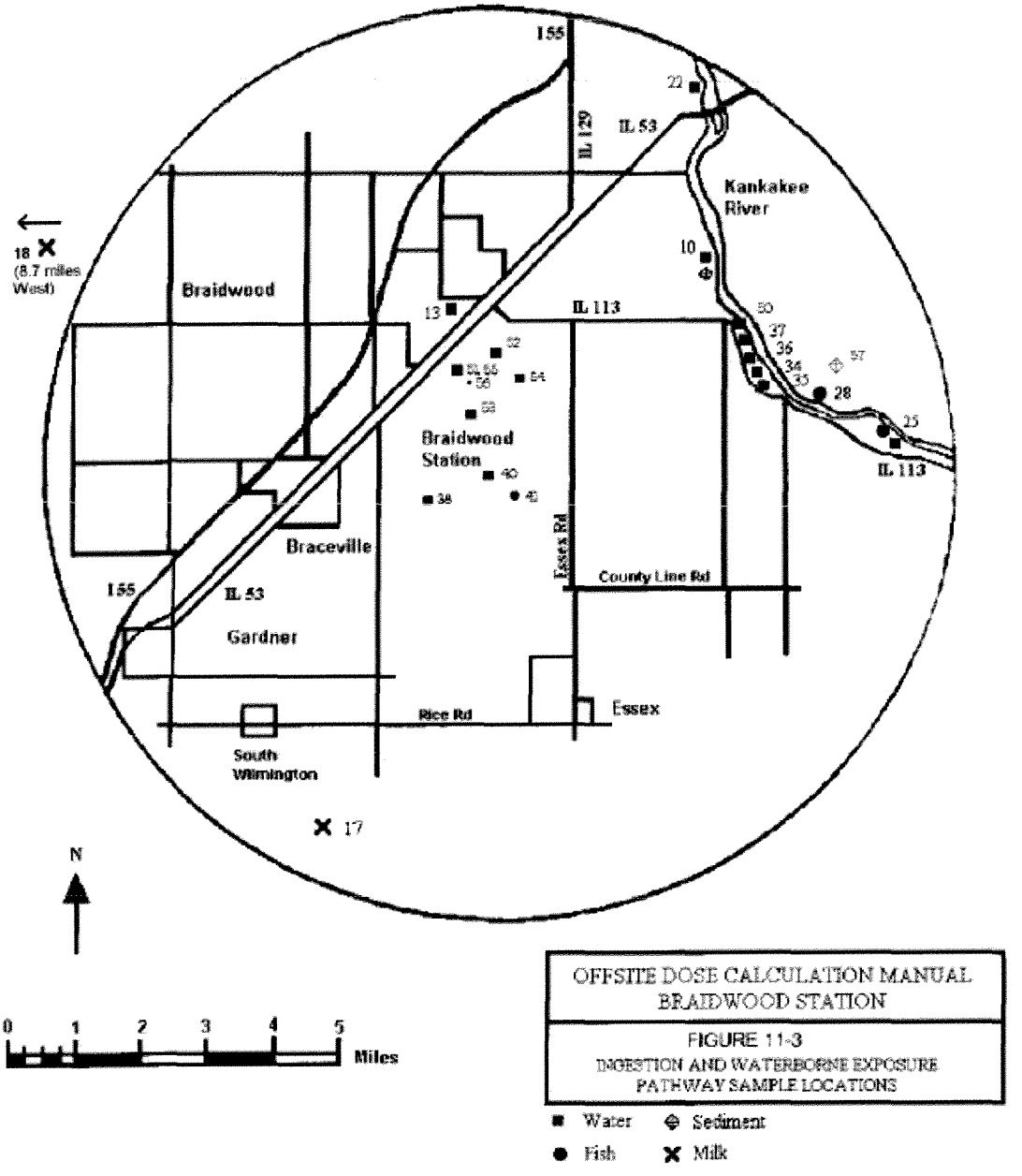


Figure B-3
Ingestion and Waterborne Exposure Pathway Sample Locations
of the Braidwood Station, 2008

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, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	BD-10	BD-25	BD-38	BD-40	BD-55	BD-56
01/10/08 - 01/10/08	6.1 ± 2.0	8.9 ± 2.5	5.5 ± 2.4	10.9 ± 2.7	< 2.3	3.1 ± 1.9
02/07/08 - 02/28/08	6.1 ± 2.1	12 ± 3.5	4.1 ± 2.6	11.2 ± 3.0	(1)	(1)
03/13/08 - 03/27/08	4.0 ± 2.0	6.3 ± 2.4	4.2 ± 2.3	11.8 ± 2.8	< 2.4	< 3.0
04/03/08 - 04/24/08	4.4 ± 1.8	4.0 ± 1.8	6.4 ± 2.2	12.4 ± 2.6	3.7 ± 1.7	3.9 ± 2.3
05/01/08 - 05/29/08	2.9 ± 1.9	3.8 ± 2.0	5.1 ± 2.3	8.1 ± 2.4	< 2.5	3.8 ± 2.3
06/05/08 - 06/26/08	6.2 ± 2.1	7.4 ± 2.3	5.9 ± 2.5	13.1 ± 2.7	3.1 ± 1.8	5.5 ± 2.5
07/03/08 - 07/31/08	4.6 ± 1.9	6.1 ± 2.1	9.9 ± 2.7	14.7 ± 2.8	3.6 ± 1.7	5.1 ± 2.2
08/07/08 - 08/28/08	6.8 ± 2.2	5.5 ± 2.1	7.8 ± 2.7	12 ± 2.8	3.5 ± 2.0	6.4 ± 2.4
09/04/08 - 09/25/08	5.8 ± 2.0	3.3 ± 1.9	9.0 ± 2.6	8.7 ± 2.5	4.6 ± 1.9	4.5 ± 2.2
10/02/08 - 10/30/08	7.0 ± 2.1	7.4 ± 2.1	9.3 ± 2.6	11.2 ± 2.6	4.4 ± 1.7	6.3 ± 2.2
11/06/08 - 11/26/08	4.3 ± 1.9	8.1 ± 2.2	8.3 ± 2.4	12.6 ± 2.6	4.7 ± 1.7	6.8 ± 2.3
12/04/08 - 12/04/08	6.3 ± 2.0	11 ± 2.2	8.8 ± 2.5	12.2 ± 2.5	5.7 ± 1.7	7.7 ± 2.2
MEAN	5.4 ± 2.6	7.0 ± 5.5	7.0 ± 4.1	11.6 ± 3.6	4.2 ± 1.7	5.3 ± 2.9

TABLE C-I.2 CONCENTRATIONS OF TRITIUM IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	BD-10	BD-25	BD-38	BD-40	BD-55	BD-56
01/10/08 - 03/27/08	< 170	< 167	< 177	< 165	< 172	< 173
04/03/08 - 06/26/08	< 190	< 190	< 188	< 192	< 188	< 193
07/03/08 - 09/25/08	< 141	< 135	< 132	< 145	< 145	< 143
10/02/08 - 12/04/08	< 152	< 154	< 170	< 155	< 160	< 151
MEAN	-	-	-	-	-	-

* 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, 2008**

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	01/03/08 - 01/31/08	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 13	< 1	< 1	< 20	< 7
	02/07/08 - 02/28/08	< 3	< 3	< 8	< 3	< 6	< 4	< 6	< 13	< 3	< 4	< 26	< 7
	03/06/08 - 03/27/08	< 4	< 4	< 9	< 4	< 8	< 4	< 7	< 9	< 3	< 4	< 24	< 7
	04/03/08 - 04/24/08	< 3	< 5	< 9	< 4	< 7	< 4	< 7	< 10	< 4	< 4	< 29	< 8
	05/01/08 - 05/29/08	< 2	< 2	< 4	< 2	< 4	< 2	< 4	< 5	< 2	< 2	< 13	< 4
	06/05/08 - 06/26/08	< 2	< 2	< 4	< 2	< 4	< 2	< 4	< 13	< 2	< 2	< 21	< 7
	07/03/08 - 07/31/08	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 15	< 1	< 1	< 18	< 6
	08/07/08 - 08/28/08	< 1	< 1	< 4	< 1	< 3	< 2	< 3	< 14	< 1	< 1	< 19	< 6
	09/04/08 - 09/25/08	< 1	< 1	< 2	< 1	< 1	< 1	< 2	< 12	< 1	< 1	< 15	< 5
	10/02/08 - 10/30/08	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 9	< 1	< 1	< 41	< 13
	11/06/08 - 11/26/08	< 2	< 2	< 6	< 3	< 5	< 3	< 5	< 15	< 2	< 2	< 24	< 9
	12/04/08 - 12/24/08	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 12	< 1	< 1	< 18	< 6
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-25	01/03/08 - 01/31/08	< 1	< 1	< 3	< 1	< 3	< 1	< 2	< 13	< 1	< 1	< 17	< 6
	02/07/08 - 02/28/08	< 2	< 2	< 4	< 2	< 4	< 2	< 3	< 8	< 2	< 2	< 15	< 5
	03/06/08 - 03/27/08	< 4	< 4	< 9	< 4	< 8	< 4	< 8	< 10	< 4	< 4	< 25	< 8
	04/03/08 - 04/24/08	< 4	< 5	< 12	< 5	< 9	< 5	< 9	< 14	< 4	< 5	< 27	< 10
	05/01/08 - 05/29/08	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 5	< 2	< 2	< 12	< 3
	06/05/08 - 06/26/08	< 1	< 1	< 4	< 1	< 3	< 2	< 3	< 11	< 1	< 2	< 17	< 5
	07/03/08 - 07/31/08	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 14	< 1	< 1	< 17	< 6
	08/07/08 - 08/28/08	< 1	< 2	< 4	< 2	< 3	< 2	< 3	< 13	< 1	< 1	< 19	< 7
	09/04/08 - 09/25/08	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 12	< 1	< 1	< 14	< 4
	10/02/08 - 10/30/08	< 1	< 2	< 5	< 1	< 3	< 2	< 4	< 9	< 1	< 1	< 49	< 15
	11/06/08 - 11/26/08	< 3	< 3	< 7	< 3	< 6	< 3	< 5	< 15	< 2	< 3	< 29	< 9
	12/04/08 - 12/24/08	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 12	< 1	< 1	< 18	< 6
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-

TABLE C-I.3 **CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008**

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	01/03/08 - 01/24/08	< 2	< 2	< 4	< 2	< 3	< 3	< 4	< 13	< 2	< 2	< 38	< 11
	02/07/08 - 02/28/08	< 3	< 3	< 7	< 3	< 6	< 3	< 5	< 12	< 3	< 3	< 24	< 8
	03/06/08 - 03/27/08	< 2	< 2	< 4	< 2	< 4	< 2	< 4	< 6	< 2	< 2	< 14	< 4
	04/03/08 - 04/24/08	< 6	< 5	< 12	< 5	< 9	< 4	< 10	< 15	< 4	< 5	< 34	< 12
	05/01/08 - 05/29/08	< 2	< 2	< 5	< 2	< 3	< 2	< 4	< 5	< 2	< 2	< 13	< 4
	06/05/08 - 06/26/08	< 2	< 2	< 4	< 1	< 3	< 2	< 3	< 14	< 2	< 2	< 22	< 7
	07/03/08 - 07/31/08	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 14	< 1	< 1	< 17	< 5
	08/07/08 - 08/28/08	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 15	< 1	< 2	< 22	< 7
	09/04/08 - 09/25/08	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 14	< 1	< 1	< 16	< 5
	10/02/08 - 10/30/08	< 1	< 1	< 3	< 1	< 2	< 1	< 3	< 10	< 1	< 1	< 37	< 9
	11/06/08 - 11/26/08	< 2	< 2	< 5	< 2	< 5	< 4	< 4	< 14	< 2	< 2	< 28	< 9
	12/04/08 - 12/11/08	< 1	< 2	< 4	< 2	< 3	< 2	< 3	< 36 (1)	< 1	< 2	< 37	< 13
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-40	01/03/08 - 01/31/08	< 1	< 1	< 3	< 1	< 2	< 1	< 3	< 12	< 1	< 1	< 17	< 4
	02/07/08 - 02/28/08	< 2	< 3	< 5	< 2	< 5	< 3	< 4	< 11	< 2	< 2	< 20	< 6
	03/06/08 - 03/27/08	< 4	< 5	< 9	< 4	< 8	< 4	< 8	< 12	< 4	< 4	< 29	< 9
	04/03/08 - 04/24/08	< 5	< 5	< 12	< 6	< 9	< 5	< 9	< 13	< 4	< 5	< 33	< 12
	05/01/08 - 05/29/08	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 5	< 2	< 2	< 12	< 4
	06/05/08 - 06/26/08	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 14	< 2	< 2	< 21	< 7
	07/03/08 - 07/31/08	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 14	< 1	< 1	< 18	< 5
	08/07/08 - 08/28/08	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 15	< 2	< 2	< 24	< 8
	09/04/08 - 09/25/08	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 13	< 1	< 1	< 15	< 5
	10/02/08 - 10/30/08	< 1	< 2	< 4	< 1	< 3	< 2	< 4	< 8	< 1	< 1	< 44	< 15
	11/06/08 - 11/26/08	< 2	< 3	< 6	< 3	< 5	< 3	< 5	< 14	< 2	< 3	< 26	< 7
	12/04/08 - 12/24/08	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 12	< 1	< 2	< 20	< 6
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-

(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, 2008**

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	01/10/08 - 01/17/08	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 12	< 1	< 1	< 33	< 9
	02/07/08 - 02/28/08	(1)											
	03/13/08 - 03/27/08	< 3	< 3	< 7	< 3	< 6	< 3	< 6	< 9	< 3	< 3	< 22	< 6
	04/03/08 - 04/24/08	< 5	< 5	< 13	< 6	< 9	< 6	< 10	< 15	< 5	< 6	< 38	< 11
	05/01/08 - 05/29/08	< 1	< 2	< 3	< 1	< 3	< 2	< 3	< 5	< 1	< 2	< 10	< 3
	06/05/08 - 06/26/08	< 1	< 2	< 4	< 2	< 3	< 2	< 3	< 13	< 1	< 1	< 21	< 7
	07/03/08 - 07/31/08	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 14	< 1	< 1	< 17	< 5
	08/07/08 - 08/28/08	< 1	< 1	< 3	< 1	< 2	< 2	< 3	< 14	< 1	< 1	< 20	< 6
	09/04/08 - 09/25/08	< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 11	< 1	< 1	< 14	< 4
	10/02/08 - 10/30/08	< 1	< 1	< 3	< 1	< 2	< 1	< 3	< 11	< 1	< 1	< 35	< 12
	11/06/08 - 11/26/08	< 2	< 2	< 3	< 1	< 4	< 2	< 3	< 14	< 2	< 2	< 20	< 4
	12/04/08 - 12/04/08	< 1	< 2	< 5	< 1	< 3	< 2	< 3	< 62 (1)	< 1	< 1	< 51	< 15
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-56	01/10/08 - 01/10/08	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 63	< 1	< 1	< 45	< 14
	02/07/08 - 02/28/08	(1)											
	03/13/08 - 03/27/08	< 3	< 3	< 7	< 4	< 6	< 3	< 5	< 8	< 3	< 3	< 20	< 7
	04/03/08 - 04/24/08	< 3	< 4	< 7	< 4	< 6	< 3	< 6	< 11	< 3	< 3	< 22	< 6
	05/01/08 - 05/29/08	< 3	< 3	< 6	< 3	< 5	< 3	< 5	< 8	< 3	< 3	< 19	< 6
	06/05/08 - 06/26/08	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 14	< 1	< 2	< 21	< 7
	07/03/08 - 07/31/08	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 15	< 1	< 1	< 18	< 5
	08/07/08 - 08/28/08	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 15	< 1	< 1	< 21	< 7
	09/04/08 - 09/25/08	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 15	< 1	< 1	< 16	< 5
	10/02/08 - 10/30/08	< 1	< 1	< 4	< 1	< 2	< 2	< 3	< 12	< 1	< 1	< 41	< 13
	11/06/08 - 11/26/08	< 2	< 2	< 4	< 2	< 3	< 2	< 4	< 15	< 1	< 2	< 20	< 7
	12/04/08 - 12/04/08	< 2	< 2	< 5	< 1	< 3	< 2	< 4	< 71 (1)	< 1	< 1	< 58	< 15
	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, 2008**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	BD-22
01/03/08 - 01/31/08	5.6 ± 1.9
01/31/08 - 02/28/08	4.8 ± 1.8
02/28/08 - 03/27/08	3.6 ± 1.6
04/03/08 - 05/01/08	2.9 ± 1.6
05/01/08 - 05/29/08	4.4 ± 2.3
05/29/08 - 06/26/08	4.0 ± 1.6
07/03/08 - 07/31/08	5.5 ± 1.9
07/31/08 - 08/28/08	5.0 ± 1.8
08/28/08 - 10/02/08	5.2 ± 1.7
10/02/08 - 10/30/08	4.5 ± 1.7
10/30/08 - 11/26/08	5.6 ± 1.7
11/26/08 - 01/01/09	5.2 ± 1.7
MEAN	5.1 ± 3.7

TABLE C-II.2 **CONCENTRATIONS OF TRITIUM IN PUBLIC WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

COLLECTION PERIOD	BD-22
01/03/08 - 01/31/08	< 157
01/31/08 - 02/28/08	< 166
02/28/08 - 03/27/08	< 192
04/03/08 - 05/01/08	303 ± 120
05/01/08 - 05/29/08	524 ± 146
05/29/08 - 06/26/08	< 177
07/03/08 - 07/31/08	< 131
07/31/08 - 08/28/08	< 157
08/28/08 - 10/02/08	< 171
10/02/08 - 10/30/08	< 180
10/30/08 - 11/26/08	< 192
11/26/08 - 01/01/09	291 ± 118
MEAN	373 ± 262

* 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, 2008**

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	01/03/08 - 01/31/08	< 2	< 3	< 6	< 2	< 5	< 3	< 4	< 13	< 2	< 2	< 23	< 8
	01/31/08 - 02/28/08	< 1	< 2	< 3	< 1	< 3	< 2	< 3	< 14	< 1	< 1	< 21	< 6
	02/28/08 - 03/27/08	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 9	< 1	< 1	< 27	< 7
	04/03/08 - 05/01/08	< 1	< 1	< 3	< 1	< 2	< 2	< 3	< 7	< 1	< 1	< 26	< 10
	05/01/08 - 05/29/08	< 4	< 4	< 12	< 5	< 8	< 4	< 7	< 13	< 4	< 4	< 30	< 9
	05/29/08 - 06/26/08	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 11	< 1	< 1	< 46	< 13
	07/03/08 - 07/31/08	< 1	< 2	< 3	< 1	< 2	< 2	< 3	< 11	< 1	< 1	< 45	< 15
	07/31/08 - 08/28/08	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 8	< 2	< 2	< 15	< 4
	08/28/08 - 10/02/08	< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 15	< 1	< 1	< 15	< 4
	10/02/08 - 10/30/08	< 1	< 2	< 5	< 1	< 3	< 2	< 3	< 7	< 1	< 1	< 39	< 11
	10/30/08 - 11/26/08	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 10	< 1	< 1	< 42	< 12
	11/26/08 - 01/01/09	< 3	< 3	< 7	< 3	< 6	< 3	< 5	< 14	< 3	< 3	< 28	< 8
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-

TABLE C-III.1 **CONCENTRATIONS OF TRITIUM IN GROUND/WELL WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008**

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
01/11/08 - 01/11/08	< 152	< 175	(1)	230 ± 131	< 155	(1)	< 154	< 156	< 154
04/17/08 - 04/17/08	< 171	< 172	< 184	< 193	< 169		< 166	< 167	< 166
07/10/08 - 07/10/08	< 168	< 161	< 168	< 170	< 166		< 172	< 167	< 160
10/09/08 - 10/09/08	< 141	< 151	< 152	162 ± 94	< 151		< 153	< 152	< 147
MEAN	-	-	-	212 ± 87	-		-	-	-

* 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, 2008**

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	01/10/08 - 01/10/08	< 4	< 4	< 8	< 4	< 8	< 4	< 8	< 10	< 4	< 4	< 25	< 8
	04/03/08 - 04/03/08	< 7	< 8	< 17	< 7	< 16	< 8	< 13	< 12	< 6	< 8	< 35	< 11
	07/10/08 - 07/10/08	< 2	< 2	< 4	< 1	< 3	< 2	< 3	< 9	< 2	< 2	< 17	< 5
	10/09/08 - 10/09/08	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 13	< 1	< 1	< 18	< 6
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-34	03/20/08 - 03/20/08	< 5	< 5	< 10	< 5	< 10	< 6	< 10	< 15	< 5	< 6	< 35	< 12
	04/03/08 - 04/03/08	< 7	< 6	< 13	< 6	< 14	< 8	< 13	< 14	< 6	< 7	< 36	< 10
	07/10/08 - 07/10/08	< 2	< 3	< 5	< 2	< 6	< 3	< 5	< 13	< 2	< 3	< 24	< 8
	10/09/08 - 10/09/08	< 1	< 1	< 3	< 1	< 2	< 1	< 3	< 15	< 1	< 1	< 20	< 6
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-35	01/11/08 - 01/11/08	(1)											
	04/17/08 - 04/17/08	< 3	< 3	< 6	< 3	< 6	< 3	< 6	< 9	< 3	< 3	< 21	< 6
	07/10/08 - 07/10/08	< 2	< 2	< 5	< 3	< 4	< 2	< 3	< 10	< 2	< 2	< 19	< 5
	10/09/08 - 10/09/08	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 15	< 1	< 1	< 17	< 6
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-36	01/11/08 - 01/11/08	< 5	< 5	< 12	< 6	< 11	< 6	< 9	< 11	< 5	< 6	< 29	< 10
	04/03/08 - 04/03/08	< 6	< 6	< 13	< 6	< 11	< 7	< 13	< 12	< 6	< 6	< 32	< 10
	07/10/08 - 07/10/08	< 2	< 3	< 6	< 2	< 5	< 3	< 5	< 12	< 2	< 2	< 22	< 7
	10/09/08 - 10/09/08	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 13	< 1	< 1	< 20	< 5
	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, 2008**

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	01/11/08 - 01/11/08	< 5	< 5	< 10	< 5	< 11	< 6	< 10	< 11	< 5	< 5	< 28	< 10
	04/03/08 - 04/03/08	< 7	< 7	< 15	< 9	< 15	< 8	< 14	< 12	< 7	< 8	< 36	< 14
	07/10/08 - 07/10/08	< 2	< 2	< 4	< 2	< 4	< 2	< 3	< 9	< 2	< 2	< 18	< 6
	10/09/08 - 10/09/08	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 15	< 1	< 1	< 16	< 5
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-51	01/10/08 - 01/10/08	< 6	< 5	< 11	< 6	< 12	< 6	< 10	< 14	< 5	< 6	< 34	< 11
	04/03/08 - 04/03/08	< 8	< 7	< 14	< 8	< 16	< 8	< 13	< 14	< 7	< 8	< 36	< 14
	07/10/08 - 07/10/08	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 10	< 2	< 2	< 21	< 6
	10/09/08 - 10/09/08	< 1	< 1	< 2	< 1	< 1	< 1	< 2	< 14	< 1	< 1	< 16	< 5
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-53	01/10/08 - 01/10/08	< 5	< 5	< 12	< 5	< 11	< 6	< 10	< 13	< 5	< 6	< 31	< 10
	04/03/08 - 04/03/08	< 7	< 8	< 15	< 8	< 14	< 7	< 13	< 14	< 7	< 8	< 38	< 13
	07/10/08 - 07/10/08	< 2	< 3	< 6	< 3	< 5	< 3	< 5	< 13	< 2	< 3	< 24	< 7
	10/09/08 - 10/09/08	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 15	< 1	< 1	< 17	< 5
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-
BD-54	01/10/08 - 01/10/08	< 4	< 5	< 9	< 4	< 9	< 4	< 8	< 9	< 4	< 4	< 25	< 8
	04/03/08 - 04/03/08	< 8	< 7	< 15	< 7	< 14	< 8	< 12	< 14	< 7	< 7	< 39	< 12
	07/10/08 - 07/10/08	< 2	< 2	< 4	< 2	< 4	< 2	< 4	< 10	< 2	< 2	< 19	< 6
	10/09/08 - 10/09/08	< 1	< 1	< 2	< 1	< 1	< 1	< 2	< 14	< 1	< 1	< 15	< 5
	MEAN	-	-	-	-	-	-	-	-	-	-	-	-

TABLE C-IV.1 **CONCENTRATIONS OF GAMMA EMITTERS IN FISH SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008**

RESULTS IN UNITS OF PCI/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														
	05/22/08	Golden Redhorse	< 32	< 38	< 86	< 34	< 60	< 50	< 73	< 906	< 32	< 35	< 913	< 222
	05/22/08	Walleye	< 54	< 69	< 163	< 47	< 94	< 58	< 110	< 1260	< 45	< 46	< 964	< 296
	10/15/08	Golden Redhorse	< 39	< 56	< 149	< 55	< 102	< 56	< 100	< 1010	< 39	< 35	< 1000	< 316
	10/15/08	Smallmouth Bass	< 38	< 45	< 132	< 42	< 77	< 40	< 78	< 674	< 30	< 35	< 694	< 280
	MEAN		-	-	-	-	-	-	-	-	-	-	-	-
BD-28														
	05/22/08	Channel Catfish	< 51	< 83	< 222	< 59	< 137	< 79	< 146	< 1430	< 71	< 59	< 1440	< 431
	05/22/08	Quillback	< 48	< 64	< 154	< 50	< 118	< 69	< 137	< 1130	< 42	< 49	< 1450	< 366
	10/15/08	Channel Catfish	< 49	< 69	< 158	< 50	< 97	< 57	< 114	< 1010	< 48	< 59	< 1240	< 188
	10/15/08	Largemouth Bass	< 37	< 51	< 119	< 34	< 84	< 51	< 84	< 746	< 36	< 41	< 811	< 289
	MEAN		-	-	-	-	-	-	-	-	-	-	-	-
BD-41														
	05/22/08	Channel Catfish	< 38	< 51	< 119	< 34	< 73	< 58	< 82	< 1120	< 38	< 34	< 1110	< 326
	05/22/08	Largemouth Bass	< 55	< 55	< 181	< 48	< 85	< 60	< 104	< 1240	< 43	< 52	< 1230	< 336
	10/14/08	Common Carp	< 38	< 49	< 116	< 32	< 93	< 54	< 89	< 902	< 34	< 28	< 802	< 287
	10/14/08	Largemouth Bass	< 36	< 49	< 90	< 39	< 82	< 45	< 89	< 829	< 32	< 34	< 972	< 249
	MEAN		-	-	-	-	-	-	-	-	-	-	-	-

TABLE C-V.1 CONCENTRATIONS OF GAMMA EMITTERS IN SEDIMENT SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/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	05/15/08	< 94	< 104	< 256	< 99	< 195	< 113	< 200	< 88	171 ± 75	< 838	< 201
	10/02/08	< 95	< 111	< 244	< 82	< 229	< 145	< 229	< 92	< 135	< 2290	< 421
	MEAN	-	-	-	-	-	-	-	-	171 ± 0	-	-
BD-57	05/15/08	< 43	< 58	< 179	< 42	< 119	< 73	< 105	< 43	54 ± 39	< 1150	< 355
	10/02/08	< 57	< 75	< 171	< 66	< 144	< 84	< 123	< 54	87 ± 45	< 1290	< 406
	MEAN	-	-	-	-	-	-	-	-	71 ± 46	-	-

* 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, 2008

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
01/03/08 - 01/10/08	16 ± 4	23 ± 5	17 ± 4	20 ± 4	22 ± 4	20 ± 4	22 ± 5	15 ± 4
01/10/08 - 01/17/08	32 ± 5	29 ± 5	33 ± 5	29 ± 5	32 ± 5	30 ± 5	39 ± 6	27 ± 5
01/17/08 - 01/24/08	28 ± 5	33 ± 5	30 ± 5	27 ± 5	28 ± 5	26 ± 5	32 ± 5	27 ± 5
01/24/08 - 01/31/08	30 ± 5	32 ± 5	29 ± 5	18 ± 4	33 ± 5	22 ± 5	28 ± 5	25 ± 5
01/31/08 - 02/07/08	16 ± 4	16 ± 4	14 ± 4	14 ± 4	14 ± 4	15 ± 4	14 ± 4	14 ± 4
02/07/08 - 02/14/08	38 ± 6	28 ± 5	30 ± 5	31 ± 5	31 ± 5	31 ± 5	33 ± 5	26 ± 5
02/14/08 - 02/21/08	25 ± 5	22 ± 4	25 ± 5	27 ± 5	26 ± 5	26 ± 5	28 ± 5	26 ± 5
02/21/08 - 02/28/08	12 ± 4	16 ± 5	14 ± 4	15 ± 4	11 ± 4	14 ± 4	16 ± 4	13 ± 4
02/28/08 - 03/06/08	19 ± 4	18 ± 4	18 ± 4	24 ± 5	19 ± 4	19 ± 4	17 ± 4	20 ± 4
03/06/08 - 03/13/08	32 ± 5	26 ± 5	28 ± 5	24 ± 5	27 ± 5	24 ± 5	31 ± 5	21 ± 5
03/13/08 - 03/20/08	14 ± 4	15 ± 4	13 ± 4	12 ± 4	11 ± 4	17 ± 4	16 ± 4	12 ± 4
03/20/08 - 03/27/08	15 ± 4	14 ± 4	15 ± 4	16 ± 4	13 ± 4	13 ± 4	18 ± 4	14 ± 4
03/27/08 - 04/03/08	15 ± 4	16 ± 4	10 ± 4	11 ± 4	17 ± 4	11 ± 4	16 ± 4	11 ± 4
04/03/08 - 04/10/08	20 ± 4	16 ± 4	17 ± 4	16 ± 4	21 ± 4	19 ± 4	17 ± 4	< 4
04/10/08 - 04/17/08	11 ± 3	14 ± 4	13 ± 4	11 ± 4	11 ± 3	12 ± 4	10 ± 3	29 ± 5
04/17/08 - 04/24/08	20 ± 5	20 ± 4	19 ± 4	18 ± 4	25 ± 5	18 ± 4	19 ± 4	20 ± 5
04/24/08 - 05/01/08	14 ± 4	20 ± 5	18 ± 5	15 ± 4	21 ± 5	16 ± 4	16 ± 4	16 ± 4
05/01/08 - 05/08/08	17 ± 4	17 ± 4	15 ± 4	21 ± 4	20 ± 4	19 ± 4	17 ± 4	17 ± 4
05/08/08 - 05/15/08	11 ± 4	9 ± 4	12 ± 4	7 ± 3	14 ± 4	8 ± 4	12 ± 4	9 ± 4
05/15/08 - 05/22/08	7 ± 4	9 ± 4	< 5	10 ± 4	7 ± 4	7 ± 4	10 ± 4	7 ± 4
05/22/08 - 05/29/08	6 ± 3	7 ± 3	7 ± 3	8 ± 3	8 ± 4	10 ± 4	8 ± 4	9 ± 4
05/29/08 - 06/05/08	18 ± 4	20 ± 4	16 ± 4	19 ± 4	20 ± 4	16 ± 4	19 ± 4	15 ± 4
06/05/08 - 06/12/08	13 ± 4	14 ± 4	12 ± 4	16 ± 4	13 ± 4	13 ± 4	11 ± 4	13 ± 4
06/12/08 - 06/19/08	17 ± 4	15 ± 4	16 ± 4	13 ± 4	12 ± 4	8 ± 3	15 ± 4	16 ± 4
06/19/08 - 06/26/08	17 ± 4	15 ± 4	13 ± 4	17 ± 4	14 ± 4	14 ± 4	14 ± 4	16 ± 4
06/26/08 - 07/03/08	14 ± 4	14 ± 4	13 ± 4	16 ± 4	11 ± 4	15 ± 4	10 ± 4	14 ± 4
07/03/08 - 07/10/08	14 ± 4	15 ± 4	12 ± 4	14 ± 4	14 ± 4	17 ± 4	14 ± 4	15 ± 4
07/10/08 - 07/17/08	18 ± 4	16 ± 4	18 ± 4	17 ± 4	23 ± 5	18 ± 4	19 ± 4	19 ± 4
07/17/08 - 07/24/08	18 ± 4	23 ± 4	13 ± 4	20 ± 4	18 ± 4	(1)	19 ± 4	17 ± 4
07/24/08 - 07/31/08	17 ± 4	20 ± 5	16 ± 4	17 ± 4	19 ± 4	21 ± 5	16 ± 4	16 ± 4
07/31/08 - 08/07/08	19 ± 4	20 ± 4	20 ± 4	18 ± 5	24 ± 4	20 ± 4	24 ± 4	23 ± 5
08/07/08 - 08/14/08	11 ± 4	15 ± 4	13 ± 4	13 ± 4	15 ± 4	18 ± 4	15 ± 4	13 ± 4
08/14/08 - 08/21/08	23 ± 5	24 ± 5	25 ± 5	23 ± 5	24 ± 5	26 ± 5	21 ± 5	24 ± 5
08/21/08 - 08/28/08	12 ± 4	12 ± 4	15 ± 5	15 ± 5	14 ± 5	19 ± 5	17 ± 5	18 ± 5
08/28/08 - 09/04/08	25 ± 5	33 ± 5	26 ± 5	30 ± 5	33 ± 5	26 ± 5	34 ± 5	27 ± 5
09/04/08 - 09/11/08	16 ± 4	22 ± 5	21 ± 5	19 ± 4	22 ± 5	19 ± 4	19 ± 4	20 ± 5
09/11/08 - 09/18/08	14 ± 4	18 ± 4	14 ± 4	16 ± 4	14 ± 4	14 ± 4	16 ± 4	14 ± 4
09/18/08 - 09/25/08	40 ± 6	43 ± 6	38 ± 6	37 ± 5	37 ± 6	32 ± 5	41 ± 6	36 ± 5
09/25/08 - 10/02/08	31 ± 5	32 ± 5	28 ± 5	28 ± 5	30 ± 5	26 ± 5	27 ± 5	24 ± 5
10/02/08 - 10/09/08	17 ± 4	20 ± 5	16 ± 4	19 ± 5	18 ± 5	16 ± 4	22 ± 5	15 ± 4
10/09/08 - 10/16/08	19 ± 4	23 ± 5	26 ± 5	20 ± 4	22 ± 5	22 ± 4	20 ± 4	22 ± 4
10/16/08 - 10/23/08	21 ± 4	17 ± 4	18 ± 4	16 ± 4	15 ± 4	16 ± 3	17 ± 4	14 ± 3
10/23/08 - 10/30/08	16 ± 4	16 ± 4	17 ± 4	16 ± 4	20 ± 5	17 ± 4	13 ± 4	20 ± 5
10/30/08 - 11/06/08	38 ± 6	41 ± 6	38 ± 6	34 ± 5	39 ± 6	37 ± 5	35 ± 5	40 ± 6
11/06/08 - 11/13/08	14 ± 4	16 ± 4	20 ± 4	14 ± 4	21 ± 4	16 ± 4	17 ± 4	15 ± 4
11/13/08 - 11/20/08	16 ± 4	21 ± 4	20 ± 4	20 ± 4	22 ± 4	22 ± 4	25 ± 5	19 ± 4
11/20/08 - 11/26/08	20 ± 5	24 ± 5	16 ± 4	20 ± 5	20 ± 5	18 ± 5	22 ± 5	15 ± 4
11/26/08 - 12/04/08	25 ± 4	18 ± 4	22 ± 4	23 ± 4	22 ± 4	19 ± 4	23 ± 4	19 ± 4
12/04/08 - 12/11/08	14 ± 4	17 ± 5	15 ± 4	22 ± 5	18 ± 5	17 ± 5	18 ± 5	19 ± 5
12/11/08 - 12/18/08	33 ± 5	29 ± 5	28 ± 5	33 ± 5	32 ± 5	30 ± 5	29 ± 5	30 ± 5
12/18/08 - 12/24/08	28 ± 5	27 ± 5	23 ± 5	27 ± 5	22 ± 5	22 ± 5	22 ± 5	28 ± 5
12/24/08 - 01/01/09	30 ± 5	25 ± 4	30 ± 5	27 ± 5	27 ± 4	29 ± 5	33 ± 5	29 ± 5
MEAN	20 ± 16	20 ± 15	19 ± 14	19 ± 14	20 ± 15	19 ± 13	20 ± 15	19 ± 14

* 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 IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008**

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

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
01/03/08 - 01/31/08	16	33	27 ± 12	01/03/08 - 01/31/08	20	39	28 ± 11	01/03/08 - 01/31/08	15	27	24 ± 11
01/31/08 - 02/28/08	12	38	21 ± 16	01/31/08 - 02/28/08	11	33	22 ± 17	01/31/08 - 02/28/08	13	26	20 ± 14
02/28/08 - 04/03/08	10	32	18 ± 12	02/28/08 - 04/03/08	11	31	18 ± 11	02/28/08 - 04/03/08	11	21	15 ± 9
04/03/08 - 05/01/08	11	20	16 ± 6	04/03/08 - 05/01/08	10	25	17 ± 9	04/03/08 - 05/01/08	< 4	29	22 ± 13
05/01/08 - 05/29/08	< 5	21	11 ± 9	05/01/08 - 05/29/08	7	20	12 ± 9	05/01/08 - 05/29/08	7	17	10 ± 9
05/29/08 - 07/03/08	12	20	15 ± 4	05/29/08 - 07/03/08	8	20	14 ± 6	05/29/08 - 07/03/08	13	16	15 ± 3
07/03/08 - 07/31/08	12	23	17 ± 6	07/03/08 - 07/31/08	14	23	18 ± 5	07/03/08 - 07/31/08	15	19	17 ± 4
07/31/08 - 08/28/08	11	25	17 ± 10	07/31/08 - 08/28/08	14	26	20 ± 8	07/31/08 - 08/28/08	13	24	19 ± 10
08/28/08 - 10/02/08	14	43	27 ± 18	08/28/08 - 10/02/08	14	41	26 ± 17	08/28/08 - 10/02/08	14	36	24 ± 17
10/02/08 - 10/30/08	16	26	18 ± 6	10/02/08 - 10/30/08	13	22	18 ± 6	10/02/08 - 10/30/08	14	22	18 ± 7
10/30/08 - 12/04/08	14	41	23 ± 16	10/30/08 - 12/04/08	16	39	24 ± 14	10/30/08 - 12/04/08	15	40	22 ± 21
12/04/08 - 01/01/09	14	33	25 ± 12	12/04/08 - 01/01/09	17	33	25 ± 11	12/04/08 - 01/01/09	19	30	26 ± 11
01/03/08 - 01/01/09	< 5	43	20 ± 15	01/03/08 - 01/01/09	7	41	20 ± 14	01/03/08 - 01/01/09	< 4	40	19 ± 14

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

TABLE C-VI.3 **CONCENTRATIONS OF GAMMA EMITTERS IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008**

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	01/03/08 - 04/03/08	< 2	< 3	< 6	< 3	< 5	< 2	< 4	< 2	< 2	< 48	< 15
	04/03/08 - 07/03/08	< 4	< 10	< 79	< 2	< 9	< 21	< 27	< 3	< 3	< 304000	< 96900
	07/03/08 - 10/02/08	< 3	< 7	< 30	< 3	< 9	< 8	< 15	< 4	< 3	< 3290	< 875
	10/02/08 - 01/01/09	< 2	< 3	< 8	< 2	< 6	< 4	< 8	< 4	< 3	< 41	< 10
	MEAN	-	-	-	-	-	-	-	-	-	-	-
BD-03	01/03/08 - 04/03/08	< 3	< 5	< 10	< 4	< 9	< 5	< 9	< 4	< 3	< 77	< 31
	04/03/08 - 07/03/08	< 4	< 17	< 123	< 3	< 11	< 25	< 38	< 3	< 3	< 370000	< 78300
	07/03/08 - 10/02/08	< 4	< 9	< 22	< 3	< 11	< 9	< 18	< 4	< 3	< 4070	< 951
	10/02/08 - 01/01/09	< 3	< 3	< 8	< 3	< 7	< 3	< 5	< 3	< 2	< 24	< 15
	MEAN	-	-	-	-	-	-	-	-	-	-	-
BD-04	01/03/08 - 04/03/08	< 3	< 4	< 8	< 4	< 7	< 5	< 8	< 3	< 2	< 63	< 26
	04/03/08 - 07/03/08	< 4	< 16	< 75	< 2	< 10	< 18	< 30	< 2	< 2	< 253000	< 60200
	07/03/08 - 10/02/08	< 3	< 7	< 27	< 3	< 8	< 8	< 15	< 3	< 2	< 3020	< 1270
	10/02/08 - 01/01/09	< 3	< 3	< 8	< 3	< 9	< 4	< 6	< 4	< 4	< 47	< 15
	MEAN	-	-	-	-	-	-	-	-	-	-	-
BD-05	01/03/08 - 04/03/08	< 3	< 4	< 8	< 3	< 5	< 3	< 5	< 2	< 2	< 50	< 21
	04/03/08 - 07/03/08	< 3	< 17	< 100	< 4	< 10	< 22	< 39	< 4	< 3	< 310000	< 78100
	07/03/08 - 10/02/08	< 4	< 9	< 35	< 3	< 8	< 9	< 15	< 4	< 2	< 4110	< 1570
	10/02/08 - 01/01/09	< 2	< 2	< 7	< 3	< 6	< 3	< 5	< 3	< 3	< 30	< 5
	MEAN	-	-	-	-	-	-	-	-	-	-	-

TABLE C-VI.3 **CONCENTRATIONS OF GAMMA EMITTERS IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008**

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	01/03/08 - 04/03/08	< 2	< 2	< 8	< 1	< 7	< 3	< 6	< 2	< 2	< 47	< 31
	04/03/08 - 07/03/08	< 3	< 11	< 82	< 3	< 14	< 21	< 31	< 3	< 3	< 303000	< 96600
	07/03/08 - 10/02/08	< 4	< 7	< 24	< 2	< 9	< 9	< 14	< 4	< 3	< 3460	< 1390
	10/02/08 - 01/01/09	< 3	< 3	< 8	< 2	< 7	< 3	< 5	< 3	< 2	< 26	< 15
	MEAN	-	-	-	-	-	-	-	-	-	-	-
BD-19	01/03/08 - 04/03/08	< 3	< 5	< 10	< 3	< 8	< 4	< 6	< 3	< 3	< 56	< 19
	04/03/08 - 07/03/08	< 4	< 23	< 117	< 4	< 12	< 21	< 50	< 3	< 3	< 389000	< 158000
	07/03/08 - 10/02/08	< 4	< 8	< 36	< 3	< 11	< 10	< 15	< 3	< 3	< 3930	< 1310
	10/02/08 - 01/01/09	< 3	< 4	< 6	< 4	< 7	< 5	< 7	< 4	< 3	< 39	< 11
	MEAN	-	-	-	-	-	-	-	-	-	-	-
BD-20	01/03/08 - 04/03/08	< 2	< 3	< 8	< 2	< 5	< 3	< 5	< 2	< 3	< 45	< 20
	04/03/08 - 07/03/08	< 2	< 16	< 71	< 2	< 8	< 19	< 27	< 2	< 2	< 238000	< 149000
	07/03/08 - 10/02/08	< 3	< 6	< 31	< 3	< 9	< 8	< 14	< 3	< 2	< 2770	< 1010
	10/02/08 - 01/01/09	< 2	< 3	< 7	< 3	< 7	< 3	< 5	< 2	< 3	< 31	< 15
	MEAN	-	-	-	-	-	-	-	-	-	-	-
BD-21	01/03/08 - 04/03/08	< 4	< 3	< 9	< 3	< 9	< 2	< 8	< 3	< 3	< 55	< 27
	04/03/08 - 07/03/08	< 4	< 18	< 122	< 4	< 12	< 23	< 38	< 4	< 3	< 318000	< 147000
	07/03/08 - 10/02/08	< 4	< 9	< 35	< 4	< 11	< 10	< 21	< 4	< 3	< 3690	< 1230
	10/02/08 - 01/01/09	< 3	< 3	< 7	< 2	< 8	< 5	< 7	< 4	< 3	< 37	< 13
	MEAN	-	-	-	-	-	-	-	-	-	-	-

TABLE C-VII.1 CONCENTRATIONS OF I-131 IN AIR IODINE SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

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
01/03/08 - 01/10/08	< 38	< 40	< 38	< 38.4	< 24	< 25	< 26	< 25
01/10/08 - 01/17/08	< 46	< 50	< 49	< 49.5	< 28	< 46	< 46	< 46
01/17/08 - 01/24/08	< 14	< 14	< 14	< 14.2	< 21	< 21	< 20	< 21
01/24/08 - 01/31/08	< 42	< 45	< 45	< 45.5	< 42	< 40	< 42	< 23
01/31/08 - 02/07/08	< 25	< 25	< 25	< 24.6	< 38	< 38	< 42	< 38
02/07/08 - 02/14/08	< 49	< 55	< 52	< 52.2	< 49	< 32	< 49	< 49
02/14/08 - 02/21/08	< 20	< 19	< 19	< 19.2	< 19	< 19	< 15	< 19
02/21/08 - 02/28/08	< 30	< 30	< 30	< 29.7	< 35	< 35	< 34	< 35
02/28/08 - 03/06/08	< 19	< 31	< 31	< 31.3	< 24	< 24	< 24	< 24
03/06/08 - 03/13/08	< 21	< 21	< 21	< 20.7	< 21	< 21	< 21	< 21
03/13/08 - 03/20/08	< 42	< 42	< 42	< 40.4	< 43	< 43	< 43	< 43
03/20/08 - 03/27/08	< 56	< 56	< 56	< 55.9	< 59	< 59	< 59	< 59
03/27/08 - 04/03/08	< 21	< 22	< 21	< 10.8	< 14	< 14	< 21	< 14
04/03/08 - 04/10/08	< 49	< 50	< 50	< 49.6	< 47	< 47	< 47	< 47
04/10/08 - 04/17/08	< 56	< 34	< 56	< 56.4	< 57	< 57	< 57	< 57
04/17/08 - 04/24/08	< 38	< 37	< 37	< 37.3	< 52	< 52	< 52	< 52
04/24/08 - 05/01/08	< 36	< 36	< 20	< 36.1	< 46	< 46	< 46	< 46
05/01/08 - 05/08/08	< 33	< 33	< 33	< 32.8	< 29	< 28	< 29	< 29
05/08/08 - 05/15/08	< 11	< 11	< 11	< 10.8	< 9	< 9	< 9	< 9
05/15/08 - 05/22/08	< 19	< 19	< 19	< 19	< 27	< 27	< 27	< 27
05/22/08 - 05/29/08	< 26	< 26	< 61	< 24.8	< 45	< 45	< 45	< 45
05/29/08 - 06/05/08	< 39	< 39	< 40	< 39.5	< 47	< 48	< 49	< 48
06/05/08 - 06/12/08	< 11	< 11	< 11	< 11.1	< 11	< 11	< 11	< 11
06/12/08 - 06/19/08	< 61	< 53	< 54	< 53.4	< 33	< 61	< 61	< 62
06/19/08 - 06/26/08	< 42	< 42	< 43	< 42.5	< 47	< 47	< 47	< 48
06/26/08 - 07/03/08	< 65	< 65	< 65	< 65	< 63	< 63	< 63	< 63
07/03/08 - 07/10/08	< 36	< 36	< 37	< 34.2	< 44	< 45	< 45	< 45
07/10/08 - 07/17/08	< 43	< 43	< 43	< 43.2	< 44	< 44	< 44	< 44
07/17/08 - 07/24/08	< 13	< 15	< 15	< 14.6	< 12	(1)	< 13	< 12
07/24/08 - 07/31/08	< 25	< 25	< 26	< 25.3	< 23	< 23	< 23	< 23
07/31/08 - 08/07/08	< 43	< 43	< 43	< 61.9	< 61	< 62	< 62	< 66
08/07/08 - 08/14/08	< 51	< 51	< 51	< 50.9	< 47	< 47	< 47	< 47
08/14/08 - 08/21/08	< 50	< 50	< 50	< 49.7	< 47	< 47	< 48	< 47
08/21/08 - 08/28/08	< 59	< 59	< 59	< 59.3	< 68	< 68	< 68	< 68
08/28/08 - 09/04/08	< 68	< 66	< 68	< 69	< 53	< 53	< 53	< 53
09/04/08 - 09/11/08	< 46	< 46	< 46	< 46	< 50	< 50	< 51	< 50
09/11/08 - 09/18/08	< 45	< 45	< 45	< 45	< 56	< 56	< 56	< 56
09/18/08 - 09/25/08	< 52	< 52	< 52	< 52	< 43	< 43	< 43	< 43
09/25/08 - 10/02/08	< 48	< 48	< 48	< 48	< 62	< 63	< 63	< 63
10/02/08 - 10/09/08	< 40	< 40	< 40	< 40	< 67	< 67	< 67	< 67
10/09/08 - 10/16/08	< 59	< 59	< 59	< 59	< 40	< 37	< 40	< 38
10/16/08 - 10/23/08	< 22	< 22	< 23	< 23	< 14	< 24	< 26	< 24
10/23/08 - 10/30/08	< 62	< 62	< 62	< 63	< 54	< 54	< 54	< 54
10/30/08 - 11/06/08	< 57	< 57	< 57	< 57	< 60	< 60	< 60	< 60
11/06/08 - 11/13/08	< 59	< 59	< 59	< 59	< 66	< 68	< 66	< 66
11/13/08 - 11/20/08	< 47	< 47	< 47	< 47	< 49	< 49	< 49	< 48
11/20/08 - 11/26/08	< 53	< 53	< 53	< 53.2	< 62	< 62	< 62	< 62
11/26/08 - 12/04/08	< 58	< 54	< 58	< 58.1	< 57	< 57	< 57	< 57
12/04/08 - 12/11/08	< 66	< 66	< 66	< 66.5	< 67	< 67	< 67	< 67
12/11/08 - 12/18/08	< 45	< 45	< 45	< 45.4	< 43	< 43	< 43	< 43
12/18/08 - 12/24/08	< 45	< 45	< 47	< 45	< 53	< 53	< 59	< 50
12/24/08 - 01/01/09	< 40	< 40	< 40	< 40.5	< 42	< 42	< 42	< 42
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, 2008**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

	CONTROL FARM	INDICATOR FARM
COLLECTION PERIOD	BD-18	BD-17
01/03/08	< 0.6	< 0.5
02/01/08	< 0.8	< 0.8
03/06/08	< 0.5	< 0.4
04/03/08	< 0.8	< 0.7
05/01/08	< 0.7	< 0.7
05/15/08	< 0.7	< 0.8
05/29/08	< 0.8	< 0.8
06/12/08	< 0.7	< 0.7
06/26/08	< 0.7	< 0.7
07/10/08	< 0.7	< 0.7
07/24/08	< 0.7	< 0.6
08/07/08	< 0.8	< 0.8
08/21/08	< 0.8	< 0.8
09/04/08	< 0.7	< 0.7
09/18/08	< 0.9	< 0.6
10/02/08	< 0.8	< 0.9
10/16/08	< 0.8	< 0.8
10/30/08	< 0.9	< 0.9
11/13/08	< 0.7	< 0.8
12/04/08	< 0.9	< 0.8
MEAN	-	-

TABLE C-VIII.2 CONCENTRATIONS OF GAMMA EMITTERS IN MILK SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

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	01/03/08	< 7	< 7	< 15	< 8	< 14	< 7	< 12	< 6	< 7	< 26	< 10
	02/01/08	< 4	< 5	< 12	< 4	< 10	< 4	< 8	< 4	< 4	< 25	< 6
	03/06/08	< 6	< 6	< 18	< 8	< 14	< 7	< 12	< 5	< 5	< 32	< 10
	04/03/08	< 8	< 7	< 13	< 6	< 17	< 7	< 12	< 7	< 8	< 29	< 10
	05/01/08	< 7	< 7	< 16	< 6	< 18	< 8	< 12	< 7	< 6	< 38	< 10
	05/15/08	< 4	< 4	< 11	< 5	< 10	< 5	< 7	< 4	< 4	< 28	< 10
	05/29/08	< 7	< 6	< 16	< 7	< 14	< 7	< 11	< 6	< 7	< 41	< 14
	06/12/08	< 5	< 5	< 13	< 5	< 13	< 6	< 10	< 5	< 5	< 33	< 10
	06/26/08	< 5	< 4	< 15	< 7	< 14	< 6	< 10	< 4	< 6	< 34	< 13
	07/10/08	< 6	< 7	< 15	< 6	< 15	< 6	< 10	< 5	< 6	< 41	< 11
	07/24/08	< 3	< 4	< 10	< 3	< 9	< 4	< 7	< 3	< 3	< 44	< 15
	08/07/08	< 7	< 5	< 18	< 6	< 16	< 7	< 13	< 5	< 7	< 38	< 11
	08/21/08	< 5	< 5	< 13	< 6	< 11	< 5	< 9	< 5	< 5	< 30	< 12
	09/04/08	< 6	< 6	< 17	< 5	< 13	< 7	< 10	< 5	< 5	< 56	< 14
	09/18/08	< 4	< 5	< 11	< 4	< 9	< 4	< 9	< 3	< 4	< 37	< 13
	10/02/08	< 3	< 3	< 8	< 2	< 6	< 3	< 6	< 2	< 2	< 47	< 15
	10/16/08	< 3	< 4	< 9	< 3	< 8	< 3	< 6	< 3	< 3	< 27	< 8
	10/30/08	< 1	< 2	< 6	< 1	< 4	< 2	< 3	< 1	< 1	< 45	< 12
	11/13/08	< 1	< 2	< 5	< 1	< 3	< 2	< 3	< 1	< 1	< 45	< 13
	12/04/08	< 6	< 4	< 12	< 7	< 11	< 5	< 8	< 5	< 5	< 28	< 7
	MEAN	-	-	-	-	-	-	-	-	-	-	-

TABLE C-VIII.2 CONCENTRATIONS OF GAMMA EMITTERS IN MILK SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

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	01/03/08	< 7	< 7	< 13	< 7	< 18	< 9	< 14	< 6	< 9	< 31	< 10
	02/01/08	< 5	< 5	< 12	< 7	< 13	< 6	< 10	< 5	< 6	< 34	< 12
	03/06/08	< 5	< 5	< 12	< 6	< 12	< 6	< 7	< 5	< 6	< 26	< 9
	04/03/08	< 5	< 5	< 12	< 5	< 13	< 5	< 8	< 5	< 5	< 24	< 8
	05/01/08	< 6	< 7	< 16	< 8	< 17	< 7	< 12	< 8	< 7	< 43	< 11
	05/15/08	< 7	< 7	< 15	< 6	< 15	< 6	< 12	< 6	< 6	< 37	< 13
	05/29/08	< 4	< 5	< 11	< 4	< 10	< 5	< 9	< 5	< 5	< 34	< 9
	06/12/08	< 6	< 7	< 16	< 6	< 16	< 6	< 12	< 6	< 6	< 40	< 12
	06/26/08	< 4	< 5	< 11	< 5	< 11	< 5	< 9	< 4	< 5	< 33	< 10
	07/10/08	< 7	< 7	< 16	< 6	< 17	< 7	< 14	< 6	< 7	< 37	< 13
	07/24/08	< 3	< 3	< 8	< 3	< 6	< 4	< 6	< 3	< 3	< 43	< 10
	08/06/08	< 7	< 7	< 17	< 6	< 16	< 6	< 13	< 5	< 7	< 46	< 9
	08/21/08	< 4	< 4	< 9	< 5	< 9	< 5	< 8	< 3	< 4	< 24	< 6
	09/04/08	< 6	< 7	< 17	< 6	< 12	< 7	< 13	< 5	< 6	< 52	< 15
	09/18/08	< 5	< 5	< 14	< 4	< 11	< 6	< 9	< 4	< 4	< 46	< 12
	10/02/08	< 2	< 3	< 8	< 2	< 5	< 3	< 6	< 2	< 2	< 51	< 14
	10/16/08	< 4	< 5	< 10	< 5	< 10	< 5	< 9	< 4	< 5	< 44	< 13
	10/30/08	< 2	< 2	< 6	< 2	< 3	< 2	< 4	< 1	< 2	< 46	< 15
	11/13/08	< 1	< 2	< 5	< 1	< 3	< 2	< 3	< 1	< 1	< 47	< 13
	12/04/08	< 6	< 6	< 14	< 5	< 11	< 6	< 9	< 5	< 5	< 31	< 4
	MEAN	-	-	-	-	-	-	-	-	-	-	-

TABLE C-IX.1 **CONCENTRATIONS OF GAMMA EMITTERS IN VEGETATION SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008**

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	09/13/08	Cabbage	< 15	< 14	< 35	< 13	< 29	< 17	< 23	< 12	< 15	< 114	< 25
	09/13/08	Potatoes	< 10	< 10	< 30	< 7	< 24	< 12	< 22	< 7	< 10	< 70	< 19
	MEAN		-	-	-	-	-	-	-	-	-	-	-
BD-QUAD 1	09/13/08	Cabbage	< 9	< 8	< 27	< 11	< 27	< 12	< 21	< 9	< 11	< 79	< 16
	09/13/08	Onions	< 10	< 10	< 21	< 11	< 20	< 12	< 16	< 10	< 12	< 78	< 22
	MEAN		-	-	-	-	-	-	-	-	-	-	-
BD-QUAD 2	09/13/08	Cabbage	< 12	< 12	< 32	< 13	< 28	< 13	< 24	< 10	< 13	< 95	< 19
	09/13/08	Potatoes	< 8	< 8	< 22	< 8	< 20	< 10	< 17	< 8	< 10	< 66	< 25
	MEAN		-	-	-	-	-	-	-	-	-	-	-
BD-QUAD 3	09/13/08	Beets	< 10	< 13	< 24	< 10	< 22	< 10	< 18	< 9	< 12	< 73	< 24
	09/13/08	Brussel sprouts	< 11	< 11	< 28	< 10	< 21	< 11	< 19	< 9	< 11	< 72	< 19
	MEAN		-	-	-	-	-	-	-	-	-	-	-
BD-QUAD 4	09/13/08	Cabbage	< 10	< 11	< 29	< 11	< 22	< 12	< 20	< 9	< 10	< 81	< 21
	09/13/08	Potatoes	< 14	< 15	< 35	< 13	< 33	< 17	< 24	< 14	< 16	< 109	< 28
	MEAN		-	-	-	-	-	-	-	-	-	-	-

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

TABLE C-X.1 QUARTERLY TLD RESULTS FOR BRAIDWOOD STATION, 2008

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	18.0 ± 5.2	21	15	17	19
BD-02-2	18.0 ± 5.7	22	16	16	18
BD-03-1	19.8 ± 6.6	23	16	18	22
BD-03-2	19.8 ± 6.2	24	17	18	20
BD-04-1	18.5 ± 7.7	24	15	17	18
BD-04-2	18.5 ± 6.8	23	15	17	19
BD-05-1	19.8 ± 8.7	26	16	18	19
BD-05-2	19.8 ± 11	27	15	17	20
BD-06-1	18.5 ± 7.4	24	16	17	17
BD-06-2	17.8 ± 5.7	21	14	18	18
BD-19-1	19.0 ± 5.9	23	16	18	19
BD-19-2	19.5 ± 5.8	23	16	19	20
BD-20-1	18.3 ± 6.0	22	15	17	19
BD-20-2	19.0 ± 7.1	24	16	17	19
BD-21-1	18.3 ± 7.0	22	14	17	20
BD-21-2	18.8 ± 6.0	22	15	18	20
BD-101-3	19.0 ± 6.5	23	15	19	19
BD-101-4	18.8 ± 7.7	24	15	17	19
BD-102-1	17.3 ± 6.6	21	13	17	18
BD-102-2	18.8 ± 5.0	22	16	18	19
BD-103-1	19.3 ± 6.0	23	16	18	20
BD-103-2	20.3 ± 8.4	26	16	19	20
BD-104-1	17.0 ± 6.7	21	13	16	18
BD-104-2	17.5 ± 6.2	22	15	16	17
BD-105-1	17.0 ± 6.7	21	13	16	18
BD-105-2	18.5 ± 6.2	23	16	17	18
BD-106-1	17.5 ± 5.8	21	14	17	18
BD-106-2	18.0 ± 5.9	21	14	19	18
BD-107-1	19.3 ± 8.4	25	15	18	19
BD-107-2	18.0 ± 7.5	23	14	17	18
BD-108-1	18.5 ± 8.4	24	14	17	19
BD-108-2	18.0 ± 6.7	22	14	17	19
BD-109-1	21.3 ± 8.4	27	17	20	21
BD-109-2	21.3 ± 9.1	26	16	19	24
BD-110-1	19.3 ± 5.0	22	16	20	19
BD-110-2	18.0 ± 7.5	23	14	17	18
BD-112-1	18.0 ± 6.3	22	15	16	19
BD-112-2	17.8 ± 6.6	22	14	17	18
BD-114-1	19.0 ± 6.5	23	15	19	19
BD-114-2	18.0 ± 6.7	22	14	17	19
BD-115-1	18.5 ± 5.8	22	15	18	19
BD-115-2	19.3 ± 9.6	25	14	17	21
BD-116-1	19.5 ± 9.0	25	14	20	19
BD-116-2	19.3 ± 9.4	26	15	18	18

TABLE C-X.1 QUARTERLY TLD RESULTS FOR BRAIDWOOD STATION, 2008

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	23.8 ± 10	29	17	24	25
BD-201-2	19.8 ± 7.7	25	16	18	20
BD-202-1	18.8 ± 7.2	21	14	18	22
BD-202-2	19.8 ± 11	27	15	17	20
BD-203-1	21.3 ± 9.1	24	16	26	19
BD-203-2	19.0 ± 7.8	24	15	17	20
BD-204-1	17.0 ± 7.8	22	13	15	18
BD-204-2	17.3 ± 7.0	21	13	16	19
BD-205-1	17.3 ± 5.0	20	14	17	18
BD-205-2	18.3 ± 9.0	24	13	18	18
BD-206-1	19.8 ± 7.0	21	16	18	24
BD-206-2	19.3 ± 7.5	24	15	18	20
BD-207-1	18.3 ± 6.0	21	14	19	19
BD-207-2	17.8 ± 6.0	21	14	17	19
BD-208-1	17.5 ± 5.8	21	14	17	18
BD-208-2	17.8 ± 6.0	21	14	17	19
BD-209-1	22.0 ± 9.1	28	17	21	22
BD-209-2	24.8 ± 7.7	30	21	25	23
BD-210-1	21.3 ± 6.6	25	17	22	21
BD-210-2	19.3 ± 5.7	23	16	19	19
BD-211-1	23.3 ± 7.7	26	19	21	27
BD-211-2	23.8 ± 6.6	26	19	24	26
BD-212-3	19.8 ± 8.5	25	15	18	21
BD-212-4	24.0 ± 10	29	17	24	26
BD-213-3	18.8 ± 7.9	22	14	17	22
BD-213-4	17.8 ± 7.7	23	14	16	18
BD-214-1	19.5 ± 7.4	23	15	18	22
BD-214-2	21.3 ± 7.0	25	17	20	23
BD-215-1	18.3 ± 8.4	24	14	17	18
BD-215-2	18.0 ± 7.5	23	14	17	18
BD-216-1	20.5 ± 9.0	27	17	18	20
BD-216-2	21.8 ± 9.1	27	16	21	23
BD-111A-1	18.3 ± 6.0	22	15	17	19
BD-111A-2	19.0 ± 5.9	23	16	18	19
BD-113A-1	19.3 ± 6.6	24	17	17	19
BD-113A-2	18.0 ± 5.2	21	15	17	19

TABLE C-X.2 MEAN QUARTLY TLD RESULTS FOR THE INNER RING, OUTER RING, OTHER AND CONTROL LOCATIONS FOR BRAIDWOOD STATION, 2008

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	23.0 ± 3.4	24.1 ± 5.5	23.1 ± 3.5	23.5 ± 1.4
APR-JUN	14.8 ± 2.2	15.5 ± 3.8	15.3 ± 1.5	16.5 ± 1.4
JUL-SEP	17.7 ± 2.4	19.1 ± 5.8	17.4 ± 1.5	18.0 ± 0.0
OCT-DEC	19.0 ± 2.5	20.8 ± 5.3	18.9 ± 1.8	21.0 ± 2.8

TABLE C-X.3 SUMMARY OF THE AMBIENT DOSIMETRY PROGRAM FOR BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF MILLI-ROENTGEN/QUARTER

LOCATION	SAMPLES ANALYZED	PERIOD MINIMUM	PERIOD MAXIMUM	PERIOD MEAN ± 2 S.D.
SITE BOUNDARY	128	13.0	27.0	18.6 ± 6.5
INTERMEDIATE DISTANCE	128	13.0	30.0	19.9 ± 8.1
OTHER	56	14.0	27.0	18.7 ± 6.2
CONTROL	8	16.0	24.0	19.8 ± 5.9

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

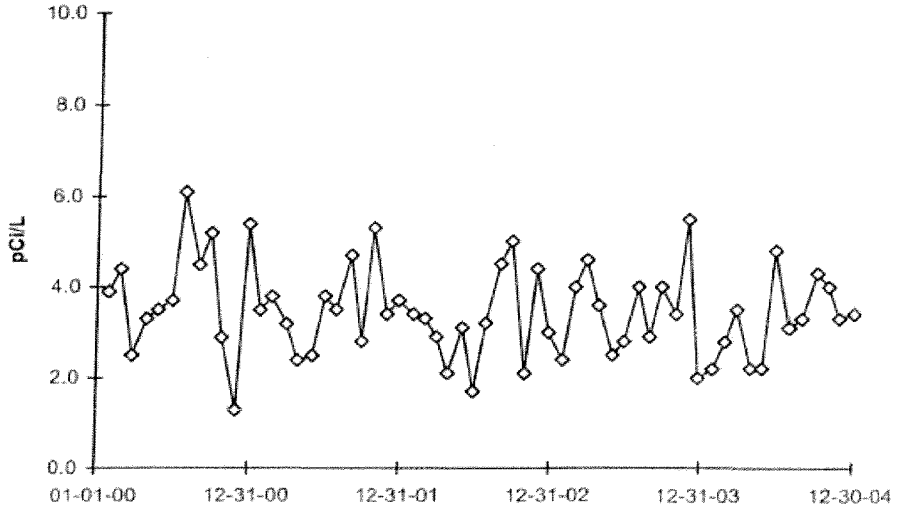
INTERMEDIATE DISTANCE STATIONS - BD-201-1, BD-201-2, BD-202-1, BD-202-2, BD-203-1, BD-203-2, BD-204-1, BD-204-2, BD-205-1, BD-205-2, BD-206-1, BD-206-2, BD-207-1, BD-207-2, BD-208-1, BD-208-2, BD-209-1, BD-209-2, BD-210-1, BD-210-2, BD-211-1, BD-211-2, BD-212-3, BD-212-4, BD-213-3, BD-213-4, BD-214-1,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

BD-10 Kankakee River, Downstream



BD-25 (C) Kankakee River, Upstream

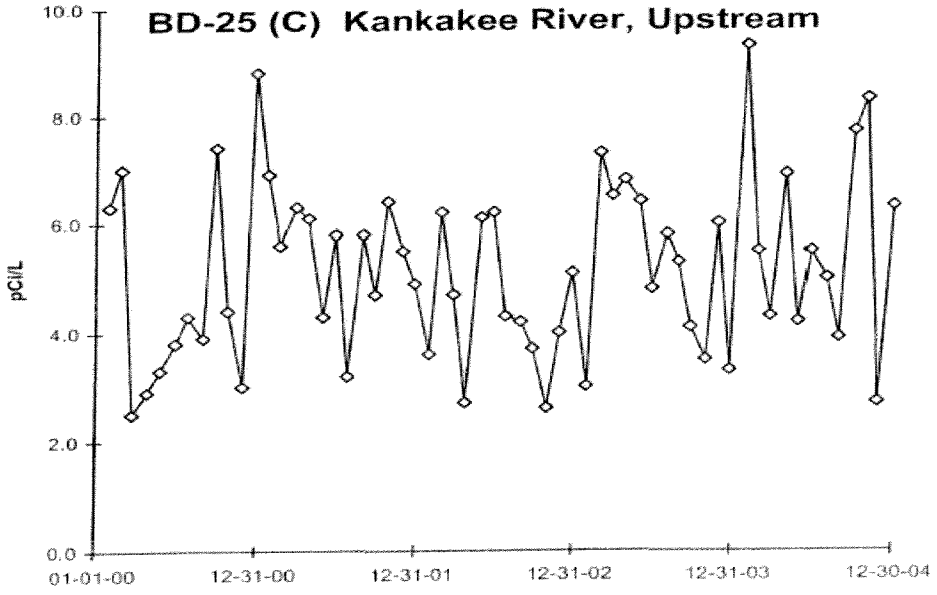
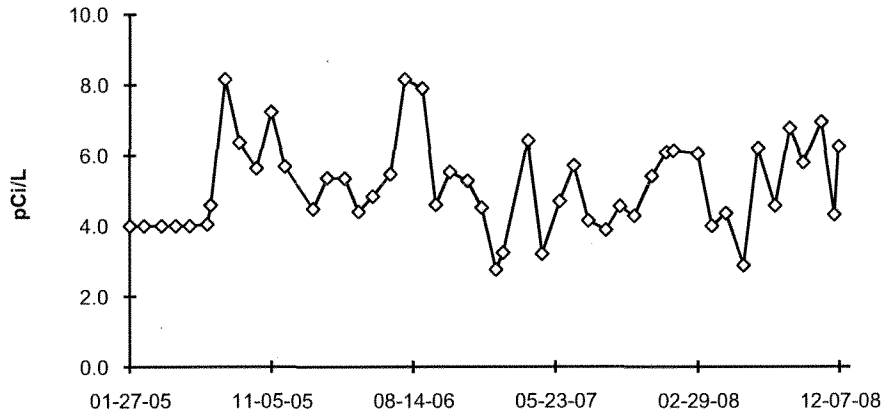
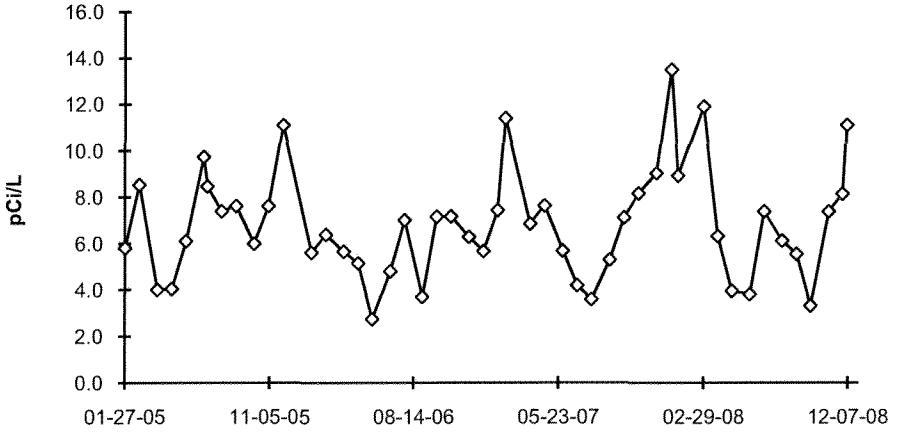


FIGURE C-1 (cont.)
Surface Water - Gross Beta - Stations BD-10 and BD-25 (C) Collected in the Vicinity of Braidwood Station, 2005 - 2008

BD-10 Kankaee River, Downstream



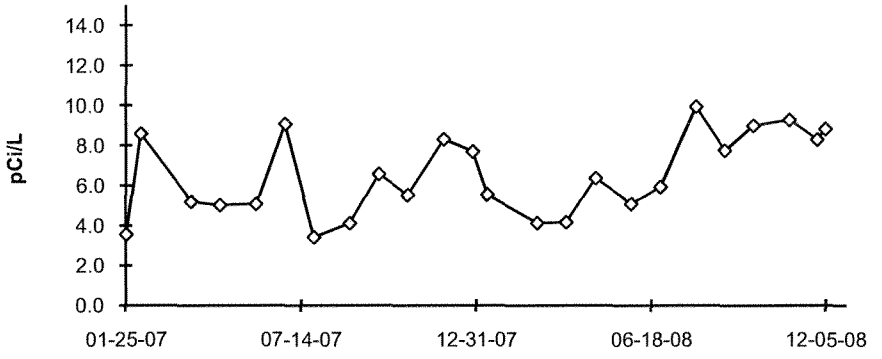
BD-25 (C) Kankakee River, Upstream



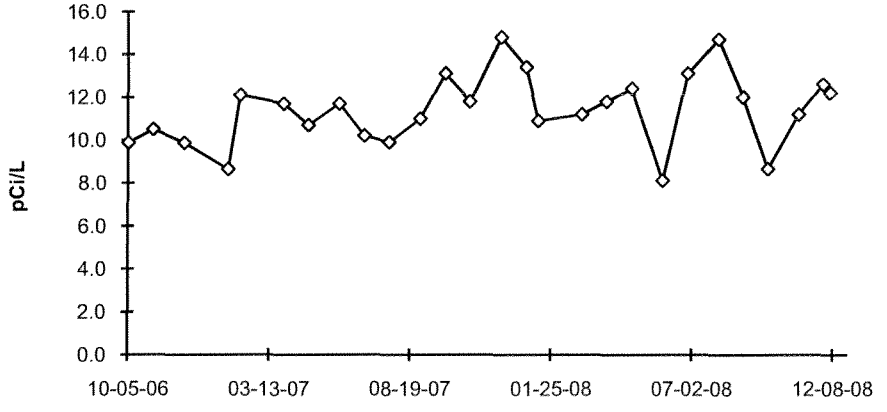
DUE TO VENDOR CHANGE IN 2005, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE 2005 AND MDC VALUES AFTER JUNE 2005

FIGURE C-2
Surface Water - Gross Beta - Stations BD-38 and BD-40 Collected in the Vicinity of Braidwood Station, 2007 - 2008

BD-38 Main Drainage Ditch



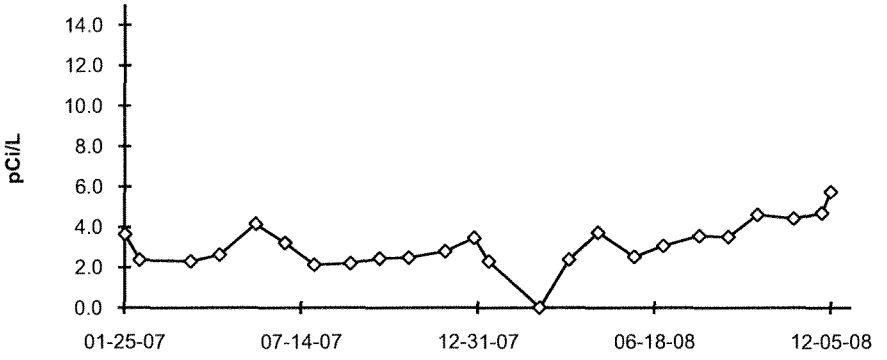
BD-40 Braidwood Station Cooling Lake



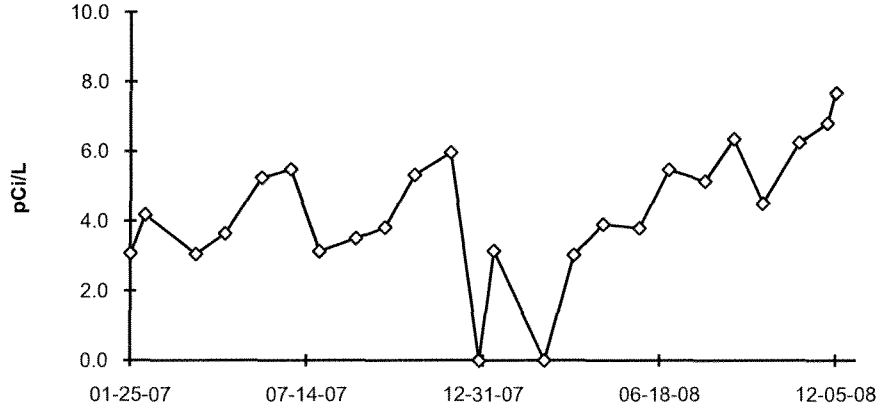
NEW STATION BD-40 ADDED ON 10/05/06
NEW STATION BD-38 ADDED ON 01/25/07

FIGURE C-3
Surface Water - Gross Beta - Stations BD-55 and BD-56 Collected in the Vicinity of Braidwood Station, 2007 - 2008

BD-55 North Pond Fatlan Site

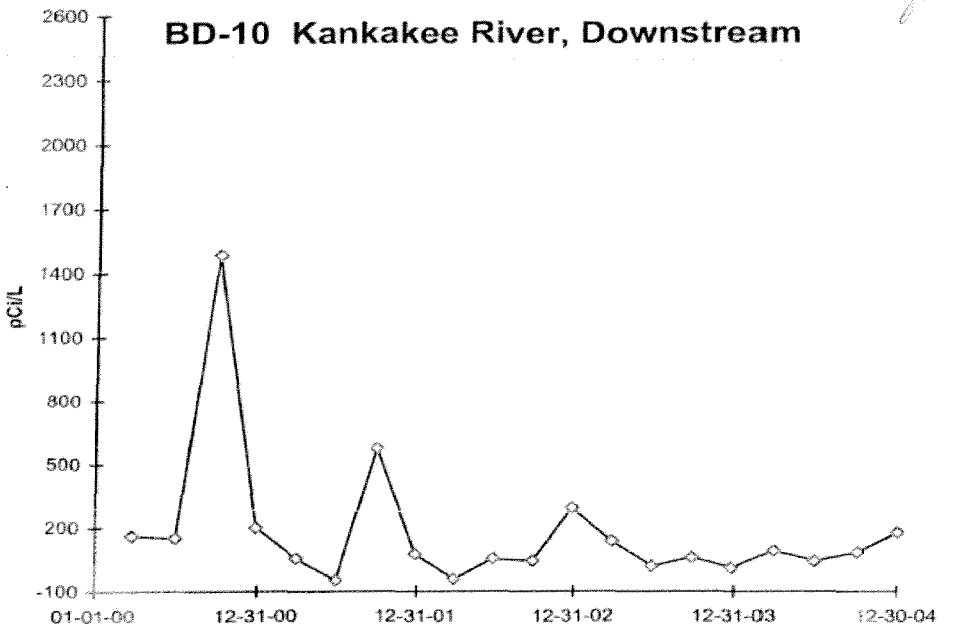


BD-56 South Pond Fatlan Site



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



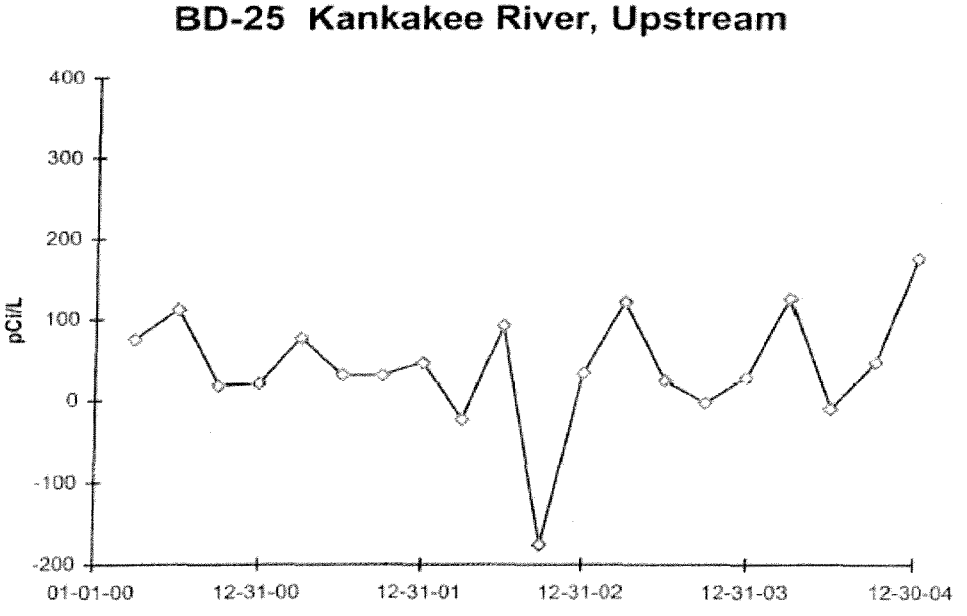
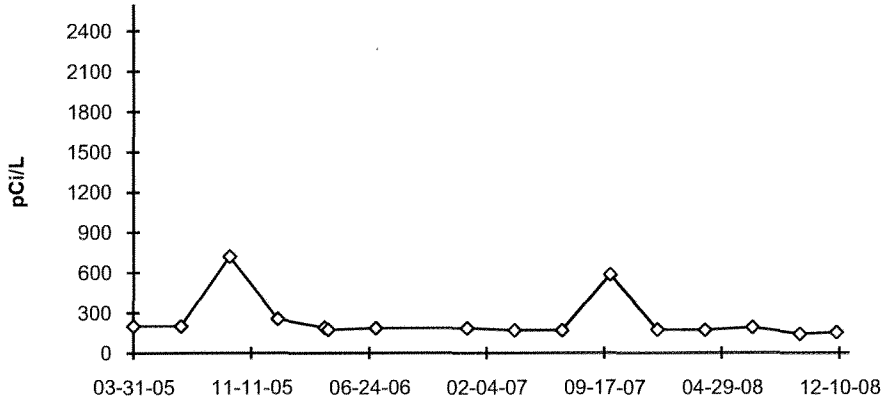
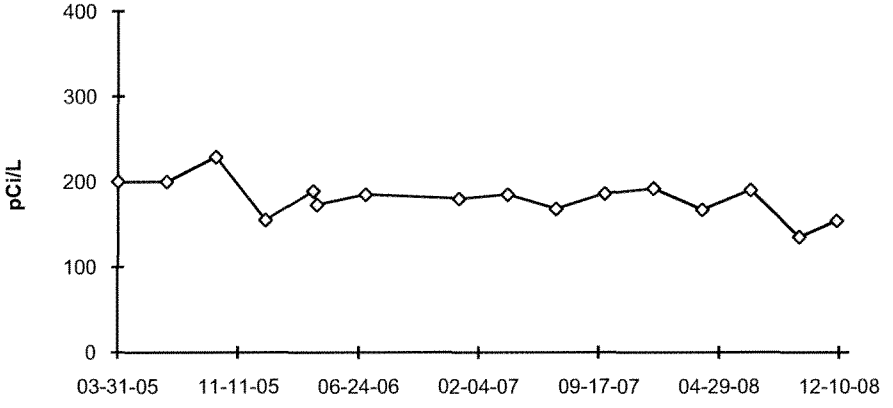


FIGURE C-4 (cont.)
Surface Water - Tritium - Stations BD-10 and BD-25 (C) Collected in the Vicinity of Braidwood Station, 2005 - 2008

BD-10 Kankakee River, Downstream



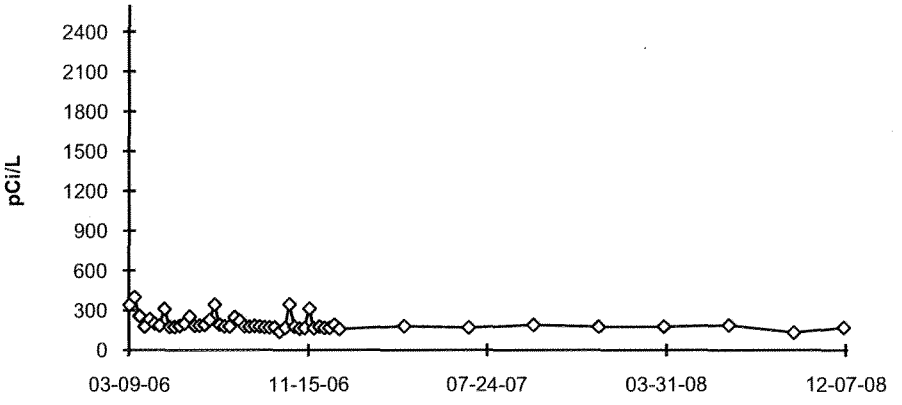
BD-25 (C) Kankakee River, Upstream



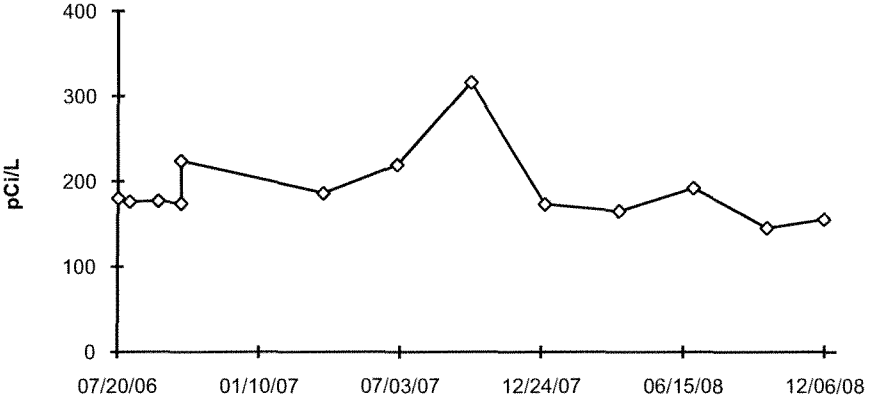
DUE TO VENDOR CHANGE IN 2005, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE 2005 AND MDC VALUES AFTER JUNE 2005

FIGURE C-5
Surface Water - Tritium - Stations BD-38 and BD-40 Collected in the Vicinity of Braidwood Station, 2006 - 2008

BD-38 Main Drainage Ditch



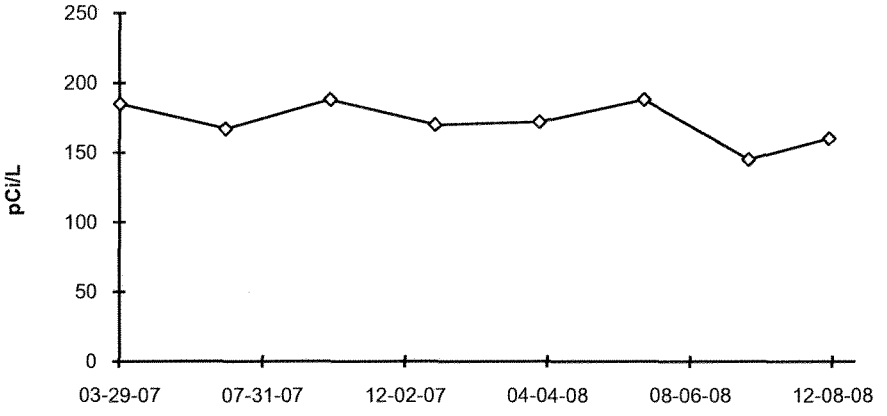
BD-40 Braidwood Station Cooling Lake



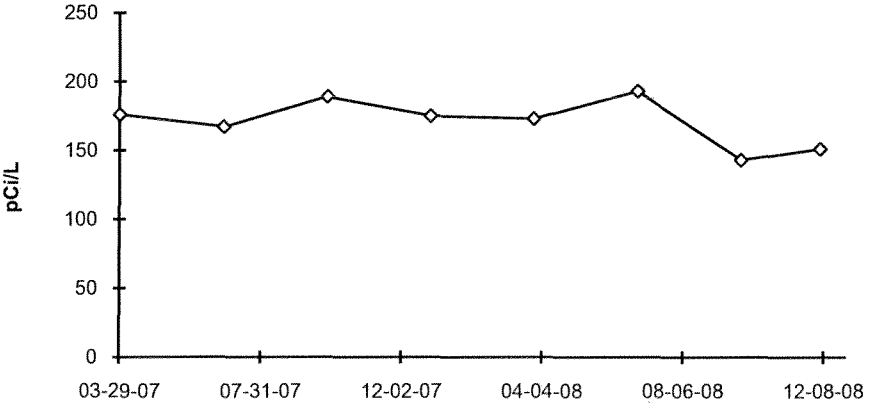
NEW STATIONS BD-38 AND BD-40 ADDED IN 2006

FIGURE C-6
Surface Water - Tritium - Stations BD-55 and BD-56 Collected in the Vicinity of Braidwood Station, 2007 - 2008

BD-55 North Pond Fatlan Site



BD-56 South Pond Fatlan Site



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

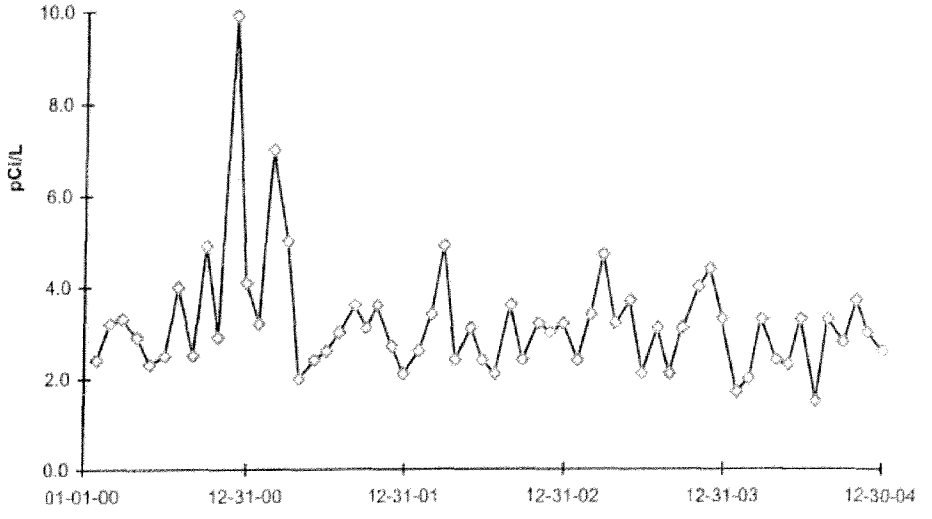
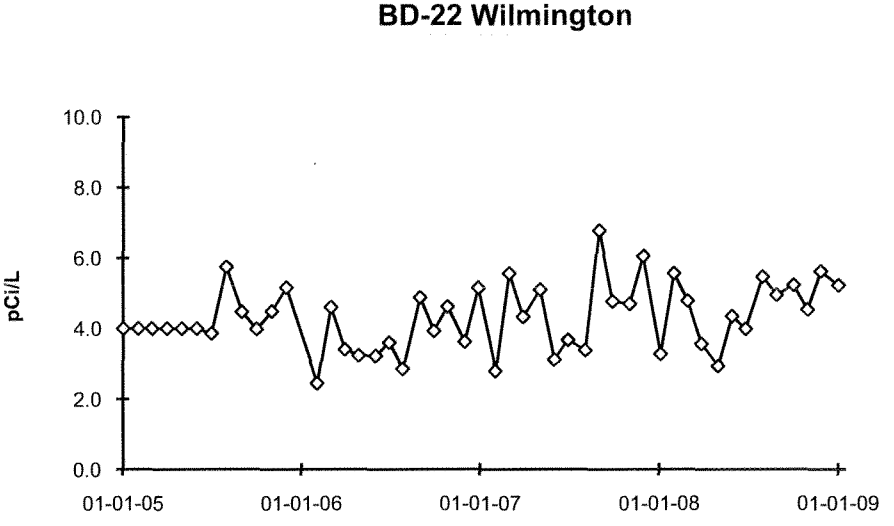


FIGURE C-7 (cont.)
Public Water - Gross Beta - Station BD-22
Collected in the Vicinity of Braidwood Station, 2005 - 2008



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

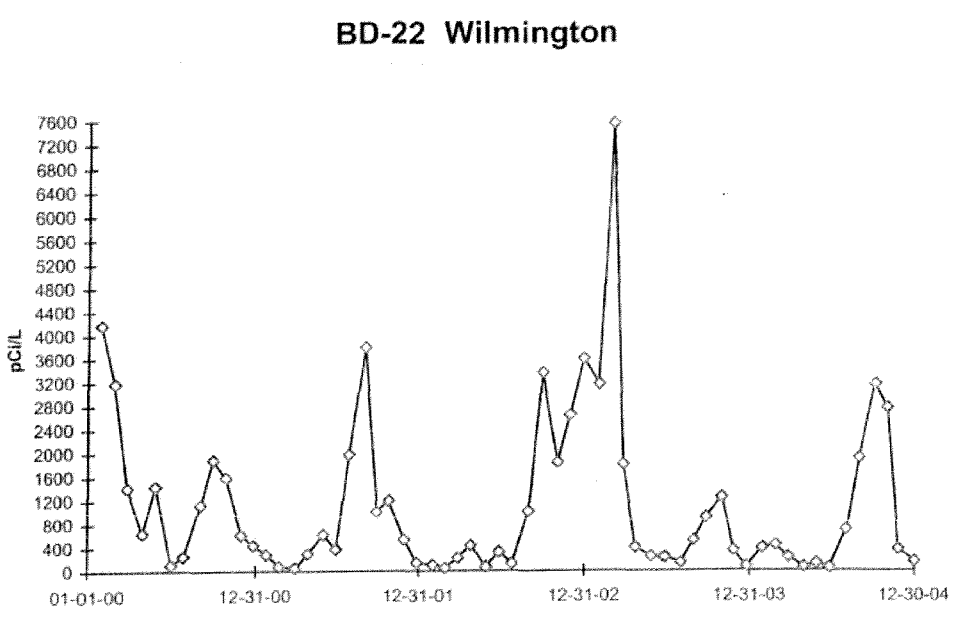
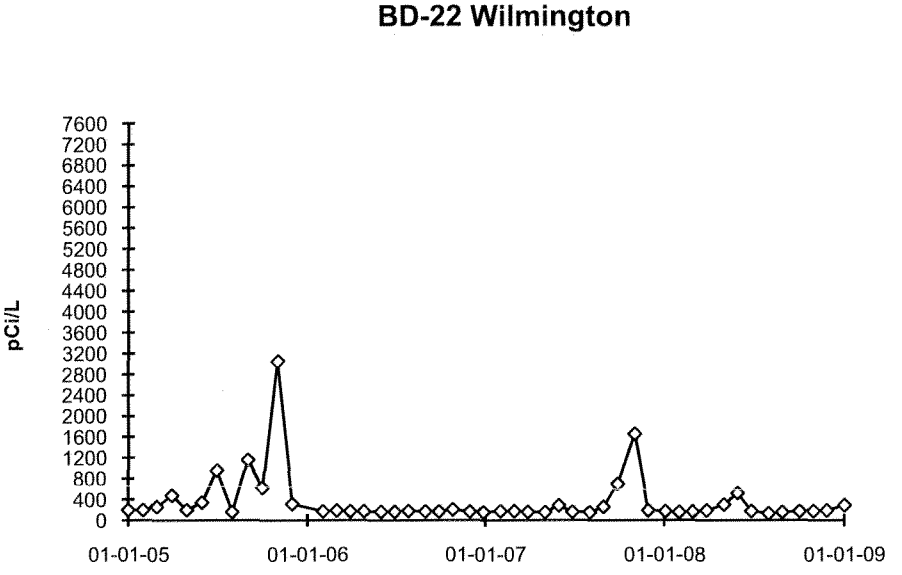
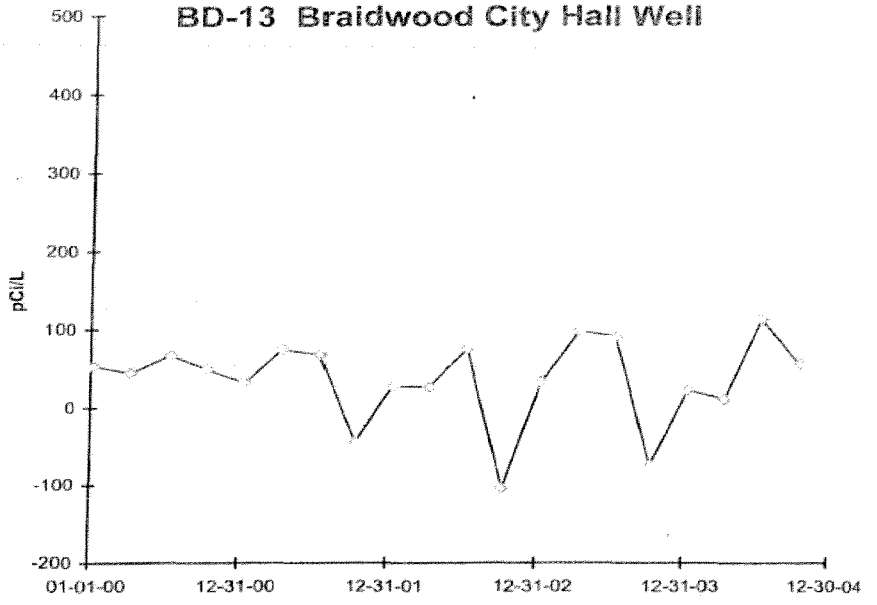


FIGURE C-8 (cont.)
Public Water - Tritium - Station BD-22
Collected in the Vicinity of Braidwood Station, 2005 - 2008



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



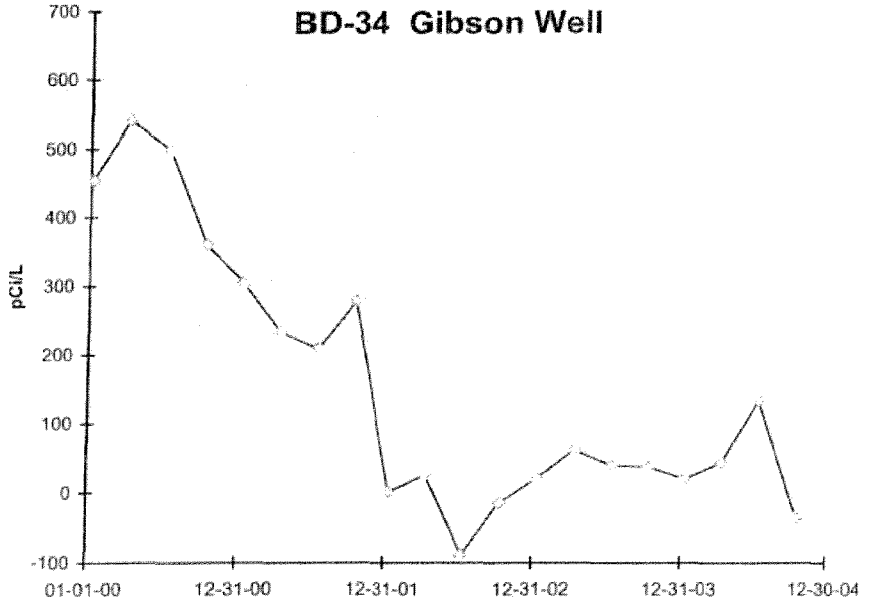
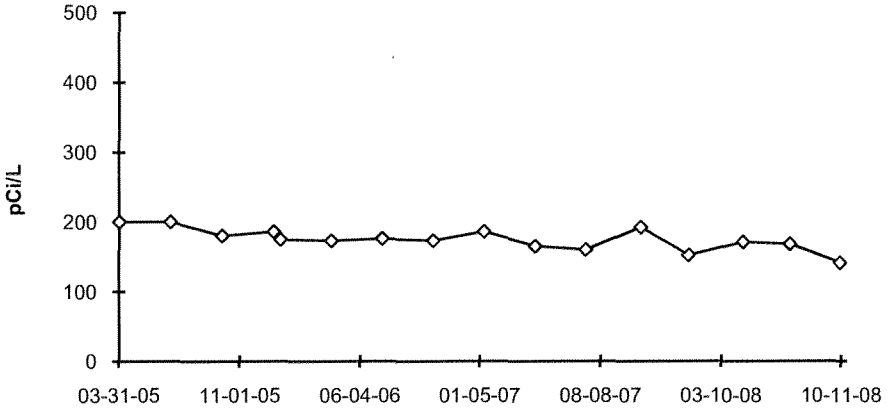
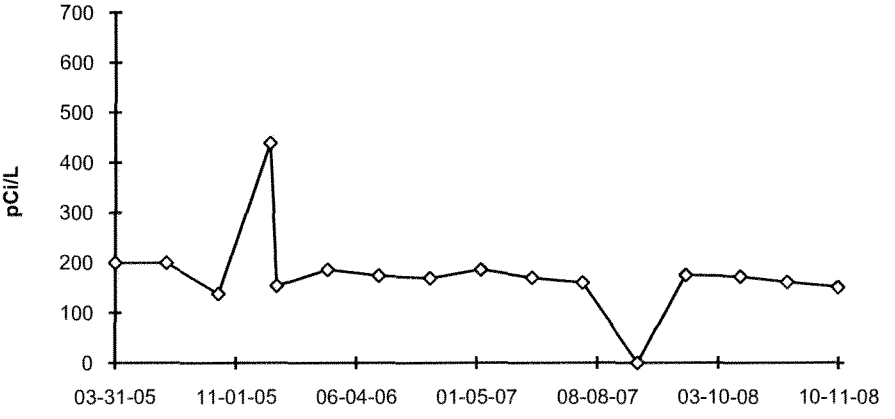


FIGURE C-9 (cont.)
Ground/Well Water - Tritium - Stations BD-13 and BD-34 Collected in the Vicinity of Braidwood Station, 2005 - 2008

BD-13 Braidwood City Hall Well

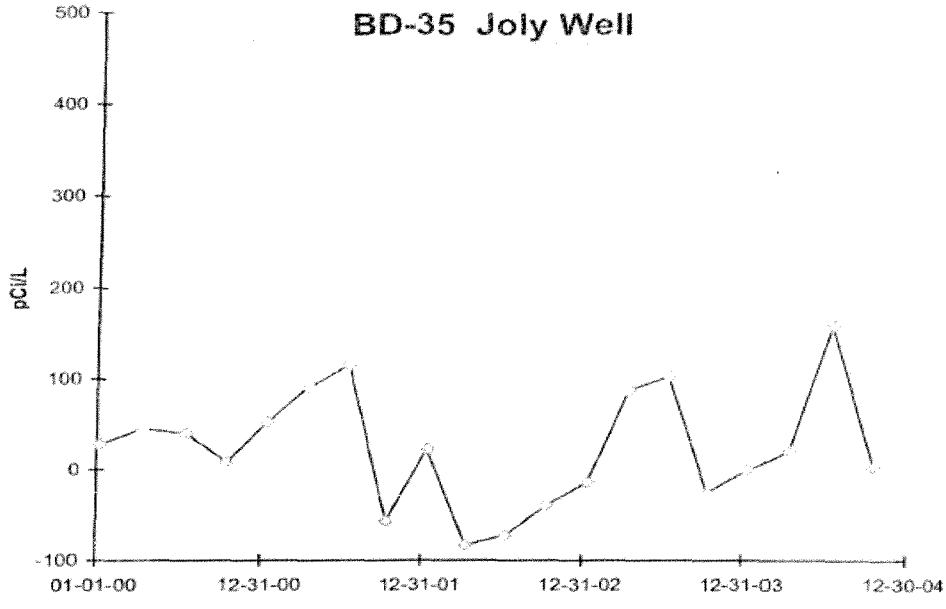


BD-34 Gibson Well



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



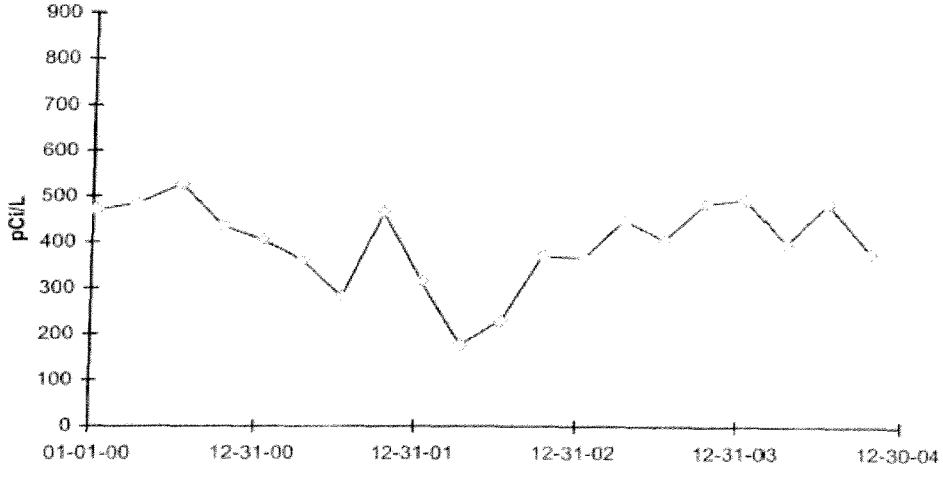
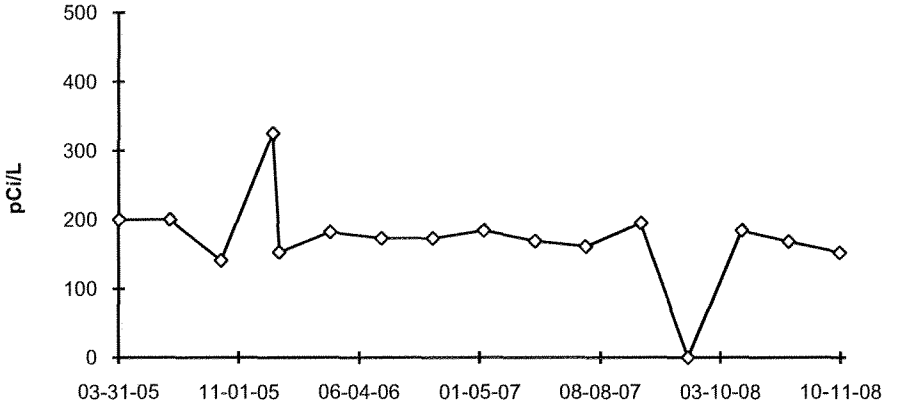
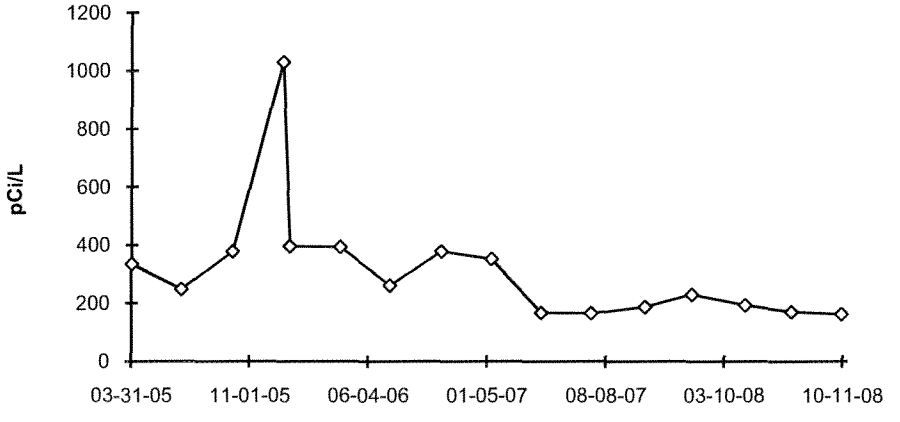


FIGURE C-10 (cont.)
Ground/Well Water - Tritium - Stations BD-35 and BD-36 Collected in the Vicinity of Braidwood Station, 2005 - 2008

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

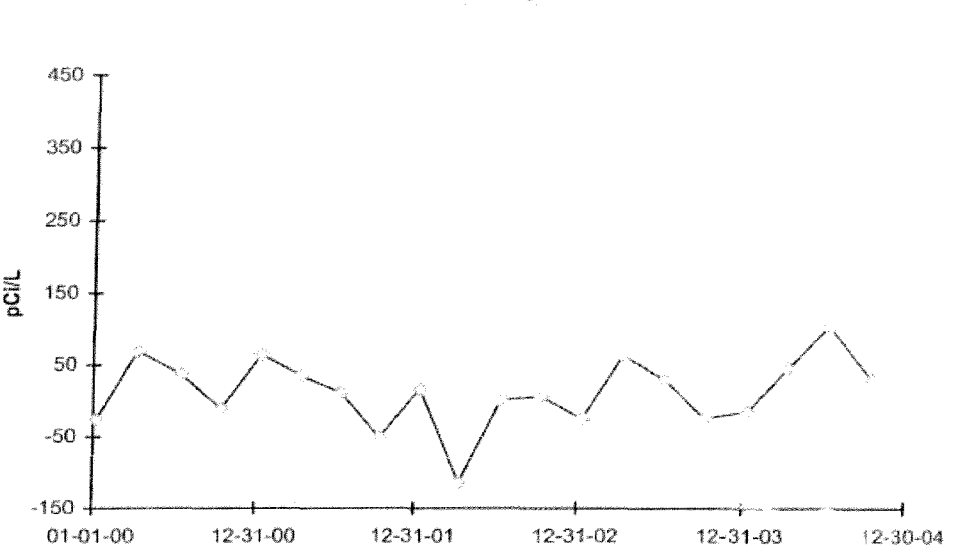
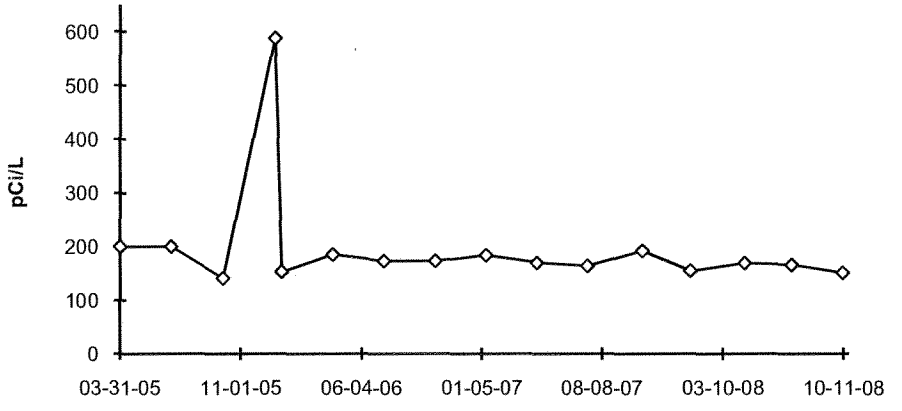


FIGURE C-11 (cont.)
Ground/Well Water - Tritium - Station BD-37
Collected in the Vicinity of Braidwood Station, 2005 - 2008

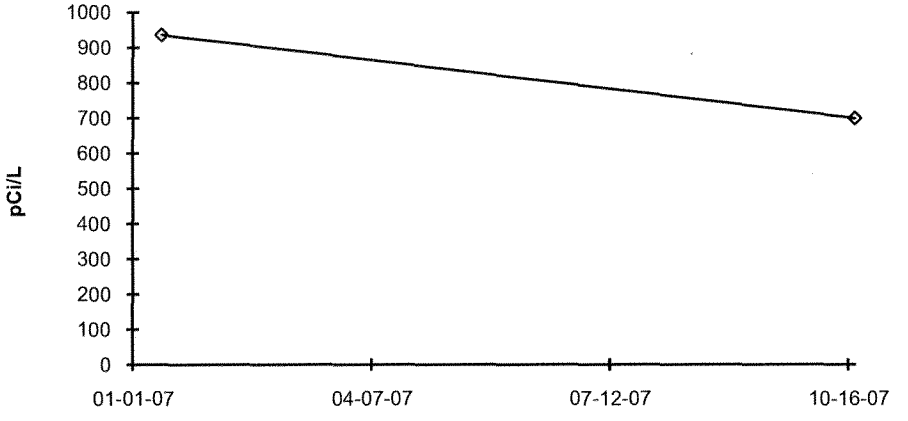
BD-37 Nurczyk Well



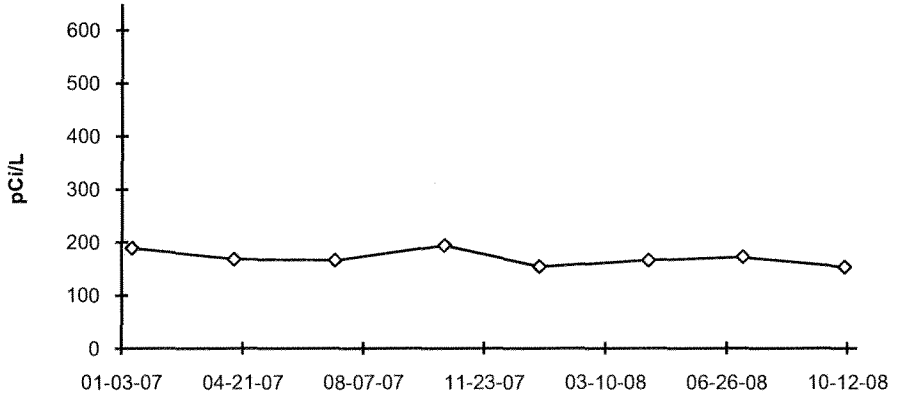
DUE TO VENDOR CHANGE IN 2005, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE AND MDC VALUES JULY THROUGH DECEMBER

FIGURE C-12
Ground/Well Water - Tritium - Station BD-50 and BD-51 Collected in the Vicinity of Braidwood Station, 2007-2008

BD-50 Skole Well



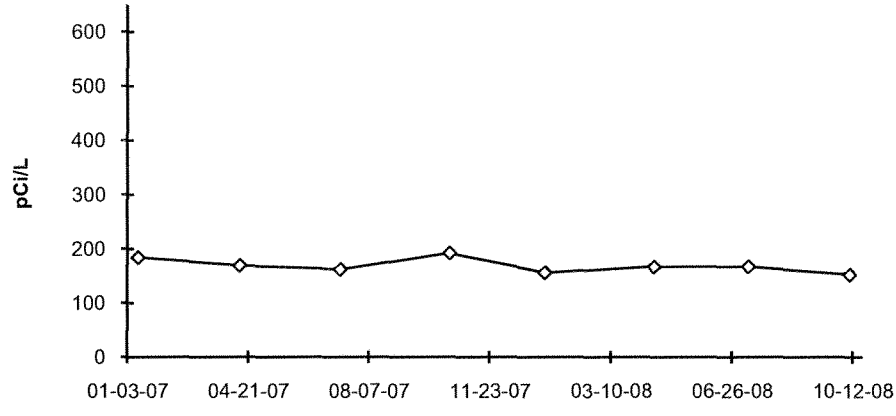
BD-51 Fatlan Well



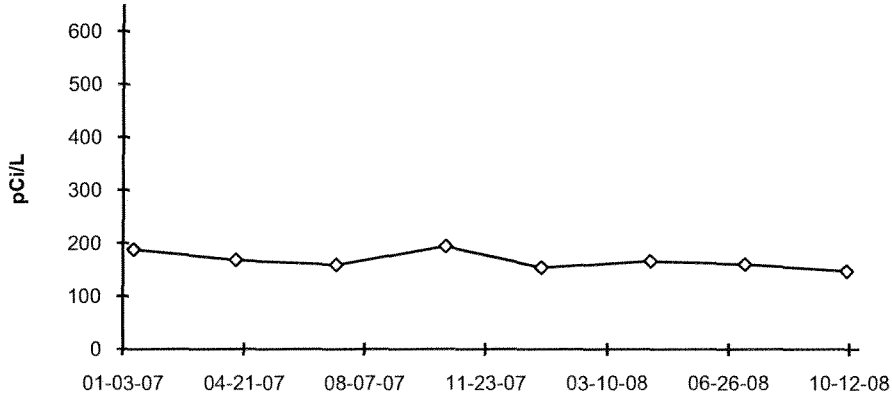
NEW STATIONS BD-50 AND BD-51 ADDED IN 2007
NEW STATION BD-50 DISCONTINUED 10/18/07

FIGURE C-13
Ground/Well Water - Tritium - Station BD-53 and BD-54 Collected in the Vicinity of Braidwood Station, 2007 - 2008

BD-53 Phelps Well



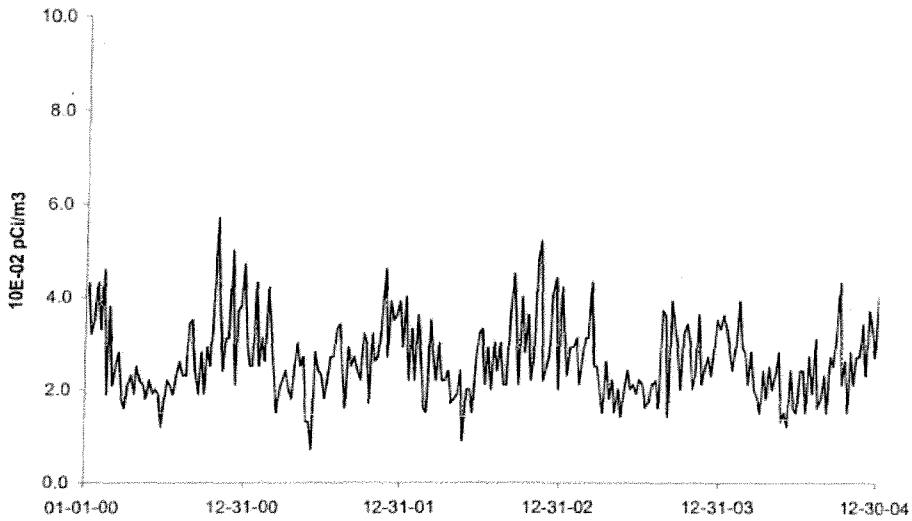
BD-54 Cash Well



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 NEW



BD-06 Godley

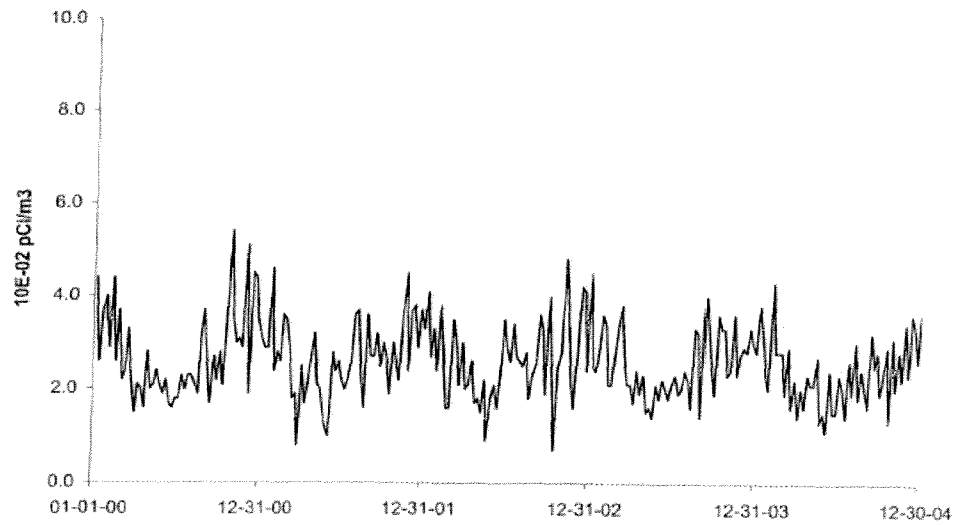
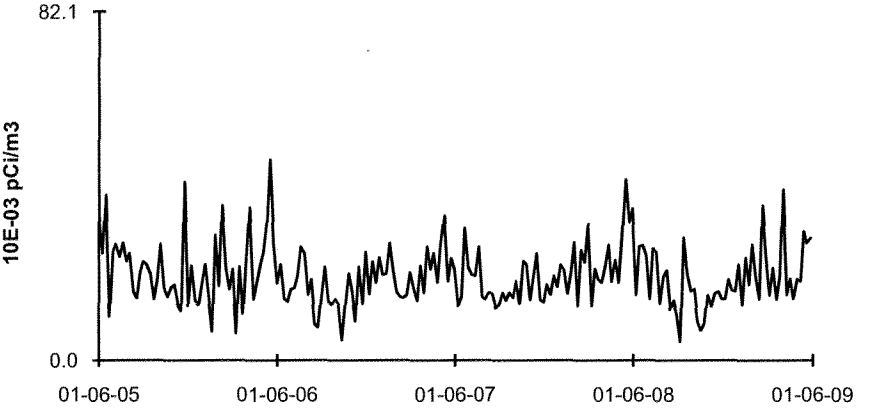
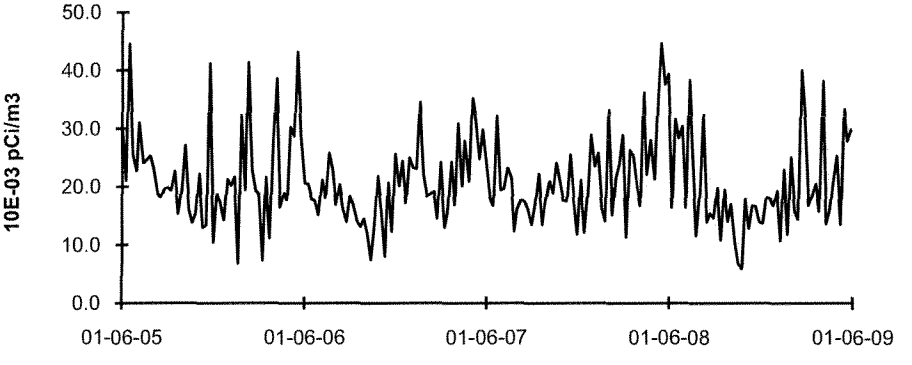


FIGURE C-14 (cont.)
Air Particulates - Gross Beta- Stations BD-03 (C) and BD-06 Collected in the Vicinity of Braidwood Station, 2005 - 2008

BD-03 (C) County Line Road



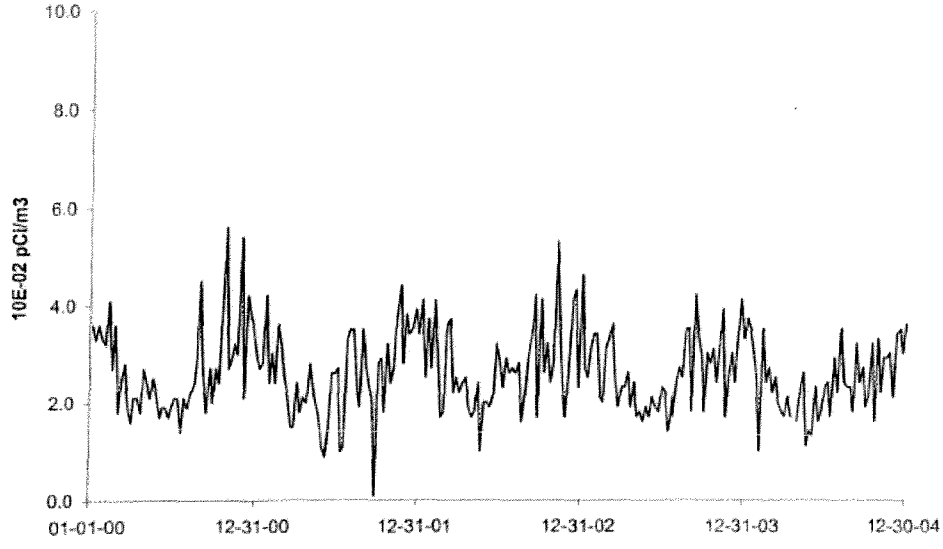
BD-06 Godley



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

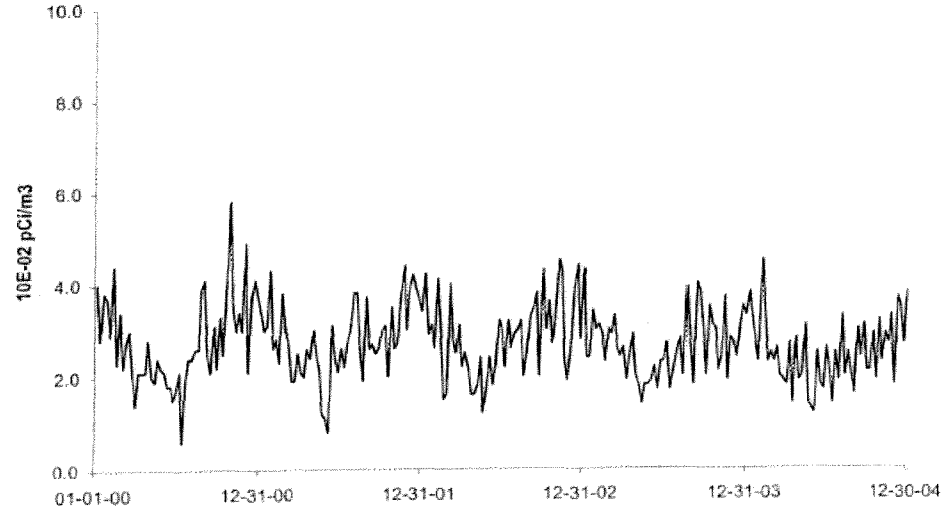
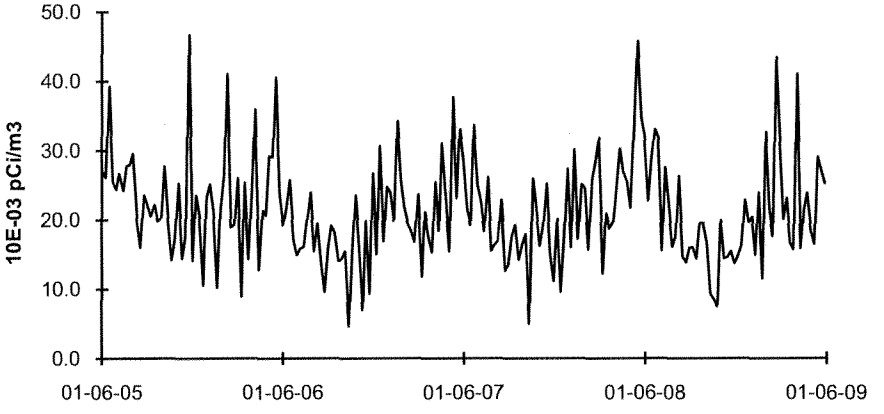
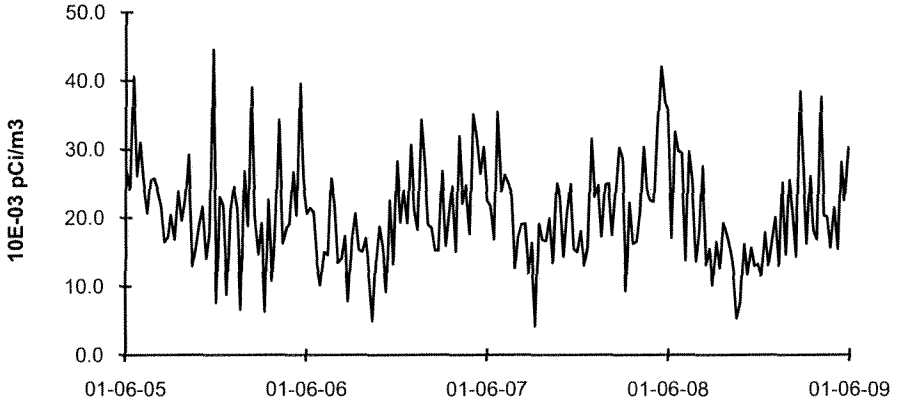


FIGURE C-15 (cont.)
Air Particulates - Gross Beta- Stations BD-19 and BD-20 Collected in the Vicinity of Braidwood Station, 2005 - 2008

BD-19 Nearsite, NW



BD-20 Nearsite, 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

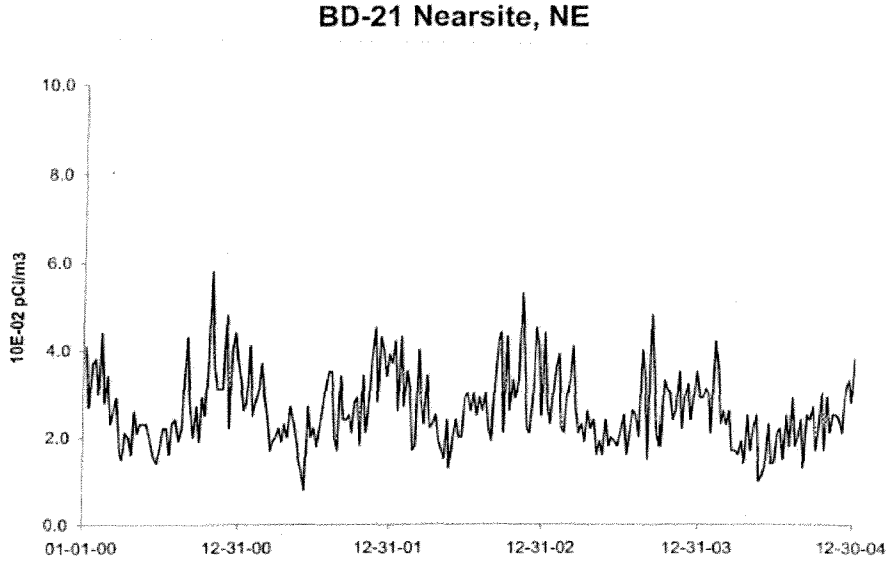
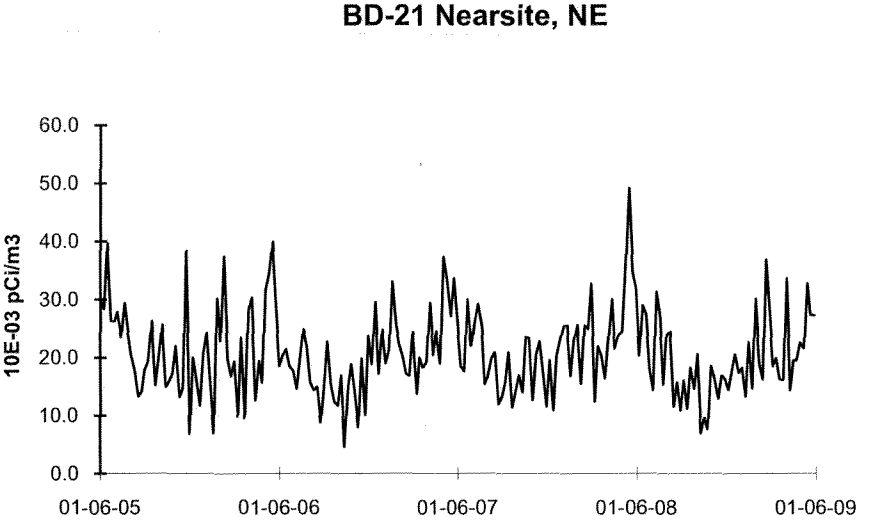


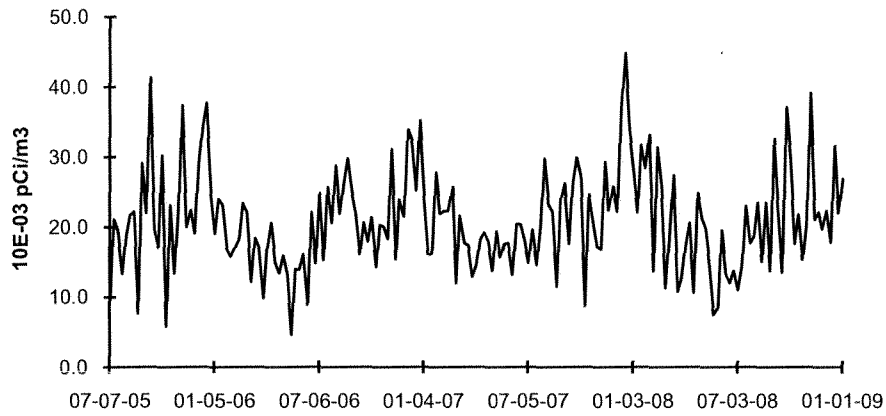
FIGURE C-16 (cont.)
Air Particulates - Gross Beta- Station BD-21
Collected in the Vicinity of Braidwood Station, 2005 - 2008



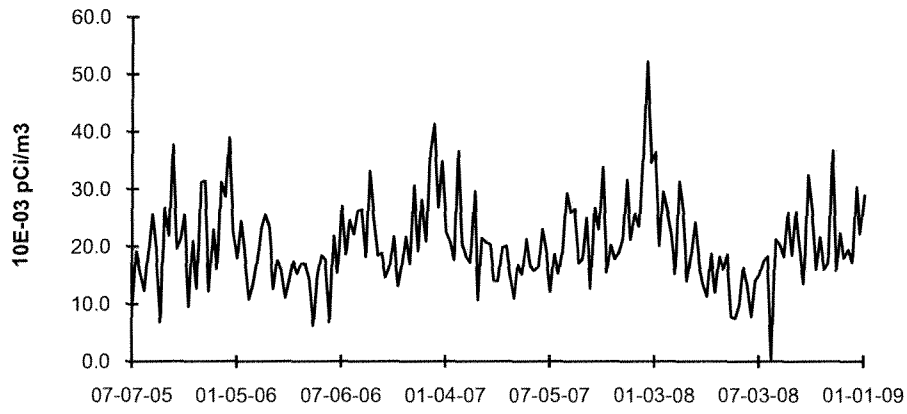
DUE TO VENDOR CHANGE, THE REPORTED UNITS CHANGED FROM E-02 PCI/M3 TO E-03 PCI/M3

FIGURE C-17
Air Particulates - Gross Beta- Stations BD-02 and BD-04 Collected in the Vicinity of Braidwood Station, 2005 - 2008

BD-02 Nearsite, NW

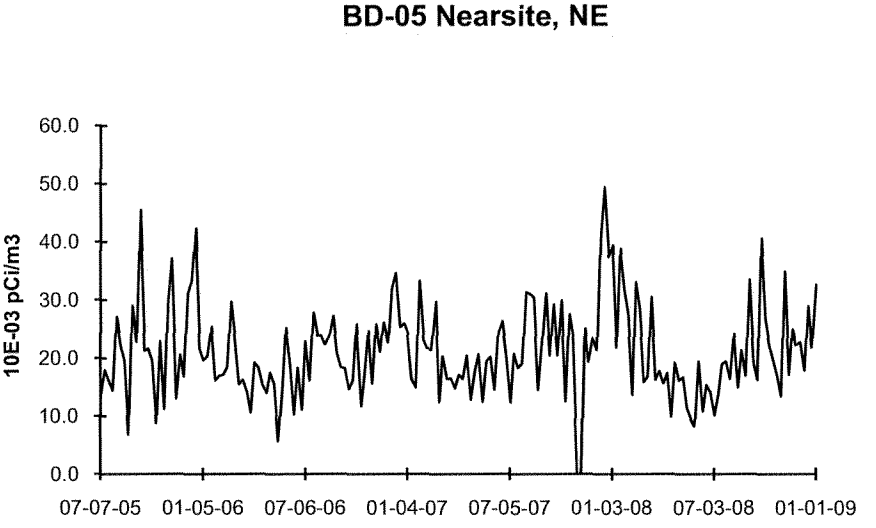


BD-04 Nearsite, N



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 - 2008



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

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APPENDIX D

INTER-LABORATORY COMPARISON PROGRAM

TABLE D-1 ANALYTICS ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM
TELEDYNE BROWN ENGINEERING, 2008
(PAGE 1 OF 3)

Month/Year	Identification Number	Matrix	Nuclide	Units	Reported Value (a)	Known Value (b)	Ratio (c) TBE/Analytics	Evaluation (d)
March 2008	E5847-396	Milk	Sr-89	pCi/L	83.5	95.8	0.87	A
			Sr-90	pCi/L	13.9	12.9	1.08	A
	E5848-396	Milk	I-131	pCi/L	57.3	60.0	0.96	A
			Ce-141	pCi/L	229	249	0.92	A
			Cr-51	pCi/L	336	359	0.94	A
			Cs-134	pCi/L	106	125	0.85	A
			Cs-137	pCi/L	141	146	0.97	A
			Co-58	pCi/L	71.8	70.8	1.01	A
			Mn-54	pCi/L	98.1	94.2	1.04	A
			Fe-59	pCi/L	102	102	1.00	A
			Zn-65	pCi/L	135	137	0.99	A
			Co-60	pCi/L	230	236	0.97	A
	E5850A-396	AP	Ce-141	pCi	163	157	1.04	A
			Cr-51	pCi	233	227	1.03	A
			Cs-134	pCi	72.6	79.0	0.92	A
			Cs-137	pCi	98.3	92.0	1.07	A
			Co-58	pCi	46.7	44.7	1.04	A
			Mn-54	pCi	69.8	59.4	1.18	A
			Fe-59	pCi	72.2	64.5	1.12	A
			Zn-65	pCi	106	86.4	1.23	W
			Co-60	pCi	156	149	1.05	A
	E5849-396	Charcoal	I-131	pCi	65.5	60.1	1.09	A
June 2008	E5971-396	Milk	Sr-89	pCi/L	83.9	85.0	0.99	A
			Sr-90	pCi/L	14.4	15.8	0.91	A
	E5972-396	Milk	I-131	pCi/L	70.9	71.4	0.99	A
			Ce-141	pCi/L	157	174	0.90	A
			Cr-51	pCi/L	159	138	1.15	A
			Cs-134	pCi/L	69.7	76.7	0.91	A
			Cs-137	pCi/L	115	116	0.99	A
			Co-58	pCi/L	59.1	61.9	0.95	A
			Mn-54	pCi/L	139	135	1.03	A
			Fe-59	pCi/L	98.4	91.7	1.07	A
			Zn-65	pCi/L	129	127	1.02	A
			Co-60	pCi/L	101	104	0.97	A
	E5974-396	AP	Ce-141	pCi	206	207	1.00	A
			Cr-51	pCi	173	164	1.05	A
			Cs-134	pCi	95.9	91.0	1.05	A
			Cs-137	pCi	142.0	138.0	1.03	A
			Co-58	pCi	72.0	73.4	0.98	A
			Mn-54	pCi	180	160.0	1.13	A
			Fe-59	pCi	108.0	109.0	0.99	A
			Zn-65	pCi	159	150	1.06	A
			Co-60	pCi	129	124	1.04	A

TABLE D-1 ANALYTICS ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM
TELEDYNE BROWN ENGINEERING, 2008
(PAGE 2 OF 3)

Month/Year	Identification Number	Matrix	Nuclide	Units	Reported Value (a)	Known Value (b)	Ratio (c) TBE/Analytics	Evaluation (d)
June 2008	E5973-396	Charcoal	I-131	pCi	73.8	84.1	0.88	A
September 2008	E6284-396	Milk	Sr-89	pCi/L	76.2	73.9	1.03	A
			Sr-90	pCi/L	12.3	11.0	1.12	A
	E6285-396	Milk	I-131	pCi/L	65.7	67.9	0.97	A
			Ce-141	pCi/L	145	161	0.90	A
			Cr-51	pCi/L	406	421	0.96	A
			Cs-134	pCi/L	196	232	0.84	A
			Cs-137	pCi/L	147	162	0.91	A
			Co-58	pCi/L	167	179	0.93	A
			Mn-54	pCi/L	165	166	0.99	A
			Fe-59	pCi/L	161	144	1.12	A
			Zn-65	pCi/L	305	319	0.96	A
			Co-60	pCi/L	218	234	0.93	A
	E6287-396	AP	Ce-141	pCi	79.5	76.3	1.04	A
			Cr-51	pCi	208	199	1.05	A
			Cs-134	pCi	106	110	0.96	A
			Cs-137	pCi	79.3	76.7	1.03	A
			Co-58	pCi	87.7	84.4	1.04	A
			Mn-54	pCi	90.3	78.6	1.15	A
			Fe-59	pCi	81.7	68.3	1.20	A
			Zn-65	pCi	144	151	0.95	A
			Co-60	pCi	111	111	1.00	A
	E6286-396	Charcoal	I-131	pCi	93.2	90.0	1.04	A
December 2008	E6415-396	Milk	Sr-89	pCi/L	98.4	91.9	1.07	A
			Sr-90	pCi/L	18.0	12.6	1.43	N (1)
	E6416-396	Milk	I-131	pCi/L	69.2	79.9	0.87	A
			Ce-141	pCi/L	177	191	0.93	A
			Cr-51	pCi/L	231	246	0.94	A
			Cs-134	pCi/L	117	134	0.87	A
			Cs-137	pCi/L	119	120	0.99	A
			Co-58	pCi/L	104	104	1.00	A
			Mn-54	pCi/L	153	152	1.01	A
			Fe-59	pCi/L	99.6	100	1.00	A
			Zn-65	pCi/L	177	183	0.97	A
			Co-60	pCi/L	133	133	1.00	A
	E6418-396	AP	Ce-141	pCi	148	146	1.01	A
			Cr-51	pCi	202	187	1.08	A
			Cs-134	pCi	103	102	1.01	A
			Cs-137	pCi	95.4	91.2	1.05	A
			Co-58	pCi	81.4	79.2	1.03	A
			Mn-54	pCi	113	116.0	0.97	A
			Fe-59	pCi	76.5	76.4	1.00	A
			Zn-65	pCi	122	139	0.88	A
			Co-60	pCi	108	101	1.07	A

TABLE D-1 ANALYTICS ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM
TELEDYNE BROWN ENGINEERING, 2008
(PAGE 3 OF 3)

Month/Year	Identification Number	Matrix	Nuclide	Units	Reported Value (a)	Known Value (b)	Ratio (c) TBE/Analytics	Evaluation (d)
December 2008	E6417-396	Charcoal	I-131	pCi	65.8	74.1	0.89	A

(1) NCR 09-02 initiated to investigate the failure.

(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, 2008
(PAGE 1 OF 1)

Month/Year	Identification Number	Media	Nuclide	Units	Reported Value (a)	Known Value (b)	Control Limits	Evaluation (c)
January 2008	Quik^{tm} Response	Water	Sr-89	pCi/L	37.33	19.0	11.8 - 25.2	N (1)
			Sr-90	pCi/L	40.40	42.7	31.5 - 49.0	A
			Ba-133	pCi/L	87.8	90.5	76.2 - 99.6	A
			Cs-134	pCi/L	80.67	88.9	72.9 - 97.8	A
			Cs-137	pCi/L	222.33	231	208 - 256	A
			Co-60	pCi/L	98.9	101.0	90.9 - 113	A
			Zn-65	pCi/L	352	350	315 - 408	A
			Gr-A	pCi/L	13.0	12.7	6.02 - 18.7	A
			Gr-B	pCi/L	32.7	36.2	23.8 - 43.8	A
			H-3	pCi/L	11100	11300	9840 - 12400	A
January 2008	RAD 72	Water	Sr-89	pCi/L	69.0	65.3	53.0 - 73.4	A
			Sr-90	pCi/L	35.6	41.4	30.5 - 47.6	A
			Ba-133	pCi/L	25.9	25.7	20.0 - 29.5	A
			Cs-134	pCi/L	86.5	92.6	76.0 - 102	A
			Cs-137	pCi/L	155	158	142 - 176	A
			Co-60	pCi/L	16.0	14.4	11.4 - 18.7	A
			Zn-65	pCi/L	214	204	184 - 240	A
			Gr-A	pCi/L	13.3	14.8	7.15 - 21.2	A
			Gr-B	pCi/L	21.2	22.5	13.7 - 30.6	A
			I-131	pCi/L	22.8	23.6	19.6 - 28.0	A
			H-3	pCi/L	3390	3540	3000 - 3910	A
April 2008	Rad 73	Water	Sr-89	pCi/L	65.47	60.4	48.6 - 68.2	A
			Sr-90	pCi/L	39.80	39.2	28.8 - 45.1	A
			Ba-133	pCi/L	59.63	58.3	48.3 - 64.3	A
			Cs-134	pCi/L	45.00	46.6	37.4 - 51.3	A
			Cs-137	pCi/L	97.97	102	91.8 - 115	A
			Co-60	pCi/L	75.47	76.6	68.9 - 86.7	A
			Zn-65	pCi/L	109	106	95.4 - 126	A
			Gr-A	pCi/L	41.03	50.8	26.5 - 63.7	A
			Gr-B	pCi/L	50.20	51.4	35.0 - 58.4	A
			I-131	pCi/L	26.67	28.7	23.9 - 33.6	A
			H-3	pCi/L	11633	12000	10400 - 13200	A

(1) Could find no cause for Sr-89 failure. Sample sent to outside lab for verification, but the outside laboratory was unable to confirm our numbers or ERA numbers. Studies bracketing these results, RAD 71 and RAD 72, had acceptable Sr-89 results. NCR 08-03

(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, 2008
(PAGE 1 OF 2)

Month/Year	Identification Number	Media	Nuclide	Units	Reported Value (a)	Known Value (b)	Acceptance Range	Evaluation (c)
January 2008	07-MaW18	Water	Cs-134	Bq/L	-0.26		(1)	A
			Cs-137	Bq/L	0.029		(1)	A
			Co-57	Bq/L	21	22.8	16.0 - 29.6	A
			Co-60	Bq/L	8.2	8.40	5.88 - 10.92	A
			H-3	Bq/L	473	472	330 - 614	A
			Mn-54	Bq/L	12	12.1	8.5 - 15.7	A
			Sr-90	Bq/L	10.70	11.4	7.98- 14.82	A
			Zn-65	Bq/L	15.6	16.3	11.4 - 21.2	A
	07-GrW18	Water	Gr-A	Bq/L	1.4	1.399	>0.0 - 2.798	A
			Gr-B	Bq/L	3.06	2.43	1.22 - 3.65	A
	07-MaS18	Soil	Cs-134	Bq/kg	790	854.0	598 - 1110	A
			Cs-137	Bq/kg	568	545	382 - 709	A
			Co-57	Bq/kg	424	421	295 - 547	A
			Co-60	Bq/kg	2.307	2.9	(2)	A
			Mn-54	Bq/kg	611	570	399 - 741	A
			K-40	Bq/kg	6.09	571	400 - 742	A
			Sr-90	Bq/kg	454	493.0	345 - 641	A
			Zn-65	Bq/kg	0.162		(1)	A
	07-RdF18	AP	Cs-134	Bq/sample	2.73	2.5200	1.76 - 3.28	A
			Cs-137	Bq/sample	2.88	2.7	1.89 - 3.51	A
			Co-57	Bq/sample	3.493	3.55	2.49 - 4.62	A
			Co-60	Bq/sample	1.357	1.31	0.92 - 1.70	A
			Mn-54	Bq/sample	0.006		(1)	A
			Sr-90	Bq/sample	1.61	1.548	1.084 - 2.012	A
			Zn-65	Bq/sample	2.59	2.04	1.43 - 2.65	A
	07-GrF18	AP	Gr-A	Bq/sample	0.131	0.348	>0.0 - 0.696	A
			Gr-B	Bq/sample	0.261	0.286	0.143 - 0.429	A
January 2008	07-RdV18	Vegetation	Cs-134	Bq/sample	5.25	6.28	4.40 - 8.16	A
			Cs-137	Bq/sample	3.13	3.41	2.39 - 4.43	A
			Co-57	Bq/sample	6.837	6.89	4.82 - 8.96	A
			Co-60	Bq/sample	2.44	2.77	1.94 - 3.60	A
			Mn-54	Bq/sample	4.45	4.74	3.32 - 6.16	A
			K-40	Bq/sample	61.3		(1)	
			Sr-90	Bq/sample	1.33	1.273	0.891 - 1.655	A
			Zn-65	Bq/sample	0.085		(1)	A
August 2008	08-MaW19	Water	Cs-134	Bq/L	17.1	19.5	13.7 - 25.4	A
			Cs-137	Bq/L	21.4	23.6	16.5 - 30.7	A
			Co-57	Bq/L	-0.044		(1)	A
			Co-60	Bq/L	10.8	11.6	8.1 - 15.1	A
			H-3	Bq/L	334	341	239 - 443	A
			Mn-54	Bq/L	13.0	13.7	9.6 - 17.8	A
			Sr-90	Bq/L	6.55	6.45	4.52- 8.39	A
			Zn-65	Bq/L	16.5	17.1	12.0 - 22.2	A

TABLE D-3 DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)
TELEDYNE BROWN ENGINEERING, 2008
(PAGE 2 OF 2)

Month/Year	Identification Number	Media	Nuclide	Units	Reported Value (a)	Known Value (b)	Acceptance Range	Evaluation (c)
August 2008	08-GrW19	Water	Gr-A	Bq/L	0.0612	<0.56	(3)	A
			Gr-B	Bq/L	0.222	<1.85	(3)	A
	08-MaS19	Soil	Cs-134	Bq/kg	546	581	407 - 755	A
			Cs-137	Bq/kg	2.52	2.8	(2)	A
			Co-57	Bq/kg	340	333	233 - 433	A
			Co-60	Bq/kg	157	145.0	102 - 189	A
			Mn-54	Bq/kg	460	415	291 - 540	A
			K-40	Bq/kg	650	571	399 - 741	A
			Sr-90	Bq/kg	1.40		(1)	A
			Zn-65	Bq/kg	-1.53		(1)	A
	08-RdF19	AP	Cs-134	Bq/sample	2.46	2.6300	1.84 - 3.42	A
			Cs-137	Bq/sample	0.0063		(1)	A
			Co-57	Bq/sample	1.36	1.50	1.05 - 1.95	A
			Co-60	Bq/sample	0.0143		(1)	A
			Mn-54	Bq/sample	2.70	2.64	1.85 - 3.43	A
			Sr-90	Bq/sample	1.42	1.12	0.78 - 1.46	W
			Zn-65	Bq/sample	0.975	0.94	0.66 - 1.22	A
	08-GrF19	AP	Gr-A	Bq/sample	-0.0037		(4)	A
			Gr-B	Bq/sample	0.540	0.525	0.263 - 0.788	A
	08-RdV19	Vegetation	Cs-134	Bq/sample	4.36	5.5	3.9 - 7.2	W
			Cs-137	Bq/sample	-0.03		(1)	A
			Co-57	Bq/sample	6.72	7.1	5.0 - 9.2	A
			Co-60	Bq/sample	4.04	4.70	3.3 - 6.1	A
			Mn-54	Bq/sample	5.22	5.8	4.1 - 7.5	A
			K-40	Bq/sample	64.4		(1)	
			Sr-90	Bq/sample	1.62	1.9	1.3 - 2.5	A
			Zn-65	Bq/sample	6.160	6.9	4.8 - 9.0	A

(1) Not evaluated by MAPEP.

(2) Reported a statistically zero result.

(3) Designed to test the Safe Drinking Water screening levels. Labs reporting values less than ref values were found to be acceptable.

(4) False positive test.

(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., 2008**

Lab Code [b]	Date	Analysis	Concentration (pCi/L) Laboratory Result [c]	ERA Result [d]	Control Limits	Acceptance
STAP-1143	03/24/08	Co-60	650.72 ± 3.00	730.0	565.0 - 912.0	Pass
STAP-1143	03/24/08	Cs-134	467.50 ± 5.53	523.0	341.0 - 647.0	Pass
STAP-1143	03/24/08	Cs-137	1375.90 ± 25.41	1450.0	1090.0 - 1900.0	Pass
STAP-1143 [e]	03/24/08	Mn-54	0.00 ± 0.00	0.0	0.0 - 10.0	Pass
STAP-1143	03/24/08	Sr-90	157.60 ± 7.70	152.0	66.9 - 236.0	Pass
STAP-1143	03/24/08	Zn-65	889.90 ± 15.90	872.0	604.0 - 1210.0	Pass
STAP-1144	03/24/08	Gr. Beta	99.90 ± 3.09	92.2	56.80 - 135.0	Pass
STSO-1145	03/24/08	Ac-228	1269.02 ± 36.81	1180.0	757.0 - 1660.0	Pass
STSO-1145	03/24/08	Bi-212	1407.10 ± 56.64	1360.0	357.0 - 2030.0	Pass
STSO-1145	03/24/08	Co-60	5219.70 ± 90.30	5130.0	3730.0 - 6890.0	Pass
STSO-1145	03/24/08	Cs-134	5427.30 ± 102.94	5640.0	3630.0 - 6790.0	Pass
STSO-1145	03/24/08	Cs-137	6346.60 ± 201.80	6010.0	4600.0 - 7810.0	Pass
STSO-1145	03/24/08	K-40	11052.70 ± 181.80	11000.0	7980.0 - 14900.0	Pass
STSO-1145 [e]	03/24/08	Mn-54	0.00 ± 0.00	0.0	0.0 - 10.0	Pass
STSO-1145	03/24/08	Pb-212	1198.20 ± 96.58	1080.0	697.0 - 1520.0	Pass
STSO-1145	03/24/08	Pb-214	2253.30 ± 291.60	2020.0	1210.0 - 3010.0	Pass
STSO-1145	03/24/08	Sr-90	6407.00 ± 277.00	5360.0	1940.0 - 8750.0	Pass
STSO-1145	03/24/08	Th-234	2421.80 ± 321.00	2030.0	644.0 - 3870.0	Pass
STSO-1145	03/24/08	Zn-65	2936.20 ± 73.50	2660.0	2110.0 - 3570.0	Pass
STVE-1146	03/24/08	Co-60	912.41 ± 13.59	888.0	600.0 - 1280.0	Pass
STVE-1146	03/24/08	Cs-134	1547.70 ± 38.81	1540.0	882.0 - 2130.0	Pass
STVE-1146	03/24/08	Cs-137	1163.80 ± 20.62	1100.0	807.0 - 1530.0	Pass
STVE-1146	03/24/08	K-40	22186.00 ± 339.40	24600.0	17700.0 - 34800.0	Pass
STVE-1146 [e]	03/24/08	Mn-54	0.00 ± 0.00	0.0	0.0 - 10.0	Pass
STVE-1146	03/24/08	Sr-90	3825.90 ± 140.66	4130.0	2310.0 - 5480.0	Pass
STVE-1146	03/24/08	Zn-65	1676.80 ± 43.00	1430.0	1030.0 - 1960.0	Pass
STW-1147	03/24/08	Co-60	1430.00 ± 33.33	1420.0	1240.0 - 1680.0	Pass
STW-1147	03/24/08	Cs-134	730.18 ± 33.39	751.0	555.0 - 862.0	Pass
STW-1147	03/24/08	Cs-137	1947.80 ± 13.80	1990.0	1690.0 - 2380.0	Pass
STW-1147 [e]	03/24/08	Mn-54	0.00 ± 0.00	0.0	0.0 - 10.0	Pass
STW-1147	03/24/08	Sr-90	512.03 ± 43.37	512.0	325.0 - 684.0	Pass
STW-1147	03/24/08	Zn-65	708.90 ± 29.00	694.0	588.0 - 865.0	Pass
STW-1120	03/19/07	Zn-65	2009.00 ± 36.40	1910.0	1600.0 - 2410.0	Pass

[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).

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

[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] 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., 2008

		Concentration [b]				
Lab Code[c]	Date	Analysis	Laboratory result	Known Activity	Control Limits [d]	Acceptance
STW-1137	01/01/08	Co-57	23.80 ± 0.60	22.80	16.00 - 29.60	Pass
STW-1137	01/01/08	Co-60	8.60 ± 0.50	8.40	5.88 - 10.92	Pass
STW-1137	01/01/08	Cs-134	-0.021 ± 0.10	0.00	-1.00 - 1.00	Pass
STW-1137	01/01/08	Cs-137	0.00 ± 0.10	0.00	-1.00 - 1.00	Pass
STW-1137	01/01/08	H-3	515.10 ± 12.70	472.00	330.00 - 614.00	Pass
STW-1137	01/01/08	Mn-54	12.90 ± 0.80	12.10	8.50 - 15.70	Pass
STW-1137	01/01/08	Sr-90	12.00 ± 1.50	11.40	7.98 - 14.82	Pass
STW-1137	01/01/08	Zn-65	16.90 ± 1.40	16.30	11.40 - 21.20	Pass
STW-1138	01/01/08	Gr. Beta	2.30 ± 0.15	2.43	1.22 - 3.65	Pass
STAP-1139	01/01/08	Co-57	3.90 ± 0.07	3.55	2.49 - 4.62	Pass
STAP-1139	01/01/08	Co-60	1.43 ± 0.07	1.31	0.92 - 1.70	Pass
STAP-1139	01/01/08	Cs-134	2.59 ± 0.16	2.52	1.76 - 3.28	Pass
STAP-1139	01/01/08	Cs-137	3.05 ± 0.12	2.70	1.89 - 3.51	Pass
STAP-1139	01/01/08	Mn-54	0.43 ± 0.58	0.00	0.00 - 1.00	Pass
STAP-1139	01/01/08	Sr-90	1.30 ± 0.27	1.55	1.08 - 2.01	Pass
STAP-1139	01/01/08	Zn-65	2.36 ± 0.18	2.04	1.43 - 2.65	Pass
STAP-1140	01/01/08	Gr. Beta	0.34 ± 0.04	0.29	0.14 - 0.43	Pass
STVE-1141	01/01/08	Co-57	8.30 ± 0.18	6.89	4.82 - 8.96	Pass
STVE-1141	01/01/08	Co-60	3.03 ± 0.13	2.77	1.94 - 3.60	Pass
STVE-1141	01/01/08	Cs-134	6.53 ± 0.29	6.28	4.40 - 8.16	Pass
STVE-1141	01/01/08	Cs-137	3.90 ± 0.19	3.41	2.39 - 4.43	Pass
STVE-1141	01/01/08	Mn-54	5.43 ± 0.21	4.74	3.32 - 6.16	Pass
STVE-1141	01/01/08	Zn-65	0.033 ± 0.10	0.00	0.00 - 1.00	Pass
STSO-1142	01/01/08	Co-57	483.00 ± 3.00	421.00	295.00 - 547.00	Pass
STSO-1142	01/01/08	Co-60	3.00 ± 0.80	2.90	0.00 - 5.00	Pass
STSO-1142	01/01/08	Cs-134	896.50 ± 7.40	854.00	598.00 - 1110.00	Pass
STSO-1142	01/01/08	Cs-137	624.40 ± 4.10	545.00	382.00 - 709.00	Pass
STSO-1142	01/01/08	Mn-54	667.20 ± 3.80	570.00	399.00 - 741.00	Pass
STSO-1142	01/01/08	Zn-65	0.093 ± 0.91	0.00	0.00 - 1.00	Pass
STSO-1158	08/01/08	Co-57	353.02 ± 2.01	333.00	233.00 - 433.00	Pass
STSO-1158	08/01/08	Co-60	151.99 ± 1.58	145.00	102.00 - 189.00	Pass
STSO-1158	08/01/08	Cs-134	499.72 ± 2.65	581.00	407.00 - 755.00	Pass
STSO-1158	08/01/08	Cs-137	2.54 ± 0.25	2.80	0.00 - 5.00	Pass
STSO-1158	08/01/08	K-40	643.94 ± 15.50	570.00	399.00 - 741.00	Pass
STSO-1158	08/01/08	Mn-54	452.14 ± 2.96	415.00	291.00 - 540.00	Pass
STSO-1158	08/01/08	Sr-90	1.95 ± 2.04	0.00	0.00 - 5.00	Pass
STSO-1158	08/01/08	Zn-65	0.10 ± 2.04	0.00	0.00 - 5.00	Pass

TABLE D-5 DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)[a] ENVIRONMENTAL, INC., 2008

		Concentration [b]				
Lab Code[c]	Date	Analysis	Laboratory result	Known Activity	Control Limits [d]	Acceptance
STVE-1159	08/01/08	Co-57	8.52 ± 0.23	7.10	5.00 - 9.20	Pass
STVE-1159	08/01/08	Co-60	5.08 ± 0.19	4.70	3.30 - 6.10	Pass
STVE-1159	08/01/08	Cs-134	5.26 ± 0.18	5.50	3.90 - 7.20	Pass
STVE-1159	08/01/08	Cs-137	0.01 ± 0.14	0.00	0.00 - 1.00	Pass
STVE-1159	08/01/08	Mn-54	6.39 ± 0.28	5.80	4.10 - 7.50	Pass
STVE-1159	08/01/08	Zn-65	7.73 ± 0.45	6.90	4.80 - 9.00	Pass
STW-1162	08/01/08	Co-57	0.03 ± 0.16	0.00	0.00 - 5.00	Pass
STW-1162	08/01/08	Co-60	11.27 ± 0.23	11.60	8.10 - 15.10	Pass
STW-1162	08/01/08	Cs-134	17.93 ± 0.52	19.50	13.70 - 25.40	Pass
STW-1162	08/01/08	Cs-137	23.72 ± 0.43	23.60	16.50 - 30.70	Pass
STW-1162	08/01/08	H-3	385.15 ± 8.93	341.00	239.00 - 443.00	Pass
STW-1162	08/01/08	Mn-54	13.87 ± 0.37	13.70	9.60 - 17.80	Pass
STW-1162	08/01/08	Sr-90	6.49 ± 1.12	6.45	4.52 - 8.39	Pass
STW-1162	08/01/08	Zn-65	17.64 ± 0.61	17.10	12.00 - 22.20	Pass
STW-1163	08/01/08	Gr. Beta	0.12 ± 0.05	0.00	0.00 - 1.85	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.

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APPENDIX E

EFFLUENT DATA

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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 3.48E+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 4.00E+02 curies of fission and activation gases were released with a maximum quarterly average release rate of 3.71E+00 µCi/sec at Unit 1 and 3.55E+01 µCi/sec at Unit 2.

A total of 2.50E-03 curies of 1-131 were released during the year with a maximum average quarterly release rate of 1.50E-04 µCi/sec for Unit 1 and 1.68E-04 µCi/sec for Unit 2.

A total of 9.39E-06 curies of beta-gamma emitters were released as airborne particulate matter with a maximum average release rate of 5.71E-07 µCi/sec at Unit 1 and 4.91E-07 µCi/sec at Unit 2. Alpha-emitting radionuclides were below the lower limit of detection (LLD) for the year.

A total of 1.26E+02 curies of tritium were released with a maximum average quarterly release rate of 3.46E+00 uCi/sec at Unit 1 and 7.36E-00 uCi/sec at Unit 2.

1.2 Liquids Released to Kankakee River

A total of 2.53E+06 liters of radioactive liquid wastes (prior to dilution) containing 1.03E-01 curies (excluding tritium, noble gases and alpha) were discharged from the station. These wastes were released at a maximum quarterly diluted average concentration of 1.01E-08 µCi/ml. Alpha-emitting radionuclides were less than the LLD for the year. A total of 1.41E+03 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 2008 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 2.91E-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 1.80E-02 mrem (Table 3.4-1). The maximum gamma air dose was 3.24E-02 mrad (Table 3.1-1) based on measured effluents and average meteorological data and 3.17E-02 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 6.09E-02 mrem based on concurrent meteorological data (Table 3.4-1).

The maximum offsite beta air dose for the year was 2.20E-02 mrad (Table 3.1-1) based on measured effluents and average meteorological data and 6.69E-02 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 2008 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 3.04E+00 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 1.32E-01 mrem and no organ dose exceeded 2.18E-01 mrem (Table 3.2-1 [child]).

3.3 Assessment of Dose to Member of Public

During the period January to December, 2008, 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 99.3% during 2008.

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

APPENDIX E-1

DATA TABLES AND FIGURES

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2008
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	1.17E+00	2.92E+01	7.01E-03	6.89E-03	7.59
2. Average Release Rate	uCi/sec	1.50E-01	3.71E+00	8.82E-04	8.67E-04	
3. Percent of ODCM Limit - gamma	%	5.70E-05	5.07E-03	1.12E-06	2.04E-07	
4. Percent of ODCM Limit - beta	%	7.32E-04	1.27E-02	2.71E-06	4.69E-06	
B. Iodine Releases						
1. Total I-131 Activity	Ci	1.90E-06	1.18E-03	<LLD	<LLD	33.20
2. Average Release Rate	uCi/sec	2.44E-07	1.50E-04	0.00E+00	0.00E+00	
3. Percent of ODCM Limit - gamma	%	3.17E-02	1.91E+01	0.00E+00	0.00E+00	
C. Particulate (> 8 day half-life) Releases						
1. Gross Activity	Ci	<LLD	<LLD	4.54E-06	<LLD	19.80
2. Average Release Rate	uCi/sec	0.00E+00	0.00E+00	5.71E-07	0.00E+00	
3. Percent of ODCM Limit	%	0.00E+00	0.00E+00	1.68E-02	0.00E+00	
4. Gross Alpha Activity	Ci	<LLD	<LLD	<LLD	<LLD	
D. Tritium Releases						
1. Total Release Activity	Ci	4.85E-01	2.72E+01	5.90E+00	5.74E-01	8.07
2. Average Release Rate	uCi/sec	6.24E-02	3.46E+00	7.42E-01	7.22E-02	
3. Percent of ODCM Limit	%	3.17E-02	1.91E+01	1.68E-02	1.63E-03	

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

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2008
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	1.29E+00	2.79E+02	8.92E+01	3.05E-02	7.59
2. Average Release Rate	uCi/sec	1.66E-01	3.55E+01	1.12E+01	3.84E-03	
3. Percent of ODCM Limit - gamma	%	7.60E-05	4.49E-02	5.97E-01	2.06E-05	
4. Percent of ODCM Limit - beta	%	7.78E-04	1.09E-01	9.57E-02	2.60E-05	
B. Iodine Releases						
1. Total I-131 Activity	Ci	4.41E-07	1.32E-03	<LLD	<LLD	33.20
2. Average Release Rate	uCi/sec	5.67E-08	1.68E-04	0.00E+00	0.00E+00	
3. Percent of ODCM Limit	%	1.85E-02	2.12E+01	0.00E+00	0.00E+00	
C. Particulate (> 8 day half-life) Releases						
1. Gross Activity	Ci	<LLD	9.50E-07	<LLD	3.90E-06	19.80
2. Average Release Rate	uCi/sec	0.00E+00	1.22E-07	0.00E+00	4.91E-07	
3. Percent of OCDM Limit	%	0.00E+00	2.12E+01	0.00E+00	1.08E-02	
4. Gross Alpha Activity	Ci	<LLD	<LLD	<LLD	<LLD	
D. Tritium Releases						
1. Total Release Activity	Ci	5.15E+00	2.39E+01	5.85E+01	3.80E+00	8.07
2. Average Release Rate	uCi/sec	6.62E-01	3.04E+00	7.36E+00	4.78E-01	
3. Percent of ODCM Limit	%	1.85E-02	2.12E+01	1.66E-01	1.08E-02	

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

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2008
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	9.38E-04	3.40E-02	5.47E-03	1.12E-02	2.64
2. Average Concentration Released	uCi/ml	2.72E-10	1.01E-08	1.76E-09	2.26E-09	
3. Percent of limit	%	*	*	*	*	
B. Tritium						
1. Total Activity Released	Ci	1.09E+02	4.77E+02	3.12E+01	8.78E+01	5.85
2. Average Concentration Released	uCi/ml	3.16E-05	1.42E-04	1.01E-05	1.77E-05	
3. % of Limit (1E-2 uCi/ml)	%	3.16E-01	1.42E+00	1.01E-01	1.77E-01	
C. Dissolved Noble Gases						
1. Total Activity Released	Ci	<LLD	7.44E-06	<LLD	<LLD	2.64
2. Average Concentration Released	uCi/ml	0.00E+00	2.22E-12	0.00E+00	0.00E+00	
3. % of Limit (2E-4 uCi/ml)	%	0.00E+00	1.11E-06	0.00E+00	0.00E+00	
D. Gross Alpha						
1. Total Activity Released	Ci	3.60E-07	4.85E-05	1.39E-05	5.38E-05	14.70
2. Average Concentration Released	uCi/ml	1.04E-13	1.45E-11	4.48E-12	1.09E-11	
E. Volume of Releases						
1. Volume of Liquid Waste to Discharge	liters	2.13E+05	7.15E+05	7.51E+04	2.64E+05	
2. Volume of Dilution Water	liters	3.45E+09	3.35E+09	3.10E+09	4.95E+09	

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

Note: % Limit Values are included in Appendix B 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.

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2008
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	9.38E-04	3.40E-02	5.47E-03	1.12E-02	2.64
2. Average Concentration Released	uCi/ml	2.72E-10	1.01E-08	1.76E-09	2.26E-09	
3. Percent of Limit	%	*	*	*	*	
B. Tritium						
1. Total Activity Released	Ci	1.09E+02	4.77E+02	3.12E+01	8.78E+01	5.85
2. Average Concentration Released	uCi/ml	3.16E-05	1.42E-04	1.01E-05	1.77E-05	
3. % of Limit (1E-3 uCi/ml)	%	3.16E-01	1.42E+00	1.01E-01	1.77E-01	
C. Dissolved Noble Gases						
1. Total Activity Released	Ci	<LLD	7.44E-06	<LLD	<LLD	2.64
2. Average Concentration Released	uCi/ml	0.00E+00	2.22E- 12	0.00E+00	0.00E+00	
3. % of Limit (2E-4 uCi/ml)	%	0.00E+00	1.11E-06	0.00E+00	0.00E+00	
D. Gross Alpha						
1. Total Activity Released	Ci	3.60E-07	4.85E-05	1.39E-05	5.38E-05	14.70
2. Average Concentration Released	uCi/ml	1.04E-13	1.45E-11	4.48E-12	1.09E-11	
E. Volume of Releases						
1. Volume of Liquid Waste to Discharge	liters	2.13E+05	7.15E+05	7.51E+04	2.64E+05	
2. Volume of Dilution Water	liters	3.45E+09	3.35E+09	3.10E+09	4.95E+09	

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

Note: % Limit Values are included in Appendix B of this report.

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

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

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2008 00:00
Period End Date.....: 01/01/2009 00:00
Period Duration (min): 5.270E+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	1.44E+00	31-day	2.25E-01	6.38E+02	3.00E-01	4.78E+02
Qrtr->End	INFANT	THYROID	1.44E+00	Quarter	5.63E+00	2.55E+01	7.50E+00	1.91E+01
Year->End	INFANT	THYROID	1.44E+00	Annual	1.13E+01	1.28E+01	1.50E+01	9.57E+00

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

Nuclide	Percentage
H-3	3.94E-01
I-131	9.96E+01
I-132	1.20E-04
I-133	3.84E-02
ND-147	1.40E-06

=== 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	8.35E-03	31-day	1.50E-01	5.57E+00	2.00E-01	4.18E+00
Qrtr->End	CHILD	TBODY	8.35E-03	Quarter	5.25E+00	1.59E-01	7.50E+00	1.11E-01
Year->End	CHILD	TBODY	8.35E-03	Annual	1.05E+01	7.95E-02	1.50E+01	5.57E-02

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

Nuclide	Percentage
H-3	8.71E+01
I-131	1.29E+01
I-132	2.14E-03
I-133	6.90E-03
ND-147	2.42E-04

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

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2008 00:00
Period End Date.....: 01/01/2009 00:00
Period Duration (min): 5.270E+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	2.56E-04	31-day	1.50E-01	1.71E-01	2.00E-01	1.28E-01
Qrtr->End	Gamma	2.56E-04	Quarter	3.75E+00	6.84E-03	5.00E+00	5.13E-03
Year->End	Gamma	2.56E-04	Annual	7.50E+00	3.42E-03	1.00E+01	2.56E-03

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

Nuclide	Percentage
AR-41	1.97E-01
KR-85M	1.47E-01
KR-85	4.87E-01
XE-133M	1.07E+00
XE-131M	4.65E-01
XE-135	1.90E+01
XE-133	7.86E+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	1.35E-03	31-day	3.00E-01	4.49E-01	4.00E-01	3.36E-01
Qrtr->End	Beta	1.35E-03	Quarter	7.50E+00	1.79E-02	1.00E+01	1.35E-02
Year->End	Beta	1.35E-03	Annual	1.50E+01	8.97E-03	2.00E+01	6.73E-03

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

Nuclide	Percentage
AR-41	2.16E-02
KR-85M	7.31E-02
KR-85	1.71E+01
XE-133M	1.50E+00
XE-131M	1.03E+00
XE-135	7.57E+00
XE-133	7.27E+01

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

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2008 00:00
Period End Date.....: 01/01/2009 00:00
Period Duration (min): 5.270E+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	1.60E+00	31-day	2.25E-01	7.13E+02	3.00E-01	5.35E+02
Qrtr->End	INFANT	THYROID	1.60E+00	Quarter	5.63E+00	2.85E+01	7.50E+00	2.14E+01
Year->End	INFANT	THYROID	1.60E+00	Annual	1.13E+01	1.43E+01	1.50E+01	1.07E+01

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

Nuclide	Percentage
H-3	9.47E-01
TE-132	6.60E-07
I-131	9.91E+01
I-132	8.22E-05
I-133	8.10E-02

=== 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	2.07E-02	31-day	1.50E-01	1.38E+01	2.00E-01	1.03E+01
Qrtr->End	CHILD	TBODY	2.07E-02	Quarter	5.25E+00	3.94E-01	7.50E+00	2.76E-01
Year->End	CHILD	TBODY	2.07E-02	Annual	1.05E+01	1.97E-01	1.50E+01	1.38E-01

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

Nuclide	Percentage
H-3	9.43E+01
TE-132	3.64E-05
I-131	5.80E+00
I-132	6.67E-04
I-133	6.53E-03

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

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2008 00:00
Period End Date.....: 01/01/2009 00:00
Period Duration (min): 5.270E+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	3.21E-02	31-day	1.50E-01	2.14E+01	2.00E-01	1.61E+01
Qrtr->End	Gamma	3.21E-02	Quarter	3.75E+00	8.56E-01	5.00E+00	6.42E-01
Year->End	Gamma	3.21E-02	Annual	7.50E+00	4.28E-01	1.00E+01	3.21E-01

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

Nuclide	Percentage
AR-41	1.58E-03
KR-85M	1.17E-03
KR-85	3.88E-03
XE-133M	8.52E-03
KR-88	9.27E+01
XE-131M	3.71E-03
XE-135	4.80E-01
XE-133	6.83E+00

=== 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	2.06E-02	31-day	3.00E-01	6.86E+00	4.00E-01	5.15E+00
Qrtr->End	Beta	2.06E-02	Quarter	7.50E+00	2.74E-01	1.00E+01	2.06E-01
Year->End	Beta	2.06E-02	Annual	1.50E+01	1.37E-01	2.00E+01	1.03E-01

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

Nuclide	Percentage
AR-41	1.41E-03
KR-85M	4.78E-03
KR-85	1.12E+00
XE-133M	9.81E-02
KR-88	4.55E+01
XE-131M	6.72E-02
XE-135	1.56E+00
XE-133	5.17E+01

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

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2008 00:00
Period End Date.....: 01/01/2009 00:00
Period Duration (mins): 5.270E+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	ADULT	GILLI	1.09E-01	31-day	1.50E-01	7.24E+01	2.00E-01	5.43E+01
Qrtr->End	ADULT	GILLI	1.09E-01	Quarter	3.75E+00	2.90E+00	5.00E+00	2.17E+00
Year->End	ADULT	GILLI	1.09E-01	Annual	7.50E+00	1.45E+00	1.00E+01	1.09E+00

Critical Pathway.....: 1 Fresh Water Fish - Sport (FFSP)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	3.13E+01
CR-51	7.39E-02
MN-54	1.79E-01
FE-55	1.04E-01
FE-59	1.24E-01
CO-58	8.28E-01
CO-60	8.43E-01
ZN-65	1.12E-02
ZR-95	1.00E-02
NB-95	6.57E+01
RU-103	2.27E-03
TE-132	1.99E-02
I-131	7.74E-04
I-132	5.97E-07
CS-134	4.16E-01
CS-137	2.86E-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	ADULT	TBODY	6.60E-02	31-day	4.50E-02	1.47E+02	6.00E-02	1.10E+02
Qrtr->End	ADULT	TBODY	6.60E-02	Quarter	1.13E+00	5.87E+00	1.50E+00	4.40E+00
Year->End	ADULT	TBODY	6.60E-02	Annual	2.25E+00	2.93E+00	3.00E+00	2.20E+00

Critical Pathway.....: 1 Fresh Water Fish - Sport (FFSP)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	5.15E+01
CR-51	4.85E-04

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

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2008 00:00
Period End Date.....: 01/01/2009 00:00
Period Duration (mins): 5.270E+05

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

Nuclide	Percentage
MN-54	1.83E-02
FE-55	6.99E-02
FE-59	2.36E-02
CO-58	1.51E-01
CO-60	1.64E-01
ZN-65	1.33E-02
ZR-95	3.52E-06
NB-95	9.59E-03
RU-103	1.38E-05
TE-132	6.49E-04
I-131	2.77E-03
I-132	1.83E-06
CS-134	3.20E+01
CS-137	1.59E+01

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

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2008 00:00
Period End Date.....: 01/01/2009 00:00
Period Duration (mins): 5.270E+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	ADULT	GILLI	1.09E-01	31-day	1.50E-01	7.24E+01	2.00E-01	5.43E+01
Qrtr->End	ADULT	GILLI	1.09E-01	Quarter	3.75E+00	2.90E+00	5.00E+00	2.17E+00
Year->End	ADULT	GILLI	1.09E-01	Annual	7.50E+00	1.45E+00	1.00E+01	1.09E+00

Critical Pathway.....: 1 Fresh Water Fish - Sport (FFSP)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	3.13E+01
CR-51	7.39E-02
MN-54	1.79E-01
FE-55	1.04E-01
FE-59	1.24E-01
CO-58	8.28E-01
CO-60	8.43E-01
ZN-65	1.12E-02
ZR-95	1.00E-02
NB-95	6.57E+01
RU-103	2.27E-03
TE-132	1.99E-02
I-131	7.74E-04
I-132	5.97E-07
CS-134	4.16E-01
CS-137	2.86E-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	ADULT	TBODY	6.60E-02	31-day	4.50E-02	1.47E+02	6.00E-02	1.10E+02
Qrtr->End	ADULT	TBODY	6.60E-02	Quarter	1.13E+00	5.87E+00	1.50E+00	4.40E+00
Year->End	ADULT	TBODY	6.60E-02	Annual	2.25E+00	2.93E+00	3.00E+00	2.20E+00

Critical Pathway.....: 1 Fresh Water Fish - Sport (FFSP)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	5.15E+01
CR-51	4.85E-04

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

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2008 00:00
Period End Date.....: 01/01/2009 00:00
Period Duration (mins): 5.270E+05

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

Nuclide	Percentage
MN-54	1.83E-02
FE-55	6.99E-02
FE-59	2.36E-02
CO-58	1.51E-01
CO-60	1.64E-01
ZN-65	1.33E-02
ZR-95	3.52E-06
NB-95	9.59E-03
RU-103	1.38E-05
TE-132	6.49E-04
I-131	2.77E-03
I-132	1.83E-06
CS-134	3.20E+01
CS-137	1.59E+01

Table 3.3-1

10CFR20 COMPLIANCE ASSESSMENT

Braidwood Nuclear Station

Unit 1

10 CFR 20 Compliance Assessment

Period of Assessment: 1/1/08 through 12/31/08
Calculated 5/5/09

10 CFR 20.1301(a)(1) Compliance

Total Effective Dose Equivalent (TEDE)	mrem/year	1.63E+00
10 CFR 20.1301(a)(1) limit	mrem/year	100.00
	% of limit	1.63

Compliance Summary

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
TEDE (mrem)	1.62E-02	1.52E+00	5.16E-02	3.39E-02	1.62E+00

Table 3.3-1 (continued)

10CFR20 COMPLIANCE ASSESSMENT

Braidwood Nuclear Station

Unit 2

10 CFR 20 Compliance Assessment

Period of Assessment: 1/1/08 through 12/31/08
Calculated 5/5/09

10 CFR 20.1301(a)(1) Compliance

Total Effective Dose Equivalent (TEDE)	mrem/year	1.85E+00
10 CFR 20.1301(a)(1) limit	mrem/year	100.00
	% of limit	1.85

Compliance Summary

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
TEDE (mrem)	1.52E-02	1.70E+00	1.02E-01	3.46E-02	1.85E+00

Table 3.4-1

Braidwood Station - Unit 1

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

2008

TYPE OF DOSE	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	ANNUAL
GAMMA AIR (mrad)	3.480E-06(N)	3.210E-04(W)	9.170E-08(W)	1.590E-08(N)	3.231E-04(W)
BETA AIR (mrad)	1.410E-04(N)	3.520E-03(W)	9.300E-07(W)	1.120E-06(N)	3.583E-03(W)
WHOLE BODY (mrem)	1.250E-06(N)	1.650E-04(W)	6.680E-08(W)	5.040E-09(N)	1.659E-04(W)
SKIN (mrem)	6.260E-05(N)	1.450E-03(W)	3.350E-07(W)	5.120E-07(N)	1.483E-03(W)
ORGAN (mrem)	2.290E-05(N)	2.670E-03(W)	4.830E-04(W)	3.240E-05(N)	3.191E-03(W)
CRITICAL PERSON	Teenager	Teenager	Teenager	Teenager	Teenager
CRITICAL ORGAN	Thyroid	Thyroid	Liver	Liver	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	0.01	10.0	0.00
BETA AIR (mrad)	10.0	0.04	20.0	0.02
WHOLE BODY (mrem)	2.5	0.01	5.0	0.00
SKIN (mrem)	7.5	0.02	15.0	0.01
ORGAN (mrem)	7.5	0.04	15.0	0.02
CRITICAL PERSON		Teenager		Teenager
CRITICAL ORGAN		Thyroid		Thyroid

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

Date of calculation: 4/9/2009

Table 3.4-1 (continued)

Braidwood Station - Unit 2

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

2008

TYPE OF DOSE	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	ANNUAL
GAMMA AIR (mrad)	4.590E-06(N)	2.960E-03(W)	2.840E-02(W)	1.260E-06(N)	3.136E-02(W)
BETA AIR (mrad)	1.500E-04(N)	3.030E-02(W)	3.290E-02(W)	6.240E-06(N)	6.327E-02(W)
WHOLE BODY (mrem)	1.720E-06(N)	1.460E-03(W)	1.640E-02(W)	6.200E-07(N)	1.786E-02(W)
SKIN (mrem)	6.540E-05(N)	1.060E-02(W)	4.880E-02(W)	4.290E-06(N)	5.944E-02(W)
ORGAN (mrem)	2.330E-04(N)	2.570E-03(W)	4.790E-03(W)	2.150E-04(N)	7.644E-03(W)
CRITICAL PERSON	Teenager	Teenager	Teenager	Teenager	Teenager
CRITICAL ORGAN	Liver	Thyroid	Liver	Liver	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	0.57	10.0	0.31
BETA AIR (mrad)	10.0	0.33	20.0	0.32
WHOLE BODY (mrem)	2.5	0.66	5.0	0.36
SKIN (mrem)	7.5	0.65	15.0	0.40
ORGAN (mrem)	7.5	0.06	15.0	0.05
CRITICAL PERSON		Teenager		Teenager
CRITICAL ORGAN		Liver		Thyroid

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

Date of calculation: 4/9/2009

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APPENDIX F

METEOROLOGICAL

Braidwood Generating Station

Period of Record: January - March 2008
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	8	0	0	0	8
NE	0	1	3	0	0	0	4
ENE	0	1	0	0	0	0	1
E	0	1	3	0	0	0	4
ESE	0	0	3	0	0	0	3
SE	0	0	2	0	0	0	2
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	2	0	0	2
SW	0	1	3	2	0	0	6
WSW	0	0	2	0	1	0	3
W	0	2	4	4	6	0	16
WNW	0	6	15	5	0	0	26
NW	0	5	9	0	0	0	14
NNW	0	2	6	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	0	19	58	13	7	0	97

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: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	0	0	0	0	0
NNE	0	0	3	2	0	0	5
NE	0	2	0	1	0	0	3
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	1	1	0	0	0	2
SE	0	0	1	0	0	0	1
SSE	0	0	1	1	0	0	2
S	0	0	0	0	0	0	0
SSW	0	1	0	1	0	0	2
SW	0	0	0	0	0	0	0
WSW	0	1	2	1	0	0	4
W	0	3	6	0	0	0	9
WNW	0	4	3	2	0	0	9
NW	0	5	1	0	0	0	6
NNW	0	0	5	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	0	17	23	8	0	0	48

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: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	2	1	0	0	4
NNE	0	0	5	1	0	0	6
NE	0	2	1	0	0	0	3
ENE	0	1	0	0	0	0	1
E	0	0	3	0	0	0	3
ESE	0	3	2	0	0	0	5
SE	0	0	3	0	0	0	3
SSE	0	1	5	0	0	0	6
S	0	0	0	4	0	0	4
SSW	0	2	4	2	1	0	9
SW	0	2	3	0	1	0	6
WSW	0	4	5	0	1	0	10
W	0	7	6	2	1	0	16
WNW	0	5	7	2	0	0	14
NW	0	1	2	0	0	0	3
NNW	0	0	3	2	0	0	5
Variable	0	0	0	0	0	0	0
Total	0	29	51	14	4	0	98

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: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	15	40	4	0	0	59
NNE	5	24	30	3	0	0	62
NE	9	24	39	5	0	0	77
ENE	10	47	18	0	0	0	75
E	3	42	7	0	0	0	52
ESE	1	18	24	0	0	0	43
SE	0	12	21	2	0	0	35
SSE	0	15	54	11	0	0	80
S	0	6	48	68	7	0	129
SSW	0	11	28	29	6	0	74
SW	1	18	33	10	5	0	67
WSW	1	32	21	1	0	0	55
W	5	36	56	32	11	0	140
WNW	3	30	94	31	5	0	163
NW	2	29	28	5	0	0	64
NNW	0	21	28	8	0	0	57
Variable	0	0	0	0	0	0	0
Total	40	380	569	209	34	0	1232

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: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	5	12	0	0	0	0	17
NNE	3	13	7	0	0	0	23
NE	6	6	2	5	0	0	19
ENE	7	7	3	2	0	0	19
E	8	18	2	0	0	0	28
ESE	5	17	6	0	0	0	28
SE	3	11	17	1	0	0	32
SSE	3	14	25	1	2	0	45
S	1	8	35	21	1	0	66
SSW	1	10	14	10	4	0	39
SW	5	6	7	0	0	0	18
WSW	4	21	13	0	0	0	38
W	11	13	7	5	0	0	36
WNW	20	23	12	1	0	0	56
NW	16	29	3	0	0	0	48
NNW	8	13	8	0	0	0	29
Variable	0	0	0	0	0	0	0
Total	106	221	161	46	7	0	541

Hours of calm in this stability class: 11
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	1	1	0	0	0	0	2
NNE	1	2	0	0	0	0	3
NE	2	0	0	0	0	0	2
ENE	4	0	0	0	0	0	4
E	2	0	0	0	0	0	2
ESE	1	2	0	0	0	0	3
SE	0	4	0	0	0	0	4
SSE	0	0	0	0	0	0	0
S	0	2	0	0	0	0	2
SSW	3	3	1	0	0	0	7
SW	3	1	0	0	0	0	4
WSW	2	15	0	0	0	0	17
W	19	7	0	0	0	0	26
WNW	14	5	0	0	0	0	19
NW	2	2	0	0	0	0	4
NNW	2	0	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	56	44	1	0	0	0	101

Hours of calm in this stability class: 13
Hours of missing wind measurements in this stability class: 4
Hours of missing stability measurements in all stability classes: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	1	0	0	0	0	0	1
NNE	0	0	0	0	0	0	0
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	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	2	0	0	0	0	2
SW	3	0	0	0	0	0	3
WSW	0	0	0	0	0	0	0
W	1	0	0	0	0	0	1
WNW	2	0	0	0	0	0	2
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	7	2	0	0	0	0	9

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: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	1	0	0	1
NNE	0	0	0	1	0	0	1
NE	0	0	8	3	0	0	11
ENE	0	0	1	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	1	5	0	0	6
SE	0	0	3	0	0	0	3
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	1	0	0	1	0	2
SW	0	0	1	2	2	0	5
WSW	0	0	0	0	0	1	1
W	0	1	1	6	0	7	15
WNW	0	1	9	11	0	5	26
NW	0	0	12	6	0	0	18
NNW	0	0	4	3	0	0	7
Variable	0	0	0	0	0	0	0
Total	0	3	40	38	3	13	97

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: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	0	0	0	0
NNE	0	0	1	0	0	0	1
NE	0	0	4	0	3	0	7
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	1	1	0	0	2
SSE	0	0	1	0	0	0	1
S	0	0	0	0	0	1	1
SSW	0	0	1	0	0	0	1
SW	0	0	0	0	1	0	1
WSW	0	0	0	0	0	0	0
W	0	2	3	5	0	1	11
WNW	0	1	3	2	0	2	8
NW	0	3	5	0	0	0	8
NNW	0	1	3	2	0	0	6
Variable	0	0	0	0	0	0	0
Total	0	7	23	10	4	4	48

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: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	1	3	0	0	5
NNE	0	0	0	0	0	0	0
NE	0	0	3	4	1	0	8
ENE	0	0	1	0	0	0	1
E	0	0	1	0	0	0	1
ESE	0	0	1	1	3	0	5
SE	0	0	3	2	1	0	6
SSE	0	1	2	3	0	0	6
S	0	0	0	0	4	0	4
SSW	0	1	0	2	2	1	6
SW	0	0	5	2	0	1	8
WSW	0	2	3	2	0	0	7
W	0	5	4	7	0	3	19
WNW	0	1	4	5	0	1	11
NW	0	1	5	2	0	1	9
NNW	0	0	1	1	0	0	2
Variable	0	0	0	0	0	0	0
Total	0	12	34	34	11	7	98

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: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	6	18	25	0	0	49
NNE	1	7	25	26	5	0	64
NE	4	9	20	34	13	0	80
ENE	1	14	20	16	0	0	51
E	1	10	36	12	0	0	59
ESE	0	4	19	24	10	0	57
SE	0	2	11	24	5	2	44
SSE	0	0	16	26	11	0	53
S	0	1	18	37	63	25	144
SSW	0	5	6	21	27	16	75
SW	0	9	19	27	4	8	67
WSW	1	22	21	10	1	3	58
W	0	17	20	33	24	9	103
WNW	2	9	23	80	52	26	192
NW	2	7	24	30	15	4	82
NNW	0	9	15	26	4	0	54
Variable	0	0	0	0	0	0	0
Total	12	131	311	451	234	93	1232

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 3
Hours of missing stability measurements in all stability classes: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	4	5	12	1	0	0	22
NNE	1	1	16	6	0	0	24
NE	0	5	7	3	4	1	20
ENE	2	3	8	2	2	1	18
E	0	6	13	4	0	0	23
ESE	0	0	6	20	3	0	29
SE	0	3	11	5	9	0	28
SSE	0	3	10	25	8	0	46
S	0	2	5	20	21	13	61
SSW	0	5	8	15	10	13	51
SW	2	5	5	7	2	0	21
WSW	0	7	13	7	0	0	27
W	2	4	14	15	4	0	39
WNW	3	3	14	15	3	4	42
NW	3	10	36	18	2	0	69
NNW	0	2	20	11	0	0	33
Variable	0	0	0	0	0	0	0
Total	17	64	198	174	68	32	553

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: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	2	0	0	0	3
NNE	0	0	4	0	0	0	4
NE	2	0	2	1	0	0	5
ENE	0	3	1	0	0	0	4
E	0	3	0	0	0	0	3
ESE	0	0	2	0	0	0	2
SE	1	1	0	0	0	0	2
SSE	1	1	1	5	0	0	8
S	1	0	0	1	0	0	2
SSW	0	1	1	1	0	0	3
SW	0	0	1	0	0	0	1
WSW	1	1	7	3	0	0	12
W	0	1	7	2	0	0	10
WNW	1	4	25	1	0	0	31
NW	0	2	15	6	0	0	23
NNW	0	0	5	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	7	18	73	20	0	0	118

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: 20

Braidwood Generating Station

Period of Record: January - March 2008
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	0	0	0	0	0
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	1	0	0	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	1	0	0	0	0	0	1
SSW	0	0	1	0	0	0	1
SW	0	0	2	0	0	0	2
WSW	0	0	1	0	0	0	1
W	0	1	0	0	0	0	1
WNW	0	0	0	0	0	0	0
NW	0	1	1	0	0	0	2
NNW	0	2	1	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	2	4	7	0	0	0	13

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: 20

Braidwood Generating Station

Period of Record: April - June 2008
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	1	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	0	5	3	0	0	0	8
ENE	1	4	4	0	0	0	9
E	0	2	2	0	0	0	4
ESE	0	3	2	0	0	0	5
SE	0	3	8	1	0	0	12
SSE	0	1	5	3	0	0	9
S	0	0	1	3	4	0	8
SSW	0	2	2	8	1	0	13
SW	0	0	2	1	0	0	3
WSW	0	2	8	9	0	0	19
W	0	6	13	7	1	0	27
WNW	0	4	12	0	0	0	16
NW	0	6	19	0	0	0	25
NNW	0	7	20	1	0	0	28
Variable	0	0	0	0	0	0	0
Total	1	46	102	33	6	0	188

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 2008
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	5	2	0	0	0	7
NNE	0	4	1	0	0	0	5
NE	0	1	3	0	0	0	4
ENE	3	3	0	0	0	0	6
E	0	3	0	0	0	0	3
ESE	0	5	1	0	0	0	6
SE	0	2	3	0	0	0	5
SSE	0	3	6	2	0	0	11
S	0	2	3	6	2	0	13
SSW	0	0	3	3	5	0	11
SW	0	2	4	2	1	0	9
WSW	0	3	9	0	0	0	12
W	0	3	6	4	0	0	13
WNW	0	5	4	0	0	0	9
NW	0	6	3	0	0	0	9
NNW	0	6	5	0	0	0	11
Variable	0	0	0	0	0	0	0
Total	3	53	53	17	8	0	134

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 2008
Stability Class - Slightly Unstable - 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	3	2	0	0	0	5
NNE	0	4	4	0	0	0	8
NE	0	2	4	0	0	0	6
ENE	0	5	0	0	0	0	5
E	1	0	0	0	0	0	1
ESE	1	2	0	0	0	0	3
SE	1	7	3	3	0	0	14
SSE	1	5	2	0	0	0	8
S	2	1	10	3	1	0	17
SSW	1	2	5	6	0	1	15
SW	0	2	5	2	0	0	9
WSW	0	5	7	2	0	0	14
W	0	3	4	0	0	0	7
WNW	0	4	5	0	0	0	9
NW	0	5	2	0	0	0	7
NNW	0	5	3	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	7	55	56	16	1	1	136

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

Braidwood Generating Station

Period of Record: April - June 2008
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	4	7	15	3	1	0	30
NNE	2	20	35	4	3	0	64
NE	1	29	36	0	0	0	66
ENE	5	19	23	0	0	0	47
E	2	11	5	0	0	0	18
ESE	5	3	2	5	0	0	15
SE	5	10	8	2	0	0	25
SSE	1	13	25	4	0	0	43
S	0	12	35	27	6	0	80
SSW	2	9	25	17	14	4	71
SW	0	15	32	18	1	0	66
WSW	5	10	30	9	0	0	54
W	1	14	20	21	2	0	58
WNW	5	13	18	7	0	0	43
NW	3	20	18	1	0	0	42
NNW	1	17	16	2	0	0	36
Variable	0	0	0	0	0	0	0
Total	42	222	343	120	27	4	758

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 4
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2008
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	14	3	0	0	0	23
NNE	3	24	3	0	0	0	30
NE	10	9	3	0	0	0	22
ENE	19	13	1	0	0	0	33
E	26	12	1	0	0	0	39
ESE	12	33	10	5	0	0	60
SE	8	42	23	4	0	0	77
SSE	4	25	26	5	0	0	60
S	3	15	59	23	0	0	100
SSW	3	9	30	16	4	0	62
SW	1	21	19	2	0	0	43
WSW	4	39	7	0	0	0	50
W	6	20	2	1	0	0	29
WNW	9	14	1	0	0	0	24
NW	5	12	2	0	0	0	19
NNW	6	10	4	0	0	0	20
Variable	0	0	0	0	0	0	0
Total	125	312	194	56	4	0	691

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 4
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2008
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	2	1	0	0	0	0	3
NNE	4	0	0	0	0	0	4
NE	6	1	0	0	0	0	7
ENE	6	1	0	0	0	0	7
E	10	0	0	0	0	0	10
ESE	11	7	0	0	0	0	18
SE	8	3	0	0	0	0	11
SSE	4	1	0	0	0	0	5
S	0	2	0	0	0	0	2
SSW	1	5	4	0	0	0	10
SW	4	7	1	0	0	0	12
WSW	8	16	1	0	0	0	25
W	24	8	0	0	0	0	32
WNW	16	0	0	0	0	0	16
NW	8	1	0	0	0	0	9
NNW	3	1	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	115	54	6	0	0	0	175

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

Braidwood Generating Station

Period of Record: April - June 2008
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	3	0	0	0	0	0	3
NNE	1	0	0	0	0	0	1
NE	1	0	0	0	0	0	1
ENE	4	0	0	0	0	0	4
E	7	0	0	0	0	0	7
ESE	2	0	0	0	0	0	2
SE	3	0	0	0	0	0	3
SSE	0	0	0	0	0	0	0
S	4	0	0	0	0	0	4
SSW	2	1	0	0	0	0	3
SW	1	0	0	0	0	0	1
WSW	7	4	0	0	0	0	11
W	12	1	0	0	0	0	13
WNW	7	0	0	0	0	0	7
NW	3	0	0	0	0	0	3
NNW	4	0	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	61	6	0	0	0	0	67

Hours of calm in this stability class: 8
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 2008
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	1	4	1	0	0	6
NNE	0	0	1	0	0	0	1
NE	0	1	1	1	0	0	3
ENE	0	0	9	2	0	0	11
E	0	0	3	0	0	0	3
ESE	0	1	2	4	0	0	7
SE	0	1	1	7	0	1	10
SSE	0	1	2	4	0	0	7
S	0	0	2	1	3	2	8
SSW	0	0	0	0	4	9	13
SW	0	0	4	0	1	0	5
WSW	0	0	2	2	1	0	5
W	0	1	8	8	10	2	29
WNW	0	2	5	12	4	0	23
NW	0	2	5	15	3	0	25
NNW	0	2	10	15	3	0	30
Variable	0	0	0	0	0	0	0
Total	0	12	59	72	29	14	186

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 2008
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	2	0	0	0	5
NNE	0	1	2	1	0	0	4
NE	0	2	1	1	0	0	4
ENE	0	0	2	3	0	0	5
E	0	0	2	1	0	0	3
ESE	0	0	1	1	0	0	2
SE	1	1	3	2	0	0	7
SSE	0	1	2	3	0	0	6
S	0	1	5	0	2	3	11
SSW	0	0	3	2	6	4	15
SW	0	1	1	2	0	5	9
WSW	0	0	6	4	0	0	10
W	0	1	5	4	1	0	11
WNW	0	3	3	3	2	1	12
NW	0	3	4	5	0	0	12
NNW	0	3	5	4	0	0	12
Variable	0	0	0	0	0	0	0
Total	1	20	47	36	11	13	128

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 8
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2008
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	0	3	1	0	0	4
NNE	0	1	4	2	0	0	7
NE	0	1	3	4	0	0	8
ENE	0	0	2	1	0	0	3
E	0	0	3	0	0	0	3
ESE	0	3	0	0	0	0	3
SE	0	2	3	1	0	3	9
SSE	1	2	5	2	0	0	10
S	1	1	3	4	0	1	10
SSW	0	0	3	4	6	0	13
SW	0	2	4	1	2	5	14
WSW	0	1	6	2	1	0	10
W	0	0	5	3	2	0	10
WNW	0	4	1	6	0	0	11
NW	0	3	3	3	1	0	10
NNW	0	3	4	3	0	0	10
Variable	0	0	0	0	0	0	0
Total	2	23	52	37	12	9	135

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

Braidwood Generating Station

Period of Record: April - June 2008
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	8	10	8	2	2	31
NNE	1	6	5	24	2	4	42
NE	0	4	24	34	7	1	70
ENE	1	4	16	31	3	0	55
E	1	4	11	5	3	0	24
ESE	1	0	6	1	2	0	10
SE	1	6	1	4	2	6	20
SSE	1	9	8	8	1	0	27
S	0	3	12	27	21	5	68
SSW	1	8	9	15	20	24	77
SW	1	4	7	26	8	16	62
WSW	1	2	23	20	16	2	64
W	0	3	13	15	8	6	45
WNW	1	8	14	16	17	4	60
NW	0	11	14	23	7	1	56
NNW	0	6	12	16	4	0	38
Variable	0	0	0	0	0	0	0
Total	11	86	185	273	123	71	749

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 14
Hours of missing stability measurements in all stability classes: 0

Braidwood Generating Station

Period of Record: April - June 2008
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	7	12	3	0	0	22
NNE	0	4	14	5	0	0	23
NE	1	2	24	4	0	0	31
ENE	1	6	14	5	0	0	26
E	0	7	20	1	0	0	28
ESE	0	1	14	14	2	3	34
SE	0	3	23	23	4	8	61
SSE	1	2	10	42	10	0	65
S	1	5	16	30	22	2	76
SSW	1	3	11	34	39	11	99
SW	0	3	4	23	19	3	52
WSW	0	5	21	15	1	0	42
W	0	1	25	14	1	0	41
WNW	0	2	17	4	0	0	23
NW	0	6	21	5	1	0	33
NNW	0	3	14	4	0	0	21
Variable	0	0	0	0	0	0	0
Total	5	60	260	226	99	27	677

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

Braidwood Generating Station

Period of Record: April - June 2008
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	3	5	2	0	0	10
NNE	0	3	0	0	0	0	3
NE	0	1	1	1	0	0	3
ENE	3	0	5	1	0	0	9
E	1	2	2	0	0	0	5
ESE	0	2	4	1	0	0	7
SE	0	3	7	6	0	0	16
SSE	0	2	6	2	0	0	10
S	0	3	1	0	0	0	4
SSW	0	1	3	0	0	0	4
SW	0	2	3	2	0	0	7
WSW	0	2	4	9	0	0	15
W	0	2	6	8	0	0	16
WNW	0	4	19	8	0	0	31
NW	0	8	17	4	0	0	29
NNW	0	2	7	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	4	40	90	44	0	0	178

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

Braidwood Generating Station

Period of Record: April - June 2008
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	0	0	0	0	0
NNE	0	0	3	0	0	0	3
NE	0	0	4	0	0	0	4
ENE	1	0	0	0	0	0	1
E	0	0	2	0	0	0	2
ESE	0	1	2	0	0	0	3
SE	0	0	0	0	0	0	0
SSE	0	6	0	0	0	0	6
S	0	1	0	0	0	0	1
SSW	1	1	1	0	0	0	3
SW	0	4	1	1	0	0	6
WSW	1	2	1	0	0	0	4
W	0	1	2	3	0	0	6
WNW	0	4	4	6	0	0	14
NW	0	4	6	2	0	0	12
NNW	0	2	6	2	0	0	10
Variable	0	0	0	0	0	0	0
Total	3	26	32	14	0	0	75

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: July - September 2008
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	15	2	0	0	0	17
NNE	0	13	6	0	0	0	19
NE	0	20	16	0	0	0	36
ENE	2	23	0	0	0	0	25
E	1	13	0	0	0	0	14
ESE	0	7	0	0	0	0	7
SE	0	16	2	0	0	0	18
SSE	0	19	4	0	0	0	23
S	0	12	13	0	0	0	25
SSW	0	5	8	3	0	0	16
SW	0	5	22	5	0	0	32
WSW	0	22	18	1	0	0	41
W	0	36	21	0	0	0	57
WNW	0	14	4	0	0	0	18
NW	0	15	6	0	0	0	21
NNW	0	12	12	0	0	0	24
Variable	0	0	0	0	0	0	0
Total	3	247	134	9	0	0	393

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: 6

Braidwood Generating Station

Period of Record: July - September 2008
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	8	0	0	0	0	8
NNE	0	7	0	0	0	0	7
NE	2	11	0	0	0	0	13
ENE	4	3	0	0	0	0	7
E	3	3	0	0	0	0	6
ESE	0	7	0	0	0	0	7
SE	1	5	1	0	0	0	7
SSE	0	5	1	0	0	0	6
S	1	6	5	0	0	0	12
SSW	1	5	4	1	0	0	11
SW	0	4	4	0	0	0	8
WSW	0	2	6	0	0	0	8
W	0	12	7	0	0	0	19
WNW	1	4	0	0	0	0	5
NW	1	2	0	0	0	0	3
NNW	2	7	2	0	0	0	11
Variable	0	0	0	0	0	0	0
Total	16	91	30	1	0	0	138

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: 6

Braidwood Generating Station

Period of Record: July - September 2008
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	0	0	0	0	4
NNE	2	4	3	0	0	0	9
NE	0	4	1	0	0	0	5
ENE	1	4	0	0	0	0	5
E	3	3	0	0	0	0	6
ESE	1	3	0	0	0	0	4
SE	1	6	1	0	0	0	8
SSE	0	12	0	0	0	0	12
S	0	4	1	0	0	0	5
SSW	0	2	0	2	0	0	4
SW	0	5	3	0	0	0	8
WSW	0	6	2	1	0	0	9
W	0	6	1	0	0	0	7
WNW	0	1	1	0	0	0	2
NW	1	2	1	0	0	0	4
NNW	1	3	2	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	11	68	16	3	0	0	98

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: 6

Braidwood Generating Station

Period of Record: July - September 2008
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	15	9	3	0	0	30
NNE	2	20	19	0	0	0	41
NE	9	27	3	0	0	0	39
ENE	5	9	0	0	0	0	14
E	6	6	0	0	0	0	12
ESE	7	2	0	0	0	0	9
SE	10	17	0	0	0	0	27
SSE	3	26	5	0	0	0	34
S	1	16	10	0	0	0	27
SSW	1	7	21	1	0	0	30
SW	1	27	31	2	0	0	61
WSW	2	30	8	1	0	0	41
W	3	25	2	0	0	0	30
WNW	13	16	6	0	0	0	35
NW	6	26	5	0	0	0	37
NNW	3	22	3	0	0	0	28
Variable	0	0	0	0	0	0	0
Total	75	291	122	7	0	0	495

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: 6

Braidwood Generating Station

Period of Record: July - September 2008
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	3	3	1	0	0	0	7
NNE	9	22	1	0	0	0	32
NE	18	15	1	0	0	0	34
ENE	30	13	0	0	0	0	43
E	28	4	0	0	0	0	32
ESE	13	17	0	0	0	0	30
SE	9	25	4	0	0	0	38
SSE	5	30	3	0	0	0	38
S	3	27	8	0	0	0	38
SSW	2	20	9	0	0	0	31
SW	1	38	3	0	0	0	42
WSW	8	56	1	0	0	0	65
W	13	13	1	0	0	0	27
WNW	21	4	0	0	0	0	25
NW	13	10	0	0	0	0	23
NNW	7	14	0	1	0	0	22
Variable	0	0	0	0	0	0	0
Total	183	311	32	1	0	0	527

Hours of calm in this stability class: 4
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 6

Braidwood Generating Station

Period of Record: July - September 2008
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	16	2	0	0	0	0	18
NNE	15	5	0	0	0	0	20
NE	14	0	0	0	0	0	14
ENE	26	0	1	0	0	0	27
E	42	3	0	0	0	0	45
ESE	29	10	0	0	0	0	39
SE	10	6	0	0	0	0	16
SSE	16	6	0	0	0	0	22
S	5	5	0	0	0	0	10
SSW	5	13	0	0	0	0	18
SW	5	5	2	0	0	0	12
WSW	9	24	0	0	0	0	33
W	20	3	0	0	0	0	23
WNW	20	2	0	0	0	0	22
NW	16	2	0	0	0	0	18
NNW	11	3	0	0	0	0	14
Variable	0	0	0	0	0	0	0
Total	259	89	3	0	0	0	351

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

Braidwood Generating Station

Period of Record: July - September 2008
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	2	1	0	0	0	0	3
NNE	6	0	0	0	0	0	6
NE	7	0	0	0	0	0	7
ENE	8	0	0	0	0	0	8
E	23	0	0	0	0	0	23
ESE	11	0	0	0	0	0	11
SE	1	1	0	0	0	0	2
SSE	3	0	0	0	0	0	3
S	1	0	0	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	1	0	0	0	0	0	1
WSW	9	1	0	0	0	0	10
W	21	0	0	0	0	0	21
WNW	20	0	0	0	0	0	20
NW	7	0	0	0	0	0	7
NNW	7	0	0	0	0	0	7
Variable	0	0	0	0	0	0	0
Total	127	3	0	0	0	0	130

Hours of calm in this stability class: 39
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 6

Braidwood Generating Station

Period of Record: July - September 2008
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	9	13	0	0	0	22
NNE	0	7	3	0	0	0	10
NE	0	8	14	16	0	0	38
ENE	0	9	15	0	0	0	24
E	0	8	8	0	0	0	16
ESE	0	6	2	0	0	0	8
SE	0	6	12	1	0	0	19
SSE	0	7	13	2	0	0	22
S	0	6	9	6	0	0	21
SSW	0	1	5	9	1	0	16
SW	0	1	15	11	4	0	31
WSW	0	7	24	6	4	0	41
W	0	10	34	10	0	0	54
WNW	0	5	9	6	4	0	24
NW	0	8	13	8	0	0	29
NNW	0	2	14	1	0	0	17
Variable	0	0	0	0	0	0	0
Total	0	100	203	76	13	0	392

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 3
Hours of missing stability measurements in all stability classes: 6

Braidwood Generating Station

Period of Record: July - September 2008
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	7	0	0	0	7
NNE	2	5	1	0	0	0	8
NE	1	5	7	1	0	0	14
ENE	1	2	2	0	0	0	5
E	1	5	1	0	0	0	7
ESE	0	4	1	0	0	0	5
SE	0	5	1	1	0	0	7
SSE	0	5	4	0	0	0	9
S	0	0	4	4	0	0	8
SSW	0	3	3	3	0	0	9
SW	0	2	7	2	1	0	12
WSW	0	2	4	3	0	0	9
W	0	3	12	1	0	0	16
WNW	0	3	4	0	0	0	7
NW	1	3	3	1	0	0	8
NNW	0	2	3	1	0	0	6
Variable	0	0	0	0	0	0	0
Total	6	49	64	17	1	0	137

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: 6

Braidwood Generating Station

Period of Record: July - September 2008
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	1	2	2	0	0	0	5
NNE	1	2	2	1	0	0	6
NE	0	2	3	2	0	0	7
ENE	2	3	1	0	0	0	6
E	0	3	1	0	0	0	4
ESE	1	1	2	1	0	0	5
SE	0	5	2	0	0	0	7
SSE	0	9	2	0	0	0	11
S	0	3	2	0	1	0	6
SSW	0	1	1	0	1	0	3
SW	0	3	5	2	1	0	11
WSW	0	1	3	1	1	0	6
W	0	4	2	1	0	0	7
WNW	0	1	2	2	0	0	5
NW	0	1	1	1	0	0	3
NNW	0	2	4	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	5	43	35	11	4	0	98

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: 6

Braidwood Generating Station

Period of Record: July - September 2008
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	7	12	5	3	0	28
NNE	1	6	9	10	0	0	26
NE	2	9	18	17	0	0	46
ENE	3	8	5	0	0	0	16
E	2	5	6	0	0	0	13
ESE	2	3	4	0	0	0	9
SE	3	6	11	1	0	0	21
SSE	3	5	20	11	0	0	39
S	0	1	14	7	0	0	22
SSW	1	2	6	26	5	0	40
SW	1	4	26	18	7	0	56
WSW	0	9	20	6	1	0	36
W	3	7	23	2	0	0	35
WNW	1	9	17	11	1	0	39
NW	1	13	21	8	0	0	43
NNW	1	7	14	2	1	0	25
Variable	0	0	0	0	0	0	0
Total	25	101	226	124	18	0	494

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: 6

Braidwood Generating Station

Period of Record: July - September 2008
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	7	2	1	0	0	10
NNE	1	1	8	1	0	0	11
NE	1	7	37	5	0	0	50
ENE	1	10	29	2	0	0	42
E	0	7	30	3	0	0	40
ESE	0	1	7	14	0	0	22
SE	0	5	14	11	0	0	30
SSE	0	8	19	7	2	0	36
S	0	1	14	20	1	0	36
SSW	0	3	10	23	1	0	37
SW	0	6	33	9	0	0	48
WSW	1	7	33	14	0	0	55
W	2	5	17	6	0	0	30
WNW	1	6	15	1	0	0	23
NW	2	11	19	0	0	1	33
NNW	0	5	19	2	0	0	26
Variable	0	0	0	0	0	0	0
Total	9	90	306	119	4	1	529

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

Braidwood Generating Station

Period of Record: July - September 2008
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	3	18	0	0	0	22
NNE	0	5	18	1	0	0	24
NE	1	5	11	6	0	0	23
ENE	1	10	10	0	0	0	21
E	0	3	19	9	0	0	31
ESE	1	2	13	25	0	0	41
SE	0	4	7	9	0	0	20
SSE	0	2	9	2	0	0	13
S	0	8	20	2	0	0	30
SSW	1	8	9	2	0	0	20
SW	0	6	10	5	0	0	21
WSW	0	6	7	11	0	0	24
W	2	5	8	11	0	0	26
WNW	1	3	9	3	0	0	16
NW	0	8	13	1	0	0	22
NNW	0	1	17	0	0	0	18
Variable	0	0	0	0	0	0	0
Total	8	79	198	87	0	0	372

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: 6

Braidwood Generating Station

Period of Record: July - September 2008
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	6	5	1	0	0	12
NNE	1	1	3	0	0	0	5
NE	1	4	3	1	0	0	9
ENE	0	10	2	0	0	0	12
E	1	8	5	3	0	0	17
ESE	0	2	3	11	0	0	16
SE	0	2	1	2	0	0	5
SSE	1	5	1	0	0	0	7
S	1	2	1	0	0	0	4
SSW	2	5	1	0	0	0	8
SW	2	6	0	0	0	0	8
WSW	1	1	0	0	0	0	2
W	1	2	4	4	0	0	11
WNW	1	3	17	3	0	0	24
NW	0	3	6	1	0	0	10
NNW	0	8	6	2	0	0	16
Variable	0	0	0	0	0	0	0
Total	12	68	58	28	0	0	166

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: 6

Braidwood Generating Station

Period of Record: October - December2008
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	3	0	0	0	3
NNE	0	0	0	0	0	0	0
NE	0	4	0	0	0	0	4
ENE	0	1	0	0	0	0	1
E	0	5	1	0	0	0	6
ESE	0	0	2	0	0	0	2
SE	0	1	1	0	0	0	2
SSE	0	0	0	0	0	0	0
S	0	0	3	1	0	0	4
SSW	0	0	2	2	0	0	4
SW	0	0	0	1	0	0	1
WSW	0	1	1	0	0	0	2
W	0	3	3	3	1	0	10
WNW	0	5	12	0	0	0	17
NW	0	7	14	0	0	0	21
NNW	0	2	3	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	0	29	45	7	1	0	82

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: 2

Braidwood Generating Station

Period of Record: October - December2008
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	1	0	0	0	0	1
NNE	0	1	0	0	0	0	1
NE	0	3	0	0	0	0	3
ENE	0	2	0	0	0	0	2
E	0	0	0	0	0	0	0
ESE	0	7	4	0	0	0	11
SE	0	0	1	0	0	0	1
SSE	0	1	3	0	0	0	4
S	0	0	3	4	0	0	7
SSW	0	0	3	4	0	0	7
SW	0	0	1	1	0	0	2
WSW	0	2	7	3	0	0	12
W	0	5	3	6	0	0	14
WNW	0	4	5	1	0	0	10
NW	0	4	4	0	0	0	8
NNW	0	6	2	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	0	36	36	19	0	0	91

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

Braidwood Generating Station

Period of Record: October - December2008
Stability Class - Slightly Unstable - 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	5	2	0	0	0	7
NNE	0	4	0	0	0	0	4
NE	0	6	0	0	0	0	6
ENE	0	5	0	0	0	0	5
E	1	2	0	0	0	0	3
ESE	0	1	1	0	0	0	2
SE	0	3	2	1	0	0	6
SSE	0	6	3	0	0	0	9
S	0	1	9	2	1	0	13
SSW	0	2	2	2	0	0	6
SW	0	0	3	1	0	0	4
WSW	0	3	7	2	0	0	12
W	0	6	8	5	0	0	19
WNW	0	3	1	0	0	0	4
NW	0	1	3	0	0	0	4
NNW	1	2	3	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	2	50	44	13	1	0	110

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: 2

Braidwood Generating Station

Period of Record: October - December2008
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	2	15	14	6	0	0	37
NNE	2	5	3	3	0	0	13
NE	2	18	3	0	0	0	23
ENE	6	10	0	0	0	0	16
E	1	9	1	0	0	0	11
ESE	2	28	9	0	0	0	39
SE	0	29	33	0	0	0	62
SSE	0	21	19	18	0	0	58
S	0	12	53	51	11	0	127
SSW	0	4	31	27	4	0	66
SW	0	12	38	12	0	0	62
WSW	1	25	27	9	6	0	68
W	1	34	71	29	6	0	141
WNW	6	19	46	12	0	0	83
NW	4	23	35	1	0	0	63
NNW	2	25	70	24	1	0	122
Variable	0	0	0	0	0	0	0
Total	29	289	453	192	28	0	991

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 51
Hours of missing stability measurements in all stability classes: 2

Braidwood Generating Station

Period of Record: October - December2008
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	3	16	1	0	0	0	20
NNE	5	2	0	0	0	0	7
NE	4	8	0	0	0	0	12
ENE	11	5	0	0	0	0	16
E	29	20	0	0	0	0	49
ESE	12	29	7	0	0	0	48
SE	3	28	10	0	0	0	41
SSE	2	34	20	3	0	0	59
S	0	39	64	24	1	0	128
SSW	0	6	32	2	0	0	40
SW	1	10	11	3	0	0	25
WSW	5	14	1	1	0	0	21
W	7	27	4	1	0	0	39
WNW	6	17	4	1	1	0	29
NW	15	25	11	0	0	0	51
NNW	4	14	14	0	0	0	32
Variable	0	0	0	0	0	0	0
Total	107	294	179	35	2	0	617

Hours of calm in this stability class: 5
Hours of missing wind measurements in this stability class: 8
Hours of missing stability measurements in all stability classes: 2

Braidwood Generating Station

Period of Record: October - December2008
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	6	5	0	0	0	0	11
NNE	8	0	0	0	0	0	8
NE	4	0	0	0	0	0	4
ENE	8	0	0	0	0	0	8
E	14	3	0	0	0	0	17
ESE	13	5	0	0	0	0	18
SE	1	3	0	0	0	0	4
SSE	1	0	0	0	0	0	1
S	2	0	0	0	0	0	2
SSW	1	5	2	0	0	0	8
SW	2	5	0	0	0	0	7
WSW	9	29	0	0	0	0	38
W	17	9	1	0	0	0	27
WNW	5	0	0	0	0	0	5
NW	9	0	0	0	0	0	9
NNW	6	1	0	0	0	0	7
Variable	0	0	0	0	0	0	0
Total	106	65	3	0	0	0	174

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: 2

Braidwood Generating Station

Period of Record: October - December2008
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	1	0	0	0	0	0	1
NNE	1	0	0	0	0	0	1
NE	2	0	0	0	0	0	2
ENE	2	0	0	0	0	0	2
E	10	0	0	0	0	0	10
ESE	5	0	0	0	0	0	5
SE	4	0	0	0	0	0	4
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	4	1	0	0	0	0	5
WSW	3	11	0	0	0	0	14
W	1	1	0	0	0	0	2
WNW	0	0	0	0	0	0	0
NW	1	0	0	0	0	0	1
NNW	6	0	0	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	40	13	0	0	0	0	53

Hours of calm in this stability class: 14
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 2

Braidwood Generating Station

Period of Record: October - December2008
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	2	0	0	2
NNE	0	0	0	0	0	0	0
NE	0	2	1	0	0	0	3
ENE	0	2	0	0	0	0	2
E	0	1	3	0	2	0	6
ESE	0	0	1	0	1	0	2
SE	0	0	1	1	0	0	2
SSE	0	0	0	0	0	0	0
S	0	0	0	3	1	1	5
SSW	0	0	1	1	2	0	4
SW	0	0	0	0	0	0	0
WSW	0	0	1	0	0	0	1
W	0	1	1	3	0	1	6
WNW	0	2	7	6	1	2	18
NW	0	3	8	12	1	0	24
NNW	0	1	1	2	0	0	4
Variable	0	0	0	0	0	0	0
Total	0	12	25	30	8	4	79

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

Braidwood Generating Station

Period of Record: October - December2008
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	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	1	4	0	0	0	5
ENE	0	3	0	0	0	0	3
E	0	0	0	2	0	0	2
ESE	0	1	3	2	3	0	9
SE	0	0	1	1	0	0	2
SSE	0	0	2	1	0	0	3
S	0	0	0	3	5	1	9
SSW	0	0	0	3	2	0	5
SW	0	0	1	0	1	0	2
WSW	0	1	2	3	3	0	9
W	0	0	6	3	0	0	9
WNW	0	1	9	3	1	2	16
NW	0	2	4	3	1	0	10
NNW	0	0	6	2	0	0	8
Variable	0	0	0	0	0	0	0
Total	0	9	38	26	16	3	92

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: 2

Braidwood Generating Station

Period of Record: October - December2008
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	4	1	0	0	7
NNE	0	3	1	0	0	0	4
NE	0	4	2	0	0	0	6
ENE	0	5	0	0	0	0	5
E	0	2	2	0	1	0	5
ESE	0	1	0	1	0	0	2
SE	0	2	2	1	2	0	7
SSE	0	5	2	2	0	0	9
S	0	1	4	3	3	1	12
SSW	0	0	4	1	1	1	7
SW	0	0	0	3	0	0	3
WSW	0	0	3	6	1	0	10
W	0	4	3	6	2	1	16
WNW	0	0	5	2	1	0	8
NW	0	0	1	2	0	0	3
NNW	0	2	3	1	0	0	6
Variable	0	0	0	0	0	0	0
Total	0	31	36	29	11	3	110

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: 2

Braidwood Generating Station

Period of Record: October - December2008
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	9	7	13	5	0	35
NNE	0	5	5	3	3	0	16
NE	1	5	7	4	0	0	17
ENE	2	8	8	2	0	0	20
E	2	2	7	5	2	0	18
ESE	0	6	4	25	3	0	38
SE	0	5	19	29	4	0	57
SSE	0	4	22	16	8	11	61
S	0	3	19	40	25	43	130
SSW	0	1	5	35	29	9	79
SW	0	3	13	28	4	0	48
WSW	0	8	16	14	6	3	47
W	1	11	22	47	18	11	110
WNW	1	1	24	56	30	8	120
NW	1	8	18	39	17	0	83
NNW	1	7	21	59	27	7	122
Variable	0	0	0	0	0	0	0
Total	10	86	217	415	181	92	1001

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 41
Hours of missing stability measurements in all stability classes: 2

Braidwood Generating Station

Period of Record: October - December2008
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	2	16	2	0	0	20
NNE	1	2	3	0	0	0	6
NE	0	0	5	1	0	0	6
ENE	2	4	9	2	0	0	17
E	1	4	18	17	2	0	42
ESE	0	4	8	34	3	0	49
SE	2	6	16	18	3	0	45
SSE	1	3	18	18	15	0	55
S	1	0	18	66	31	14	130
SSW	0	0	8	37	8	0	53
SW	0	4	5	10	5	1	25
WSW	0	7	6	4	1	0	18
W	0	6	10	6	2	0	24
WNW	0	2	15	17	3	1	38
NW	1	5	24	25	1	0	56
NNW	1	3	18	16	0	0	38
Variable	0	0	0	0	0	0	0
Total	10	52	197	273	74	16	622

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 8
Hours of missing stability measurements in all stability classes: 2

Braidwood Generating Station

Period of Record: October - December2008
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	2	8	2	0	0	12
NNE	0	3	1	0	0	0	4
NE	1	1	7	0	0	0	9
ENE	0	0	1	0	0	0	1
E	2	1	8	2	0	0	13
ESE	0	0	1	12	0	0	13
SE	1	4	8	4	0	0	17
SSE	1	0	3	3	0	0	7
S	0	1	0	0	0	0	1
SSW	0	0	1	3	1	0	5
SW	0	2	5	1	0	0	8
WSW	0	0	5	5	0	0	10
W	1	4	8	24	1	0	38
WNW	0	2	13	5	0	0	20
NW	0	3	7	0	0	0	10
NNW	0	6	5	0	0	0	11
Variable	0	0	0	0	0	0	0
Total	6	29	81	61	2	0	179

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: 2

Braidwood Generating Station

Period of Record: October - December2008
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	4	2	0	0	6
NNE	0	3	1	0	0	0	4
NE	2	1	3	1	0	0	7
ENE	0	0	0	1	0	0	1
E	0	0	1	3	0	0	4
ESE	1	2	2	2	0	0	7
SE	0	0	1	0	0	0	1
SSE	0	2	2	0	0	0	4
S	0	1	0	0	0	0	1
SSW	0	6	0	0	0	0	6
SW	0	2	0	0	0	0	2
WSW	0	2	2	3	0	0	7
W	1	0	6	4	0	0	11
WNW	0	1	1	0	0	0	2
NW	0	0	0	0	0	0	0
NNW	0	3	1	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	4	23	24	16	0	0	67

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: 2

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 2008

Prepared By

Teledyne Brown Engineering
Environmental Services

Exelon SM
Nuclear

Braidwood Station
Braceville, IL 60407

May 2009

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Table B-II.1 Concentrations of Tritium and Strontium in Surface Water Samples Collected in the Vicinity of Braidwood Station, 2008.

Table B-II.2 Concentrations of Gamma Emitters in Surface Water Samples Collected in the Vicinity of Braidwood Station, 2008.

I. Summary and Conclusions

In 2008, 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 2008. During that time period, 914 analyses were performed on 872 samples from 210 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.

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.

No 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 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 220 of 929 analyses. The tritium concentrations ranged from 200 ± 120 pCi/L to 18,200 ± 1870 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.

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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 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 2008.

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 hydro geologist 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 2008.

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 2008. RadNet provides tritium precipitation concentration data for samples collected at stations through out the U.S. from 1960 up to and including 2008. 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. All required LLDs were met. 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 18,200 pCi/l. Some contamination still exists and monitoring is ongoing.

Strontium

Strontium-90 was analyzed for in 21 samples and was less than the required detection limit of 2.0 pCi/liter. (Table B-I.2, Appendix B).

Gamma Emitters

No gamma emitting nuclides were detected in any of the samples analyzed. (Table B–II.2, 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. All required LLDs were met. 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 1,230 pCi/l.

Strontium

Strontium-90 was analyzed for in six samples and was less than the required detection limit of 2.0 pCi/liter. (Table B-II.1, Appendix B).

Gamma Emitters

Potassium-40 was detected in 2 of 21 samples. The concentration in the two samples were 170 and 189 pCi/L. No other gamma emitting nuclides were detected. (Table B-I.2, Appendix B).

C. Drinking Water Well Survey

Drinking water wells near Braidwood Station were sampled quarterly in 2008.

D. Summary of Results – Inter-Laboratory Comparison Program

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

E. Leaks, Spills, and Releases

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

There were no liquid leaks, spills, or releases in 2008 that affected groundwater.

F. Trends and Analyses

Monitoring of remediation activities indicate that tritium concentrations in affected areas are trending down. In June of 2008, samples were taken at VB-7-1. The sample for tritium analysis was not received by the offsite laboratory. Therefore, no tritium analysis was completed for June for VB-7-1. A separate sample for the same well was sent to another offsite laboratory for chemical analyses. Those analyses were completed as required with the results as expected. The July 2008 tritium samples for VB-7-1 were completed and the results were as expected.

G. Investigations

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

H. 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 Breaker 2 area: Two extraction wells have been installed in this area to remove contaminated ground water. These wells, which became operational in 2008, discharge to the Exelon Pond. The wells are in place to remediate a previously identified contamination plume and were not installed to remediate contamination from a new spill.

   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, 2008

Station Code	Sample Description
BL-03	Monitoring Well
BL-06	Monitoring Well
BL-06D	Monitoring Well
BL-09D	Monitoring Well
BL-10D	Monitoring Well
BL-11	Monitoring Well
BL-11D	Monitoring Well
BL-12D	Monitoring Well
BL-13D	Monitoring Well
BL-14D	Monitoring Well
BL-15D	Monitoring Well
BL-16D	Monitoring Well
BL-17D	Monitoring Well
BL-18D	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
C-1D	Monitoring Well
C-2D	Monitoring Well
CD-1D	Monitoring Well
D-2D	Monitoring Well
D-3D	Monitoring Well
DITCH (DS-2)	Surface Water
EXELON POND	Surface Water
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
FATLAN POND	Surface Water
G-2D	Monitoring Well
H DITCH	Surface Water
LAKE DISCHARGE CANAL	Surface Water
LAKE INTAKE	Surface Water
MW-102R	Monitoring Well
MW-103	Monitoring Well
MW-105	Monitoring Well
MW-105D	Monitoring Well
MW-106D	Monitoring Well
MW-109D	Monitoring Well

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Braidwood Station, 2008

Station Code	Sample Description
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
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-160	Monitoring Well
MW-160D	Monitoring Well
MW-161D	Monitoring Well
MW-162D	Monitoring Well
MW-16-D	Monitoring Well
MW-2	Monitoring Well
MW-22	Monitoring Well
MW-301BD	Monitoring Well
MW-302BD	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

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Braidwood Station, 2008

Station Code	Sample Description
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-BW-207I	Distant Well
MW-BW-208BD	Distant Well
MW-F-5D	Monitoring Well
P-2D	Monitoring Well
P-4D	Monitoring Well
P-5D	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-011	Monitoring Well
PW-013	Monitoring Well
PW-014	Monitoring Well
PW-015	Monitoring Well
PW-016	Monitoring Well
PW-11	Monitoring Well
RW-10	Monitoring Well
RW-5	Monitoring Well
RW-6	Monitoring Well
RW-7	Monitoring Well
RW-9	Monitoring Well
S-1D	Monitoring Well
S-2D	Monitoring Well
S-4D	Monitoring Well
S-7D	Monitoring Well
S-8DR	Monitoring Well
SC-1D	Monitoring Well
SC-2D	Monitoring Well
SCAMEN POND	Surface Water
SG-BW-105	Surface Water
SW-05	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

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Braidwood Station, 2008

Station Code	Sample Description
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
VB10-1	Monitoring Well
VB1-1	Monitoring Well
VB1-10D	Monitoring Well
VB11-1	Monitoring Well
VB1-11D	Monitoring Well
VB1-12D	Monitoring Well
VB1-2D	Monitoring Well
VB-13	Monitoring Well
VB-13D	Monitoring Well
VB1-3D	Monitoring Well
VB-14D	Monitoring Well
VB1-4D	Monitoring Well
VB1-5D	Monitoring Well
VB-1-7D	Monitoring Well
VB1-8D	Monitoring Well
VB1-9D	Monitoring Well
VB2-10	Monitoring Well
VB2-10D	Monitoring Well
VB2-11	Monitoring Well
VB2-11D	Monitoring Well
VB2-11P	Monitoring Well
VB2-12	Monitoring Well
VB2-12D	Monitoring Well
VB2-13	Monitoring Well
VB2-13D	Monitoring Well
VB2-14	Monitoring Well
VB2-14D	Monitoring Well
VB2-15	Monitoring Well
VB2-15D	Monitoring Well
VB2-16	Monitoring Well
VB2-16D	Monitoring Well
VB2-17	Monitoring Well
VB2-17D	Monitoring Well
VB2-2D	Monitoring Well
VB2-5D	Monitoring Well
VB2-9D	Monitoring Well
VB3-10D	Monitoring Well
VB3-2	Monitoring Well

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Braidwood Station, 2008

Station Code	Sample Description
VB3-4D	Monitoring Well
VB3-7D	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
WCFPD-1D	Monitoring Well
WCFPD-2DR	Monitoring Well
WELL D-1D	Monitoring Well

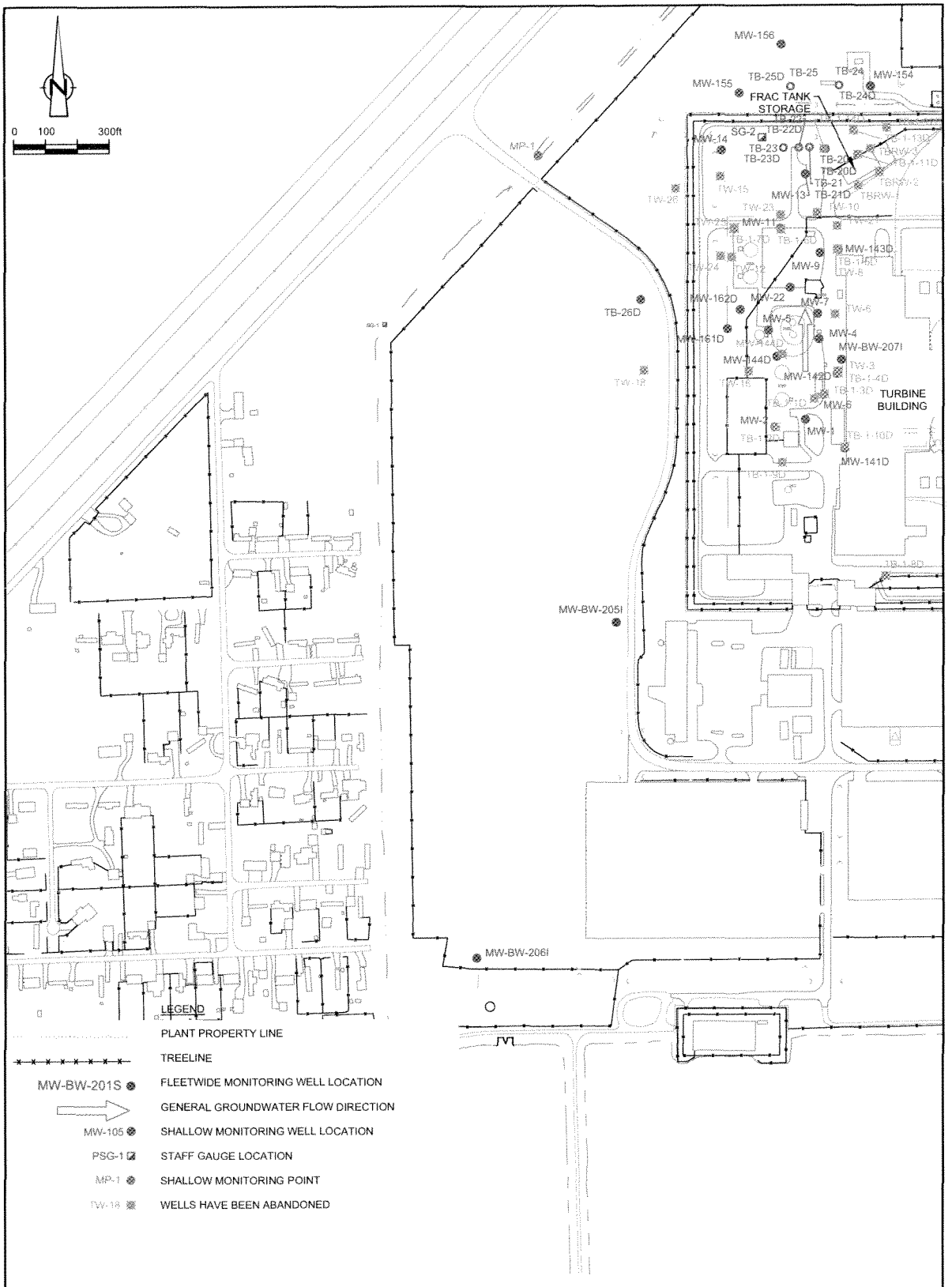


figure 3

MONITORING WELL LOCATIONS
WEST TURBINE BUILDING AREA/PROTECTED AREA
EXELON GENERATION BRAIDWOOD STATION
Braceville, Illinois

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

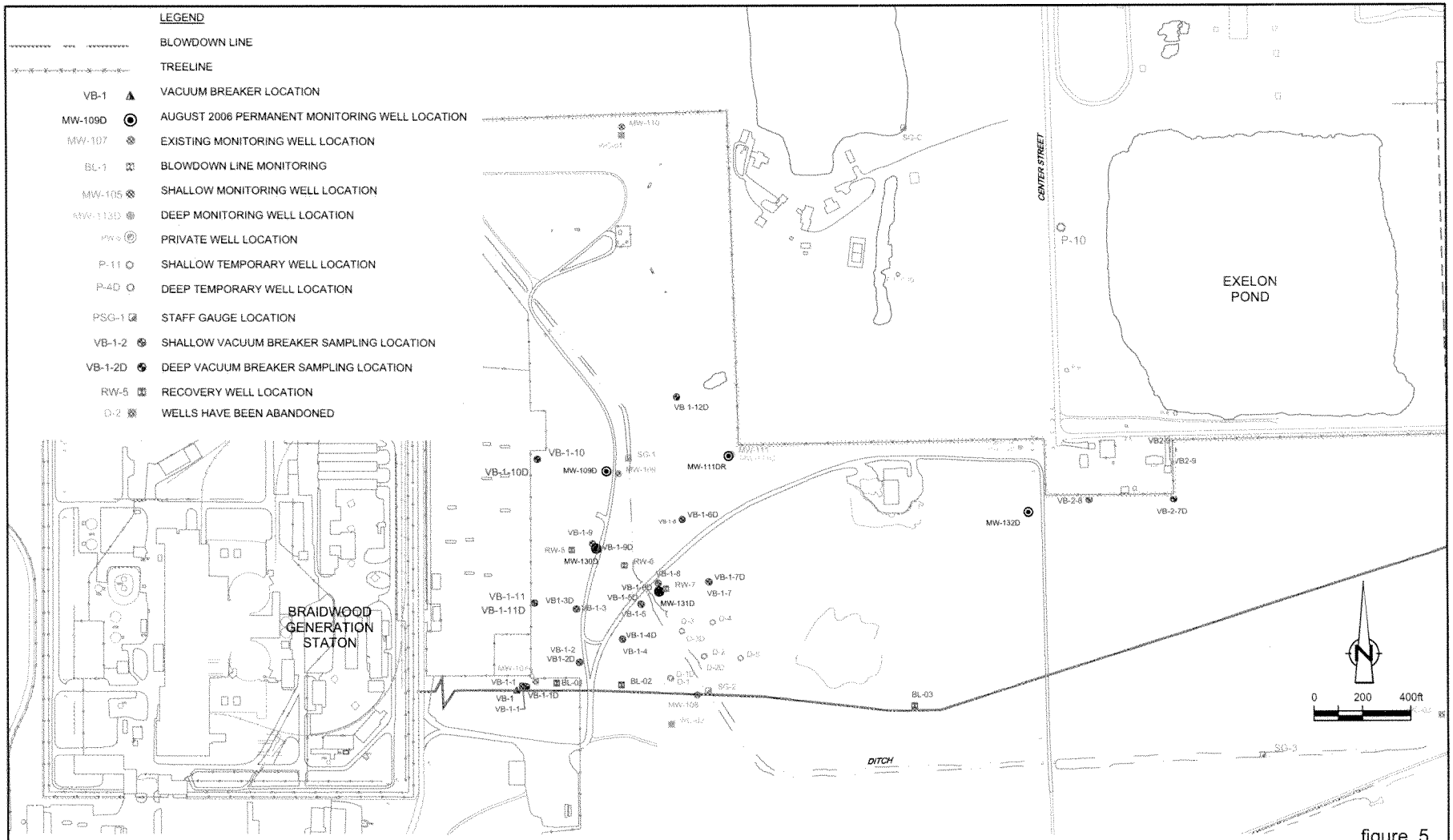
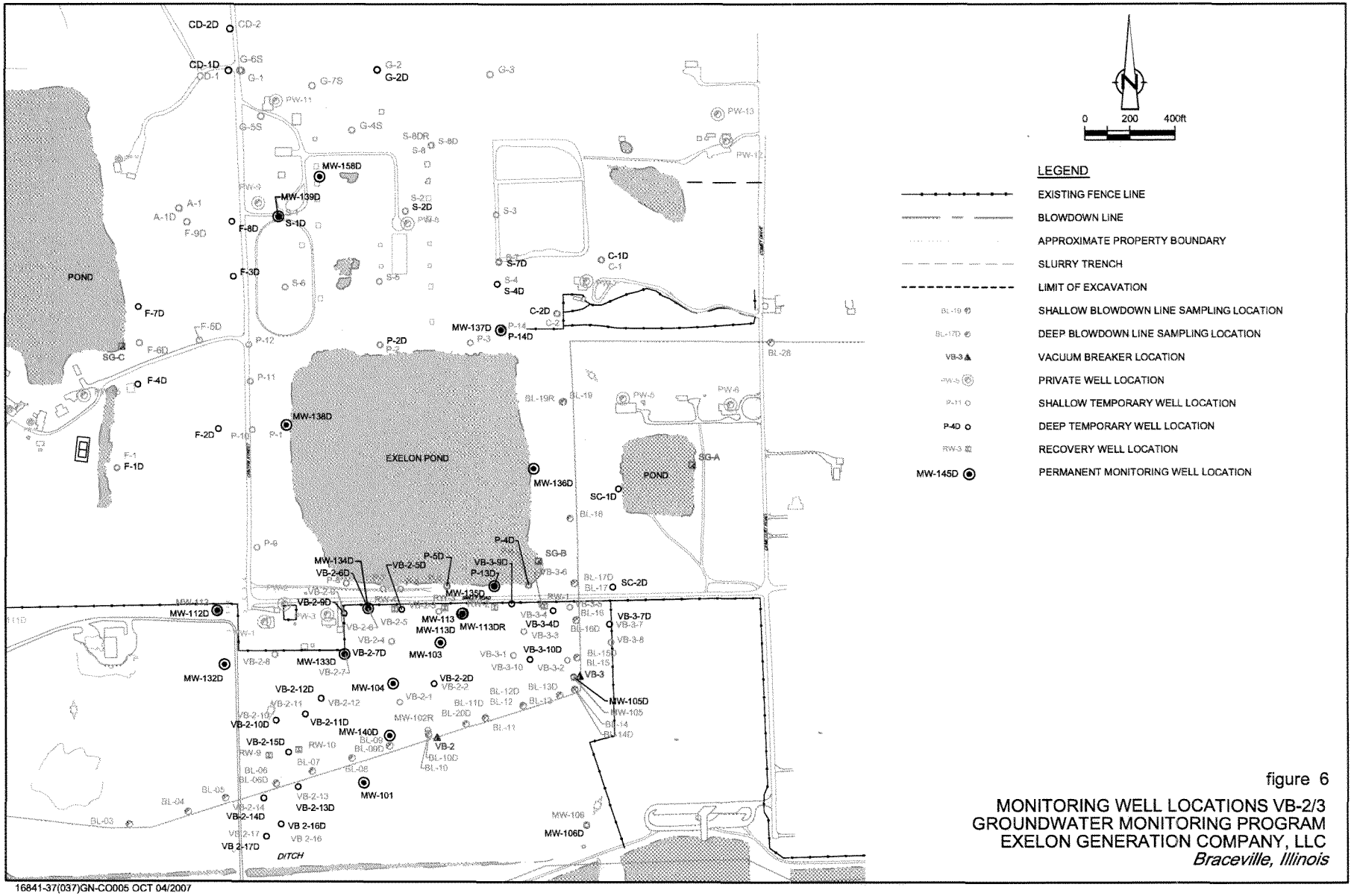


figure 5

MONITORING WELL LOCATIONS - VB-1
GROUNDWATER MONITORING PROGRAM
EXELON GENERATION BRAIDWOOD STATION
Braceville, Illinois

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



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

figure 6

MONITORING WELL LOCATIONS VB-2/3
GROUNDWATER MONITORING PROGRAM
EXELON GENERATION COMPANY, LLC
Braceville, Illinois

APPENDIX B

DATA TABLES

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
BL-03	01/15/08	< 160	
BL-03	02/12/08	< 176	
BL-03	03/10/08	< 174	
BL-03	04/15/08	< 165	
BL-03	05/15/08	< 164	
BL-03	06/11/08	< 148	
BL-03	07/15/08	< 168	
BL-03	08/13/08	< 153	
BL-03	09/17/08	< 159	
BL-03	10/15/08	< 166	
BL-03	11/12/08	< 176	
BL-03	12/16/08	< 179	
BL-06	02/12/08	1800 ± 250	
BL-06	01/15/08	2180 ± 283	
BL-06	03/11/08	1340 ± 195	
BL-06	04/15/08	1070 ± 178	
BL-06	05/15/08	2880 ± 346	
BL-06	06/10/08	2520 ± 312	
BL-06	07/15/08	2620 ± 319	
BL-06	08/14/08	2970 ± 349	
BL-06	09/17/08	933 ± 151	
BL-06	10/15/08	1340 ± 207	
BL-06	11/12/08	587 ± 139	
BL-06	12/18/08	266 ± 111	
BL-06D	03/11/08	4080 ± 463	
BL-06D	06/10/08	2480 ± 307	
BL-06D	09/18/08	502 ± 124	
BL-06D	12/18/08	257 ± 112	
BL-09D	09/17/08	< 153	
BL-10D	09/17/08	< 144	
BL-11	01/15/08	< 161	
BL-11	02/12/08	< 179	
BL-11	03/11/08	< 158	
BL-11	04/15/08	< 158	
BL-11	05/14/08	< 166	
BL-11	06/11/08	< 162	
BL-11	07/15/08	< 169	
BL-11	08/14/08	< 156	
BL-11	09/17/08	< 163	
BL-11	10/15/08	< 184	
BL-11	11/11/08	< 176	
BL-11	12/17/08	< 190	
BL-11D	09/18/08	< 147	
BL-12D	09/17/08	< 154	
BL-13D	09/17/08	< 156	
BL-14D	09/18/08	< 150	
BL-15D	09/18/08	< 151	
BL-16D	09/18/08	< 156	
BL-17D	09/17/08	< 154	
BL-18D	09/17/08	< 164	
BL-19R	01/16/08	< 159	
BL-19R	02/13/08	< 181	
BL-19R	03/12/08	< 158	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
BL-19R	04/15/08	< 167	
BL-19R	05/15/08	< 166	
BL-19R	06/09/08	< 176	
BL-19R	07/15/08	< 164	
BL-19R	08/13/08	< 155	
BL-19R	09/17/08	< 162	
BL-19R	10/15/08	< 184	
BL-19R	11/11/08	< 193	
BL-19R	12/18/08	< 154	
BL-20D	09/18/08	< 147	
BL-21	01/16/08	< 163	
BL-21	02/13/08	< 168	
BL-21	03/11/08	< 188	
BL-21	04/15/08	< 158	
BL-21	05/15/08	< 163	
BL-21	06/10/08	< 171	
BL-21	08/12/08	< 157	
BL-21	09/18/08	< 162	
BL-21	10/15/08	< 185	
BL-21	11/11/08	< 195	
BL-21	12/17/08	< 156	
BL-22	01/16/08	< 159	
BL-22	02/13/08	< 165	
BL-22	03/11/08	< 157	
BL-22	04/15/08	< 159	
BL-22	05/13/08	< 165	
BL-22	06/11/08	< 144	
BL-22	08/12/08	< 154	
BL-22	09/18/08	< 165	
BL-22	10/14/08	< 182	
BL-22	11/11/08	< 190	
BL-22	12/17/08	< 160	
BL-23	01/15/08	< 161	
BL-23	03/13/08	< 158	
BL-23	04/17/08	< 185	
BL-23	05/14/08	< 164	
BL-23	06/10/08	< 171	
BL-23	08/12/08	< 150	
BL-23	09/16/08	< 174	
BL-23	10/14/08	< 183	
BL-23	11/11/08	< 194	
BL-23	12/16/08	< 181	
BL-24	01/16/08	< 161	
BL-24	02/13/08	< 166	
BL-24	03/11/08	< 157	
BL-24	04/15/08	< 168	
BL-24	05/14/08	< 168	
BL-24	06/10/08	< 165	
BL-24	08/13/08	< 156	
BL-24	09/18/08	< 165	
BL-24	10/14/08	< 186	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
BL-24	11/11/08	< 195	
BL-24	12/16/08	< 175	
BL-25	01/16/08	< 158	
BL-25	02/12/08	< 164	
BL-25	03/11/08	< 153	
BL-25	04/15/08	< 164	
BL-25	05/14/08	< 163	
BL-25	06/10/08	< 169	
BL-25	08/12/08	< 155	
BL-25	09/18/08	< 163	
BL-25	10/15/08	< 185	
BL-25	11/11/08	< 193	
BL-25	12/16/08	< 177	
BL-26	01/15/08	< 159	
BL-26	02/12/08	< 180	
BL-26	03/10/08	< 157	
BL-26	04/15/08	< 165	
BL-26	05/13/08	< 166	
BL-26	06/09/08	< 169	
BL-26	07/15/08	< 180	
BL-26	08/12/08	< 159	
BL-26	09/15/08	< 166	
BL-26	10/14/08	< 150	
BL-26	11/11/08	< 193	
BL-26	12/16/08	< 191	
BL-27	01/16/08	< 158	
BL-27	02/12/08	< 184	
BL-27	03/10/08	< 157	
BL-27	04/15/08	< 167	
BL-27	05/14/08	< 163	
BL-27	06/10/08	< 170	
BL-27	08/13/08	< 160	
BL-27	09/16/08	< 167	
BL-27	10/14/08	< 158	
BL-27	11/11/08	< 191	
BL-27	12/16/08	< 189	
C-1D	09/16/08	< 173	
C-2D	09/16/08	< 175	
CD-1D	09/16/08	< 167	
D-2D	09/15/08	< 159	
D-3D	09/15/08	178 ± 110	
F-1D	09/16/08	< 172	
F-3D	09/16/08	627 ± 144	
F-4D	09/16/08	< 168	
F-5D	03/13/08	860 ± 162	
F-5D	06/11/08	1020 ± 168	
F-5D	12/17/08	854 ± 145	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
F-6D	01/15/08	317 ± 112	
F-6D	02/13/08	287 ± 112	
F-6D	03/13/08	280 ± 124	
F-6D	04/17/08	200 ± 120	
F-6D	05/15/08	230 ± 105	
F-6D	06/11/08	< 187	
F-6D	08/13/08	< 158	
F-6D	09/16/08	< 167	
F-6D	10/16/08	< 162	
F-6D	11/12/08	< 174	
F-6D	12/18/08	< 159	
F-7D	09/16/08	790 ± 159	
F-8D	09/16/08	835 ± 161	
F-9D	01/16/08	1210 ± 187	
F-9D	03/13/08	1360 ± 206	
F-9D	04/17/08	1080 ± 187	
F-9D	05/15/08	945 ± 161	
F-9D	06/11/08	1010 ± 169	
F-9D	07/17/08	1220 ± 184	
F-9D	08/13/08	843 ± 146	
F-9D	09/16/08	764 ± 156	
F-9D	10/15/08	1090 ± 181	
F-9D	11/12/08	1060 ± 170	
F-9D	12/17/08	895 ± 170	
G-2D	09/16/08	< 166	
MW-102R	01/15/08	< 162	
MW-102R	02/12/08	< 180	
MW-102R	03/10/08	< 179	
MW-102R	04/14/08	< 169	
MW-102R	05/14/08	< 166	
MW-102R	06/11/08	< 164	
MW-102R	07/14/08	< 167	
MW-102R	08/14/08	< 159	
MW-102R	09/17/08	< 150	
MW-102R	10/15/08	< 177	
MW-102R	11/12/08	< 173	
MW-102R	12/16/08	< 185	
MW-103	02/12/08	< 172	
MW-103	03/13/08	< 157	
MW-105	03/13/08	< 161	
MW-105	06/11/08	< 146	
MW-105	09/17/08	< 151	
MW-105	12/17/08	< 189	
MW-105D	09/17/08	< 164	
MW-106D	09/18/08	< 157	
MW-109D	03/07/08	< 177	
MW-109D	05/09/08	< 163	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
MW-109D	09/22/08	< 159	
MW-109D	09/22/08	< 184	
MW-109D	12/16/08	< 179	
MW-11	05/06/08	226 ± 110	
MW-11	09/15/08	< 167	
MW-11	09/15/08	-	< 1.2
MW-110	03/13/08	< 156	
MW-110	06/11/08	151 ± 96	
MW-110	09/17/08	< 147	
MW-110	12/18/08	< 160	
MW-111DR	03/12/08	< 159	
MW-111DR	06/11/08	< 151	
MW-111DR	09/17/08	< 155	
MW-111DR	12/18/08	< 160	
MW-112D	03/12/08	< 163	
MW-112D	06/11/08	< 146	
MW-112D	09/17/08	< 150	
MW-112D	12/17/08	< 189	
MW-113	03/12/08	1950 ± 257	
MW-113	06/09/08	3090 ± 368	
MW-113	09/17/08	850 ± 138	
MW-113	12/17/08	2010 ± 275	
MW-113DR	03/12/08	713 ± 143	
MW-113DR	06/09/08	1030 ± 168	
MW-113DR	09/17/08	228 ± 109	
MW-113DR	12/17/08	191 ± 120	
MW-13	01/15/08	824 ± 156	
MW-13	02/26/08	1060 ± 178	
MW-13	03/12/08	1430 ± 221	
MW-13	04/01/08	1090 ± 177	
MW-13	05/07/08	487 ± 126	
MW-13	06/20/08	543 ± 126	
MW-13	07/23/08	617 ± 150	
MW-13	08/27/08	718 ± 135	
MW-13	09/18/08	785 ± 151	
MW-13	09/18/08	-	< 1.5
MW-13	10/26/08	467 ± 121	
MW-13	11/08/08	378 ± 126	
MW-13	12/05/08	525 ± 132	
MW-130D	03/07/08	< 178	
MW-130D	05/09/08	< 163	
MW-130D	09/22/08	< 160	
MW-130D	09/22/08	< 185	
MW-130D	12/16/08	< 178	
MW-131D	03/12/08	< 157	
MW-131D	06/11/08	< 148	
MW-131D	09/17/08	< 151	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
MW-131D	12/18/08	< 161	
MW-132D	03/12/08	< 162	
MW-132D	06/11/08	< 149	
MW-132D	09/17/08	< 150	
MW-132D	12/18/08	< 160	
MW-133D	03/13/08	< 162	
MW-133D	06/17/08	< 164	
MW-133D	09/16/08	< 149	
MW-133D	12/16/08	< 174	
MW-134D	03/13/08	1990 ± 265	
MW-134D	05/15/08	1950 ± 257	
MW-134D	06/17/08	1530 ± 214	
MW-134D	09/16/08	1300 ± 200	
MW-134D	12/16/08	1510 ± 214	
MW-135D	03/12/08	2730 ± 331	
MW-135D	06/09/08	1590 ± 221	
MW-135D	09/16/08	714 ± 146	
MW-135D	12/18/08	734 ± 143	
MW-136D	03/12/08	< 158	
MW-136D	06/09/08	< 171	
MW-136D	09/16/08	< 165	
MW-136D	12/18/08	< 161	
MW-137D	03/12/08	< 157	
MW-137D	06/09/08	< 182	
MW-137D	09/16/08	< 166	
MW-137D	12/18/08	< 159	
MW-138D	03/12/08	< 159	
MW-138D	06/09/08	< 181	
MW-138D	09/16/08	< 168	
MW-138D	12/18/08	< 158	
MW-139D	03/12/08	< 183	
MW-139D	06/11/08	< 188	
MW-139D	09/17/08	< 146	
MW-139D	12/17/08	< 179	
MW-14	06/20/08	< 161	
MW-14	12/03/08	182 ± 119	
MW-140D	03/13/08	443 ± 129	
MW-140D	06/09/08	468 ± 134	
MW-140D	09/17/08	< 150	
MW-140D	12/16/08	< 185	
MW-141D	02/27/08	418 ± 122	
MW-141D	05/08/08	366 ± 117	
MW-141D	08/27/08	529 ± 126	< 1.8
MW-141D	11/08/08	402 ± 129	
MW-142D	02/27/08	681 ± 145	
MW-142D	05/06/08	663 ± 142	
MW-142D	08/18/08	643 ± 130	< 1.9

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
MW-142D	11/08/08	699 ± 150	
MW-143D	02/27/08	167 ± 106	
MW-143D	05/05/08	< 162	
MW-143D	08/27/08	564 ± 125	< 0.9
MW-143D	11/08/08	253 ± 120	
MW-144D	02/27/08	461 ± 125	
MW-144D	05/05/08	679 ± 141	
MW-144D	08/19/08	767 ± 150	< 0.8
MW-144D	11/08/08	1400 ± 210	
MW-145D	03/12/08	428 ± 132	
MW-145D	06/11/08	152 ± 101	
MW-145D	09/16/08	1940 ± 260	
MW-145D	12/17/08	1200 ± 177	
MW-148D	03/11/08	< 157	
MW-148D	06/09/08	< 170	
MW-148D	09/16/08	< 171	
MW-148D	12/17/08	< 182	
MW-149D	03/11/08	185 ± 104	
MW-149D	06/09/08	< 168	
MW-149D	09/16/08	< 174	
MW-149D	12/17/08	< 162	
MW-150D	03/11/08	< 159	
MW-150D	06/09/08	< 168	
MW-150D	09/16/08	< 174	
MW-150D	12/17/08	< 175	
MW-151D	03/11/08	2370 ± 296	
MW-151D	06/09/08	1330 ± 194	
MW-151D	09/16/08	1080 ± 173	
MW-151D	12/16/08	1470 ± 211	
MW-154	02/22/08	< 163	
MW-154	05/19/08	189 ± 105	
MW-154	08/28/08	240 ± 109	< 1.4
MW-154	11/25/08	< 183	
MW-155	02/22/08	< 164	
MW-155	05/19/08	< 158	
MW-155	08/28/08	< 159	< 1.3
MW-155	11/25/08	< 180	
MW-156	02/22/08	< 159	
MW-156	05/19/08	< 156	
MW-156	08/28/08	< 155	< 1.3
MW-156	11/25/08	< 178	
MW-157D	03/12/08	626 ± 144	
MW-157D	06/11/08	< 149	
MW-157D	09/16/08	5720 ± 632	
MW-157D	12/18/08	< 160	
MW-158D	01/15/08	< 164	
MW-158D	02/13/08	< 166	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
MW-158D	03/12/08	< 187	
MW-158D	04/15/08	< 171	
MW-158D	05/14/08	< 165	
MW-158D	06/09/08	< 163	
MW-158D	08/13/08	< 186	
MW-158D	09/17/08	< 173	
MW-158D	10/15/08	< 181	
MW-158D	11/12/08	< 173	
MW-158D	12/17/08	< 189	
MW-159D	02/26/08	< 163	
MW-159D	05/07/08	< 157	
MW-159D	08/27/08	< 156	< 0.8
MW-159D	11/05/08	< 172	
MW-160	11/05/08	< 182	
MW-160D	02/27/08	< 161	
MW-160D	05/07/08	< 165	
MW-161D	06/20/08	370 ± 116	
MW-161D	12/03/08	478 ± 135	
MW-162D	06/20/08	387 ± 114	
MW-162D	12/10/08	448 ± 133	
MW-16-D	08/27/08	< 152	< 1.0
MW-2	05/08/08	629 ± 134	
MW-2	09/16/08	604 ± 137	
MW-2	09/16/08	-	< 1.7
MW-22	05/05/08	554 ± 130	
MW-22	09/15/08	194 ± 114	
MW-22	09/15/08	-	< 0.8
MW-301BD	02/06/08	< 155	
MW-302BD	02/06/08	< 155	
MW-4	06/20/08	808 ± 146	
MW-4	12/10/08	265 ± 122	
MW-5	05/06/08	751 ± 150	
MW-5	09/16/08	427 ± 129	
MW-5	09/16/08		< 1.5
MW-6	05/08/08	1070 ± 178	
MW-6	09/16/08	1100 ± 176	
MW-6	09/16/08	-	< 0.9
MW-7	05/08/08	477 ± 125	
MW-7	09/16/08	562 ± 135	
MW-7	09/16/08	-	< 1.2
MW-9	05/06/08	212 ± 110	
MW-9	09/15/08	336 ± 122	
MW-9	09/15/08	-	< 1.3
MW-BW-201BD	05/08/08	< 162	
MW-BW-201BD	07/23/08	< 183	
MW-BW-201I	05/05/08	< 162	
MW-BW-201I	07/23/08	189 ± 108	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
MW-BW-201S	05/05/08	< 158	
MW-BW-201S	07/23/08	234 ± 117	
MW-BW-202I	05/05/08	< 163	
MW-BW-202I	07/23/08	243 ± 119	
MW-BW-202S	05/05/08	< 159	
MW-BW-202S	07/23/08	294 ± 128	
MW-BW-203I	05/05/08	< 164	
MW-BW-203I	07/23/08	< 195	
MW-BW-203S	05/05/08	< 166	
MW-BW-203S	07/23/08	< 193	
MW-BW-204I	05/09/08	174 ± 103	
MW-BW-204I	10/26/08	< 164	< 1.5
MW-BW-205I	05/09/08	< 156	
MW-BW-205I	09/17/08	< 157	
MW-BW-205I	09/17/08	-	< 1.5
MW-BW-206I	05/09/08	< 164	
MW-BW-206I	09/17/08	< 160	
MW-BW-206I	09/17/08	-	< 0.6
MW-BW-207I	05/07/08	1060 ± 179	
MW-BW-207I	09/18/08	1140 ± 181	
MW-BW-207I	09/18/08	-	< 0.9
MW-BW-208BD	05/07/08	< 159	
MW-BW-208BD	07/23/08	< 195	
MW-F-5D	09/17/08	1090 ± 162	
P-2D	09/17/08	1370 ± 193	
P-4D	09/17/08	2280 ± 280	
P-5D	09/17/08	< 161	
PW-001	01/14/08	< 159	
PW-001	07/28/08	< 197	
PW-001	10/16/08	< 163	
PW-002	01/14/08	< 160	
PW-002	07/28/08	< 196	
PW-002	10/16/08	< 158	
PW-003	01/14/08	< 160	
PW-003	07/28/08	< 193	
PW-003	10/16/08	< 161	
PW-006	01/14/08	< 160	
PW-006	07/28/08	< 183	
PW-006	10/16/08	< 163	
PW-006A	07/28/08	< 174	
PW-006A	10/16/08	< 161	
PW-006B	10/16/08	< 162	
PW-011	07/28/08	< 177	
PW-011	10/16/08	< 160	
PW-013	07/28/08	< 182	
PW-013	10/16/08	< 154	
PW-014	01/14/08	< 159	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
PW-014	07/28/08	< 173	
PW-014	10/16/08	< 164	
PW-015	01/14/08	< 160	
PW-015	04/16/08	< 173	
PW-015	07/28/08	< 184	
PW-015	10/16/08	< 167	
PW-016	07/28/08	< 181	
PW-016	10/16/08	< 160	
PW-11	02/13/08	< 165	
RW-10	04/09/08	3120 ± 371	
RW-10	05/05/08	4280 ± 489	
RW-10	06/27/08	2450 ± 300	
RW-10	07/14/08	2240 ± 289	
RW-10	09/17/08	< 161	
RW-10	09/18/08	1190 ± 175	
RW-10	12/10/08	780 ± 150	
RW-5	03/19/08	1050 ± 173	
RW-5	06/27/08	869 ± 153	
RW-5	09/29/08	744 ± 143	
RW-6	02/29/08	3270 ± 388	
RW-6	06/27/08	2750 ± 331	
RW-7	03/19/08	216 ± 107	
RW-7	06/27/08	< 165	
RW-7	09/15/08	< 165	
RW-7	09/29/08	< 160	
RW-9	04/09/08	915 ± 161	
RW-9	05/05/08	1820 ± 247	
RW-9	06/27/08	2420 ± 299	
RW-9	07/14/08	2630 ± 327	
RW-9	09/17/08	1420 ± 209	
RW-9	09/18/08	< 158	
S-1D	01/16/08	1130 ± 181	
S-1D	02/13/08	893 ± 166	
S-1D	03/12/08	1030 ± 174	
S-1D	04/17/08	950 ± 173	
S-1D	05/14/08	920 ± 164	
S-1D	06/11/08	920 ± 160	
S-1D	07/17/08	709 ± 143	
S-1D	08/13/08	674 ± 131	
S-1D	09/17/08	865 ± 164	
S-1D	10/15/08	790 ± 155	
S-1D	11/12/08	699 ± 156	
S-1D	12/17/08	557 ± 142	
S-2D	09/17/08	< 172	
S-4D	09/17/08	< 167	
S-7D	01/16/08	< 157	
S-7D	02/13/08	< 181	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
S-7D	03/12/08	< 187	
S-7D	04/15/08	< 175	
S-7D	05/14/08	< 162	
S-7D	06/11/08	< 187	
S-7D	07/17/08	< 178	
S-7D	08/13/08	< 159	
S-7D	09/17/08	< 179	
S-7D	10/15/08	< 170	
S-7D	11/12/08	< 187	
S-7D	12/17/08	< 161	
S-8DR	01/15/08	< 156	
S-8DR	02/13/08	< 165	
S-8DR	03/12/08	< 182	
S-8DR	04/15/08	< 171	
S-8DR	05/14/08	< 163	
S-8DR	06/11/08	< 187	
S-8DR	07/17/08	< 174	
S-8DR	08/13/08	< 160	
S-8DR	09/17/08	< 172	
S-8DR	10/15/08	< 182	
S-8DR	11/12/08	< 174	
S-8DR	12/17/08	< 159	
SC-1D	01/14/08	< 158	
SC-2D	01/15/08	< 160	
TB-20	01/14/08	< 157	
TB-20	02/22/08	< 163	
TB-20	03/12/08	< 178	
TB-20	04/02/08	< 164	
TB-20	05/06/08	< 163	
TB-20	06/20/08	172 ± 109	
TB-20	07/10/08	< 180	
TB-20	08/27/08	< 159	
TB-20	09/18/08	307 ± 111	
TB-20	10/25/08	235 ± 113	
TB-20	11/05/08	217 ± 120	
TB-20	12/03/08	< 181	
TB-20D	01/14/08	584 ± 135	
TB-20D	02/25/08	185 ± 108	
TB-20D	04/02/08	495 ± 124	
TB-20D	07/10/08	< 187	
TB-20D	10/25/08	< 154	
TB-21	01/14/08	< 163	
TB-21	02/25/08	255 ± 109	
TB-21	03/12/08	268 ± 119	
TB-21	04/15/08	< 180	
TB-21	05/06/08	< 166	
TB-21	06/20/08	< 161	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
TB-21	07/10/08	212 ± 119	
TB-21	08/27/08	< 158	
TB-21	09/18/08	191 ± 104	
TB-21	10/25/08	< 143	
TB-21	11/05/08	< 177	
TB-21	12/03/08	< 176	
TB-21D	01/15/08	174 ± 106	
TB-21D	02/25/08	< 168	
TB-21D	04/15/08	< 176	
TB-21D	07/10/08	< 179	
TB-21D	10/25/08	< 164	
TB-22	01/15/08	< 161	
TB-22	02/26/08	< 164	
TB-22	03/12/08	< 179	
TB-22	04/15/08	< 173	
TB-22	05/06/08	< 162	
TB-22	06/20/08	321 ± 115	
TB-22	07/10/08	< 188	
TB-22	08/27/08	< 149	
TB-22	09/18/08	< 162	
TB-22	10/25/08	512 ± 127	
TB-22	11/05/08	457 ± 130	
TB-22	12/03/08	< 179	
TB-22D	01/15/08	< 166	
TB-22D	02/26/08	< 161	
TB-22D	04/15/08	< 181	
TB-22D	07/11/08	< 200	
TB-22D	10/25/08	< 144	
TB-23	01/15/08	< 159	
TB-23	02/26/08	< 160	
TB-23	03/12/08	< 175	
TB-23	04/15/08	183 ± 114	
TB-23	04/15/08	< 183	
TB-23	05/06/08	< 163	
TB-23	06/20/08	< 157	
TB-23	07/11/08	< 195	
TB-23	08/27/08	233 ± 109	
TB-23	09/18/08	258 ± 106	
TB-23	10/26/08	< 147	
TB-23	11/05/08	186 ± 118	
TB-23	12/03/08	< 174	
TB-23D	02/26/08	< 159	
TB-23D	07/11/08	< 194	
TB-23D	10/26/08	< 158	
TB-24	05/19/08	< 158	
TB-24D	05/19/08	< 156	
TB-25	05/19/08	< 154	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
TB-25D	05/19/08	< 155	
TB-26D	05/19/08	< 159	
VB10-1	01/15/08	< 160	
VB10-1	02/12/08	< 180	
VB10-1	03/10/08	< 156	
VB10-1	04/14/08	< 169	
VB10-1	05/13/08	< 167	
VB10-1	06/09/08	220 ± 112	
VB10-1	08/12/08	< 152	
VB10-1	09/15/08	< 168	
VB-10-1	07/15/08	< 184	
VB10-1	10/14/08	< 156	
VB10-1	11/11/08	< 194	
VB10-1	12/16/08	< 188	
VB1-1	01/16/08	< 164	
VB1-1	02/13/08	< 166	
VB1-1	03/07/08	< 174	
VB1-1	04/02/08	< 184	
VB1-1	05/09/08	< 166	
VB1-1	06/11/08	< 162	
VB1-1	07/17/08	< 194	
VB1-1	08/12/08	< 150	
VB1-1	09/16/08	< 163	
VB1-1	10/26/08	< 175	
VB1-1	11/12/08	< 183	
VB1-1	12/16/08	< 174	
VB1-10D	10/18/08	< 161	
VB11-1	01/16/08	< 165	
VB11-1	02/12/08	< 180	
VB11-1	03/11/08	< 157	
VB11-1	04/15/08	< 168	
VB11-1	05/14/08	< 170	
VB11-1	06/10/08	< 174	
VB11-1	08/13/08	< 156	
VB11-1	09/16/08	< 162	
VB-11-1	10/14/08	< 157	
VB-11-1	11/11/08	< 196	
VB-11-1	12/16/08	< 189	
VB1-11D	10/18/08	< 162	
VB1-12D	03/13/08	< 184	
VB1-12D	06/11/08	< 151	
VB-1-12D	09/18/08	< 147	
VB-1-12D	12/18/08	< 157	
VB-1-2D	10/18/08	< 151	
VB1-3D	10/18/08	450 ± 118	
VB1-4D	10/19/08	< 163	
VB1-5D	01/17/08	1000 ± 172	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
VB1-5D	10/19/08	647 ± 135	
VB-1-7D	09/15/08	< 166	
VB1-8D	01/16/08	< 160	
VB1-9D	03/12/08	8800 ± 947	
VB1-9D	05/09/08	5500 ± 613	
VB1-9D	09/17/08	5230 ± 583	
VB1-9D	12/16/08	3230 ± 379	
VB2-10	01/14/08	< 162	
VB2-10	02/12/08	< 173	
VB2-10	03/11/08	< 175	
VB2-10	04/14/08	< 165	
VB2-10	05/14/08	< 162	
VB2-10	06/12/08	< 188	
VB2-10	08/14/08	< 153	
VB2-10	07/15/08	< 165	
VB2-10	09/15/08	< 146	
VB2-10	10/15/08	< 180	
VB2-10	11/12/08	< 173	
VB2-10	12/16/08	< 191	
VB2-10D	01/14/08	< 161	
VB2-10D	02/12/08	< 171	
VB2-10D	03/11/08	< 173	
VB2-10D	04/14/08	< 163	
VB2-10D	05/14/08	< 161	
VB2-10D	06/12/08	< 162	
VB2-10D	08/14/08	< 158	
VB2-10D	07/15/08	< 163	
VB2-10D	09/15/08	< 159	
VB2-10D	10/15/08	< 178	
VB2-10D	11/12/08	< 177	
VB2-10D	12/16/08	< 191	
VB2-11	01/14/08	< 159	
VB2-11	02/12/08	< 168	
VB2-11	03/11/08	< 178	
VB2-11	04/14/08	< 167	
VB2-11	05/14/08	< 153	
VB2-11	06/12/08	< 196	
VB2-11	07/15/08	< 178	
VB2-11	08/14/08	< 155	
VB2-11	09/15/08	< 150	
VB2-11	10/15/08	< 181	
VB2-11	11/12/08	< 173	
VB2-11	12/16/08	< 191	
VB2-11D	01/14/08	< 160	
VB2-11D	02/12/08	< 170	
VB2-11D	03/11/08	< 179	
VB2-11D	04/14/08	< 160	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
VB2-11D	05/14/08	< 155	
VB2-11D	06/12/08	< 190	
VB2-11D	07/15/08	< 183	
VB2-11D	08/14/08	< 160	
VB2-11D	09/15/08	< 142	
VB2-11D	10/15/08	< 180	
VB2-11D	11/12/08	< 171	
VB2-11P	12/16/08	< 185	
VB2-12	01/15/08	< 157	
VB2-12	02/11/08	< 158	
VB2-12	03/11/08	< 174	
VB2-12	04/15/08	< 167	
VB2-12	05/14/08	< 157	
VB2-12	06/12/08	< 192	
VB2-12	07/15/08	< 176	
VB2-12	08/14/08	< 156	
VB2-12	09/15/08	166 ± 100	
VB2-12	10/16/08	< 161	
VB2-12	11/12/08	< 181	
VB2-12	12/16/08	< 189	
VB2-12D	01/15/08	< 163	
VB2-12D	02/12/08	< 174	
VB2-12D	03/11/08	< 153	
VB2-12D	04/15/08	< 164	
VB2-12D	05/14/08	< 155	
VB2-12D	06/12/08	< 190	
VB2-12D	07/15/08	< 177	
VB2-12D	08/14/08	< 156	
VB2-12D	09/15/08	< 166	
VB2-12D	10/16/08	< 157	
VB2-12D	11/12/08	< 177	
VB2-12D	12/16/08	1030 ± 186	
VB2-12D	12/16/08	879 ± 159	
VB2-13	03/12/08	18200 ± 1870	
VB2-13	06/12/08	6250 ± 684	
VB2-13	09/18/08	1720 ± 239	
VB2-13	12/15/08	390 ± 132	
VB2-13D	03/12/08	2480 ± 316	
VB2-13D	06/12/08	2650 ± 328	
VB2-13D	09/18/08	1160 ± 186	
VB2-13D	12/15/08	890 ± 161	
VB2-14	03/12/08	6670 ± 725	
VB2-14	06/12/08	2250 ± 288	
VB2-14	09/18/08	1740 ± 224	
VB2-14	12/15/08	2950 ± 368	
VB2-14D	03/12/08	8500 ± 906	
VB2-14D	06/12/08	3290 ± 390	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
VB2-14D	09/18/08	251 ± 109	
VB2-14D	12/15/08	< 190	
VB2-15	09/18/08	1100 ± 160	
VB2-15D	03/13/08	< 186	
VB2-15D	06/12/08	4220 ± 479	
VB2-15D	12/16/08	474 ± 138	
VB2-16	03/13/08	< 180	
VB2-16	06/12/08	< 161	
VB2-16	09/18/08	< 160	
VB2-16	12/15/08	< 190	
VB2-16D	03/13/08	< 186	
VB2-16D	06/12/08	< 163	
VB2-16D	09/18/08	< 163	
VB2-16D	12/15/08	< 189	
VB2-17	03/13/08	< 187	
VB2-17	06/12/08	< 163	
VB2-17	09/18/08	< 164	
VB2-17	12/15/08	< 188	
VB2-17D	03/13/08	911 ± 162	
VB2-17D	06/12/08	260 ± 110	
VB2-17D	09/18/08	224 ± 109	
VB2-17D	12/15/08	< 190	
VB2-2D	09/19/08	< 154	
VB2-5D	09/19/08	12200 ± 1260	
VB2-9D	09/19/08	< 155	
VB3-10D	09/18/08	< 155	
VB3-2	01/14/08	167 ± 104	
VB3-2	02/13/08	< 181	
VB3-2	03/11/08	< 156	
VB3-2	04/15/08	< 165	
VB3-2	05/15/08	< 167	
VB3-2	06/09/08	< 182	
VB3-2	07/14/08	< 165	
VB3-2	08/14/08	< 154	
VB3-2	09/17/08	< 164	
VB3-2	10/15/08	< 183	
VB3-2	11/11/08	< 188	
VB3-2	12/17/08	< 187	
VB3-4D	09/19/08	311 ± 114	
VB3-7D	09/18/08	< 156	
VB3-9D	09/19/08	< 154	
VB4-1	01/16/08	< 159	
VB4-1	02/13/08	< 170	
VB4-1	03/11/08	< 186	
VB4-1	04/15/08	< 167	
VB4-1	05/13/08	< 161	
VB4-1	06/11/08	< 147	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
VB4-1	08/13/08	< 157	
VB4-1	09/16/08	< 170	
VB4-1	10/14/08	< 182	
VB4-1	11/11/08	< 192	
VB4-1	12/17/08	< 163	
VB4-5D	03/11/08	< 159	
VB4-5D	06/10/08	< 169	
VB4-5D	09/16/08	< 164	
VB4-5D	12/18/08	< 158	
VB4-6D	03/11/08	2570 ± 318	
VB4-6D	06/10/08	2430 ± 303	
VB4-6D	09/16/08	2640 ± 329	
VB4-6D	12/18/08	3590 ± 406	
VB5-2	01/16/08	< 157	
VB5-2	02/13/08	< 163	
VB5-2	03/11/08	< 160	
VB5-2	04/15/08	< 165	
VB5-2	05/15/08	< 161	
VB5-2	06/10/08	< 169	
VB5-2	08/12/08	< 156	
VB5-2	09/16/08	< 173	
VB5-2	10/15/08	< 179	
VB5-2	11/12/08	< 176	
VB5-2	12/18/08	< 161	
VB6-1	01/15/08	< 161	
VB6-1	02/13/08	< 163	
VB6-1	03/11/08	< 159	
VB6-1	04/17/08	< 182	
VB6-1	05/13/08	< 165	
VB6-1	06/09/08	< 170	
VB6-1	08/12/08	< 151	
VB6-1	09/16/08	< 170	
VB6-1	10/14/08	< 177	
VB6-1	11/11/08	< 190	
VB6-1	12/16/08	< 174	
VB7-1	01/15/08	670 ± 142	
VB7-1	02/12/08	435 ± 122	
VB7-1	03/11/08	745 ± 143	
VB7-1	04/15/08	528 ± 134	
VB7-1	05/13/08	691 ± 141	
VB7-1	08/12/08	621 ± 128	
VB7-1	09/16/08	417 ± 126	
VB7-1	10/14/08	314 ± 128	
VB7-1	11/11/08	356 ± 130	
VB7-1	12/16/08	316 ± 129	
VB8-2	01/15/08	< 158	
VB8-2	02/12/08	< 166	

TABLE B-I.1 CONCENTRATIONS OF TRITIUM AND STRONTIUM IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
VB8-2	03/11/08	< 160	
VB8-2	04/15/08	< 166	
VB8-2	05/13/08	< 165	
VB8-2	06/09/08	< 169	
VB8-2	08/12/08	< 155	
VB8-2	09/15/08	< 168	
VB8-2	10/14/08	< 153	
VB9-1	01/15/08	< 160	
VB9-1	02/12/08	< 180	
VB9-1	03/11/08	< 159	
VB9-1	04/15/08	< 169	
VB9-1	05/13/08	< 167	
VB9-1	06/10/08	< 171	
VB9-1	07/15/08	< 182	
VB9-1	08/12/08	< 156	
VB9-1	09/15/08	< 160	
VB9-1	10/14/08	178 ± 107	
VB9-1	11/11/08	< 192	
VB9-1	12/16/08	< 187	
WCFPD-1D	03/11/08	1480 ± 211	
WCFPD-1D	06/10/08	406 ± 122	
WCFPD-1D	09/18/08	894 ± 151	
WCFPD-1D	12/16/08	485 ± 138	
WCFPD-2DR	03/11/08	< 158	
WCFPD-2DR	06/10/08	< 167	
WCFPD-2DR	09/18/08	< 163	
WCFPD-2DR	12/16/08	< 176	
WELL D-1D	10/19/08	< 164	

TABLE B-I.2 **CONCENTRATIONS OF GAMMA EMITTERS IN GROUNDWATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008**

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
MW 144D	08/19/08	< 18	< 12	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 44	< 1	< 1	< 40	< 12
MW-11	09/15/08	< 21	< 10	< 1	< 2	< 6	< 1	< 3	< 2	< 3	< 421	< 1	< 1	< 151	< 51
MW-13	09/18/08	< 17	< 24	< 1	< 1	< 4	< 1	< 2	< 2	< 3	< 252	< 1	< 1	< 102	< 28
MW-141D	08/27/08	< 17	170 ± 30	< 1	< 2	< 5	< 2	< 3	< 2	< 3	< 25	< 1	< 1	< 30	< 9
MW-142D	08/18/08	< 14	189 ± 28	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 35	< 1	< 1	< 32	< 9
MW-143D	08/27/08	< 20	< 14	< 2	< 2	< 5	< 2	< 3	< 2	< 4	< 28	< 1	< 2	< 32	< 10
MW-154	08/28/08	< 16	< 11	< 1	< 2	< 3	< 1	< 2	< 2	< 3	< 24	< 1	< 1	< 26	< 7
MW-155	08/28/08	< 19	< 13	< 2	< 2	< 5	< 2	< 3	< 2	< 4	< 27	< 1	< 2	< 34	< 9
MW-156	08/28/08	< 16	< 29	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 23	< 1	< 1	< 28	< 9
MW-159D	08/27/08	< 16	< 27	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 24	< 1	< 1	< 27	< 9
MW-16-D	08/27/08	< 19	< 15	< 2	< 2	< 4	< 1	< 3	< 2	< 4	< 29	< 1	< 2	< 34	< 11
MW-2	09/16/08	< 23	< 9	< 1	< 2	< 7	< 1	< 2	< 2	< 4	< 350	< 1	< 1	< 138	< 49
MW-22	09/15/08	< 23	< 11	< 1	< 2	< 6	< 1	< 3	< 3	< 4	< 479	< 1	< 1	< 178	< 56
MW-5	09/16/08	< 19	< 8	< 1	< 1	< 4	< 1	< 2	< 2	< 3	< 342	< 1	< 1	< 133	< 39
MW-6	09/16/08	< 18	< 9	< 1	< 2	< 5	< 1	< 2	< 2	< 3	< 346	< 1	< 1	< 141	< 39
MW-7	09/16/08	< 18	< 23	< 1	< 1	< 5	< 1	< 2	< 2	< 3	< 344	< 1	< 1	< 123	< 40
MW-9	09/15/08	< 20	< 24	< 1	< 2	< 6	< 1	< 2	< 2	< 3	< 352	< 1	< 1	< 139	< 44
MW-BW-204I	10/26/08	< 15	< 27	< 1	< 1	< 4	< 1	< 2	< 2	< 3	< 34	< 1	< 1	< 30	< 10
MW-BW-205I	09/17/08	< 19	< 8	< 1	< 1	< 4	< 1	< 2	< 2	< 3	< 297	< 1	< 1	< 106	< 37
MW-BW-206I	09/17/08	< 24	< 11	< 1	< 2	< 6	< 1	< 3	< 2	< 4	< 425	< 1	< 1	< 156	< 50
MW-BW-207I	09/18/08	< 17	< 8	< 1	< 2	< 4	< 1	< 2	< 2	< 3	< 283	< 1	< 1	< 107	< 32

TABLE B-II.1 **CONCENTRATIONS OF TRITIUM AND STRONTIUM IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	H-3	SR-90
DITCH (DS-2) POINT F	09/22/08	201 ± 105	
DITCH (DS-2) POINT F	09/22/08	< 185	
DITCH (DS-2)	03/11/08	< 176	
DITCH (DS-2)	06/18/08	< 166	
EXELON POND	03/07/08	776 ± 161	
EXELON POND	05/05/08	1170 ± 187	
EXELON POND	06/23/08	994 ± 164	
EXELON POND	09/17/08	818 ± 160	
EXELON POND	09/17/08	719 ± 145	
EXELON POND	12/10/08	696 ± 148	
EXELON POND GRAB	07/14/08	1230 ± 192	
FATLAN POND	09/16/08	< 170	
H DITCH	02/06/08	178 ± 109	
H DITCH	04/11/08	< 171	
H DITCH	09/11/08	< 175	
LAKE DISCHARGE CANAL	05/21/08	< 159	
LAKE DISCHARGE CANAL	10/27/08	< 172	< 1.3
LAKE INTAKE	10/27/08	< 166	< 1.4
PW-006P	01/14/08	< 160	
PW-006P	07/28/08	< 182	
PW-006P	10/16/08	< 164	
SCAMEN POND	09/16/08	< 170	
SG-BW-105	05/05/08	< 159	
SW-05	10/16/08	< 163	
SW-05	07/16/08	186 ± 115	
SW-101	05/21/08	< 154	
SW-101	08/28/08	< 156	< 0.9
SW-102	08/28/08	< 157	< 0.9
SW-102 C DITCH	05/21/08	< 158	
SW-103	05/21/08	173 ± 103	
SW-103	09/10/08	284 ± 110	
SW-103	09/10/08	-	< 1.2
SW-104	09/10/08	166 ± 105	
SW-104	09/10/08	-	< 1.6
SW-104 A DITCH	05/21/08	< 157	

TABLE B-II.2

CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2008

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
LAKE DISCHARGE CANAL	10/27/08	< 13	< 30	< 1	< 2	< 4	< 1	< 2	< 1	< 3	< 28	< 1	< 1	< 28	< 9
LAKE INTAKE	10/27/08	< 13	< 25	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 26	< 1	< 1	< 28	< 9
SW-101	08/28/08	< 15	< 11	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 21	< 1	< 1	< 25	< 7
SW-102	08/28/08	< 20	< 42	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 30	< 2	< 2	< 36	< 11
SW-103	09/10/08	< 27	< 33	< 1	< 3	< 7	< 1	< 3	< 3	< 4	< 724	< 1	< 1	< 230	< 71
SW-104	09/10/08	< 20	< 9	< 1	< 2	< 6	< 1	< 3	< 2	< 4	< 622	< 1	< 1	< 197	< 60