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# **BRAIDWOOD STATION UNITS 1 and 2**

Annual Radiological  
Environmental Operating Report

1 January Through 31 December 2006

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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 2006 through 31 December 2006. During that time period, 1,411 analyses were performed on 1004 samples. In assessing all the data gathered for this report and comparing these results with preoperational data, it was concluded that the operation of Braidwood Station had no adverse radiological impact on the environment.

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

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

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

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

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

Food Product samples were analyzed for concentrations of gamma emitting nuclides. No fission or activation products were detected.

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

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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), Global Dosimetry, and Environmental Inc. (Midwest Labs) on samples collected during the period 1 January 2006 through 31 December 2006.

### 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 2006. 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 four surface water locations (BD-10, BD-25[control], BD-38, and BD-40) and one weekly composite sample of public drinking water location (BD-22) and ground/well water samples collected quarterly from five locations (BD-13, BD-34, BD-35, BD-36 and BD-37). 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, 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 one location semiannually, BD-10.

### Atmospheric Environment

The atmospheric environment was evaluated by performing radiological analyses on samples of air particulate, airborne iodine, and milk. Air particulate samples were collected and analyzed weekly at eight locations (BD-02, BD-03, BD-04, BD-05, BD-06, BD-19, BD-20, and BD-21). The control location was BD-03. Airborne iodine and particulate samples were obtained at each location, using a vacuum pump with charcoal and glass fiber filters attached. The pumps were run continuously and sampled air at the rate of approximately one cubic foot per minute. The air filters and air iodine samples were replaced weekly and sent to the laboratory for analysis.

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

### Ambient Gamma Radiation

Direct radiation measurements were made using CaF<sub>2</sub> thermoluminescent dosimeters (TLD). Each location consisted of 2 TLD sets. The TLD locations were placed on and around the Braidwood Station site as follows:

An inner ring 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 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;

Two TLDs – each comprised of two CaF<sub>2</sub> thermoluminescent phosphors enclosed in plastic – were placed at each location. The TLDs were exchanged quarterly and sent to Global Dosimetry for analysis.

### B. Sample Analysis

This section describes the general analytical methodologies used by TBE and Environmental Inc. (Midwest Labs) to analyze the environmental samples for radioactivity for the Braidwood Station REMP in 2006. The analytical procedures used by the laboratories are listed in Table B-2.

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

1. Concentrations of beta emitters in drinking and surface water and air particulates.
2. Concentrations of gamma emitters in drinking, ground/well and surface water, air particulates, milk, fish, sediment and food products.
3. Concentrations of tritium in drinking, 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 and public water 12 nuclides, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Zr-95, Nb-95, I-131, Cs-134, Cs-137, Ba-140, and La-140 were reported.

For ground/well water 11 nuclides, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Zr-95, Nb-95, Cs-134, Cs-137, Ba-140, and La-140 were reported.

For fish nine nuclides, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Nb/Zr-95, Cs-134, Cs-137 and Ba/La-140 were reported.

For sediment nine nuclides, Mn-54, Co-58, Fe-59, Co-60, Zn-95, Nb/Zr-95, Cs-134, Cs-137 and Ba/La-140 were reported.

For air particulate nine, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Nb/Zr-95, Cs-134, Cs-137 and Ba/La-140 were reported.

For milk 10 nuclides, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Nb/Zr-95, Cs-134, Cs-137, Ba-140 and La-140 were reported.

For vegetation nine nuclides, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Nb/Zr-95, Cs-134, Cs-137 and Ba/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 2006 the Braidwood Station REMP had a sample recovery rate in excess of 99%. Sample anomalies and missed samples are listed in the tables below:

Table D-1 LISTING OF SAMPLE ANOMALIES

Sample Type	Location Code	Collection Date	Reason
A/I	BD-02	03/23/06	No apparent reason for low reading of 163.7 hours.
A	BD-20	03/23/06	No apparent reason for low timer reading of 151.4 hours.
DW	BD-22	03/30/06	BaLa-140 LLD missed due to delay in compositing samples.
DW	BD-22	06/01/06	BaLa-140 LLD missed due to delay in compositing samples.
M	BD-17	06/15/06	I-131 LLD missed due to problem with the filter paper used in the analysis.
M	BD-17	06/29/06	I-131 LLD missed due to problem with the filter paper used in the analysis.
M	BD-18	06/30/06	I-131 LLD missed due to problem with the filter paper used in the analysis.
A/I	BD-02	08/10/06	No apparent reason for low timer reading of 166.1 hours.
A/I	BD-04	12/07/06	No apparent reason for low timer reading of 159.6 hours; may be due to snow storm in area.
A/I	BD-04	12/14/06	No apparent reason for low timer reading of 130.9 hours.

Table D-2 LISTING OF MISSED SAMPLES

Sample Type	Location Code	Collection Date	Reason
SW	BD-13	04/13/06	No sample; no access.
TLD	Other	06/29/06	TLD BD-106-2 found missing during 2 <sup>nd</sup> quarter exchange. Collector placed new 3 <sup>rd</sup> quarter TLD.
SW	BD-55, BD-56	10/12/06	No samples were collected.
GW	BD-50, BD-51 BD-52, BD-53 BD-54	10/12/06	No samples were collected.
S	BD-57	10/12/06	No samples were collected.

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

Surface water stations BD-38 and BD-40 were added to the Radiological Environmental Monitoring Program on 03/09/06 and 07/20/06, respectively. Surface water stations BD-55 and BD-56 were added to the Radiological Environmental Monitoring Program in 2006.

Groundwater stations BD-50, BD-51, BD-52, BD-53 and BD-54 were added to the Radiological Environmental Monitoring Program in 2006.

Fish station BD-41 was added to the Radiological Environmental Monitoring Program on 10/03/06.

Sediment station BD-57 was added to the Radiological Environmental Monitoring Program in 2006.

The air iodine samples were replaced biweekly and sent to the lab for analysis. All eight locations were analyzed biweekly (BD-02, BD-03, BD-

04, BD-05, BD-06, BD-19, BD-20, and BD-21) until April 06, 2006. For the rest of the year all eight locations (BD-02, BD-03, BD-04, BD-05, BD-06, BD-19, BD-20, and BD-21) were analyzed weekly.

#### IV. Results and Discussion

##### A. Aquatic Environment

###### 1. Surface Water

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

###### Gross Beta

Samples from all locations were analyzed for concentrations of gross beta (Table C-1.1, Appendix C). The values ranged from 2.7 to 11 pCi/l. Concentrations detected were consistent with those detected in previous years (Figures C-1, Appendix C).

###### Tritium

Quarterly composites of weekly collections were analyzed for tritium activity (Table C-1.2, Appendix C). The values ranged from <139 to 398 pCi/l. Concentrations detected were consistent with those detected in previous years (Figures C-2, Appendix C).

###### Gamma Spectrometry

Samples from all locations were analyzed for gamma emitting nuclides (Table C-1.3, 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). The values ranged from <2.4 to 5.2 pCi/l. Concentrations detected were consistent with those detected in previous years (Figures C–3, Appendix C).

### Tritium

Monthly composites of weekly samples from the location were analyzed for tritium activity (Table C–II.2, Appendix C). The values ranged from <158 to 210 pCi/l. Concentrations detected were consistent with those detected in previous years (Figures C–4, Appendix C).

### Gamma Spectrometry

Samples from the location were analyzed for gamma emitting nuclides (Table C–II.3, Appendix C). No nuclides were detected. The Ba-140 and La-140 LLDs were missed on the March and May composite samples. See the Program Exceptions section III.D for the explanation. All other required LLDs were met.

## 3. Ground/well Water

Quarterly samples were collected at five locations (BD-13, BD-34, BD-35, BD-36 and BD-37). The following analyses were performed:

### Tritium

Quarterly grab samples from the locations were analyzed for tritium activity (Table C–III.1, Appendix C). The values ranged from <153 to 396 pCi/l. Concentrations detected were consistent with those detected in previous years (Figures C–5 through C–7, 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, and carp were collected at three locations (BD-25, BD-28, and BD-41) semiannually. Location BD-28 could be affected by Braidwood Station's effluent releases. The following analysis was performed:

#### Gamma Spectrometry

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

### 5. Sediment

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

#### Gamma Spectrometry

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

Concentrations of the fission product Cs-137 were found in one sediment sample with a concentration of 142 pCi/kg dry. The activity detected was consistent with those detected in previous years. 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 <5 to 38 E-3 pCi/m<sup>3</sup> with a mean of 20 E-3 pCi/m<sup>3</sup>. The results from the far field (Group II) ranged from <5 to 41 E-3 pCi/m<sup>3</sup> with a mean of 20 E-3 pCi/m<sup>3</sup>. The results from the Control location (Group III) ranged from 5 to 34 E-3 pCi/m<sup>3</sup> with a mean of 18 E-3 pCi/m<sup>3</sup>. Comparison of the 2006 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 2006 indicate no notable differences among the three groups (Figures C-8 through C-10, 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. The I-131 LLD was missed on three samples. See the Program Exceptions section III.D for the explanation. All other 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 Panasonic 814 (CaF<sub>2</sub>) thermoluminescent dosimeters. 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 19 to 33 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 comparable.

#### D. Land Use Survey

A Land Use Survey conducted during the August 2006 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<sup>2</sup> in each of the sixteen 22 ½ degree sectors around the site. There were no changes required to the Braidwood Station REMP, as a result of this survey. The results of this survey are summarized below.

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

E. Summary of Results – Inter-Laboratory Comparison Program

The primary and secondary laboratories analyzed Performance Evaluation (PE) samples of air particulate, air iodine, milk, soil, vegetation and water matrices (Appendix D). The PE samples, supplied by Analytics Inc., Environmental Resource Associates (ERA) and DOE's Mixed Analyte Performance Evaluation Program (MAPEP), were evaluated against the following pre-set acceptance criteria:

1. Analytics Evaluation Criteria

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

## 2. ERA Evaluation Criteria

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

## 3. DOE Evaluation Criteria

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

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

For the primary laboratory, 24 out of 28 analytes met the specified acceptance criteria. Four samples did not meet the specified acceptance criteria for the following reasons:

1. Teledyne Brown Engineering's MAPEP Series 15 January 2006 soil Cs-134 was evaluated as a false positive, although TBE considered the result a non-detect due to the peak not being identified by the gamma software. MAPEP suggests the Bi-214 is not being differentiated from the Cs-134 peak. When the ratio of activity to uncertainty exceeds 3, TBE will use a key line analysis rather than a weighted mean analysis when evaluating MAPEP non-detects.
2. Teledyne Brown Engineering's MAPEP Series 15 January 2006 Sr-90 in vegetation result of 2.22 Bq/kg exceeded the upper acceptance range of 2.029 Bq/kg. The samples were analyzed in triplicate and the results averaged. One high result of 2.43 Bq/kg biased the submitted results on the high side. TBE was unable to determine the cause for the higher result. The Sr-90 in vegetation results for MAPEP Series 14 and MAPEP Series 16 were acceptable. No client samples were analyzed during the MAPEP

Series 14 time period.

3. Teledyne Brown Engineering's MAPEP Series 15 January 2006 Pu-238 and Pu-239/240 in vegetation result of 2.22 Bq/kg failed the required acceptance ranges. TBE was evaluating the current preparation method for vegetation samples, which proved insufficient for the analyses. TBE does not perform isotopic Pu on client's vegetation samples.

For the secondary laboratory, 20 out of 25 analytes met the specified acceptance criteria. Seven samples did not meet the specified acceptance criteria for the following reasons:

1. Environmental Inc.'s ERA November 2006 water I-131 result of 28.4 pCi/L exceeded the upper control limit of 27.3 pCi/L. The reported result was an average of three analyses, results ranged from 25.36 pCi/L to 29.23 pCi/L. A fourth analysis was performed, with a result of 24.89 pCi/L.
2. Environmental Inc.'s MAPEP January 2006 vegetation Pu-238 result of 0.08 Bq/sample exceeded the lower control limit of 0.10 Bq/sample due to incomplete dissolution of the sample.
3. Environmental Inc.'s MAPEP January 2006 air particulate Pu-238 result of 0.03 Bq/sample exceeded the lower control limit of 0.05 Bq/sample due to incomplete dissolution of the sample.
4. Environmental Inc.'s MAPEP January 2006 soil Pu-238, Pu-239/240, U-233/234 and U-238 results of 14.6, 14.6, 13.5 and 15.4 Bq/kg, respectively, exceeded the lower control limits of 42.81, 32.09, 25.9 and 27.2 Bq/kg, respectively, due to incomplete dissolution of the sample.

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

## **APPENDIX A**

### **RADIOLOGICAL ENVIRONMENTAL MONITORING REPORT QUARTERLY AND ANNUAL SUMMARY**



**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 1ST QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		1ST QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
SURFACE WATER (PCI/LITER)	GR-B	6	4	5.1 (3/3) (4.5/ 5.4)	5.9 (3/3) ( 5.6/ 6.4)	5.9 (3/3) ( 5.6/ 6.4)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0	
	H-3	6	200	272 (4/5) (177/398)	189 (0/1) ( <189)	293 (4/4) (177/398)	BD-38 INDICATOR MAIN DRAINAGE DITCH 1.5 MILES SW OF SITE	0	
	GAMMA MN-54	6	15	3 (0/3) ( <2/ <4)	3 (0/3) ( <2/ <4)	3 (0/3) ( <2/ <4)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	CO-58		15	4 (0/3) ( <3/ <4)	4 (0/3) ( <3/ <4)	4 (0/3) ( <3/ <4)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0	
	FE-59		30	8 (0/3) ( <6/ <9)	8 (0/3) ( <6/ <10)	8 (0/3) ( <6/ <10)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0	
	CO-60		15	4 (0/3) ( <3/ <4)	3 (0/3) ( <2/ <4)	4 (0/3) ( <3/ <4)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	ZN-65		30	8 (0/3) ( <5/ <10)	7 (0/3) ( <6/ <9)	8 (0/3) ( <5/ <10)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	NB-95		15	4 (0/3) ( <3/ <4)	3 (0/3) ( <3/ <4)	4 (0/3) ( <3/ <4)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 1ST QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		1ST QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
SURFACE WATER (PCI/LITER)	ZR-95		30	6 (0/3) (<4/<8)	6 (0/3) (<5/<8)	6 (0/3) (<5/<8)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0	
	I-131		15	14 (0/3) (<12/<15)	13 (0/3) (<13/<14)	14 (0/3) (<12/<15)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	CS-134		15	4 (0/3) (<2/<4)	4 (0/3) (<3/<4)	4 (0/3) (<2/<4)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	CS-137		18	3 (0/3) (<2/<4)	3 (0/3) (<3/<4)	3 (0/3) (<2/<4)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	BA-140		60	26 (0/3) (<22/<28)	27 (0/3) (<24/<29)	27 (0/3) (<24/<29)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0	
	LA-140		15	9 (0/3) (<8/<10)	9 (0/3) (<8/<10)	9 (0/3) (<8/<10)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0	
DRINKING WATER (PCI/LITER)	GR-B	3	4	3.5 (2/3) (< 2.4/ 4.6)	N/A	3.5 (2/3) (< 2.4/ 4.6)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
	H-3	3	200	179 (0/3) (<174/<189)	N/A	179 (0/3) (<174/<189)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 1ST QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		1ST QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN		NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATION MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	
DRINKING WATER (PCI/LITER)	GAMMA MN-54	3	15	3 (0/3) (<2/<5)	N/A	3 (0/3) (<2/<5)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
				4 (0/3) (<2/<5)	N/A	4 (0/3) (<2/<5)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	CO-58	30	30	9 (0/3) (<6/<10)	N/A	9 (0/3) (<6/<10)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
				4 (0/3) (<2/<5)	N/A	4 (0/3) (<2/<5)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	ZN-65	15	15	8 (0/3) (<5/<13)	N/A	8 (0/3) (<5/<13)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
				4 (0/3) (<3/<6)	N/A	4 (0/3) (<3/<6)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	NB-95	30	30	7 (0/3) (<4/<10)	N/A	7 (0/3) (<4/<10)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
				12 (0/3) (<10/<15)	N/A	12 (0/3) (<10/<15)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
ZR-95	I-131		15	12 (0/3) (<10/<15)	N/A	12 (0/3) (<10/<15)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0

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BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		1ST QUARTER, 2006		
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 MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
DRINKING WATER (PCI/LITER)	CS-134		15	4 (0/3) (<2/<7)	N/A	4 (0/3) (<2/<7)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	CS-137		18	3 (0/3) (<2/<6)	N/A	3 (0/3) (<2/<6)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	BA-140		60	60 (0/3) (<35/<105)	N/A	60 (0/3) (<35/<105)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	LA-140		15	21 (0/3) (<10/<37)	N/A	21 (0/3) (<10/<37)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
GROUND WATER (PCI/LITER)	H-3	5	200	206 (1/5) (<153/396)	N/A	396 (1/1) (396)	BD-36 INDICATOR HUTTON WELL 4.7 MILES E OF SITE	0
	GAMMA MN-54	5	15	7 (0/5) (<6/<8)	N/A	8 (0/1) (<8)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0
	CO-58		15	7 (0/5) (<6/<8)	N/A	8 (0/1) (<8)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0
	FE-59		30	14 (0/5) (<11/<16)	N/A	16 (0/1) (<16)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0

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Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		1ST QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
GROUND WATER (PCI/LITER)	CO-60		15	7 (0/5) (<6/<8)	N/A	8 (0/1) (<8)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0	
	ZN-65		30	19 (0/5) (<17/<22)	N/A	22 (0/1) (<22)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0	
	NB-95		15	8 (0/5) (<7/<9)	N/A	9 (0/1) (<9)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0	
	ZR-95		30	12 (0/5) (<11/<14)	N/A	14 (0/1) (<14)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0	
	I-131		15	11 (0/5) (<9/<14)	N/A	14 (0/1) (<14)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0	
	CS-134		15	10 (0/5) (<8/<13)	N/A	13 (0/1) (<13)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0	
	CS-137		18	8 (0/5) (<6/<9)	N/A	9 (0/1) (<9)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0	
	BA-140		60	32 (0/5) (<28/<39)	N/A	39 (0/1) (<39)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0	

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

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BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		1ST QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATION	LOCATION	MEAN(M)	STATION #	NUMBER OF	
				MEAN(M) (F)	MEAN(M) (F)	MEAN(M) (F)	DISTANCE AND DIRECTION	REPORTED	MEASUREMENTS
GROUND WATER (PCI/LITER)	LA-140		15	11 (0/5) (<9/<12)	N/A	12 (0/1) (<12)	BD-13 INDICATOR BRAIDWOOD CITY HALL WELL 1.7 MILES NNE OF SITE	0	
AIR PARTICULATE (E-3 PCI/CU.METER)	GR-B	104	10	18 (91/91) (8/30)	17 (13/13) (8/27)	19 (13/13) (14/26)	BD-06 INDICATOR GODLEY 0.5 MILEW WSW OF SITE	0	
	GAMMA MN-54	8	N/A	4.2 (0/7) (< 2.6/< 6.0)	3.8 (0/1) (< 3.8)	6.0 (0/1) (< 6.0)	BD-05 INDICATOR GARDNER 5.5 MILES SW OF SITE	0	
	CO-58		N/A	7.7 (0/7) (< 3.8/<10.5)	6.6 (0/1) (< 6.6)	10.5 (0/1) (<10.5)	BD-02 INDICATOR CUSTER PARK 5.0 MILES E OF SITE	0	
	FE-59		N/A	27.3 (0/7) (<18.5/<34.9)	17.8 (0/1) (<17.8)	34.9 (0/1) (<34.9)	BD-06 INDICATOR GODLEY 0.5 MILEW WSW OF SITE	0	
	CO-60		N/A	4.3 (0/7) (< 3.0/< 5.3)	6.5 (0/1) (< 6.5)	6.5 (0/1) (< 6.5)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0	
	ZN-65		N/A	11.7 (0/7) (< 6.6/<17.6)	19.9 (0/1) (<19.9)	19.9 (0/1) (<19.9)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0	
	ZRNB-95		N/A	8.6 (0/7) (< 7.1/<11.2)	10.7 (0/1) (<10.7)	11.2 (0/1) (<11.2)	BD-05 INDICATOR GARDNER 5.5 MILES SW OF SITE	0	

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 1ST QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		1ST QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR LOCATION MEAN(M) (F) RANGE	CONTROL LOCATION MEAN(M) (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
AIR PARTICULATE (E-3 PCI/CU.METER)	CS-134		50	4.8 (0/7) (<3.7/<6.2)	6.2 (0/1) (<6.2)	6.2 (0/1) (<6.2)	BD-02 INDICATOR CUSTER PARK 5.0 MILES E OF SITE	0	
	CS-137		60	3.4 (0/7) (<2.5/<4.1)	4.6 (0/1) (<4.6)	4.6 (0/1) (<4.6)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0	
	BALA140		N/A	240.9 (0/7) (<169/<373)	304 (0/1) (<304)	373 (0/1) (<373)	BD-05 INDICATOR GARDNER 5.5 MILES SW OF SITE	0	
AIR IODINE (E-3 PCI/CU.METER)	GAMMA I-131	48	70	21 (0/42) (<11/<30)	20 (0/6) (<16/<26)	22 (0/6) (<18/<30)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0	
MILK (PCI/LITER)	I-131	6	1	0.5 (0/3) (<0.4/<0.6)	0.5 (0/3) (<0.4/<0.6)	0.5 (0/3) (<0.4/<0.6)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
	GAMMA MN-54	6	N/A	7 (0/3) (<4/<9)	8 (0/3) (<6/<8)	8 (0/3) (<6/<8)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
	CO-58		N/A	7 (0/3) (<5/<8)	8 (0/3) (<7/<9)	8 (0/3) (<7/<9)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 1ST QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		1ST QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
MILK (PCI/LITER)	FE-59		N/A	15 (0/3) (<8/<19)	18 (0/3) (<16/<20)	18 (0/3) (<16/<20)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
	CO-60		N/A	7 (0/3) (<5/<9)	8 (0/3) (<7/<9)	8 (0/3) (<7/<9)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
	ZN-65		N/A	18 (0/3) (<10/<23)	21 (0/3) (<17/<24)	21 (0/3) (<17/<24)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
	ZRNB-95		N/A	7 (0/3) (<4/<9)	8 (0/3) (<7/<9)	8 (0/3) (<7/<9)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
	CS-134		15	8 (0/3) (<3/<10)	10 (0/3) (<7/<11)	10 (0/3) (<7/<11)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
	CS-137		18	7 (0/3) (<5/<9)	8 (0/3) (<7/<9)	8 (0/3) (<7/<9)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
	BA-140		60	29 (0/3) (<16/<40)	38 (0/3) (<33/<44)	38 (0/3) (<33/<44)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
	LA-140		15	10 (0/3) (<5/<14)	10 (0/3) (<8/<10)	10 (0/3) (<5/<14)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	

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



**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 1ST QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		1ST QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
DIRECT RADIATION (MILLI-ROENTGEN/QTR.)	TLD-QUARTERLY	80	N/A	25 (78/78) (22/31)	25 (2/2) (24/26)	31 (1/1) (31)	BD-211-1 INDICATOR		0
							4.8 MILES SW OF SITE		

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 2ND QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		2ND QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATION	LOCATION	MEAN(M)	STATION #		
				MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	NAME DISTANCE AND DIRECTION		
SURFACE WATER (PCI/LITER)	GR-B	6	4	4.9 (3/3) (4.4/ 5.5)	4.2 (3/3) ( 2.7/ 5.2)	4.9 (3/3) ( 4.4/ 5.5)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	H-3	15	200	205 (7/14) (<174/310)	173 (0/1) (<173)	208 (7/13) (<175/310)	BD-38 INDICATOR MAIN DRAINAGE DITCH 1.5 MILES SW OF SITE	0	
	GAMMA MN-54	6	15	2 (0/3) (<2/<2)	2 (0/3) (<1/<3)	2 (0/3) (<2/<2)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	CO-58		15	2 (0/3) (<2/<3)	2 (0/3) (<1/<3)	2 (0/3) (<2/<3)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	FE-59		30	5 (0/3) (<5/<6)	4 (0/3) (<2/<6)	5 (0/3) (<5/<6)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	CO-60		15	2 (0/3) (<1/<2)	2 (0/3) (<1/<2)	2 (0/3) (<1/<2)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	ZN-65		30	4 (0/3) (<3/<5)	4 (0/3) (<2/<6)	4 (0/3) (<3/<5)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	NB-95		15	2 (0/3) (<2/<3)	2 (0/3) (<1/<3)	2 (0/3) (<2/<3)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 2ND QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		2ND QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN		NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	
SURFACE WATER (PCI/LITER)	ZR-95		30	4 (0/3) (<3/<5)	3 (0/3) (<2/<5)	4 (0/3) (<3/<5)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0
	I-131		15	11 (0/3) (<9/<11)	12 (0/3) (<8/<15)	12 (0/3) (<8/<15)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0
	CS-134		15	2 (0/3) (<2/<2)	2 (0/3) (<1/<3)	2 (0/3) (<2/<2)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0
	CS-137		18	2 (0/3) (<1/<2)	2 (0/3) (<1/<3)	2 (0/3) (<1/<2)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0
	BA-140		60	24 (0/3) (<18/<34)	19 (0/3) (<15/<25)	24 (0/3) (<18/<34)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0
	LA-140		15	8 (0/3) (<6/<11)	7 (0/3) (<6/<8)	8 (0/3) (<6/<11)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0
DRINKING WATER (PCI/LITER)	GR-B	3	4	3.4 (3/3) (3.2/3.6)	N/A	3.4 (3/3) (3.2/3.6)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	H-3	3	200	170 (0/3) (<167/<175)	N/A	170 (0/3) (<167/<175)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 2ND QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457			
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		2ND QUARTER, 2006			
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 MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
DRINKING WATER (PCI/LITER)	GAMMA MN-54	3	15	2	N/A	2	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
				(0/3)		(0/3)			
					(<1/<2)		(<1/<2)		
	CO-58			15	2	N/A	2	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
					(0/3)		(0/3)		
					(<2/<3)		(<2/<3)		
	FE-59			30	5	N/A	5	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
					(0/3)		(0/3)		
				(<4/<5)		(<4/<5)			
CO-60			15	2	N/A	2	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
				(0/3)		(0/3)			
				(<1/<2)		(<1/<2)			
ZN-65			30	4	N/A	4	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
				(0/3)		(0/3)			
				(<3/<5)		(<3/<5)			
NB-95			15	2	N/A	2	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
				(0/3)		(0/3)			
				(<2/<2)		(<2/<2)			
ZR-95			30	4	N/A	4	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
				(0/3)		(0/3)			
				(<3/<4)		(<3/<4)			
I-131			15	11	N/A	11	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
				(0/3)		(0/3)			
				(<7/<14)		(<7/<14)			

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 2ND QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

<b>Name of Facility:</b>		<b>BRAIDWOOD</b>		<b>DOCKET NUMBER:</b>		<b>50-456 &amp; 50-457</b>		
<b>Location of Facility:</b>		<b>BRACEVILLE, IL</b>		<b>REPORTING PERIOD:</b>		<b>2ND QUARTER, 2006</b>		
<b>MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)</b>	<b>TYPES OF ANALYSIS PERFORMED</b>	<b>NUMBER OF ANALYSIS PERFORMED</b>	<b>REQUIRED LOWER LIMIT OF DETECTION (LLD)</b>	<b>INDICATOR</b>	<b>CONTROL</b>	<b>LOCATION WITH HIGHEST ANNUAL MEAN</b>		
				<b>LOCATIONS MEAN(M) (F) RANGE</b>	<b>LOCATIONS MEAN(M) (F) RANGE</b>	<b>MEAN(M) (F) RANGE</b>	<b>STATION # NAME DISTANCE AND DIRECTION</b>	<b>NUMBER OF NONROUTINE REPORTED MEASUREMENTS</b>
DRINKING WATER (PCI/LITER)	CS-134		15	2 (0/3) (<1/<2)	N/A	2 (0/3) (<1/<2)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	CS-137		18	2 (0/3) (<1/<2)	N/A	2 (0/3) (<1/<2)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	BA-140		60	38 (0/3) (<19/<74)	N/A	38 (0/3) (<19/<74)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	LA-140		15	12 (0/3) (<6/<23)	N/A	12 (0/3) (<6/<23)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
GROUND WATER (PCI/LITER)	H-3	5	200	224 (1/5) (<173/393)	N/A	393 (1/1) (393)	BD-36 INDICATOR HUTTON WELL 4.7 MILES E OF SITE	0
	GAMMA MN-54	5	15	5 (0/5) (<4/<5)	N/A	5 (0/1) (<5)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0
	CO-58		15	5 (0/5) (<4/<6)	N/A	6 (0/1) (<6)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0
	FE-59		30	11 (0/5) (<9/<13)	N/A	13 (0/1) (<13)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 2ND QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		2ND QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
GROUND WATER (PCI/LITER)	CO-60		15	5 (0/5) (<4/<6)	N/A	6 (0/1) (<6)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0	
	ZN-65		30	11 (0/5) (<9/<12)	N/A	12 (0/1) (<12)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0	
	NB-95		15	5 (0/5) (<5/<6)	N/A	6 (0/1) (<6)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0	
	ZR-95		30	9 (0/5) (<8/<10)	N/A	10 (0/1) (<10)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0	
	I-131		15	13 (0/5) (<12/<14)	N/A	14 (0/1) (<14)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0	
	CS-134		15	5 (0/5) (<5/<6)	N/A	6 (0/1) (<6)	BD-13 INDICATOR BRAIDWOOD CITY HALL WELL 1.7 MILES NNE OF SITE	0	
	CS-137		18	5 (0/5) (<4/<6)	N/A	6 (0/1) (<6)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0	
	BA-140		60	30 (0/5) (<28/<33)	N/A	33 (0/1) (<33)	BD-13 INDICATOR BRAIDWOOD CITY HALL WELL 1.7 MILES NNE OF SITE	0	

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 2ND QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457	
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		2ND QUARTER, 2006	
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR LOCATION MEAN(M) (F) RANGE	CONTROL LOCATION MEAN(M) (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GROUND WATER (PCI/LITER)	LA-140		15	10 (0/5) (<9/<11)	N/A	11 (0/1) (<11)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0
FISH (PCI/KG WET)	GAMMA MN-54	4	130	54 (0/2) (<50/<58)	44 (0/2) (<40/<48)	54 (0/2) (<50/<58)	BD-28 INDICATOR KANKAKEE RIVER DISCHARGE 5.4 MILES E OF SITE	0
	CO-58		130	61 (0/2) (<57/<65)	50 (0/2) (<47/<53)	61 (0/2) (<57/<65)	BD-28 INDICATOR KANKAKEE RIVER DISCHARGE 5.4 MILES E OF SITE	0
	FE-59		260	124 (0/2) (<120/<128)	101 (0/2) (<97/<105)	124 (0/2) (<120/<128)	BD-28 INDICATOR KANKAKEE RIVER DISCHARGE 5.4 MILES E OF SITE	0
	CO-60		130	50 (0/2) (<48/<53)	42 (0/2) (<37/<47)	50 (0/2) (<48/<53)	BD-28 INDICATOR KANKAKEE RIVER DISCHARGE 5.4 MILES E OF SITE	0
	ZN-65		260	138 (0/2) (<134/<142)	102 (0/2) (<97/<106)	138 (0/2) (<134/<142)	BD-28 INDICATOR KANKAKEE RIVER DISCHARGE 5.4 MILES E OF SITE	0
	ZRNB-95		N/A	61 (0/2) (<57/<66)	51 (0/2) (<50/<51)	61 (0/2) (<57/<66)	BD-28 INDICATOR KANKAKEE RIVER DISCHARGE 5.4 MILES E OF SITE	0
	CS-134		130	61 (0/2) (<58/<64)	46 (0/2) (<45/<48)	61 (0/2) (<58/<64)	BD-28 INDICATOR KANKAKEE RIVER DISCHARGE 5.4 MILES E OF SITE	0

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 2ND QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		2ND QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
FISH (PCI/KG WET)	CS-137		150	53 (0/2) (<51/<55)	43 (0/2) (<43/<43)	53 (0/2) (<51/<55)	BD-28 INDICATOR KANKAKEE RIVER DISCHARGE 5.4 MILES E OF SITE		0
	BALA140		N/A	140 (0/2) (<137/<142)	133 (0/2) (<130/<135)	140 (0/2) (<137/<142)	BD-28 INDICATOR KANKAKEE RIVER DISCHARGE 5.4 MILES E OF SITE		0
SEDIMENT (PCI/KG DRY)	GAMMA MN-54	1	N/A	135 (0/1) (<135)	N/A	135 (0/1) (<135)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	CO-58		N/A	146 (0/1) (<146)	N/A	146 (0/1) (<146)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	FE-59		N/A	319 (0/1) (<319)	N/A	319 (0/1) (<319)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	CO-60		N/A	122 (0/1) (<122)	N/A	122 (0/1) (<122)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	ZN-65		N/A	321 (0/1) (<321)	N/A	321 (0/1) (<321)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	ZRNB-95		N/A	144 (0/1) (<144)	N/A	144 (0/1) (<144)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 2ND QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

<b>Name of Facility:</b>		<b>BRAIDWOOD</b>			<b>DOCKET NUMBER:</b>		<b>50-456 &amp; 50-457</b>		
<b>Location of Facility:</b>		<b>BRACEVILLE, IL</b>			<b>REPORTING PERIOD:</b>		<b>2ND QUARTER, 2006</b>		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
SEDIMENT (PCI/KG DRY)	CS-134		150	135 (0/1) (<135)	N/A	135 (0/1) (<135)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	CS-137		180	137 (0/1) (<137)	N/A	137 (0/1) (<137)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	BALA140		N/A	325 (0/1) (<325)	N/A	325 (0/1) (<325)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
AIR PARTICULATE (E-3 PCI/CU.METER)	GR-B	104	10	15 (88/91) (<5/25)	15 (13/13) (5/22)	16 (13/13) (6/25)	BD-05 INDICATOR GARDNER 5.5 MILES SW OF SITE	0	
	GAMMA MN-54	8	N/A	3.1 (0/7) (< 1.7/< 4.1)	2.6 (0/1) (< 2.6)	4.1 (0/1) (< 4.1)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0	
	CO-58		N/A	4.7 (0/7) (< 3.0/< 6.3)	4.9 (0/1) (< 4.9)	6.3 (0/1) (< 6.3)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0	
	FE-59		N/A	14.1 (0/7) (<10.2/<19.7)	11.2 (0/1) (<11.2)	19.7 (0/1) (<19.7)	BD-21 INDICATOR NEARSITE NE 0.5 MILES NE OF SITE	0	
	CO-60		N/A	3.0 (0/7) (< 1.9/< 4.5)	2.2 (0/1) (< 2.2)	4.5 (0/1) (< 4.5)	BD-21 INDICATOR NEARSITE NE 0.5 MILES NE OF SITE	0	

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 2ND QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		2ND QUARTER, 2006		
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 MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
AIR PARTICULATE (E-3 PCI/CU.METER)	ZN-65		N/A	7.3 (0/7) (< 4.8/< 9.8)	6.0 (0/1) (< 6.0)	9.8 (0/1) (< 9.8)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0
	ZRNB-95		N/A	5.3 (0/7) (< 3.9/< 6.6)	3.8 (0/1) (< 3.8)	6.6 (0/1) (< 6.6)	BD-21 INDICATOR NEARSITE NE 0.5 MILES NE OF SITE	0
	CS-134		50	3.5 (0/7) (< 2.2/< 4.8)	2.6 (0/1) (< 2.6)	4.8 (0/1) (< 4.8)	BD-21 INDICATOR NEARSITE NE 0.5 MILES NE OF SITE	0
	CS-137		60	2.9 (0/7) (< 2.1/< 3.7)	2.8 (0/1) (< 2.8)	3.7 (0/1) (< 3.7)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0
	BALA140		N/A	98.7 (0/7) (< 78.7/< 122)	95.8 (0/1) (< 95.8)	122 (0/1) (< 122)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0
AIR IODINE (E-3 PCI/CU.METER)	GAMMA I-131	104	70	50 (0/91) (< 15/< 69)	53 (0/13) (< 22/< 67)	53 (0/13) (< 22/< 69)	BD-05 INDICATOR GARDNER 5.5 MILES SW OF SITE	0
MILK (PCI/LITER)	I-131	12	1	1.3 (0/6) (< 0.3/< 4.4)	1.0 (0/6) (< 0.3/< 2.9)	1.3 (0/6) (< 0.3/< 4.4)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 2ND QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		2ND QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
MILK (PCI/LITER)	GAMMA MN-54	12	N/A	8 (0/6) (<7/<9)	8 (0/6) (<5/<10)	8 (0/6) (<7/<9)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
				9 (0/6) (<7/<11)	8 (0/6) (<5/<9)	9 (0/6) (<7/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
				20 (0/6) (<17/<24)	19 (0/6) (<12/<23)	20 (0/6) (<17/<24)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
	CO-58		N/A	9 (0/6) (<7/<11)	9 (0/6) (<6/<12)	9 (0/6) (<7/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
				9 (0/6) (<7/<11)	9 (0/6) (<6/<12)	9 (0/6) (<7/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
				22 (0/6) (<18/<25)	20 (0/6) (<12/<25)	22 (0/6) (<18/<25)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
	CO-60		N/A	9 (0/6) (<7/<11)	9 (0/6) (<5/<11)	9 (0/6) (<8/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
				9 (0/6) (<7/<11)	9 (0/6) (<5/<11)	9 (0/6) (<8/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
				9 (0/6) (<7/<11)	9 (0/6) (<5/<11)	9 (0/6) (<8/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
ZN-65		N/A	9 (0/6) (<8/<11)	9 (0/6) (<5/<11)	9 (0/6) (<8/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0		
			9 (0/6) (<8/<11)	9 (0/6) (<5/<11)	9 (0/6) (<8/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0		
			9 (0/6) (<8/<11)	9 (0/6) (<5/<11)	9 (0/6) (<8/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0		
ZRNB-95		N/A	9 (0/6) (<8/<11)	9 (0/6) (<5/<11)	9 (0/6) (<8/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0		
			9 (0/6) (<8/<11)	9 (0/6) (<5/<11)	9 (0/6) (<8/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0		
			9 (0/6) (<8/<11)	9 (0/6) (<5/<11)	9 (0/6) (<8/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0		
CS-134		15	8 (0/6) (<7/<10)	9 (0/6) (<5/<13)	9 (0/6) (<5/<13)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0		
			8 (0/6) (<7/<10)	9 (0/6) (<5/<13)	9 (0/6) (<5/<13)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0		
			8 (0/6) (<7/<10)	9 (0/6) (<5/<13)	9 (0/6) (<5/<13)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0		
CS-137		18	9 (0/6) (<7/<11)	8 (0/6) (<5/<11)	9 (0/6) (<7/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0		
			9 (0/6) (<7/<11)	8 (0/6) (<5/<11)	9 (0/6) (<7/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0		
			9 (0/6) (<7/<11)	8 (0/6) (<5/<11)	9 (0/6) (<7/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0		

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 2ND QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		2ND QUARTER, 2006		
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 MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
MILK (PCI/LITER)	BA-140		60	44 (0/6) (<40/<49)	41 (0/6) (<27/<51)	44 (0/6) (<40/<49)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
	LA-140		15	14 (0/6) (<14/<15)	13 (0/6) (<9/<15)	14 (0/6) (<14/<15)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
DIRECT RADIATION (MILLI-ROENTGEN/QTR.)	TLD-QUARTERLY	79	N/A	21 (77/77) (19/28)	21 (2/2) (21/21)	28 (1/1) (28)	BD-209-2 INDICATOR 4.8 MILES S OF SITE	0	

A - 20

\* D-211-2 also read 28 mrem.

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 3RD QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		3RD QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR LOCATION MEAN(M) (F) RANGE	CONTROL LOCATION MEAN(M) (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
SURFACE WATER (PCI/LITER)	GR-B	6	4	6.9 (3/3) (4.6/ 8.2)	5.9 (3/3) ( 3.7/ 7.2)	6.9 (3/3) (4.6/ 8.2)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0
	H-3	18	200	194 (3/17) (<169/342)	185 (0/1) (<185)	199 (3/13) (<169/342)	BD-38 INDICATOR MAIN DRAINAGE DITCH 1.5 MILES SW OF SITE	0
	GAMMA MN-54	6	15	1 (0/3) (<1/<2)	2 (0/3) (<1/<2)	2 (0/3) (<1/<2)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0
	CO-58		15	2 (0/3) (<1/<2)	2 (0/3) (<2/<2)	2 (0/3) (<2/<2)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0
	FE-59		30	4 (0/3) (<3/<4)	4 (0/3) (<4/<5)	4 (0/3) (<4/<5)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0
	CO-60		15	2 (0/3) (<1/<2)	2 (0/3) (<1/<2)	2 (0/3) (<1/<2)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0
	ZN-65		30	3 (0/3) (<2/<3)	3 (0/3) (<3/<4)	3 (0/3) (<3/<4)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0
	NB-95		15	2 (0/3) (<1/<2)	2 (0/3) (<2/<2)	2 (0/3) (<2/<2)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 3RD QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		3RD QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR LOCATION MEAN(M) (F) RANGE	CONTROL LOCATION MEAN(M) (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
SURFACE WATER (PCI/LITER)	ZR-95		30	3 (0/3) (<3/<3)	3 (0/3) (<3/<4)	3 (0/3) (<3/<4)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0
	I-131		15	12 (0/3) (<8/<14)	13 (0/3) (<9/<15)	13 (0/3) (<9/<15)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0
	CS-134		15	1 (0/3) (<1/<2)	1 (0/3) (<1/<2)	1 (0/3) (<1/<2)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0
	CS-137		18	1 (0/3) (<1/<2)	2 (0/3) (<1/<2)	2 (0/3) (<1/<2)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0
	BA-140		60	18 (0/3) (<16/<20)	20 (0/3) (<17/<22)	20 (0/3) (<17/<22)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0
	LA-140		15	6 (0/3) (<4/<7)	6 (0/3) (<5/<6)	6 (0/3) (<5/<6)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0
	DRINKING WATER (PCI/LITER)	GR-B	3	4	3.9 (3/3) (2.9/4.9)	N/A	3.9 (3/3) (2.9/4.9)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE
H-3		3	200	176 (0/3) (<171/<182)	N/A	176 (0/3) (<171/<182)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 3RD QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

<b>Name of Facility:</b>		<b>BRAIDWOOD</b>		<b>DOCKET NUMBER:</b>		<b>50-456 &amp; 50-457</b>		
<b>Location of Facility:</b>		<b>BRACEVILLE, IL</b>		<b>REPORTING PERIOD:</b>		<b>3RD QUARTER, 2006</b>		
<b>MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)</b>	<b>TYPES OF ANALYSIS PERFORMED</b>	<b>NUMBER OF ANALYSIS PERFORMED</b>	<b>REQUIRED LOWER LIMIT OF DETECTION (LLD)</b>	<b>INDICATOR</b>	<b>CONTROL</b>	<b>LOCATION WITH HIGHEST ANNUAL MEAN</b>		
				<b>LOCATIONS MEAN(M) (F) RANGE</b>	<b>LOCATION MEAN(M) (F) RANGE</b>	<b>MEAN(M) (F) RANGE</b>	<b>STATION # NAME DISTANCE AND DIRECTION</b>	<b>NUMBER OF NONROUTINE REPORTED MEASUREMENTS</b>
DRINKING WATER (PCI/LITER)	GAMMA MN-54	3	15	4	N/A	4	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
				(0/3) (<1/<6)	(0/3) (<1/<6)			
	CO-58		15	4	N/A	4	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
				(0/3) (<1/<6)	(0/3) (<1/<6)			
	FE-59		30	8	N/A	8	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
				(0/3) (<2/<14)	(0/3) (<2/<14)			
	CO-60		15	4	N/A	4	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
				(0/3) (<1/<6)	(0/3) (<1/<6)			
ZN-65		30	7	N/A	7	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
			(0/3) (<1/<11)	(0/3) (<1/<11)				
NB-95		15	4	N/A	4	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
			(0/3) (<1/<6)	(0/3) (<1/<6)				
ZR-95		30	6	N/A	6	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
			(0/3) (<1/<10)	(0/3) (<1/<10)				
I-131		15	12	N/A	12	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
			(0/3) (<11/<14)	(0/3) (<11/<14)				

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 3RD QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		3RD QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN		NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	
DRINKING WATER (PCI/LITER)	CS-134		15	3 (0/3) (<1/<5)	N/A	3 (0/3) (<1/<5)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	CS-137		18	4 (0/3) (<1/<6)	N/A	4 (0/3) (<1/<6)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	BA-140		60	23 (0/3) (<14/<29)	N/A	23 (0/3) (<14/<29)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	LA-140		15	8 (0/3) (<4/<11)	N/A	8 (0/3) (<4/<11)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
GROUND WATER (PCI/LITER)	H-3	5	200	191 (1/5) (<173/261)	N/A	261 (1/1) (261)	BD-36 INDICATOR HUTTON WELL 4.7 MILES E OF SITE	0
	GAMMA MN-54	5	15	3 (0/5) (<2/<3)	N/A	3 (0/1) (<3)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0
	CO-58		15	3 (0/5) (<2/<3)	N/A	3 (0/1) (<3)	BD-13 INDICATOR BRAIDWOOD CITY HALL WELL 1.7 MILES NNE OF SITE	0
	FE-59		30	6 (0/5) (<6/<7)	N/A	7 (0/1) (<7)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 3RD QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		3RD QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
GROUND WATER (PCI/LITER)	CO-60		15	3 (0/5) (<2/<4)	N/A	4 (0/1) (<4)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0	
	ZN-65		30	6 (0/5) (<5/<7)	N/A	7 (0/1) (<7)	BD-13 INDICATOR BRAIDWOOD CITY HALL WELL 1.7 MILES NNE OF SITE	0	
	NB-95		15	3 (0/5) (<3/<3)	N/A	3 (0/1) (<3)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0	
	ZR-95		30	5 (0/5) (<4/<6)	N/A	6 (0/1) (<6)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0	
	I-131		15	11 (0/5) (<7/<14)	N/A	14 (0/1) (<14)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0	
	CS-134		15	3 (0/5) (<2/<3)	N/A	3 (0/1) (<3)	BD-13 INDICATOR BRAIDWOOD CITY HALL WELL 1.7 MILES NNE OF SITE	0	
	CS-137		18	3 (0/5) (<2/<3)	N/A	3 (0/1) (<3)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0	
	BA-140		60	22 (0/5) (<17/<27)	N/A	27 (0/1) (<27)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0	

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 3RD QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

<b>Name of Facility:</b>		<b>BRAIDWOOD</b>		<b>DOCKET NUMBER:</b>		<b>50-456 &amp; 50-457</b>		
<b>Location of Facility:</b>		<b>BRACEVILLE, IL</b>		<b>REPORTING PERIOD:</b>		<b>3RD QUARTER, 2006</b>		
<b>MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)</b>	<b>TYPES OF ANALYSIS PERFORMED</b>	<b>NUMBER OF ANALYSIS PERFORMED</b>	<b>REQUIRED LOWER LIMIT OF DETECTION (LLD)</b>	<b>INDICATOR LOCATIONS MEAN(M) (F) RANGE</b>	<b>CONTROL LOCATION MEAN(M) (F) RANGE</b>	<b>LOCATION WITH HIGHEST ANNUAL MEAN MEAN(M) (F) RANGE</b>	<b>STATION # NAME DISTANCE AND DIRECTION</b>	<b>NUMBER OF NONROUTINE REPORTED MEASUREMENTS</b>
GROUND WATER (PCI/LITER)	LA-140		15	7 (0/5) (<6/<10)	N/A	10 (0/1) (<10)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0
AIR PARTICULATE (E-3 PCI/CU.METER)	GR-B	104	10	22 (91/91) (15/35)	20 (13/13) (15/28)	23 (13/13) (15/30)	BD-02 INDICATOR CUSTER PARK 5.0 MILES E OF SITE	0
	GAMMA MN-54	8	N/A	2.3 (0/7) (< 1.3/< 3.3)	1.8 (0/1) (< 1.8)	3.3 (0/1) (< 3.3)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0
	CO-58		N/A	3.9 (0/7) (< 2.0/< 5.9)	3.0 (0/1) (< 3.0)	5.9 (0/1) (< 5.9)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0
	FE-59		N/A	15 (0/7) (<10.4/<22.2)	6.1 (0/1) (< 6.1)	22.2 (0/1) (<22.2)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0
	CO-60		N/A	2.4 (0/7) (< 1.1/< 3.6)	2.4 (0/1) (< 2.4)	3.6 (0/1) (< 3.6)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0
	ZN-65		N/A	6.1 (0/7) (< 3.2/<10.3)	4.8 (0/1) (< 4.8)	10.3 (0/1) (<10.3)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0
	ZRNB-95		N/A	4.9 (0/7) (< 3.7/< 7.0)	3.3 (0/1) (< 3.3)	7.0 (0/1) (< 7.0)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 3RD QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		3RD QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATION	LOCATION	MEAN(M)	STATION #	DISTANCE AND DIRECTION	
				MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	MEAN(M) (F) RANGE			
AIR PARTICULATE (E-3 PCI/CU.METER)	CS-134		50	2.3 (0/7) (< 1.3/< 4.2)	1.5 (0/1) (< 1.5)	4.2 (0/1) (< 4.2)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0	
	CS-137		60	2.2 (0/7) (< 1.3/< 2.8)	1.3 (0/1) (< 1.3)	2.8 (0/1) (< 2.8)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0	
	BALA140		N/A	204 (0/7) (<117/<288)	117 (0/1) (<117)	288 (0/1) (<288)	BD-06 INDICATOR GODLEY 0.5 MILEW WSW OF SITE	0	
AIR IODINE (E-3 PCI/CU.METER)	GAMMA I-131	104	70	52 (0/91) (<18/<70)	50 (0/13) (<27/<68)	55 (0/13) (<31/<68)	BD-19 INDICATOR NEARSITE NW 0.3 MILES NW OF SITE	0	
MILK (PCI/LITER)	I-131	12	1	0.6 (0/6) (< 0.4/< 0.8)	0.5 (0/6) (< 0.3/< 0.8)	0.6 (0/6) (< 0.4/< 0.8)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
	GAMMA MN-54	12	N/A	7 (0/6) (<6/<8)	7 (0/6) (<6/<7)	7 (0/6) (<6/<8)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
	CO-58		N/A	7 (0/6) (<6/<8)	7 (0/6) (<6/<8)	7 (0/6) (<6/<8)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 3RD QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility: <b>BRAIDWOOD</b>		DOCKET NUMBER: <b>50-456 &amp; 50-457</b>						
Location of Facility: <b>BRACEVILLE, IL</b>		REPORTING PERIOD: <b>3RD QUARTER, 2006</b>						
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN		
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
MILK (PCI/LITER)	FE-59		N/A	17 (0/6) (<15/<18)	16 (0/6) (<13/<18)	17 (0/6) (<15/<18)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0
	CO-60		N/A	8 (0/6) (<6/<9)	7 (0/6) (<5/<7)	8 (0/6) (<6/<9)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0
	ZN-65		N/A	18 (0/6) (<15/<20)	16 (0/6) (<12/<19)	18 (0/6) (<15/<20)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0
	ZRNB-95		N/A	8 (0/6) (<7/<10)	7 (0/6) (<6/<9)	8 (0/6) (<7/<10)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0
	CS-134		15	7 (0/6) (<6/<7)	6 (0/6) (<4/<8)	7 (0/6) (<6/<7)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0
	CS-137		18	7 (0/6) (<7/<8)	6 (0/6) (<5/<8)	7 (0/6) (<7/<8)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0
	BA-140		60	42 (0/6) (<37/<45)	36 (0/6) (<29/<44)	42 (0/6) (<37/<45)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0
	LA-140		15	13 (0/6) (<11/<14)	11 (0/6) (<8/<14)	13 (0/6) (<11/<14)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 3RD QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		3RD QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
VEGETATION (PCI/KG WET)	GAMMA MN-54	10	N/A	15 (0/8) (<9/<20)	13 (0/2) (<6/<20)	18 (0/2) (<16/<20)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0	
				CO-58	N/A	15 (0/8) (<10/<20)	13 (0/2) (<6/<21)	19 (0/2) (<19/<20)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE
	FE-59	N/A	39 (0/8) (<23/<52)	39 (0/2) (<16/<62)	48 (0/2) (<45/<51)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0		
	CO-60	N/A	16 (0/8) (<11/<24)	14 (0/2) (<7/<21)	18 (0/2) (<16/<20)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0		
	ZN-65	N/A	39 (0/8) (<28/<48)	40 (0/2) (<16/<64)	43 (0/2) (<41/<45)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0		
	ZRNB-95	N/A	16 (0/8) (<11/<21)	15 (0/2) (<7/<23)	17 (0/2) (<17/<18)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0		
	I-131	60	43 (0/8) (<23/<57)	38 (0/2) (<16/<59)	53 (0/2) (<50/<57)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0		
	CS-134	60	14 (0/8) (<8/<18)	12 (0/2) (<5/<18)	17 (0/2) (<16/<18)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0		

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 3RD QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

<b>Name of Facility:</b>		<b>BRAIDWOOD</b>			<b>DOCKET NUMBER:</b>		<b>50-456 &amp; 50-457</b>		
<b>Location of Facility:</b>		<b>BRACEVILLE, IL</b>			<b>REPORTING PERIOD:</b>		<b>3RD QUARTER, 2006</b>		
<b>MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)</b>	<b>TYPES OF ANALYSIS PERFORMED</b>	<b>NUMBER OF ANALYSIS PERFORMED</b>	<b>REQUIRED LOWER LIMIT OF DETECTION (LLD)</b>	<b>INDICATOR</b>	<b>CONTROL</b>	<b>LOCATION WITH HIGHEST ANNUAL MEAN</b>			
				<b>LOCATIONS</b>	<b>LOCATION</b>	<b>MEAN(M)</b>	<b>STATION #</b>	<b>NUMBER OF</b>	
				<b>MEAN(M) (F)</b>	<b>MEAN(M) (F)</b>	<b>MEAN(M) (F)</b>	<b>NAME</b>	<b>REPORTED</b>	
				<b>RANGE</b>	<b>RANGE</b>	<b>RANGE</b>	<b>DISTANCE AND DIRECTION</b>	<b>MEASUREMENTS</b>	
VEGETATION (PCI/KG WET)	CS-137		80	16 (0/8) (<9/<21)	15 (0/2) (<7/<23)	21 (0/2) (<20/<21)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0	
	BALA140		N/A	26 (0/8) (<12/<38)	19 (0/2) (<9/<30)	30 (0/2) (<22/<38)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0	
DIRECT RADIATION (MILLI-ROENTGEN/QTR.)	TLD-QUARTERLY	80	N/A	27 (78/78) (22/33)	25 (2/2) (25/25)	33 (1/1) (33)	BD-209-2 INDICATOR 4.8 MILES S OF SITE	0	

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 4TH QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		4TH QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
SURFACE WATER (PCI/LITER)	GR-B	9	4	7.6 (6/6) (4.5/10.5)	6.4 (3/3) (5.7/7.2)	10.1 (3/3) (9.9/10.5)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	H-3	17	200	192 (4/16) (<139/344)	180 (0/1) (<180)	199 (2/2) (174/224)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	GAMMA MN-54	9	15	2 (0/6) (<1/<4)	1 (0/3) (<1/<2)	2 (0/3) (<1/<4)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	CO-58		15	2 (0/6) (<1/<4)	1 (0/3) (<1/<2)	2 (0/3) (<1/<4)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	FE-59		30	5 (0/6) (<2/<8)	3 (0/3) (<2/<6)	5 (0/3) (<2/<8)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	CO-60		15	3 (0/6) (<1/<5)	1 (0/3) (<0/<2)	3 (0/3) (<1/<5)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	ZN-65		30	4 (0/6) (<1/<9)	2 (0/3) (<1/<4)	5 (0/3) (<2/<9)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	NB-95		15	3 (0/6) (<1/<5)	1 (0/3) (<1/<3)	3 (0/3) (<1/<5)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 4TH QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		4TH QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
SURFACE WATER (PCI/LITER)	ZR-95		30	4 (0/6) (<1/<7)	2 (0/3) (<1/<5)	4 (0/3) (<1/<6)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	I-131		15	11 (0/6) (<7/<15)	11 (0/3) (<7/<14)	11 (0/3) (<8/<14)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	CS-134		15	2 (0/6) (<1/<4)	1 (0/3) (<0/<2)	2 (0/3) (<1/<4)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	CS-137		18	2 (0/6) (<1/<4)	1 (0/3) (<0/<2)	2 (0/3) (<1/<4)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	BA-140		60	20 (0/6) (<10/<30)	16 (0/3) (<9/<25)	20 (0/3) (<11/<30)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	LA-140		15	7 (0/6) (<3/<10)	5 (0/3) (<3/<8)	7 (0/3) (<3/<10)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
DRINKING WATER (PCI/LITER)	GR-B	3	4	4.5 (3/3) ( 3.6/ 5.2)	N/A	4.5 (3/3) ( 3.6/ 5.2)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
	H-3	3	200	178 (1/3) (<158/210)	N/A	178 (1/3) (<158/210)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	

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BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		4TH QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
DRINKING WATER (PCI/LITER)	GAMMA MN-54	3	15	3	N/A	3	BD-22 INDICATOR	0	
				(0/3)		(0/3)	WILMINGTON		
					(<1/<4)		(<1/<4)	6.0 MILES NE OF SITE	
	CO-58		15	15	3	N/A	3	BD-22 INDICATOR	0
					(0/3)		(0/3)	WILMINGTON	
					(<1/<4)		(<1/<4)	6.0 MILES NE OF SITE	
	FE-59		30	30	7	N/A	7	BD-22 INDICATOR	0
					(0/3)		(0/3)	WILMINGTON	
				(<2/<10)		(<2/<10)	6.0 MILES NE OF SITE		
CO-60		15	15	3	N/A	3	BD-22 INDICATOR	0	
				(0/3)		(0/3)	WILMINGTON		
				(<1/<5)		(<1/<5)	6.0 MILES NE OF SITE		
ZN-65		30	30	7	N/A	7	BD-22 INDICATOR	0	
				(0/3)		(0/3)	WILMINGTON		
				(<2/<12)		(<2/<12)	6.0 MILES NE OF SITE		
NB-95		15	15	4	N/A	4	BD-22 INDICATOR	0	
				(0/3)		(0/3)	WILMINGTON		
				(<1/<5)		(<1/<5)	6.0 MILES NE OF SITE		
ZR-95		30	30	5	N/A	5	BD-22 INDICATOR	0	
				(0/3)		(0/3)	WILMINGTON		
				(<2/<8)		(<2/<8)	6.0 MILES NE OF SITE		
I-131		15	15	11	N/A	11	BD-22 INDICATOR	0	
				(0/3)		(0/3)	WILMINGTON		
				(<6/<14)		(<6/<14)	6.0 MILES NE OF SITE		

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BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		4TH QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN		
				LOCATIONS MEAN(M) (F) RANGE	LOCATIONS MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
DRINKING WATER (PCI/LITER)	CS-134		15	3 (0/3) (<1/<4)	N/A	3 (0/3) (<1/<4)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	CS-137		18	3 (0/3) (<1/<5)	N/A	3 (0/3) (<1/<5)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	BA-140		60	21 (0/3) (<9/<27)	N/A	21 (0/3) (<9/<27)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
	LA-140		15	7 (0/3) (<3/<10)	N/A	7 (0/3) (<3/<10)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0
GROUND WATER (PCI/LITER)	H-3	5	200	191 (1/5) (<173/261)	N/A	261 (1/1) (261)	BD-36 INDICATOR HUTTON WELL 4.7 MILES E OF SITE	0
	GAMMA MN-54	5	15	1 (0/5) (<1/<1)	N/A	1 (0/1) (<1)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0
	CO-58		15	2 (0/5) (<1/<2)	N/A	2 (0/1) (<2)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0
	FE-59		30	4 (0/5) (<3/<4)	N/A	4 (0/1) (<4)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0

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Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		4TH QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATION MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
GROUND WATER (PCI/LITER)	CO-60		15	1 (0/5) (<1/<1)	N/A	1 (0/1) (<1)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0	
	ZN-65		30	3 (0/5) (<2/<3)	N/A	3 (0/1) (<3)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0	
	NB-95		15	2 (0/5) (<1/<2)	N/A	2 (0/1) (<2)	BD-13 INDICATOR BRAIDWOOD CITY HALL WELL 1.7 MILES NNE OF SITE	0	
	ZR-95		30	3 (0/5) (<2/<3)	N/A	3 (0/1) (<3)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0	
	I-131		15	12 (0/5) (<11/<14)	N/A	14 (0/1) (<14)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0	
	CS-134		15	1 (0/5) (<1/<1)	N/A	1 (0/1) (<1)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0	
	CS-137		18	1 (0/5) (<1/<2)	N/A	2 (0/1) (<2)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0	
	BA-140		60	18 (0/5) (<16/<20)	N/A	20 (0/1) (<20)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0	

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 4TH QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

<b>Name of Facility:</b>		<b>BRAIDWOOD</b>			<b>DOCKET NUMBER:</b>		<b>50-456 &amp; 50-457</b>	
<b>Location of Facility:</b>		<b>BRACEVILLE, IL</b>			<b>REPORTING PERIOD:</b>		<b>4TH QUARTER, 2006</b>	
<b>MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)</b>	<b>TYPES OF ANALYSIS PERFORMED</b>	<b>NUMBER OF ANALYSIS PERFORMED</b>	<b>REQUIRED LOWER LIMIT OF DETECTION (LLD)</b>	<b>INDICATOR LOCATIONS MEAN(M) (F) RANGE</b>	<b>CONTROL LOCATION MEAN(M) (F) RANGE</b>	<b>LOCATION WITH HIGHEST ANNUAL MEAN MEAN(M) (F) RANGE</b>	<b>STATION # NAME DISTANCE AND DIRECTION</b>	<b>NUMBER OF NONROUTINE REPORTED MEASUREMENTS</b>
GROUND WATER (PCI/LITER)	LA-140		15	6 (0/5) (<4/<7)	N/A	7 (0/1) (<7)	BD-37 INDICATOR NURCZYK WELL 4.7 MILES E OF SITE	0
FISH (PCI/KG WET)	GAMMA MN-54	6	130	58 (0/4) (<46/<71)	44 (0/2) (<40/<49)	59 (0/2) (<46/<71)	BD-41 INDICATOR	0
	CO-58		130	71 (0/4) (<64/<77)	64 (0/2) (<49/<79)	73 (0/2) (<69/<77)	BD-28 INDICATOR KANKAKEE RIVER DISCHARGE 5.4 MILES E OF SITE	0
	FE-59		260	177 (0/4) (<154/<194)	141 (0/2) (<132/<150)	189 (0/2) (<183/<194)	BD-41 INDICATOR	0
	CO-60		130	62 (0/4) (<45/<92)	44 (0/2) (<38/<49)	68 (0/2) (<45/<92)	BD-41 INDICATOR	0
	ZN-65		260	127 (0/4) (<106/<174)	93 (0/2) (<89/<98)	140 (0/2) (<106/<174)	BD-41 INDICATOR	0
	ZRNB-95		N/A	82 (0/4) (<54/<98)	77 (0/2) (<64/<90)	88 (0/2) (<84/<92)	BD-41 INDICATOR	0
	CS-134		130	53 (0/4) (<44/<63)	41 (0/2) (<36/<45)	55 (0/2) (<47/<63)	BD-41 INDICATOR	0

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 4TH QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		4TH QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
FISH (PCI/KG WET)	CS-137		150	58 (0/4) (<43/<83)	42 (0/2) (<36/<48)	63 (0/2) (<43/<83)	BD-41 INDICATOR		0
	BALA140		N/A	396 (0/4) (<253/<473)	433 (0/2) (<324/<541)	440 (0/2) (<406/<473)	BD-28 INDICATOR KANKAKEE RIVER DISCHARGE 5.4 MILES E OF SITE		0
SEDIMENT (PCI/KG DRY)	GAMMA MN-54	1	N/A	95 (0/1) (<95)	N/A	95 (0/1) (<95)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	CO-58		N/A	105 (0/1) (<105)	N/A	105 (0/1) (<105)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	FE-59		N/A	227 (0/1) (<227)	N/A	227 (0/1) (<227)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	CO-60		N/A	84 (0/1) (<84)	N/A	84 (0/1) (<84)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	ZN-65		N/A	226 (0/1) (<226)	N/A	226 (0/1) (<226)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	ZRNB-95		N/A	112 (0/1) (<112)	N/A	112 (0/1) (<112)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 4TH QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		4TH QUARTER, 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
SEDIMENT (PCI/KG DRY)	CS-134		150	83 (0/1) (<83)	N/A	83 (0/1) (<83)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	CS-137		180	142 (1/1) (142)	N/A	142 (1/1) (142)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	BALA140		N/A	277 (0/1) (<277)	N/A	277 (0/1) (<277)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
AIR PARTICULATE (E-3 PCI/CU.METER)	GR-B	104	10	24 (91/91) (12/41)	22 (13/13) (14/34)	25 (13/13) (13/41)	BD-04 INDICATOR ESSEX 4.8 MILES SSE OF SITE	0	
	GAMMA MN-54	8	N/A	2.7 (0/7) (< 2.3/< 3.2)	3.1 (0/1) (< 3.1)	3.2 (0/1) (< 3.2)	BD-02 INDICATOR CUSTER PARK 5.0 MILES E OF SITE	0	
	CO-58		N/A	3.3 (0/7) (< 2.6/< 3.9)	4.3 (0/1) (< 4.3)	4.3 (0/1) (< 4.3)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0	
	FE-59		N/A	7.3 (0/7) (< 6.6/< 8.3)	9.0 (0/1) (< 9.0)	9.0 (0/1) (< 9.0)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0	
	CO-60		N/A	2.6 (0/7) (< 2.2/< 2.9)	4.5 (0/1) (< 4.5)	4.5 (0/1) (< 4.5)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0	

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 4TH QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		4TH QUARTER, 2006		
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 MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
AIR PARTICULATE (E-3 PCI/CU.METER)	ZN-65		N/A	6.8 (0/7) (< 5.6/< 7.6)	9.2 (0/1) (< 9.2)	9.2 (0/1) (< 9.2)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0
	ZRNB-95		N/A	3.3 (0/7) (< 2.6/< 3.6)	5.0 (0/1) (< 5.0)	5.0 (0/1) (< 5.0)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0
	CS-134		50	2.9 (0/7) (< 2.6/< 3.3)	4.5 (0/1) (< 4.5)	4.5 (0/1) (< 4.5)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0
	CS-137		60	2.4 (0/7) (< 1.9/< 3.3)	3.0 (0/1) (< 3.0)	3.3 (0/1) (< 3.3)	BD-02 INDICATOR CUSTER PARK 5.0 MILES E OF SITE	0
	BALA140		N/A	18.5 (0/7) (<15.3/<21)	20.5 (0/1) (<20.5)	21 (0/1) (<21)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0
AIR IODINE (E-3 PCI/CU.METER)	GAMMA I-131	104	70	39 (0/91) (<14/<68)	41 (0/13) (<17/<62)	41 (0/13) (<17/<62)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0
MILK (PCI/LITER)	I-131	8	1	0.6 (0/4) (< 0.3/< 0.8)	0.5 (0/4) (< 0.3/< 0.7)	0.6 (0/4) (< 0.3/< 0.8)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 4TH QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457			
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		4TH QUARTER, 2006			
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 MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
MILK (PCI/LITER)	GAMMA MN-54	8	N/A	5	6	6	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
				(0/4)	(0/4)	(0/4)			
					(<3/<6)	(<5/<6)	(<5/<6)		
	CO-58			N/A	6	6	6	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0
					(0/4)	(0/4)	(0/4)		
					(<3/<8)	(<5/<7)	(<5/<7)		
	FE-59			N/A	12	15	15	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0
					(0/4)	(0/4)	(0/4)		
				(<8/<14)	(<14/<17)	(<14/<17)			
CO-60			N/A	6	6	6	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
				(0/4)	(0/4)	(0/4)			
				(<4/<8)	(<5/<7)	(<4/<8)			
ZN-65			N/A	12	13	13	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
				(0/4)	(0/4)	(0/4)			
				(<8/<17)	(<10/<16)	(<10/<16)			
ZRNB-95			N/A	6	6	6	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
				(0/4)	(0/4)	(0/4)			
				(<4/<8)	(<6/<7)	(<6/<7)			
CS-134			15	5	5	5	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
				(0/4)	(0/4)	(0/4)			
				(<3/<7)	(<5/<6)	(<5/<6)			
CS-137			18	5	6	6	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
				(0/4)	(0/4)	(0/4)			
				(<3/<5)	(<5/<6)	(<5/<6)			

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 4TH QUARTER SUMMARY FOR  
BRAIDWOOD STATION, 2006**

<b>Name of Facility:</b>		<b>BRAIDWOOD</b>			<b>DOCKET NUMBER:</b>		<b>50-456 &amp; 50-457</b>		
<b>Location of Facility:</b>		<b>BRACEVILLE, IL</b>			<b>REPORTING PERIOD:</b>		<b>4TH QUARTER, 2006</b>		
<b>MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)</b>	<b>TYPES OF ANALYSIS PERFORMED</b>	<b>NUMBER OF ANALYSIS PERFORMED</b>	<b>REQUIRED LOWER LIMIT OF DETECTION (LLD)</b>	<b>INDICATOR</b>	<b>CONTROL</b>	<b>LOCATION WITH HIGHEST ANNUAL MEAN</b>			
				<b>LOCATIONS MEAN(M) (F) RANGE</b>	<b>LOCATION MEAN(M) (F) RANGE</b>	<b>MEAN(M) (F) RANGE</b>	<b>STATION # NAME DISTANCE AND DIRECTION</b>	<b>NUMBER OF NONROUTINE REPORTED MEASUREMENTS</b>	
MILK (PCI/LITER)	BA-140		60	42 (0/4) (<28/<57)	43 (0/4) (<40/<49)	43 (0/4) (<40/<49)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE		0
	LA-140		15	12 (0/4) (<8/<15)	11 (0/4) (<8/<14)	12 (0/4) (<8/<15)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE		0
DIRECT RADIATION (MILLI-ROENTGEN/QTR.)	TLD-QUARTERLY	80	N/A	26 (78/78) (22/32)	27 (2/2) (27/27)	32 (1/1) (32)	BD-211-1 INDICATOR 4.8 MILES SW OF SITE		0

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		ANNUAL 2006		
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 MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
SURFACE WATER (PCI/LITER)	GR-B	27	4	6.4 (15/15) ( 4.4/10.5)	5.6 (12/12) ( 2.7/ 7.2)	10.1 (3/3) ( 9.9/10.5)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	H-3	56	200	204 (18/52) ( <139/398)	182 (0/4) ( <173/<189)	208 (16/43) ( <139/398)	BD-38 INDICATOR MAIN DRAINAGE DITCH 1.5 MILES SW OF SITE	0	
	GAMMA MN-54	27	15	2 (0/15) ( <1/<4)	2 (0/12) ( <1/<4)	2 (0/3) ( <1/<4)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	CO-58		15	2 (0/15) ( <1/<4)	2 (0/12) ( <1/<4)	2 (0/12) ( <1/<4)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	FE-59		30	5 (0/15) ( <2/<9)	5 (0/12) ( <2/<10)	5 (0/12) ( <2/<9)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	CO-60		15	2 (0/15) ( <1/<5)	2 (0/12) ( <0/<4)	3 (0/3) ( <1/<5)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	ZN-65		30	5 (0/15) ( <1/<10)	4 (0/12) ( <1/<9)	5 (0/3) ( <2/<9)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	NB-95		15	3 (0/15) ( <1/<5)	2 (0/12) ( <1/<4)	3 (0/3) ( <1/<5)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	

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Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		ANNUAL 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
SURFACE WATER (PCI/LITER)	ZR-95		30	4 (0/15) (<1/<8)	4 (0/12) (<1/<8)	4 (0/12) (<1/<8)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	I-131		15	11 (0/15) (<7/<15)	12 (0/12) (<7/<15)	12 (0/12) (<7/<15)	BD-25 CONTROL KANKAKEE RIVER UPSTREAM 9.6 MILES E OF SITE	0	
	CS-134		15	2 (0/15) (<1/<4)	2 (0/12) (<0/<4)	2 (0/12) (<1/<4)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	CS-137		18	2 (0/15) (<1/<4)	2 (0/12) (<0/<4)	2 (0/3) (<1/<4)	BD-40 INDICATOR BRAIDWOOD STATION COOLING LAKE ONSITE	0	
	BA-140		60	21 (0/15) (<10/<34)	20 (0/12) (<9/<29)	22 (0/12) (<10/<34)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	LA-140		15	7 (0/15) (<3/<11)	7 (0/12) (<3/<10)	7 (0/12) (<3/<11)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
DRINKING WATER (PCI/LITER)	GR-B	12	4	3.8 (11/12) (< 2.4/ 5.2)	N/A	3.8 (11/12) (< 2.4/ 5.2)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
	H-3	12	200	176 (1/12) (<158/210)	N/A	176 (1/12) (<158/210)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	

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BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		ANNUAL 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
DRINKING WATER (PCI/LITER)	GAMMA MN-54	12	15	3	N/A	3	BD-22 INDICATOR	0	
				(0/12)		(0/12)	WILMINGTON		
				(<1/<6)		(<1/<6)	6.0 MILES NE OF SITE		
	CO-58	15	15	3	N/A	3	BD-22 INDICATOR	0	
				(0/12)		(0/12)	WILMINGTON		
				(<1/<6)		(<1/<6)	6.0 MILES NE OF SITE		
	FE-59	30	30	7	N/A	7	BD-22 INDICATOR	0	
				(0/12)		(0/12)	WILMINGTON		
			(<2/<14)		(<2/<14)	6.0 MILES NE OF SITE			
CO-60	15	15	3	N/A	3	BD-22 INDICATOR	0		
			(0/12)		(0/12)	WILMINGTON			
			(<1/<6)		(<1/<6)	6.0 MILES NE OF SITE			
ZN-65	30	30	7	N/A	7	BD-22 INDICATOR	0		
			(0/12)		(0/12)	WILMINGTON			
			(<1/<13)		(<1/<13)	6.0 MILES NE OF SITE			
NB-95	15	15	3	N/A	3	BD-22 INDICATOR	0		
			(0/12)		(0/12)	WILMINGTON			
			(<1/<6)		(<1/<6)	6.0 MILES NE OF SITE			
ZR-95	30	30	6	N/A	6	BD-22 INDICATOR	0		
			(0/12)		(0/12)	WILMINGTON			
			(<1/<10)		(<1/<10)	6.0 MILES NE OF SITE			
I-131	15	15	12	N/A	12	BD-22 INDICATOR	0		
			(0/12)		(0/12)	WILMINGTON			
			(<6/<15)		(<6/<15)	6.0 MILES NE OF SITE			

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		ANNUAL 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR LOCATION MEAN(M) (F) RANGE	CONTROL LOCATION MEAN(M) (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
DRINKING WATER (PCI/LITER)	CS-134		15	3 (0/12) (<1/<7)	N/A	3 (0/12) (<1/<7)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
	CS-137		18	3 (0/12) (<1/<6)	N/A	3 (0/12) (<1/<6)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
	BA-140		60	36 (0/12) (<9/<105)	N/A	36 (0/12) (<9/<105)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
	LA-140		15	12 (0/12) (<3/<37)	N/A	12 (0/12) (<3/<37)	BD-22 INDICATOR WILMINGTON 6.0 MILES NE OF SITE	0	
GROUND WATER (PCI/LITER)	H-3	20	200	209 (4/20) (<153/396)	N/A	357 (4/4) (261/396)	BD-36 INDICATOR HUTTON WELL 4.7 MILES E OF SITE	0	
	GAMMA MN-54	20	15	4 (0/20) (<1/<8)	N/A	4 (0/4) (<1/<8)	BD-13 INDICATOR BRAIDWOOD CITY HALL WELL 1.7 MILES NNE OF SITE	0	
	CO-58		15	4 (0/20) (<1/<8)	N/A	4 (0/4) (<2/<8)	BD-13 INDICATOR BRAIDWOOD CITY HALL WELL 1.7 MILES NNE OF SITE	0	
	FE-59		30	9 (0/20) (<3/<16)	N/A	9 (0/4) (<4/<14)	BD-13 INDICATOR BRAIDWOOD CITY HALL WELL 1.7 MILES NNE OF SITE	0	

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY FOR  
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Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		ANNUAL 2006		
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 MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GROUND WATER (PCI/LITER)	CO-60		15	4 (0/20) (<1/<8)	N/A	4 (0/4) (<1/<8)	BD-13 INDICATOR BRAIDWOOD CITY HALL WELL 1.7 MILES NNE OF SITE	0
	ZN-65		30	10 (0/20) (<2/<22)	N/A	10 (0/4) (<3/<19)	BD-34 INDICATOR GIBSON WELL 4.7 MILES E OF SITE	0
	NB-95		15	4 (0/20) (<1/<9)	N/A	5 (0/4) (<2/<9)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0
	ZR-95		30	7 (0/20) (<2/<14)	N/A	8 (0/4) (<3/<14)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0
	I-131		15	12 (0/20) (<7/<14)	N/A	12 (0/4) (<10/<14)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0
	CS-134		15	5 (0/20) (<1/<13)	N/A	5 (0/4) (<1/<13)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0
	CS-137		18	4 (0/20) (<1/<9)	N/A	4 (0/4) (<2/<9)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0
	BA-140		60	25 (0/20) (<16/<39)	N/A	26 (0/4) (<19/<39)	BD-35 INDICATOR JOLY WELL 4.7 MILES E OF SITE	0

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**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY FOR  
BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		ANNUAL 2006		
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 MEAN(M) (F) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GROUND WATER (PCI/LITER)	LA-140		15	9 (0/20) (<4/<12)	N/A	9 (0/4) (<6/<12)	BD-13 INDICATOR BRAIDWOOD CITY HALL WELL 1.7 MILES NNE OF SITE	0
FISH (PCI/KG WET)	GAMMA MN-54	10	130	57 (0/6) (<46/<71)	44 (0/4) (<40/<49)	59 (0/2) (<46/<71)	BD-41 INDICATOR	0
	CO-58		130	68 (0/6) (<57/<77)	57 (0/4) (<47/<79)	70 (0/2) (<64/<76)	BD-41 INDICATOR	0
	FE-59		260	159 (0/6) (<120/<194)	121 (0/4) (<97/<150)	189 (0/2) (<183/<194)	BD-41 INDICATOR	0
	CO-60		130	58 (0/6) (<45/<92)	43 (0/4) (<37/<49)	68 (0/2) (<45/<92)	BD-41 INDICATOR	0
	ZN-65		260	131 (0/6) (<106/<174)	97 (0/4) (<89/<106)	140 (0/2) (<106/<174)	BD-41 INDICATOR	0
	ZRNB-95		N/A	75 (0/6) (<54/<98)	64 (0/4) (<50/<90)	88 (0/2) (<84/<92)	BD-41 INDICATOR	0
	CS-134		130	56 (0/6) (<44/<64)	44 (0/4) (<36/<48)	56 (0/4) (<44/<64)	BD-28 INDICATOR KANKAKEE RIVER DISCHARGE 5.4 MILES E OF SITE	0

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BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		ANNUAL 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
FISH (PCI/KG WET)	CS-137		150	57 (0/6) (<43/<83)	42 (0/4) (<36/<48)	63 (0/2) (<43/<83)	BD-41 INDICATOR		0
	BALA140		N/A	311 (0/6) (<137/<473)	283 (0/4) (<130/<541)	353 (0/2) (<253/<453)	BD-41 INDICATOR		0
SEDIMENT (PCI/KG DRY)	GAMMA MN-54	2	N/A	115 (0/2) (<95/<135)	N/A	115 (0/2) (<95/<135)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	CO-58		N/A	126 (0/2) (<105/<146)	N/A	126 (0/2) (<105/<146)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	FE-59		N/A	273 (0/2) (<227/<319)	N/A	273 (0/2) (<227/<319)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	CO-60		N/A	103 (0/2) (<84/<122)	N/A	103 (0/2) (<84/<122)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	ZN-65		N/A	274 (0/2) (<226/<321)	N/A	274 (0/2) (<226/<321)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
	ZRNB-95		N/A	128 (0/2) (<112/<144)	N/A	128 (0/2) (<112/<144)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE		0
				N/A					

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BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		ANNUAL 2006		
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 MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
SEDIMENT (PCI/KG DRY)	CS-134		150	109 (0/2) (<83/<135)	N/A	109 (0/2) (<83/<135)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	CS-137		180	140 (1/2) (<137/142)	N/A	140 (1/2) (<137/142)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
	BALA140		N/A	301 (0/2) (<277/<325)	N/A	301 (0/2) (<277/<325)	BD-10 INDICATOR KANKAKEE RIVER DOWNSTREAM 5.4 MILES NE OF SITE	0	
AIR PARTICULATE (E-3 PCI/CU.METER)	GR-B	416	10	20 (361/364) (<5/41)	18 (52/52) (5/34)	20 (52/52) (6/41)	BD-04 INDICATOR ESSEX 4.8 MILES SSE OF SITE	0	
	GAMMA MN-54	32	N/A	3.1 (0/28) (< 1.3/< 6.0)	2.8 (0/4) (< 1.8/< 3.8)	3.6 (0/4) (< 2.4/< 5.7)	BD-04 INDICATOR ESSEX 4.8 MILES SSE OF SITE	0	
	CO-58		N/A	4.9 (0/28) (< 2.0/<10.5)	4.7 (0/4) (< 3.0/< 6.6)	5.9 (0/4) (< 3.7/< 7.9)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0	
	FE-59		N/A	15.9 (0/28) (< 6.6/<34.9)	11 (0/4) (< 6.1/<17.8)	17.7 (0/4) (< 7.3/<25)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0	
	CO-60		N/A	3.1 (0/28) (< 1.1/< 5.3)	3.9 (0/4) (< 2.2/< 6.5)	3.9 (0/4) (< 2.2/< 6.5)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0	

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BRAIDWOOD STATION, 2006**

Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		ANNUAL 2006		
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPES OF ANALYSIS PERFORMED	NUMBER OF ANALYSIS PERFORMED	REQUIRED LOWER LIMIT OF DETECTION (LLD)	INDICATOR	CONTROL	LOCATION WITH HIGHEST ANNUAL MEAN			NUMBER OF NONROUTINE REPORTED MEASUREMENTS
				LOCATIONS MEAN(M) (F) RANGE	LOCATION MEAN(M) (F) RANGE	MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION		
AIR PARTICULATE (E-3 PCI/CU.METER)	ZN-65		N/A	8.0 (0/28) (< 3.2/<17.6)	10 (0/4) (< 4.8/<19.9)	10 (0/4) (< 4.8/<19.9)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0	
	ZRNB-95		N/A	5.5 (0/28) (< 2.6/<11.2)	5.7 (0/4) (< 3.3/<10.7)	6.1 (0/4) (< 3.6/<11.2)	BD-05 INDICATOR GARDNER 5.5 MILES SW OF SITE	0	
	CS-134		50	3.4 (0/28) (< 1.3/< 6.2)	3.7 (0/4) (< 1.5/< 6.2)	3.9 (0/4) (< 2.8/< 4.7)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0	
	CS-137		60	2.7 (0/28) (< 1.3/< 4.1)	2.9 (0/4) (< 1.3/< 4.6)	3.2 (0/4) (< 2.1/< 4.0)	BD-20 INDICATOR NEARSITE N 0.6 MILES N OF SITE	0	
	BALA140		N/A	140.5 (0/28) (<15.3/<373)	134.3 (0/4) (<20.5/<304)	181.9 (0/4) (<20.6/<373)	BD-05 INDICATOR GARDNER 5.5 MILES SW OF SITE	0	
AIR IODINE (E-3 PCI/CU.METER)	GAMMA I-131	360	70	44 (0/315) (<11/<70)	44 (0/45) (<16/<68)	44 (0/45) (<16/<68)	BD-03 CONTROL COUNTY LINE ROAD 6.2 MILES ESE OF SITE	0	
MILK (PCI/LITER)	I-131	38	1	0.8 (0/19) (< 0.3/< 4.4)	0.7 (0/19) (< 0.3/< 2.9)	0.8 (0/19) (< 0.3/< 4.4)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	

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Name of Facility:		BRAIDWOOD		DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL		REPORTING PERIOD:		ANNUAL 2006		
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 MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
MILK (PCI/LITER)	GAMMA MN-54	38	N/A	7 (0/19) (<3/<9)	7 (0/19) (<5/<10)	7 (0/19) (<5/<10)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0
				7 (0/19) (<3/<11)	7 (0/19) (<5/<9)	7 (0/19) (<5/<9)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0
	CO-58		N/A	17 (0/19) (<8/<24)	17 (0/19) (<12/<23)	17 (0/19) (<12/<23)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0
				8 (0/19) (<4/<11)	7 (0/19) (<5/<12)	8 (0/19) (<4/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0
	FE-59		N/A	18 (0/19) (<8/<25)	17 (0/19) (<10/<25)	18 (0/19) (<8/<25)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0
				8 (0/19) (<4/<11)	8 (0/19) (<5/<11)	8 (0/19) (<4/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0
	CO-60		N/A	7 (0/19) (<3/<10)	7 (0/19) (<4/<13)	7 (0/19) (<4/<13)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0
				7 (0/19) (<3/<11)	7 (0/19) (<5/<11)	7 (0/19) (<3/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0
ZN-65		N/A	8 (0/19) (<4/<11)	8 (0/19) (<5/<11)	8 (0/19) (<4/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
ZRNB-95		N/A	8 (0/19) (<4/<11)	8 (0/19) (<5/<11)	8 (0/19) (<4/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
CS-134		15	7 (0/19) (<3/<10)	7 (0/19) (<4/<13)	7 (0/19) (<4/<13)	BD-18 CONTROL BIROS' FARM 8.7 MILES W OF SITE	0	
CS-137		18	7 (0/19) (<3/<11)	7 (0/19) (<5/<11)	7 (0/19) (<3/<11)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	

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Name of Facility:		BRAIDWOOD			DOCKET NUMBER:		50-456 & 50-457		
Location of Facility:		BRACEVILLE, IL			REPORTING PERIOD:		ANNUAL 2006		
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 MEAN(M) (F) RANGE	STATION # NAME DISTANCE AND DIRECTION	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
MILK (PCI/LITER)	BA-140		60	41 (0/19) (<16/<57)	39 (0/19) (<27/<51)	41 (0/19) (<16/<57)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
	LA-140		15	13 (0/19) (<5/<15)	11 (0/19) (<8/<15)	13 (0/19) (<5/<15)	BD-17 INDICATOR HALPIN'S DAIRY 5.5 MILES SSW OF SITE	0	
VEGETATION (PCI/KG WET)	GAMMA MN-54	10	N/A	15 (0/8) (<9/<20)	13 (0/2) (<6/<20)	18 (0/2) (<16/<20)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0	
	CO-58		N/A	15 (0/8) (<10/<20)	13 (0/2) (<6/<21)	19 (0/2) (<19/<20)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0	
	FE-59		N/A	39 (0/8) (<23/<52)	39 (0/2) (<16/<62)	48 (0/2) (<45/<51)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0	
	CO-60		N/A	16 (0/8) (<11/<24)	14 (0/2) (<7/<21)	18 (0/2) (<16/<20)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0	
	ZN-65		N/A	39 (0/8) (<28/<48)	40 (0/2) (<16/<64)	43 (0/2) (<41/<45)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0	
	ZRNB-95		N/A	16 (0/8) (<11/<21)	15 (0/2) (<7/<23)	17 (0/2) (<17/<18)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0	

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

**TABLE A-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM ANNUAL SUMMARY FOR  
BRAIDWOOD STATION, 2006**

<b>Name of Facility:</b>		<b>BRAIDWOOD</b>		<b>DOCKET NUMBER:</b>		<b>50-456 &amp; 50-457</b>		
<b>Location of Facility:</b>		<b>BRACEVILLE, IL</b>		<b>REPORTING PERIOD:</b>		<b>ANNUAL 2006</b>		
<b>MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)</b>	<b>TYPES OF ANALYSIS PERFORMED</b>	<b>NUMBER OF ANALYSIS PERFORMED</b>	<b>REQUIRED LOWER LIMIT OF DETECTION (LLD)</b>	<b>INDICATOR</b>	<b>CONTROL</b>	<b>LOCATION WITH HIGHEST ANNUAL MEAN</b>		
				<b>LOCATIONS MEAN(M) (F) RANGE</b>	<b>LOCATION MEAN(M) (F) RANGE</b>	<b>MEAN(M) (F) RANGE</b>	<b>STATION # NAME DISTANCE AND DIRECTION</b>	<b>NUMBER OF NONROUTINE REPORTED MEASUREMENTS</b>
VEGETATION (PCI/KG WET)	I-131		60	43 (0/8) (<23/<57)	38 (0/2) (<16/<59)	53 (0/2) (<50/<57)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0
	CS-134		60	14 (0/8) (<8/<18)	12 (0/2) (<5/<18)	17 (0/2) (<16/<18)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0
	CS-137		80	16 (0/8) (<9/<21)	15 (0/2) (<7/<23)	21 (0/2) (<20/<21)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0
	BALA140		N/A	26 (0/8) (<12/<38)	19 (0/2) (<9/<30)	30 (0/2) (<22/<38)	BD-QUAD 4 INDICATOR BRUCE SINKULAR 1.9 MILES NNW OF SITE	0
DIRECT RADIATION (MILLI-ROENTGEN/QTR.)	TLD-QUARTERLY	319	N/A	25 (311/311) (19/33)	25 (8/8) (21/27)	30 (4/4) (28/33)	BD-209-2 INDICATOR	0

A - 53

\* BD-211-1 also read 30 mrem but the range was (26/32).

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

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## **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, 2006

Location	Location Description	Distance & Direction From Site
<b>A. Surface Water</b>		
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 (indicator)	0.6 miles NE
<b>B. Drinking (Potable) Water</b>		
BD-22	Wilmington (indicator)	6.0 miles NE
<b>C. Ground/Well Water</b>		
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-52	Seratt Well (indicator)	0.8 miles NE
BD-53	Phelps Well (indicator)	0.7 miles E
BD-54	Cash Well (indicator)	0.9 miles NE
<b>D. Milk - bi-weekly / monthly</b>		
BD-17	Halpin's Dairy (indicator)	5.5 miles SSW
BD-18	Biros' Farm (control)	8.7 miles W
<b>E. Air Particulates / Air Iodine</b>		
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
<b>F. Fish</b>		
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
<b>G. Sediment</b>		
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, 2006

Location	Location Description	Distance & Direction From Site
<u>H. Food Products</u>		
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
<u>I. Environmental Dosimetry - TLD</u>		
<u>Site Boundary</u>		
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
<u>Intermediate Distance</u>		
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
<u>Other</u>		
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, 2006

Location	Location Description	Distance & Direction From Site
<u>I. Environmental Dosimetry – TLD (cont'd)</u>		
<u>Control and Special Interest</u>		
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, 2006

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, 2006

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	Biweekly 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 <sub>2</sub> elements.	Global Dosimetry

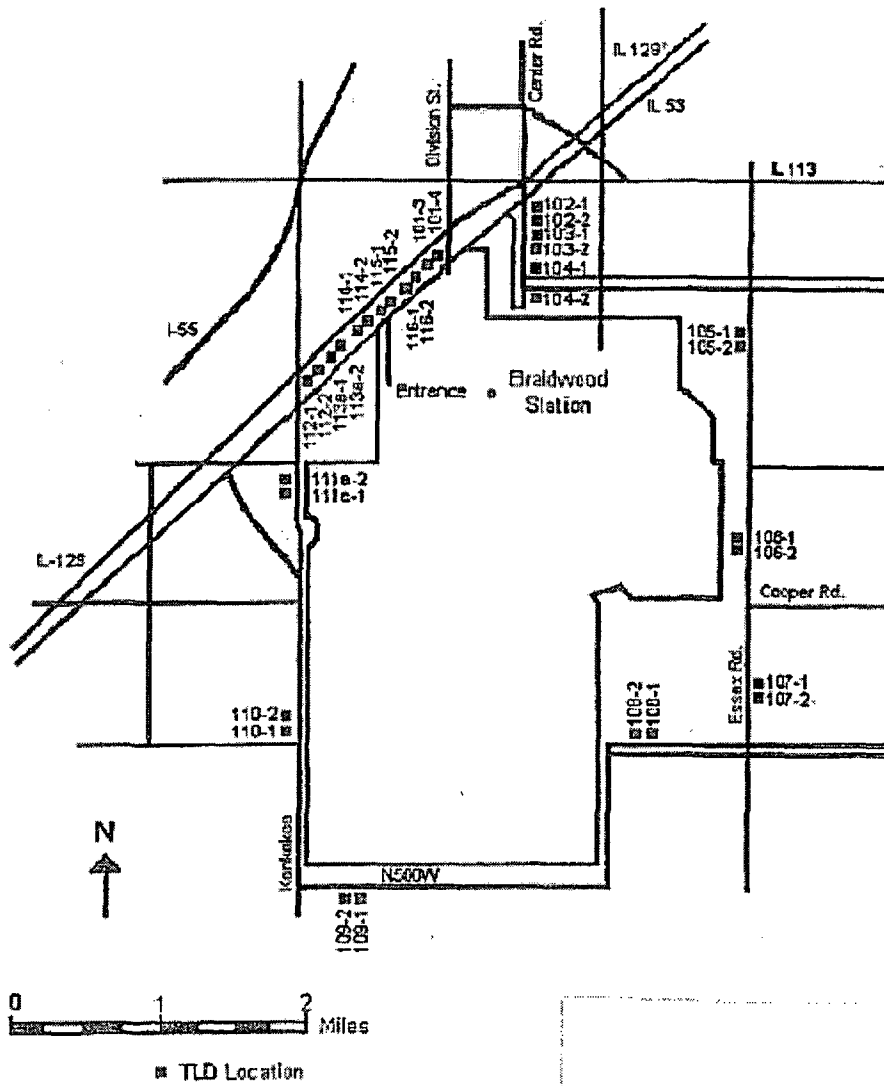


Figure B-1  
 Inner Ring TLD Locations of the  
 Braidwood Station, 2006

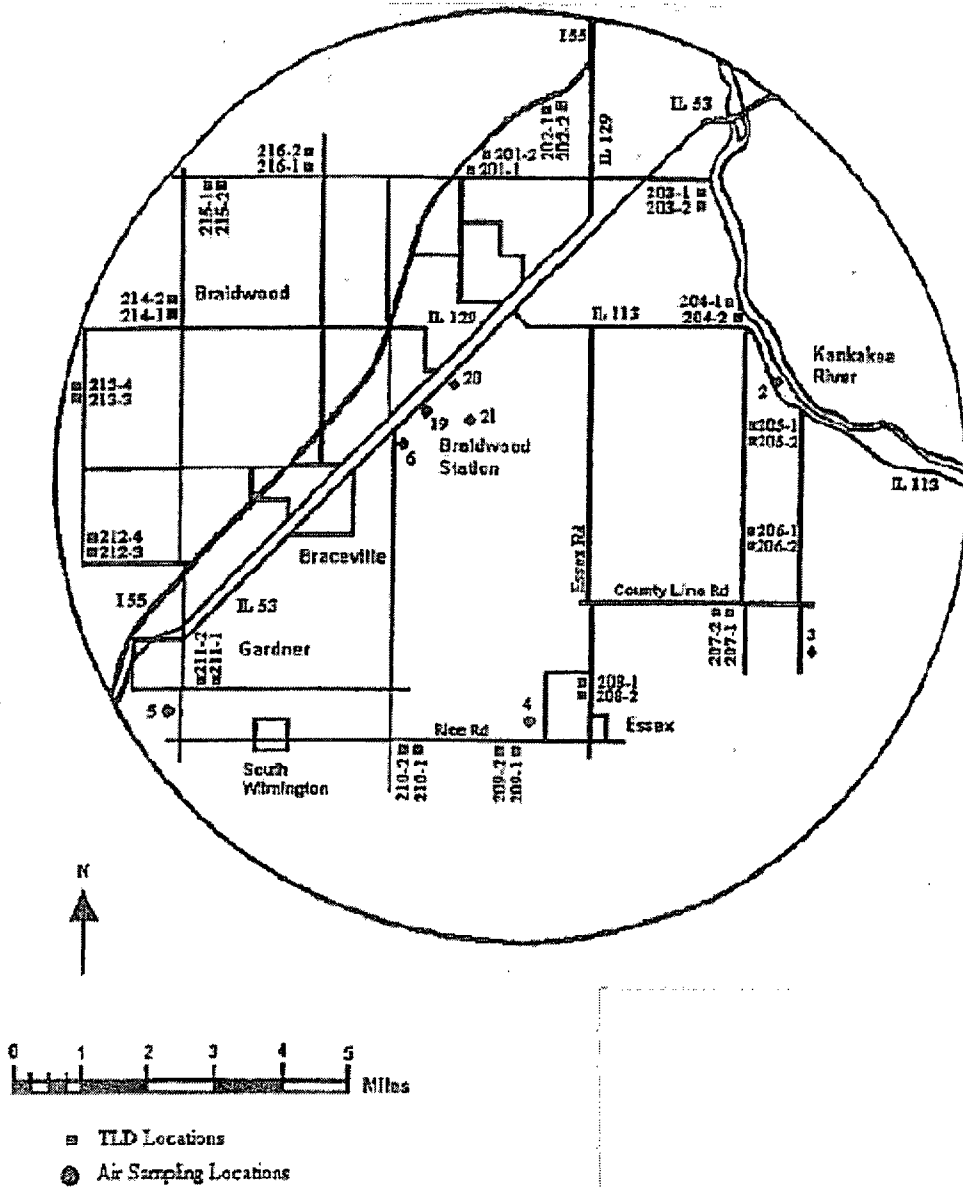
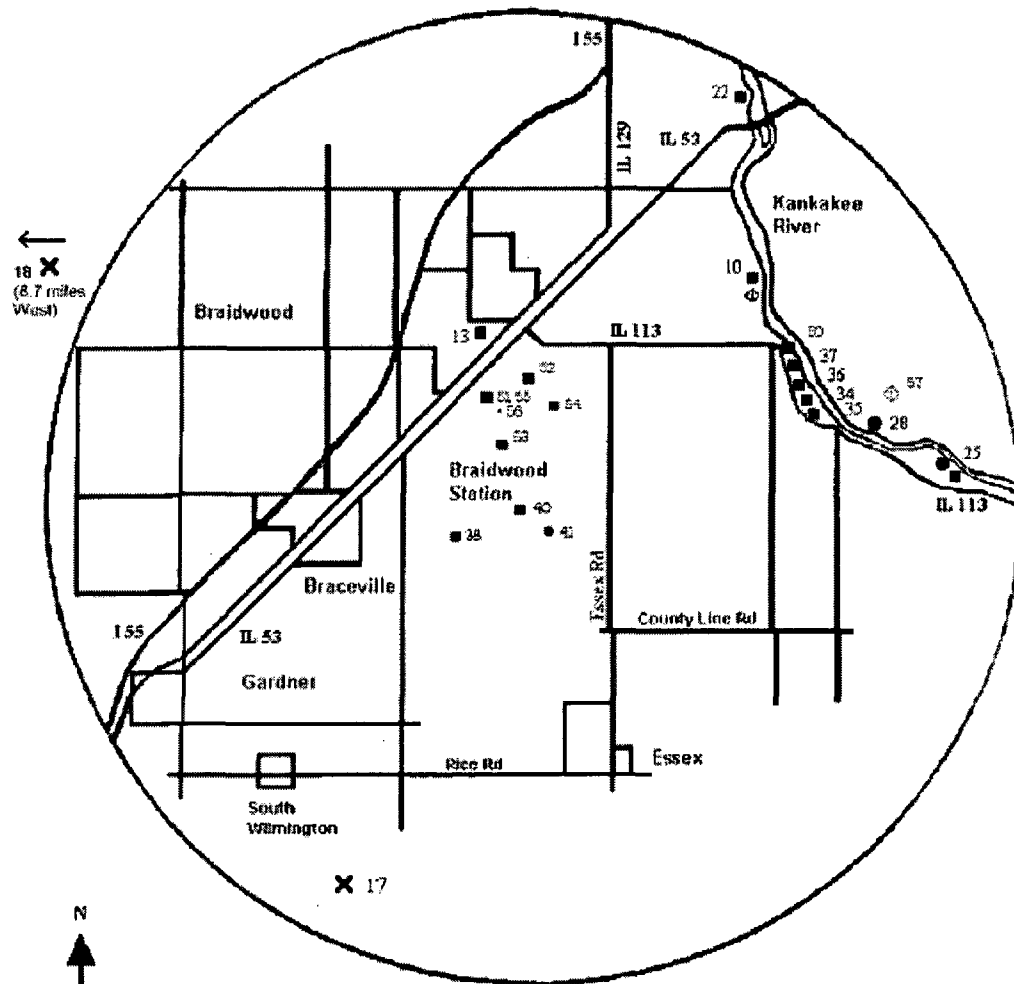


Figure B-2  
 Fixed Air Sampling and Outer Ring TLD Locations  
 of the Braidwood Station, 2006



OFFSITE DOSE CALCULATION MANUAL  
 BRAIDWOOD STATION

FIGURE 11-3  
 INGESTION AND WATERBORNE EXPOSURE  
 PATHWAY SAMPLE LOCATIONS

- Water    ⊙ Sediment
- Fish    X Milk

Figure B-3  
 Ingestion and Waterborne Exposure Pathway Sample Locations  
 of the Braidwood Station, 2006

## **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, 2006**

RESULTS IN UNITS OF PCI/LITER  $\pm$  2 SIGMA

COLLECTION PERIOD	BD-10	BD-25	BD-40
JAN	4.5 $\pm$ 1.9	5.6 $\pm$ 2.1	
FEB	5.4 $\pm$ 1.8	6.4 $\pm$ 2.0	
MAR	5.4 $\pm$ 1.9	5.7 $\pm$ 2.0	
APR	4.4 $\pm$ 2.0	5.2 $\pm$ 1.9	
MAY	4.8 $\pm$ 2.2	2.7 $\pm$ 1.9	
JUN	5.5 $\pm$ 2.2	4.8 $\pm$ 2.1	
JUL	8.2 $\pm$ 2.3	7.0 $\pm$ 2.3	
AUG	7.9 $\pm$ 2.1	3.7 $\pm$ 1.8	
SEP	4.6 $\pm$ 2.0	7.2 $\pm$ 2.2	
OCT	5.5 $\pm$ 1.7	7.2 $\pm$ 1.8	9.9 $\pm$ 2.2 (1)
NOV	5.3 $\pm$ 2.0	6.3 $\pm$ 2.1	11 $\pm$ 2.7
DEC	4.5 $\pm$ 2.0	5.7 $\pm$ 2.1	9.9 $\pm$ 2.7
MEAN	5.5 $\pm$ 2.5	5.6 $\pm$ 2.7	10 $\pm$ 0.7

(1) SEE PROGRAM CHANGES SECTION FOR EXPLANATION

**TABLE C-I.2 CONCENTRATIONS OF TRITIUM IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/LITER  $\pm$  2 SIGMA

COLLECTION PERIOD	BD-10	BD-25	COLLECTION PERIOD	BD-38	BD-40
APR-JUN	< 174	< 173	03/16/06 (1)	398 $\pm$ 137	
JUL-SEP	< 184	< 185	03/23/06	256 $\pm$ 110	
OCT-DEC	< 184	< 180	03/30/06	177 $\pm$ 110	
			04/06/06	232 $\pm$ 111	
			04/13/06	199 $\pm$ 121	
			04/20/06	184 $\pm$ 121	
			04/27/06	310 $\pm$ 128	
			05/04/06	< 175	
			05/11/06	< 175	
			05/18/06	< 182	
			05/25/06	202 $\pm$ 115	
			06/01/06	252 $\pm$ 111	
			06/08/06	< 184	
			06/15/06	< 185	
			06/22/06	< 191	
			06/29/06	227 $\pm$ 118	
			07/06/06	342 $\pm$ 117	
			07/13/06	< 191	
			07/20/06	< 179	< 180
			07/27/06	< 179	
			08/03/06	248 $\pm$ 122	< 176
			08/10/06	220 $\pm$ 121	
			08/17/06	< 178	
			08/24/06	< 175	
			08/31/06	< 181	
			09/07/06	< 177	< 177
			09/14/06	< 172	
			09/21/06	< 169	
			09/28/06	< 172	
			10/05/06	< 139	< 174
			10/05/06	NA	224 $\pm$ 124 (c)
			10/13/06	< 168	
			10/19/06	344 $\pm$ 128	
			10/26/06	< 176	
			11/02/06	< 163	
			11/09/06	< 166	
			11/16/06	312 $\pm$ 116	
			11/22/06	< 165	
			11/30/06	< 176	
			12/07/06	< 167	
			12/14/06	< 167	
			12/21/06	< 190	
			12/28/06	< 157	
MEAN	183 $\pm$ 13	182 $\pm$ 14		208 $\pm$ 121	186 $\pm$ 42

(c) = COMPOSITE 10/05/06 - 12/28/06

(1) SEE PROGRAM CHANGES SECTION FOR EXPLANATION

**TABLE C-I.3 CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

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	JAN	< 3	< 4	< 8	< 4	< 8	< 4	< 7	< 15	< 4	< 3	< 28	< 10
	FEB	< 4	< 4	< 9	< 4	< 10	< 4	< 8	< 14	< 4	< 4	< 28	< 9
	MAR	< 2	< 3	< 6	< 3	< 5	< 3	< 4	< 12	< 2	< 2	< 22	< 8
	APR	< 2	< 3	< 6	< 2	< 5	< 3	< 5	< 11	< 2	< 2	< 21	< 7
	MAY	< 2	< 2	< 5	< 1	< 3	< 2	< 3	< 11	< 2	< 1	< 34	< 11
	JUN	< 2	< 2	< 5	< 2	< 5	< 2	< 4	< 9	< 2	< 2	< 18	< 6
	JUL	< 1	< 1	< 3	< 1	< 2	< 1	< 3	< 12	< 1	< 1	< 18	< 6
	AUG	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 14	< 1	< 1	< 20	< 7
	SEP	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 8	< 2	< 2	< 16	< 4
	OCT	< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 7	< 1	< 1	< 10	< 3
	NOV	< 3	< 3	< 6	< 4	< 5	< 3	< 6	< 9	< 3	< 3	< 21	< 7
	DEC	< 3	< 3	< 6	< 2	< 5	< 3	< 5	< 15	< 2	< 3	< 25	< 10
	MEAN	2 ± 2	2 ± 2	5 ± 4	2 ± 2	5 ± 5	2 ± 2	4 ± 4	12 ± 5	2 ± 2	2 ± 2	22 ± 13	7 ± 5
BD-25	JAN	< 3	< 4	< 8	< 3	< 7	< 4	< 6	< 14	< 4	< 3	< 28	< 10
	FEB	< 4	< 4	< 10	< 4	< 9	< 4	< 8	< 14	< 4	< 4	< 29	< 9
	MAR	< 2	< 3	< 6	< 2	< 6	< 3	< 5	< 13	< 3	< 3	< 24	< 8
	APR	< 3	< 3	< 6	< 2	< 6	< 3	< 5	< 15	< 3	< 3	< 25	< 8
	MAY	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 15	< 1	< 1	< 16	< 6
	JUN	< 2	< 2	< 4	< 2	< 4	< 2	< 4	< 8	< 2	< 2	< 15	< 6
	JUL	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 15	< 1	< 1	< 20	< 6
	AUG	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 14	< 1	< 2	< 22	< 6
	SEP	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 9	< 2	< 2	< 17	< 5
	OCT	< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 7	< 1	< 1	< 9	< 3
	NOV	< 1	< 1	< 2	< 0	< 1	< 1	< 1	< 14	< 0	< 0	< 14	< 5
	DEC	< 2	< 2	< 6	< 2	< 4	< 3	< 5	< 12	< 2	< 2	< 25	< 8
	MEAN	2 ± 2	2 ± 2	5 ± 5	2 ± 2	4 ± 5	2 ± 2	4 ± 4	12 ± 6	2 ± 2	2 ± 2	20 ± 12	7 ± 4

C-3

**TABLE C-I.3 CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

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-40	JAN	(1)											
	FEB												
	MAR												
	APR												
	MAY												
	JUN												
	JUL												
	AUG												
	SEP												
	OCT	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 8	< 1	< 1	< 11	< 4
	NOV	< 4	< 4	< 8	< 5	< 9	< 5	< 7	< 14	< 4	< 4	< 30	< 9
	DEC	< 2	< 2	< 4	< 3	< 4	< 2	< 4	< 12	< 2	< 2	< 20	< 6
	MEAN		2 ± 3	2 ± 3	5 ± 6	3 ± 5	5 ± 7	3 ± 4	4 ± 5	11 ± 6	2 ± 3	2 ± 3	20 ± 19

C-4

(1) SEE PROGRAM CHANGES SECTION FOR EXPLANATION

**TABLE C-II.1 CONCENTRATIONS OF GROSS BETA IN PUBLIC WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/LITER  $\pm$  2 SIGMA

COLLECTION PERIOD	BD-22
JAN	< 2.4
FEB	4.6 $\pm$ 1.8
MAR	3.4 $\pm$ 1.8
APR	3.2 $\pm$ 1.8
MAY	3.2 $\pm$ 1.7
JUN	3.6 $\pm$ 1.8
JUL	2.9 $\pm$ 1.6
AUG	4.9 $\pm$ 1.8
SEP	3.9 $\pm$ 1.7
OCT	4.6 $\pm$ 1.6
NOV	3.6 $\pm$ 1.6
DEC	5.2 $\pm$ 1.6
MEAN	3.8 $\pm$ 1.7

**TABLE C-II.2 CONCENTRATIONS OF TRITIUM IN PUBLIC WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/LITER  $\pm$  2 SIGMA

COLLECTION PERIOD	BD-22
JAN	< 174
FEB	< 189
MAR	< 175
APR	< 175
MAY	< 169
JUN	< 167
JUL	< 182
AUG	< 174
SEP	< 171
OCT	210 $\pm$ 126
NOV	< 166
DEC	< 158
MEAN	176 $\pm$ 27

**TABLE C-II.3 CONCENTRATIONS OF GAMMA EMITTERS IN PUBLIC WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/L  $\pm$  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	JAN	< 2	< 2	< 6	< 2	< 5	< 3	< 4	< 10	< 2	< 2	< 39	< 15
	FEB	< 5	< 5	< 10	< 5	< 13	< 6	< 10	< 15	< 7	< 6	< 35	< 10
	MAR	< 3	< 3	< 10	< 3	< 6	< 4	< 6	< 12	< 2	< 3	< 105 (1)	< 37 (1)
	APR	< 2	< 3	< 5	< 2	< 5	< 2	< 4	< 12	< 2	< 2	< 22	< 8
	MAY	< 1	< 2	< 5	< 1	< 3	< 2	< 3	< 7	< 1	< 1	< 74 (1)	< 23 (1)
	JUN	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 14	< 1	< 1	< 19	< 6
	JUL	< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 14	< 1	< 1	< 14	< 4
	AUG	< 4	< 5	< 10	< 5	< 10	< 5	< 8	< 12	< 4	< 4	< 26	< 10
	SEP	< 6	< 6	< 14	< 6	< 11	< 6	< 10	< 11	< 5	< 6	< 29	< 11
	OCT	< 4	< 4	< 10	< 4	< 9	< 5	< 7	< 13	< 4	< 4	< 27	< 8
	NOV	< 1	< 1	< 2	< 1	< 2	< 1	< 2	< 6	< 1	< 1	< 9	< 3
	DEC	< 4	< 4	< 10	< 5	< 12	< 5	< 8	< 14	< 4	< 5	< 27	< 10
	MEAN	3 $\pm$ 4	3 $\pm$ 4	7 $\pm$ 7	3 $\pm$ 4	7 $\pm$ 8	3 $\pm$ 4	6 $\pm$ 6	12 $\pm$ 6	3 $\pm$ 4	3 $\pm$ 4	36 $\pm$ 55	12 $\pm$ 19

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(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

**TABLE C-III.1      CONCENTRATIONS OF TRITIUM IN GROUND/WELL WATER SAMPLES  
COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/LITER  $\pm$  2 SIGMA

COLLECTION PERIOD	BD-13	BD-34	BD-35	BD-36	BD-37
JAN-MAR	< 175	< 154	< 153	396 $\pm$ 121	< 153
APR-JUN	< 173	< 186	< 182	393 $\pm$ 132	< 185
JUL-SEP	< 176	< 174	< 173	261 $\pm$ 120	< 173
OCT-DEC	< 173	< 169	< 173	378 $\pm$ 118	< 173
MEAN	174 $\pm$ 3	171 $\pm$ 27	170 $\pm$ 25	357 $\pm$ 129	171 $\pm$ 27

**TABLE C-III.2 CONCENTRATIONS OF GAMMA EMITTERS IN GROUND/WELL WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/L  $\pm$  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-13	JAN	< 8	< 8	< 14	< 8	< 18	< 7	< 11	< 9	< 8	< 29	< 12
	APR	< 5	< 5	< 12	< 5	< 11	< 5	< 9	< 6	< 5	< 33	< 10
	JUL	< 3	< 3	< 7	< 3	< 7	< 3	< 6	< 3	< 3	< 25	< 9
	OCT	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 1	< 2	< 18	< 6
	MEAN	4 $\pm$ 5	4 $\pm$ 5	9 $\pm$ 9	4 $\pm$ 5	10 $\pm$ 13	4 $\pm$ 5	7 $\pm$ 7	5 $\pm$ 7	4 $\pm$ 5	26 $\pm$ 13	9 $\pm$ 5
BD-34	JAN	< 6	< 6	< 11	< 6	< 19	< 7	< 11	< 8	< 6	< 28	< 9
	APR	< 5	< 6	< 13	< 6	< 11	< 5	< 8	< 5	< 6	< 32	< 11
	JUL	< 3	< 3	< 7	< 4	< 7	< 3	< 6	< 3	< 3	< 27	< 10
	OCT	< 1	< 1	< 4	< 1	< 3	< 2	< 3	< 1	< 1	< 19	< 6
	MEAN	4 $\pm$ 4	4 $\pm$ 5	9 $\pm$ 8	4 $\pm$ 4	10 $\pm$ 13	4 $\pm$ 4	7 $\pm$ 7	4 $\pm$ 6	4 $\pm$ 5	26 $\pm$ 11	9 $\pm$ 5
BD-35	JAN	< 8	< 8	< 16	< 8	< 22	< 9	< 14	< 13	< 9	< 39	< 12
	APR	< 4	< 4	< 9	< 4	< 9	< 5	< 8	< 5	< 4	< 28	< 9
	JUL	< 2	< 2	< 6	< 2	< 5	< 3	< 5	< 2	< 2	< 20	< 7
	OCT	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 1	< 2	< 19	< 6
	MEAN	4 $\pm$ 6	4 $\pm$ 6	9 $\pm$ 11	4 $\pm$ 6	10 $\pm$ 17	5 $\pm$ 7	8 $\pm$ 10	5 $\pm$ 11	4 $\pm$ 7	26 $\pm$ 18	8 $\pm$ 5
BD-36	JAN	< 8	< 7	< 14	< 8	< 20	< 8	< 13	< 12	< 8	< 32	< 10
	APR	< 4	< 5	< 9	< 4	< 10	< 5	< 8	< 5	< 5	< 28	< 9
	JUL	< 2	< 2	< 6	< 2	< 5	< 3	< 4	< 2	< 2	< 20	< 6
	OCT	< 1	< 1	< 3	< 1	< 2	< 1	< 2	< 1	< 1	< 16	< 4
	MEAN	4 $\pm$ 6	4 $\pm$ 5	8 $\pm$ 10	4 $\pm$ 6	9 $\pm$ 15	4 $\pm$ 6	7 $\pm$ 9	5 $\pm$ 9	4 $\pm$ 6	24 $\pm$ 15	7 $\pm$ 6



**TABLE C-III.2 CONCENTRATIONS OF GAMMA EMITTERS IN GROUND/WELL WATER SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/L  $\pm$  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-37	JAN	< 7	< 7	< 15	< 6	< 17	< 7	< 12	< 10	< 8	< 31	< 12
	APR	< 5	< 5	< 11	< 5	< 12	< 6	< 10	< 6	< 5	< 31	< 10
	JUL	< 2	< 3	< 6	< 2	< 5	< 3	< 4	< 3	< 2	< 17	< 6
	OCT	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 1	< 2	< 20	< 7
	MEAN	4 $\pm$ 5	4 $\pm$ 5	9 $\pm$ 10	4 $\pm$ 4	9 $\pm$ 12	4 $\pm$ 5	7 $\pm$ 9	5 $\pm$ 7	4 $\pm$ 6	25 $\pm$ 15	9 $\pm$ 5

TABLE C-IV.1

**CONCENTRATIONS OF GAMMA EMITTERS IN FISH SAMPLES COLLECTED  
IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/KG WET  $\pm$  2 SIGMA

STC	COLLECTION PERIOD	MN-54	CO-58	FE-59	CO-60	ZN-65	ZRNB-95	CS-134	CS-137	BALA-140
<b>BD-25</b>										
Golden Redhorse	05/04/06	< 48	< 53	< 105	< 47	< 106	< 50	< 48	< 43	< 130
Channel Catfish	05/04/06	< 40	< 47	< 97	< 37	< 97	< 51	< 45	< 43	< 135
Channel Catfish	10/03/06	< 40	< 49	< 132	< 38	< 98	< 64	< 36	< 36	< 324
Golden Redhorse	10/03/06	< 49	< 79	< 150	< 49	< 89	< 90	< 45	< 48	< 541
	MEAN	44 $\pm$ 10	57 $\pm$ 30	121 $\pm$ 49	43 $\pm$ 12	97 $\pm$ 14	64 $\pm$ 37	44 $\pm$ 10	42 $\pm$ 10	283 $\pm$ 389
<b>BD-28</b>										
Channel Catfish	05/04/06	< 50	< 57	< 128	< 48	< 134	< 57	< 58	< 51	< 137
Common Carp	05/04/06	< 58	< 65	< 120	< 53	< 142	< 66	< 64	< 55	< 142
Golden Redhorse	10/03/06	< 48	< 69	< 154	< 53	< 107	< 54	< 44	< 48	< 473
Smallmouth Bass	10/03/06	< 67	< 77	< 176	< 60	< 121	< 98	< 58	< 59	< 406
	MEAN	56 $\pm$ 17	67 $\pm$ 16	145 $\pm$ 51	53 $\pm$ 10	126 $\pm$ 31	69 $\pm$ 40	56 $\pm$ 17	53 $\pm$ 9	290 $\pm$ 351
<b>BD-41 (1)</b>										
Common Carp	10/03/06	< 46	< 64	< 183	< 45	< 106	< 84	< 47	< 43	< 453
Largemouth Bass	10/03/06	< 71	< 76	< 194	< 92	< 174	< 92	< 63	< 83	< 253
	MEAN	59 $\pm$ 34	70 $\pm$ 16	189 $\pm$ 16	68 $\pm$ 67	140 $\pm$ 96	88 $\pm$ 11	55 $\pm$ 23	63 $\pm$ 57	353 $\pm$ 283

(1) SEE PROGRAM CHANGES SECTION FOR EXPLANATION

**TABLE C-V.1 CONCENTRATIONS OF GAMMA EMITTERS IN SEDIMENT SAMPLES  
COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/KG DRY  $\pm$  2 SIGMA

STC	COLLECTION PERIOD	MN-54	CO-58	FE-59	CO-60	ZN-65	ZRNB-95	CS-134	CS-137	BALA-140
BD-10	05/04/06	< 135	< 146	< 319	< 122	< 321	< 144	< 135	< 137	< 325
	10/26/06	< 95	< 105	< 227	< 84	< 226	< 112	< 83.1	142 $\pm$ 80	< 277
	MEAN	115 $\pm$ 57	126 $\pm$ 58	273 $\pm$ 130	103 $\pm$ 54	274 $\pm$ 134	128 $\pm$ 45	109 $\pm$ 73	140 $\pm$ 7	301 $\pm$ 68

**TABLE C-VI.1 CONCENTRATIONS OF GROSS BETA IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

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

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

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

**TABLE C-VI.2 MONTHLY AND YEARLY MEAN VALUES OF GROSS BETA CONCENTRATIONS (E-3 PCI/CU METER) IN AIR PARTICULATE SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

GROUP I - NEAR FIELD LOCATIONS				GROUP II - FAR FIELD LOCATIONS				GROUP III - CONTROL LOCATIONS			
COLLECTION PERIOD	MIN.	MAX.	MEAN ± 2 SD	COLLECTION PERIOD	MIN.	MAX.	MEAN ± 2 SD	COLLECTION PERIOD	MIN.	MAX.	MEAN ± 2 SD
12/29/05 - 02/02/06	10	26	19 ± 7	12/29/05 - 02/02/06	11	25	19 ± 8	12/29/05 - 02/02/06	14	23	17 ± 7
02/02/06 - 03/02/06	15	26	20 ± 8	02/02/06 - 03/02/06	17	30	22 ± 8	02/02/06 - 03/02/06	17	27	22 ± 9
03/02/06 - 03/30/06	8	20	14 ± 7	03/02/06 - 03/30/06	10	18	14 ± 6	03/02/06 - 03/30/06	8	19	13 ± 11
03/30/06 - 04/27/06	12	23	16 ± 6	03/30/06 - 04/27/06	13	21	16 ± 4	03/30/06 - 04/27/06	13	22	16 ± 8
04/27/06 - 06/01/06	< 5	24	14 ± 11	04/27/06 - 06/01/06	< 5	25	14 ± 11	04/27/06 - 06/01/06	5	20	13 ± 11
06/01/06 - 06/29/06	7	23	14 ± 10	06/01/06 - 06/29/06	7	22	15 ± 10	06/01/06 - 06/29/06	9	22	15 ± 11
06/29/06 - 07/27/06	15	31	22 ± 10	06/29/06 - 07/27/06	15	28	22 ± 8	06/29/06 - 07/27/06	16	26	21 ± 9
07/27/06 - 08/31/06	18	35	26 ± 10	07/27/06 - 08/31/06	18	33	25 ± 7	07/27/06 - 08/31/06	20	28	23 ± 6
08/31/06 - 09/28/06	15	22	18 ± 4	08/31/06 - 09/28/06	15	22	18 ± 4	08/31/06 - 09/28/06	15	16	15 ± 1
09/28/06 - 11/02/06	12	27	19 ± 9	09/28/06 - 11/02/06	12	26	19 ± 8	09/28/06 - 11/02/06	14	22	18 ± 7
11/02/06 - 11/30/06	18	32	24 ± 10	11/02/06 - 11/30/06	15	31	24 ± 9	11/02/06 - 11/30/06	18	27	23 ± 8
11/30/06 - 12/28/06	15	38	30 ± 12	11/30/06 - 12/28/06	25	41	32 ± 10	11/30/06 - 12/28/06	19	34	26 ± 13
12/29/05 - 12/28/06	< 5	38	20 ± 10	12/29/05 - 12/28/06	< 5	41	20 ± 11	12/29/05 - 12/28/06	5	34	18 ± 9

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

TABLE C-VI.3

CONCENTRATIONS OF GAMMA EMITTERS IN AIR PARTICULATE SAMPLES  
COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006

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

STC	COLLECTION PERIOD	MN-54	CO-58	FE-59	CO-60	ZN-65	ZRNB-95	CS-134	CS-137	BALA140
BD-02	12/29/05 - 03/30/06	< 3	< 11	< 33	< 4	< 18	< 9	< 6	< 4	< 169
	03/30/06 - 06/29/06	< 2	< 3	< 12	< 2	< 5.8	< 4	< 2	< 2	< 80
	06/29/06 - 09/28/06	< 3	< 4	< 14	< 2	< 6.2	< 4	< 1	< 2	< 222
	09/28/06 - 12/28/06	< 3	< 4	< 6.9	< 2	< 7.6	< 4	< 3	< 3	< 18
	MEAN	3 ± 1	5 ± 7	16 ± 23	2 ± 2	9 ± 11	5 ± 5	3 ± 4	3 ± 2	122 ± 181
BD-03	12/29/05 - 03/30/06	< 4	< 7	< 18	< 7	< 20	< 11	< 6	< 5	< 304
	03/30/06 - 06/29/06	< 3	< 5	< 11	< 2	< 6	< 4	< 3	< 3	< 96
	06/29/06 - 09/28/06	< 2	< 3	< 6.1	< 2	< 4.8	< 3	< 1	< 1	< 117
	09/28/06 - 12/28/06	< 3	< 4	< 9	< 5	< 9.2	< 5	< 4	< 3	< 21
	MEAN	3 ± 2	5 ± 3	11 ± 10	4 ± 4	10 ± 14	6 ± 7	4 ± 4	3 ± 3	134 ± 241
BD-04	12/29/05 - 03/30/06	< 6	< 8	< 22	< 5	< 12	< 9	< 5	< 4	< 304
	03/30/06 - 06/29/06	< 3	< 5	< 15	< 3	< 8	< 5	< 4	< 3	< 92
	06/29/06 - 09/28/06	< 2	< 4	< 16	< 3	< 6.8	< 5	< 2	< 2	< 187
	09/28/06 - 12/28/06	< 3	< 3	< 7.9	< 3	< 7.4	< 3	< 3	< 3	< 19
	MEAN	4 ± 3	5 ± 5	15 ± 12	4 ± 2	9 ± 5	5 ± 5	3 ± 3	3 ± 1	151 ± 246
BD-05	12/29/05 - 03/30/06	< 6	< 7	< 31	< 5	< 13	< 11	< 6	< 4	< 373
	03/30/06 - 06/29/06	< 4	< 5	< 14	< 3	< 8.1	< 6	< 4	< 3	< 114
	06/29/06 - 09/28/06	< 2	< 4	< 15	< 2	< 4.7	< 4	< 2	< 2	< 220
	09/28/06 - 12/28/06	< 2	< 3	< 7.1	< 3	< 7	< 4	< 3	< 2	< 21
	MEAN	3 ± 4	5 ± 4	17 ± 20	3 ± 3	8 ± 7	6 ± 7	4 ± 3	3 ± 1	182 ± 302

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TABLE C-VI.3

**CONCENTRATIONS OF GAMMA EMITTERS IN AIR PARTICULATE SAMPLES  
COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF E-3 PCI/CU METER  $\pm$  2 SIGMA

STC	COLLECTION PERIOD	MN-54	CO-58	FE-59	CO-60	ZN-65	NB-95	CS-134	CS-137	BALA140
BD-06	12/29/05 - 03/30/06	< 4	< 8	< 35	< 4	< 14	< 7	< 4	< 3	< 244
	03/30/06 - 06/29/06	< 2	< 3	< 10	< 2	< 4.8	< 4	< 3	< 3	< 79
	06/29/06 - 09/28/06	< 2	< 4	< 13	< 2	< 5.5	< 5	< 2	< 2	(1)
	09/28/06 - 12/28/06	< 2	< 3	< 6.6	< 3	< 5.6	< 3	< 3	< 2	< 15
	MEAN	2 $\pm$ 2	5 $\pm$ 5	16 $\pm$ 25	3 $\pm$ 1	7 $\pm$ 9	5 $\pm$ 3	3 $\pm$ 1	2 $\pm$ 1	113 $\pm$ 236
BD-19	12/29/05 - 03/30/06	< 3	< 4	< 27	< 3	< 9.5	< 9	< 4	< 3	< 174
	03/30/06 - 06/29/06	< 3	< 5	< 12	< 2	< 6.9	< 6	< 3	< 3	< 83
	06/29/06 - 09/28/06	< 1	< 2	< 10	< 1	< 4	< 4	< 1	< 1	< 117
	09/28/06 - 12/28/06	< 2	< 3	< 8.3	< 3	< 7.1	< 4	< 3	< 2	< 15
	MEAN	3 $\pm$ 2	3 $\pm$ 3	14 $\pm$ 17	2 $\pm$ 2	7 $\pm$ 4	6 $\pm$ 5	3 $\pm$ 2	2 $\pm$ 1	97 $\pm$ 133
BD-20	12/29/05 - 03/30/06	< 3	< 8	< 25	< 5	< 9.1	< 7	< 5	< 4	< 176
	03/30/06 - 06/29/06	< 4	< 6	< 17	< 4	< 9.8	< 6	< 4	< 4	< 122
	06/29/06 - 09/28/06	< 2	< 4	< 15	< 3	< 7	< 4	< 2	< 2	(1)
	09/28/06 - 12/28/06	< 2	< 4	< 7.3	< 3	< 7.5	< 3	< 3	< 2	< 21
	MEAN	3 $\pm$ 2	5 $\pm$ 4	16 $\pm$ 15	3 $\pm$ 2	8 $\pm$ 3	5 $\pm$ 4	3 $\pm$ 2	3 $\pm$ 2	106 $\pm$ 157
BD-21	12/29/05 - 03/30/06	< 4	< 8	< 19	< 4	< 6.6	< 8	< 4	< 3	< 246
	03/30/06 - 06/29/06	< 4	< 4	< 20	< 4	< 7.7	< 7	< 5	< 4	< 121
	06/29/06 - 09/28/06	< 2	< 3	< 12	< 2	< 3.2	< 4	< 2	< 2	< 128
	09/28/06 - 12/28/06	< 3	< 3	< 7.2	< 2	< 5.7	< 3	< 3	< 3	< 19
	MEAN	3 $\pm$ 2	5 $\pm$ 4	14 $\pm$ 12	3 $\pm$ 2	6 $\pm$ 4	5 $\pm$ 5	3 $\pm$ 2	3 $\pm$ 1	129 $\pm$ 185

(1) SEE PROGRAM CHANGES SECTION FOR EXPLANATION

**TABLE C-VII.1 CONCENTRATIONS OF I-131 IN AIR IODINE SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

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

WEEK	GROUP I				GROUP II			GROUP III
	BD-06	BD-19	BD-20	BD-21	BD-02	BD-04	BD-05	BD-03
1								
2	< 29	< 30	< 30	< 30	< 20	< 27	< 27	< 26
3								
4	< 23	< 23	< 23	< 23	< 21	< 21	< 21	< 16
5								
6	< 24	< 24	< 24	< 23	< 22	< 11	< 22	< 22
7								
8	< 22	< 22	< 22	< 22	< 20	< 20	< 20	< 20
9								
10	< 14	< 19	< 19	< 19	< 21	< 21	< 21	< 21
11								
12	< 16	< 11	< 18	< 16	< 16	< 16	< 16	< 16
13		(1)						
14	< 23	< 23	< 23	< 15	< 22	< 22	< 22	< 22
15	< 42	< 45	< 45	< 45	< 37	< 37	< 38	< 37
16	< 50	< 36	< 48	< 48	< 49	< 49	< 49	< 49
17	< 46	< 46	< 46	< 46	< 53	< 53	< 53	< 53
18	< 60	< 60	< 39	< 58	< 64	< 64	< 64	< 64
19	< 56	< 54	< 36	< 54	< 67	< 67	< 69	< 67
20	< 66	< 66	< 66	< 66	< 58	< 59	< 59	< 59
21	< 56	< 60	< 60	< 60	< 56	< 56	< 56	< 56
22	< 54	< 54	< 54	< 54	< 41	< 41	< 41	< 41
23	< 59	< 58	< 58	< 60	< 60	< 60	< 61	< 58
24	< 60	< 60	< 60	< 32	< 65	< 66	< 66	< 65
25	< 54	< 37	< 39	< 38	< 54	< 43	< 54	< 54
26	< 36	< 36	< 36	< 36	< 60	< 60	< 60	< 60
27	< 62	< 62	< 60	< 62	< 61	< 61	< 62	< 61
28	< 62	< 62	< 62	< 60	< 27	< 27	< 28	< 27
29	< 63	< 65	< 63	< 64	< 61	< 61	< 61	< 61
30	< 60	< 60	< 62	< 62	< 63	< 64	< 51	< 64
31	< 51	< 50	< 50	< 50	< 37	< 37	< 38	< 37
32	< 68	< 68	< 68	< 68	< 52	< 51	< 51	< 51
33	< 27	< 35	< 35	< 32	< 49	< 49	< 46	< 49
34	< 46	< 44	< 44	< 44	< 18	< 33	< 33	< 33
35	< 31	< 31	< 31	< 31	< 57	< 57	< 57	< 57
36	< 44	< 44	< 44	< 45	< 26	< 27	< 27	< 27
37	< 61	< 61	< 61	< 61	< 68	< 68	< 68	< 68
38	< 64	< 64	< 65	< 65	< 65	< 66	< 66	< 66
39	< 70	< 67	< 38	< 67	< 69	< 54	< 54	< 54
40	< 26	< 27	< 27	< 27	< 29	< 29	< 29	< 29
41	< 25	< 25	< 25	< 14	< 66	< 25	< 66	< 62
42	< 53	< 53	< 53	< 53	< 40	< 40	< 40	< 39
43	< 20	< 21	< 21	< 21	< 54	< 54	< 54	< 54
44	< 46	< 35	< 35	< 35	< 25	< 46	< 46	< 46
45	< 63	< 64	< 64	< 64	< 58	< 58	< 58	< 58
46	< 55	< 55	< 55	< 55	< 36	< 37	< 37	< 36
47	< 41	< 48	< 48	< 49	< 41	< 41	< 23	< 41
48	< 26	< 26	< 26	< 26	< 24	< 24	< 24	< 24
49	< 59	< 66	< 68	< 68	< 59	< 50	< 59	< 59
50	< 15	< 15	< 15	< 16	< 17	< 22	< 17	< 17
51	< 38	< 37	< 38	< 38	< 48	< 48	< 39	< 48
52	< 29	< 29	< 29	< 29	< 25	< 25	< 25	< 25
MEAN	44 ± 34	44 ± 34	43 ± 32	43 ± 35	44 ± 35	43 ± 33	44 ± 34	44 ± 33

(1) SEE PROGRAM CHANGES SECTION FOR EXPLANATION



**TABLE C-VIII.1 CONCENTRATIONS OF I-131 IN MILK SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/LITER  $\pm$  2 SIGMA

COLLECTION PERIOD	CONTROL FARM	INDICATOR FARM
	BD-18	BD-17
01/05/06	< 0.6	< 0.6
02/02/06	< 0.4	< 0.4
03/02/06	< 0.6	< 0.5
04/06/06	< 0.3	< 0.3
05/05/06	< 0.7	< 0.9
05/19/06	< 0.6	< 0.4
06/02/06	< 0.6	< 0.5
06/16/06	< 1.0	< 1.2 (1)
06/30/06	< 2.9 (1)	< 4.4 (1)
07/14/06	< 0.6	< 0.7
07/28/06	< 0.8	< 0.8
08/10/06	< 0.3	< 0.5
08/25/06	< 0.7	< 0.6
09/08/06	< 0.3	< 0.4
09/22/06	< 0.5	< 0.6
10/06/06	< 0.3	< 0.5
10/19/06	< 0.7	< 0.8
11/03/06	< 0.7	< 0.7
12/07/06	< 0.3	< 0.3
MEAN	0.7 $\pm$ 1.13	0.8 $\pm$ 1.81

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

**TABLE C-VIII.2 CONCENTRATIONS OF GAMMA EMITTERS IN MILK SAMPLES  
COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/LITER  $\pm$  2 SIGMA

STC	COLLECTION PERIOD	MN-54	CO-58	FE-59	CO-60	ZN-65	ZRNB-95	CS-134	CS-137	BA-140	LA-140
BD-17	01/05/06	< 4	< 5	< 8	< 5	< 10	< 4	< 3	< 5	< 16	< 5
	02/02/06	< 8	< 7	< 18	< 8	< 21	< 8	< 10	< 7	< 32	< 11
	03/02/06	< 9	< 8	< 19	< 9	< 23	< 9	< 10	< 9	< 40	< 14
	04/06/06	< 9	< 10	< 24	< 11	< 24	< 10	< 10	< 11	< 46	< 14
	05/04/06	< 8	< 9	< 19	< 8	< 21	< 10	< 8	< 8	< 47	< 14
	05/18/06	< 8	< 11	< 21	< 11	< 25	< 11	< 10	< 11	< 44	< 14
	06/01/06	< 7	< 7	< 17	< 7	< 18	< 8	< 7	< 7	< 41	< 15
	06/15/06	< 8	< 8	< 18	< 10	< 21	< 9	< 7	< 9	< 40	< 14
	06/29/06	< 7	< 8	< 23	< 9	< 21	< 8	< 9	< 9	< 49	< 14
	07/13/06	< 7	< 6	< 18	< 6	< 18	< 8	< 7	< 7	< 45	< 14
	07/27/06	< 7	< 7	< 18	< 9	< 17	< 8	< 6	< 7	< 42	< 11
	08/10/06	< 7	< 6	< 15	< 7	< 18	< 8	< 6	< 7	< 44	< 14
	08/24/06	< 6	< 7	< 16	< 8	< 15	< 7	< 7	< 7	< 37	< 14
	09/07/06	< 8	< 7	< 17	< 8	< 19	< 8	< 7	< 7	< 43	< 13
	09/21/06	< 6	< 8	< 16	< 9	< 20	< 10	< 7	< 8	< 40	< 11
	10/05/06	< 4	< 5	< 14	< 6	< 13	< 6	< 5	< 5	< 57	< 14
	10/19/06	< 6	< 6	< 13	< 5	< 12	< 6	< 4	< 5	< 42	< 15
11/02/06	< 3	< 3	< 8	< 4	< 8	< 4	< 3	< 3	< 28	< 9	
12/07/06	< 6	< 8	< 14	< 8	< 17	< 8	< 7	< 5	< 43	< 8	
MEAN		7 $\pm$ 3	7 $\pm$ 4	17 $\pm$ 8	8 $\pm$ 4	18 $\pm$ 9	8 $\pm$ 4	7 $\pm$ 4	7 $\pm$ 4	41 $\pm$ 17	13 $\pm$ 5

**TABLE C-VIII.2 CONCENTRATIONS OF GAMMA EMITTERS IN MILK SAMPLES  
COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

STC	COLLECTION PERIOD	MN-54	CO-58	FE-59	CO-60	ZN-65	ZRNB-95	CS-134	CS-137	BA-140	LA-140
BD-18	01/05/06	< 8	< 9	< 19	< 9	< 24	< 9	< 11	< 9	< 38	< 10
	02/02/06	< 8	< 9	< 20	< 9	< 23	< 9	< 10	< 9	< 44	< 10
	03/02/06	< 6	< 7	< 16	< 7	< 17	< 7	< 7	< 7	< 33	< 8
	04/06/06	< 8	< 9	< 17	< 8	< 25	< 10	< 13	< 8	< 41	< 13
	05/05/06	< 8	< 8	< 20	< 9	< 21	< 10	< 8	< 8	< 51	< 15
	05/19/06	< 8	< 9	< 21	< 9	< 24	< 9	< 9	< 10	< 43	< 13
	06/02/06	< 7	< 8	< 19	< 8	< 18	< 8	< 8	< 8	< 44	< 14
	06/16/06	< 10	< 9	< 23	< 12	< 22	< 11	< 10	< 11	< 38	< 13
	06/30/06	< 5	< 5	< 12	< 6	< 12	< 5	< 5	< 5	< 27	< 9
	07/14/06	< 6	< 8	< 17	< 7	< 17	< 7	< 7	< 7	< 44	< 14
	07/28/06	< 6	< 7	< 18	< 6	< 19	< 8	< 8	< 7	< 37	< 12
	08/10/06	< 7	< 6	< 15	< 7	< 15	< 6	< 6	< 5	< 36	< 9
	08/25/06	< 6	< 6	< 13	< 7	< 12	< 7	< 5	< 5	< 33	< 13
	09/08/06	< 6	< 6	< 16	< 5	< 17	< 7	< 4	< 5	< 39	< 13
	09/22/06	< 7	< 7	< 15	< 7	< 15	< 9	< 7	< 8	< 29	< 8
	10/06/06	< 5	< 6	< 16	< 6	< 10	< 7	< 5	< 5	< 49	< 12
10/19/06	< 5	< 7	< 14	< 6	< 14	< 6	< 5	< 6	< 40	< 14	
11/03/06	< 6	< 5	< 14	< 5	< 12	< 6	< 5	< 6	< 43	< 11	
12/07/06	< 6	< 6	< 17	< 7	< 16	< 6	< 6	< 6	< 42	< 8	
		7 ± 3	7 ± 3	17 ± 6	7 ± 4	17 ± 9	8 ± 3	7 ± 5	7 ± 4	39 ± 12	11 ± 5

TABLE C-IX.1

**CONCENTRATIONS OF GAMMA EMITTERS IN VEGETATION SAMPLES  
COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF PCI/KG WET  $\pm$  2 SIGMA

STC	COLLECTION PERIOD	MN-54	CO-58	FE-59	CO-60	ZN-65	ZRNB-95	CS-134	CS-137	BALA140
BD-QUAD 1 Cabbage	09/23/06	< 9	< 10	< 23	< 11	< 31	< 11	< 9	< 9	< 12
BD-QUAD 1 Onions	09/23/06	< 19	< 16	< 45	< 24	< 42	< 20	< 14	< 17	< 34
	MEAN	14 $\pm$ 14	13 $\pm$ 8	34 $\pm$ 32	17 $\pm$ 18	37 $\pm$ 15	15 $\pm$ 12	12 $\pm$ 8	13 $\pm$ 11	23 $\pm$ 31
BD-QUAD 2 Rutabagas	09/23/06	< 11	< 11	< 32	< 11	< 28	< 12	< 8	< 12	< 18
BD-QUAD 2 Rutabaga greens	09/23/06	< 16	< 18	< 37	< 19	< 44	< 17	< 15	< 17	< 34
	MEAN	14 $\pm$ 7	14 $\pm$ 9	35 $\pm$ 7	15 $\pm$ 11	36 $\pm$ 23	14 $\pm$ 8	11 $\pm$ 9	14 $\pm$ 6	26 $\pm$ 22
BD-QUAD 3 Broccoli Schultz	09/09/06	< 20	< 14	< 52	< 17	< 48	< 21	< 18	< 18	< 24
BD-QUAD 3 Potatoes Schultz	09/09/06	< 12	< 14	< 29	< 13	< 31	< 12	< 12	< 14	< 21
	MEAN	16 $\pm$ 12	14 $\pm$ 0	40 $\pm$ 32	15 $\pm$ 6	40 $\pm$ 25	17 $\pm$ 13	15 $\pm$ 7	16 $\pm$ 6	22 $\pm$ 4
BD-QUAD 4 Cabbage	09/23/06	< 20	< 19	< 45	< 20	< 41	< 17	< 18	< 21	< 38
BD-QUAD 4 Sweet Potatoes	09/23/06	< 16	< 20	< 51	< 16	< 45	< 18	< 16	< 20	< 22
	MEAN	18 $\pm$ 5	19 $\pm$ 2	48 $\pm$ 9	18 $\pm$ 6	43 $\pm$ 4	17 $\pm$ 1	17 $\pm$ 3	21 $\pm$ 2	30 $\pm$ 23
BD-QUAD-C Broccoli	09/23/06	< 20	< 21	< 62	< 21	< 64	< 23	< 18	< 23	< 30
BD-QUAD-C Potatoes	09/23/06	< 6	< 6	< 16	< 7	< 16	< 7	< 5	< 7	< 9
	MEAN	13 $\pm$ 20	13 $\pm$ 21	39 $\pm$ 65	14 $\pm$ 20	40 $\pm$ 68	15 $\pm$ 23	12 $\pm$ 18	15 $\pm$ 23	19 $\pm$ 30

**TABLE C-X.1 QUARTERLY TLD RESULTS FOR BRAIDWOOD STATION, 2006**

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	23.5 ± 4.8	25	20	24	25
BD-02-2	25.5 ± 5.0	26	22	28	26
BD-03-1	24.8 ± 5.3	26	21	25	27
BD-03-2	24.3 ± 5.0	24	21	25	27
BD-04-1	24.3 ± 7.0	23	20	28	26
BD-04-2	23.0 ± 4.3	23	21	26	22
BD-05-1	28.0 ± 4.0	29	25	29	29
BD-05-2	26.5 ± 6.2	27	22	28	29
BD-06-1	23.3 ± 4.4	24	20	24	25
BD-06-2	23.3 ± 7.0	22	19	27	25
BD-19-1	24.5 ± 5.8	24	21	28	25
BD-19-2	24.3 ± 5.0	24	21	25	27
BD-20-1	23.5 ± 5.3	23	20	25	26
BD-20-2	25.3 ± 7.5	26	20	29	26
BD-21-1	24.0 ± 5.7	26	20	24	26
BD-21-2	25.5 ± 3.5	26	23	27	26
BD-101-3	24.3 ± 6.8	23	20	27	27
BD-101-4	25.0 ± 2.8	26	23	26	25
BD-102-1	24.0 ± 5.4	25	20	26	25
BD-102-2	25.8 ± 6.8	26	21	29	27
BD-103-1	25.0 ± 6.3	24	21	28	27
BD-103-2	24.8 ± 1.9	24	24	26	25
BD-104-1	22.5 ± 5.8	22	19	26	23
BD-104-2	23.3 ± 4.4	22	21	26	24
BD-105-1	24.8 ± 8.4	26	19	29	25
BD-105-2	25.0 ± 4.3	25	22	27	26
BD-106-1	23.3 ± 6.0	22	20	27	24
BD-106-2	26.7 ± 3.1	25	(1)	28	27
BD-107-1	24.8 ± 6.4	26	20	27	26
BD-107-2	23.5 ± 4.8	24	20	25	25
BD-108-1	23.8 ± 6.6	24	19	26	26
BD-108-2	24.3 ± 5.7	26	20	25	26
BD-109-1	27.3 ± 7.0	26	23	31	29
BD-109-2	27.0 ± 6.7	28	22	29	29
BD-110-1	24.8 ± 6.8	25	20	28	26
BD-110-2	26.3 ± 8.2	25	21	29	30
BD-111a-1	24.0 ± 5.9	25	20	27	24
BD-111a-2	26.0 ± 4.9	26	23	29	26
BD-112-1	23.8 ± 5.7	24	20	27	24
BD-112-2	24.8 ± 6.6	25	20	27	27
BD-113a-1	24.8 ± 6.8	25	20	28	26
BD-113a-2	24.5 ± 6.0	26	20	26	26
BD-114-1	24.8 ± 6.8	25	20	28	26
BD-114-2	24.8 ± 6.8	25	20	28	26
BD-115-1	25.5 ± 5.8	25	22	29	26
BD-115-2	24.3 ± 7.0	23	20	28	26
BD-116-1	25.5 ± 3.8	27	23	25	27
BD-116-2	24.5 ± 2.6	25	24	26	23
BD-201-1	28.3 ± 5.7	29	24	30	30
BD-201-2	24.8 ± 4.4	27	22	24	26
BD-202-1	25.0 ± 6.9	26	20	28	26
BD-202-2	25.3 ± 6.2	25	21	28	27
BD-203-1	23.5 ± 5.8	26	21	26	21

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

**TABLE C-X.1 QUARTERLY TLD RESULTS FOR BRAIDWOOD STATION, 2006**

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-203-2	23.5 ± 6.2	22	20	27	25
BD-204-1	23.8 ± 6.4	25	19	26	25
BD-204-2	22.5 ± 2.6	24	21	22	23
BD-205-1	23.5 ± 5.0	24	20	26	24
BD-205-2	23.8 ± 6.4	25	19	26	25
BD-206-1	26.3 ± 7.2	27	21	29	28
BD-206-2	25.8 ± 5.3	26	22	27	28
BD-207-1	24.0 ± 5.9	22	21	27	26
BD-207-2	23.8 ± 6.0	25	20	27	23
BD-208-1	24.3 ± 6.0	23	21	28	25
BD-208-2	23.8 ± 6.0	23	20	27	25
BD-209-1	28.3 ± 7.2	29	23	31	30
BD-209-2	30.3 ± 4.1	30	28	33	30
BD-210-1	29.0 ± 3.3	29	27	31	29
BD-210-2	25.0 ± 7.7	24	20	28	28
BD-211-1	30.3 ± 5.7	31	26	32	32
BD-211-2	30.0 ± 3.3	30	28	32	30
BD-212-3	24.8 ± 6.0	24	21	28	26
BD-212-4	28.8 ± 6.8	29	24	32	30
BD-213-3	23.8 ± 5.3	25	20	24	26
BD-213-4	23.8 ± 6.0	25	20	27	23
BD-214-1	25.0 ± 5.9	26	21	28	25
BD-214-2	25.8 ± 5.3	28	23	24	28
BD-215-1	24.8 ± 6.4	26	20	27	26
BD-215-2	22.8 ± 5.0	24	19	24	24
BD-216-1	25.8 ± 6.4	27	21	28	27
BD-216-2	26.5 ± 6.0	28	22	28	28

(1) SEE PROGRAM EXCEPTIONS SECTION FOR EXPLANATION

**TABLE C-X.2****MEAN QUARTERLY TLD RESULTS FOR THE INNER RING, OUTER RING,  
OTHER AND CONTROL LOCATIONS FOR BRAIDWOOD STATION, 2006**RESULTS IN UNITS OF MILLI-ROENTGEN/QUARTER  $\pm$  2 STANDARD  
DEVIATIONS OF THE STATION DATA

STATION CODE	SITE BOUNDARY $\pm$ 2 S. D.	INTERMEDIATE DISTANCE	OTHER	CONTROL
JAN-MAR	24.8 $\pm$ 2.8	26.1 $\pm$ 4.8	24.9 $\pm$ 3.8	25.0 $\pm$ 2.8
APR-JUN	21.0 $\pm$ 2.9	21.7 $\pm$ 5.0	21.0 $\pm$ 3.1	21.0 $\pm$ 0.0
JUL-SEP	27.3 $\pm$ 2.9	27.7 $\pm$ 5.3	26.6 $\pm$ 3.7	25.0 $\pm$ 0.0
OCT-DEC	25.9 $\pm$ 3.2	26.7 $\pm$ 4.7	26.0 $\pm$ 3.5	27.0 $\pm$ 0.0

**TABLE C-X.3****SUMMARY OF THE AMBIENT DOSIMETRY PROGRAM FOR  
BRAIDWOOD STATION, 2006**

RESULTS IN UNITS OF MILLI-ROENTGEN/STD. MONTH

LOCATION	SAMPLES ANALYZED	PERIOD MINIMUM	PERIOD MAXIMUM	PERIOD MEAN $\pm$ 2 S. D.
SITE BOUNDARY	127	19	31	24.8 $\pm$ 5.5
INTERMEDIATE DISTANCE	128	19	33	25.5 $\pm$ 6.7
OTHER	56	19	29	24.6 $\pm$ 5.6
CONTROL	8	21	27	24.5 $\pm$ 4.8

SITE BOUNDARY - 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 - BD-201-1, BD-201-2, BD-202-1, BD-202-2, BD-203-1, BD-203-2,  
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-211-4, BD-212-1, BD-212-4, BD-213-1  
BD-213-4, BD-214-1, BD-214-4, BD-215-1, BD-215-4, BD-216-1, BD-216-2

OTHER - 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 - BD-03-1, BD-03-2

**TABLE C-XI.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

**SURFACE WATER (TRITIUM LIQUID SCINTILLATION)**

COLLECTION PERIOD	BD-10	BD-25
JAN-MAR	01/05/06 - 03/30/06	01/05/06 - 03/30/06
APR-JUN	04/06/06 - 06/29/06	04/06/06 - 06/29/06
JUL-SEP	07/06/06 - 09/28/06	07/06/06 - 09/28/06
OCT-DEC	10/05/06 - 12/28/06	10/05/06 - 12/28/06

**SURFACE WATER (GROSS BETA & GAMMA SPECTROSCOPY)**

COLLECTION PERIOD	BD-10	BD-25	BD-40
JAN	01/05/06 - 01/26/06	01/05/06 - 01/26/06	(1)
FEB	02/02/06 - 02/23/06	02/02/06 - 02/23/06	
MAR	03/02/06 - 03/30/06	03/02/06 - 03/30/06	
APR	04/06/06 - 04/27/06	04/06/06 - 04/27/06	
MAY	05/04/06 - 05/25/06	05/04/06 - 05/25/06	
JUN	06/01/06 - 06/29/06	06/01/06 - 06/29/06	
JUL	07/06/06 - 07/27/06	07/06/06 - 07/27/06	
AUG	08/03/06 - 08/31/06	08/03/06 - 08/31/06	
SEP	09/07/06 - 09/28/06	09/07/06 - 09/28/06	
OCT	10/05/06 - 10/26/06	10/05/06 - 10/26/06	10/05/06 - 10/26/06
NOV	11/02/06 - 11/30/06	11/02/06 - 11/30/06	11/02/06 - 11/30/06
DEC	12/07/06 - 12/28/06	12/07/06 - 12/28/06	12/07/06 - 12/28/06

**PUBLIC WATER (TRITIUM & GAMMA SPECTROSCOPY)**

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

(1) SEE PROGRAM CHANGES SECTION FOR EXPLANATION



**TABLE C-XI.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

**SURFACE WATER (TRITIUM LIQUID SCINTILLATION)**

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

(1) SEE PROGRAM CHANGES SECTION FOR EXPLANATION

**TABLE C-XI.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

**GROUNDWELL WATER (TRITIUM LIQUID SCINTILLATION AND GAMMA SPECTROSCOPY)**

COLLECTION PERIOD	BD-13	BD-34	BD-35	BD-37
JAN-MAR	01/12/06	01/12/06	01/12/06	01/12/06
APR-JUN	04/20/06	04/13/06	04/13/06	04/13/06
JUL-SEP	07/14/06	07/13/06	07/13/06	07/13/06
OCT-DEC	10/13/06	10/13/06	10/13/06	10/13/06

**AIR PARTICULATE (GAMMA SPECTROSCOPY)**

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

**AIR PARTICULATE (GAMMA SPECTROSCOPY)**

COLLECTION PERIOD	BD-19	BD-20	BD-21
JAN-MAR	12/29/05 - 03/30/06	12/29/05 - 03/30/06	12/29/05 - 03/30/06
APR-JUN	03/30/06 - 06/29/06	03/30/06 - 06/29/06	03/30/06 - 06/29/06
JUL-SEP	06/29/06 - 09/28/06	06/29/06 - 09/28/06	06/29/06 - 09/28/06
OCT-DEC	09/28/06 - 12/28/06	09/28/06 - 12/28/06	09/28/06 - 12/28/06

**TABLE C-XI.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

**AIR PARTICULATE (GROSS BETA & I-131)**

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

\* AIR IODINE SAMPLES COLLECTED BIWEEKLY

**TABLE C-XI.1 SUMMARY OF COLLECTION DATES FOR SAMPLES COLLECTED IN THE VICINITY OF BRAIDWOOD STATION, 2006**

**AIR PARTICULATE (GROSS BETA & I-131)**

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

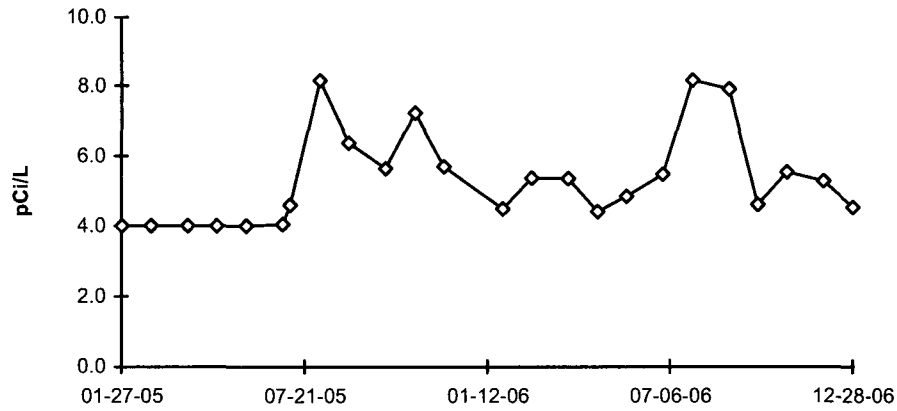
\* AIR IODINE SAMPLES COLLECTED BIWEEKLY



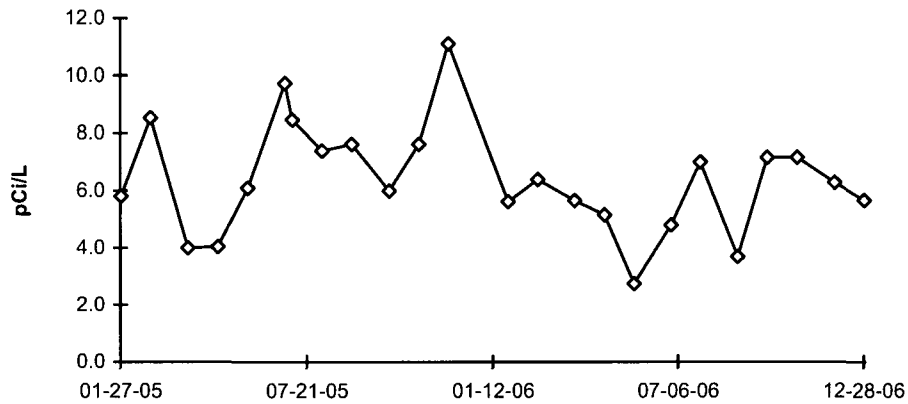
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**FIGURE C-1 (cont.)**  
**Surface Water - Gross Beta - Stations BD-10 and BD-25 (C)**  
**Collected in the Vicinity of Braidwood Station, 2005 - 2006**

**BD-10 Kankakee River, Downstream**



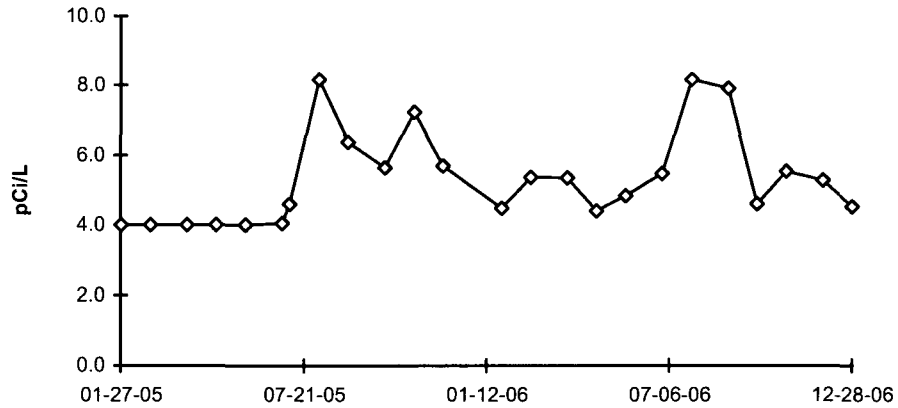
**BD-25 (C) Kankakee River, Upstream**



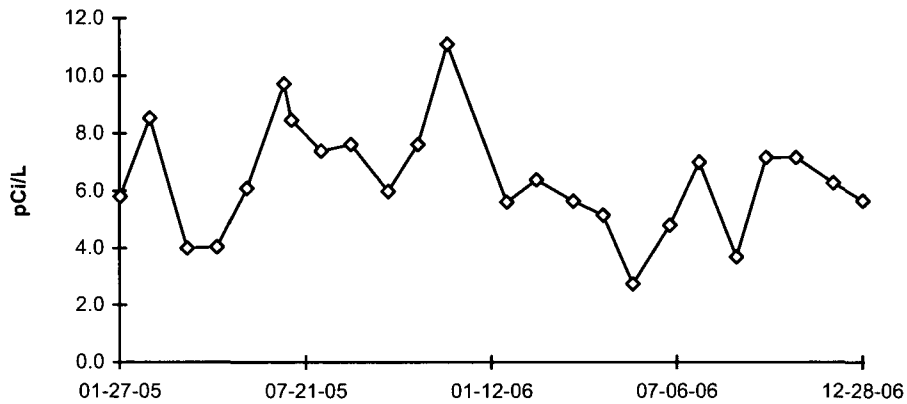
DUE TO VENDOR CHANGE IN 2005, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE 2005 AND MDC VALUES AFTER JUNE 2005

**FIGURE C-1 (cont.)**  
**Surface Water - Gross Beta - Stations BD-10 and BD-25 (C)**  
**Collected in the Vicinity of Braidwood Station, 2005 - 2006**

**BD-10 Kankakee River, Downstream**



**BD-25 (C) Kankakee River, Upstream**

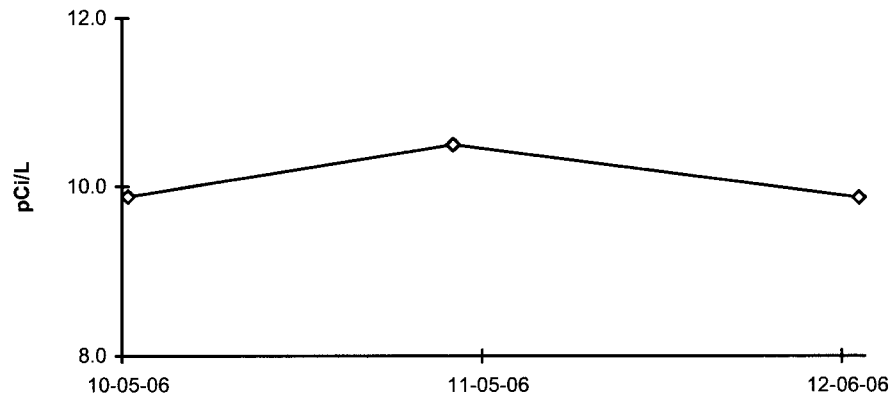


DUE TO VENDOR CHANGE IN 2005, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE 2005 AND MDC VALUES AFTER JUNE 2005



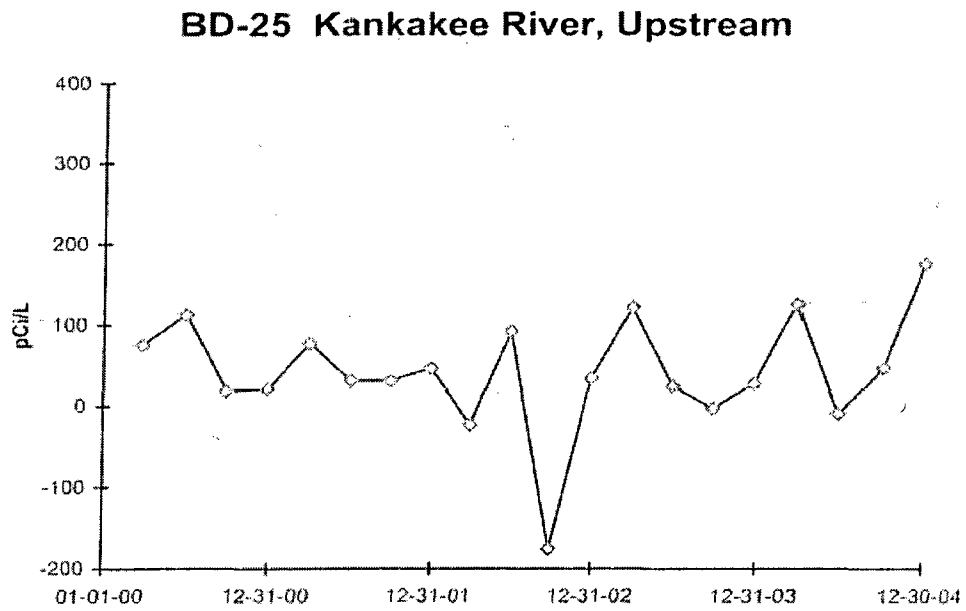
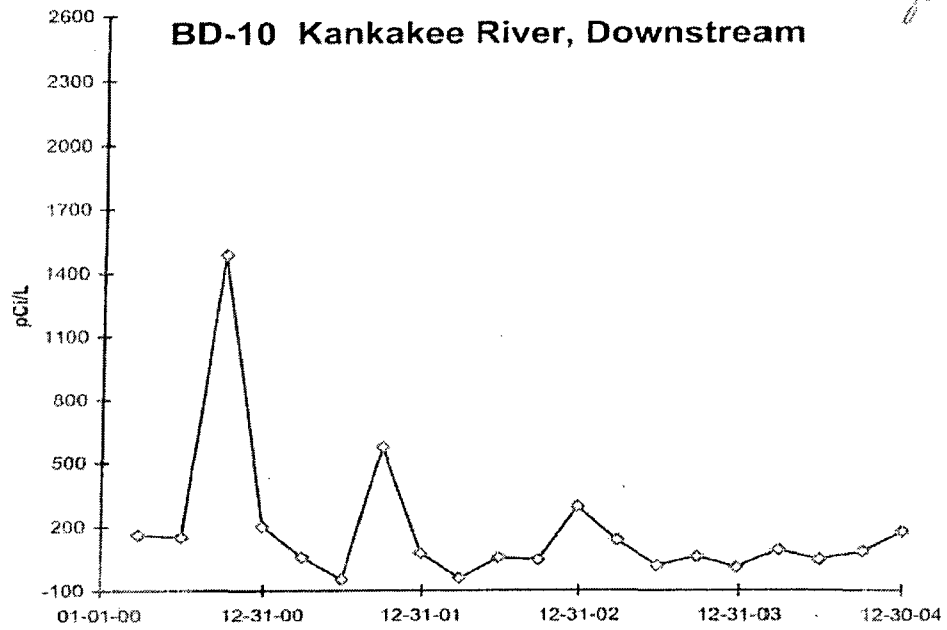
**FIGURE C-1 (cont.)**  
**Surface Water - Gross Beta - Station BD-40**  
**Collected in the Vicinity of Braidwood Station, 2006**

**BD-40**



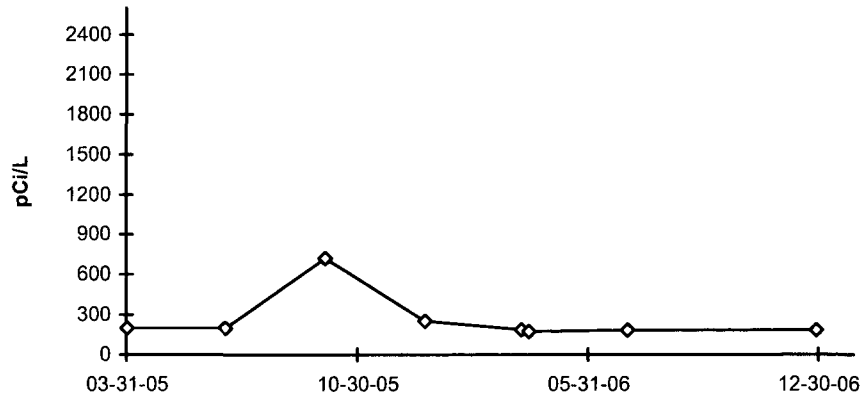
NEW STATION BD-40 ADDED ON 10/05/06

**FIGURE C-2**  
**Surface Water - Tritium - Stations BD-10 and BD-25 (C)**  
**Collected in the Vicinity of Braidwood Station, 2000 - 2004**

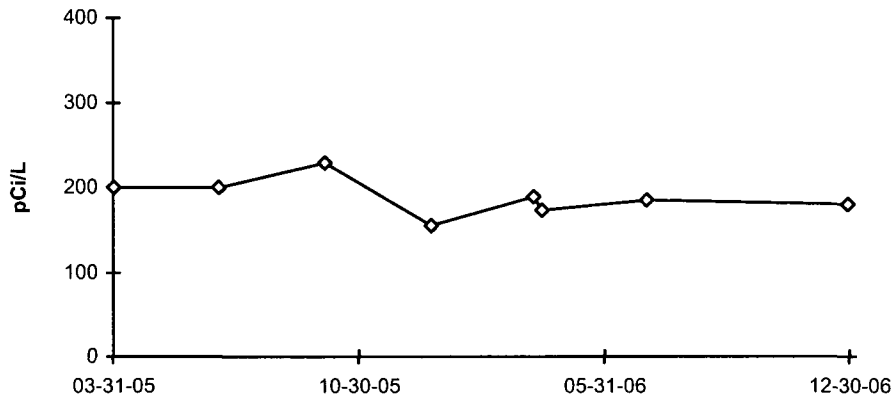


**FIGURE C-2 (cont.)**  
**Surface Water - Tritium - Stations BD-10 and BD-25 (C)**  
**Collected in the Vicinity of Braidwood Station, 2005 - 2006**

**BD-10 Kankakee River, Downstream**



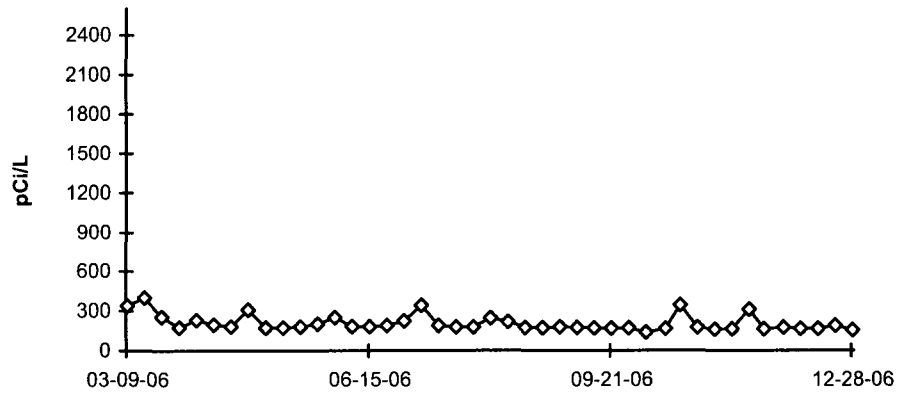
**BD-25 (C) Kankakee River, Upstream**



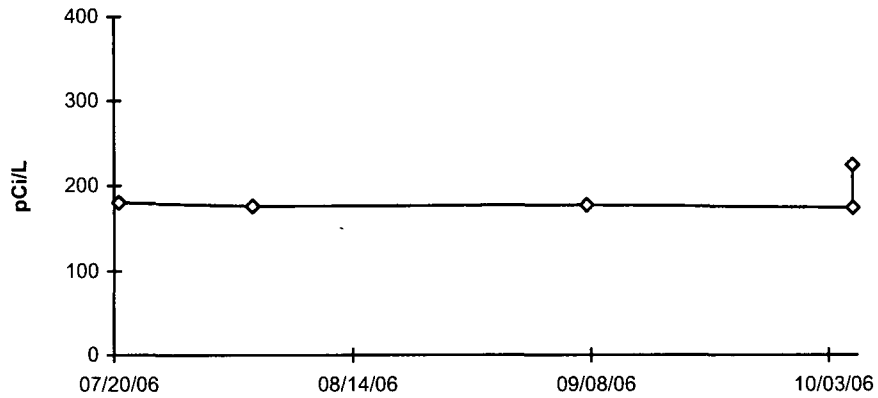
DUE TO VENDOR CHANGE IN 2005, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE 2005 AND MDC VALUES AFTER JUNE 2005

**FIGURE C-2 (cont.)**  
**Surface Water - Tritium - Stations BD-38 (C)**  
**Collected in the Vicinity of Braidwood Station, 2006**

**BD-38**

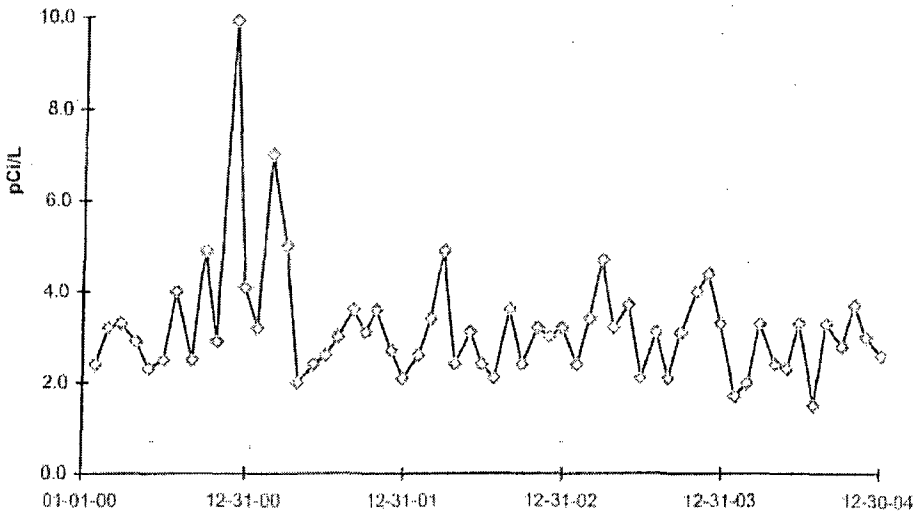


**BD-40**



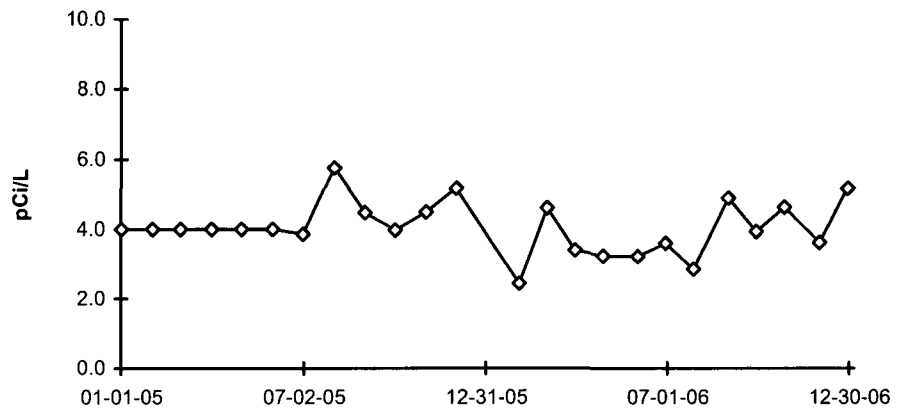
NEW STATIONS BD-38 AND BD-40 ADDED IN 2006

**FIGURE C-3**  
**Public Water - Gross Beta - Station BD-22**  
**Collected in the Vicinity of Braidwood Station, 2000 - 2004**  
**BD-22 Wilmington**



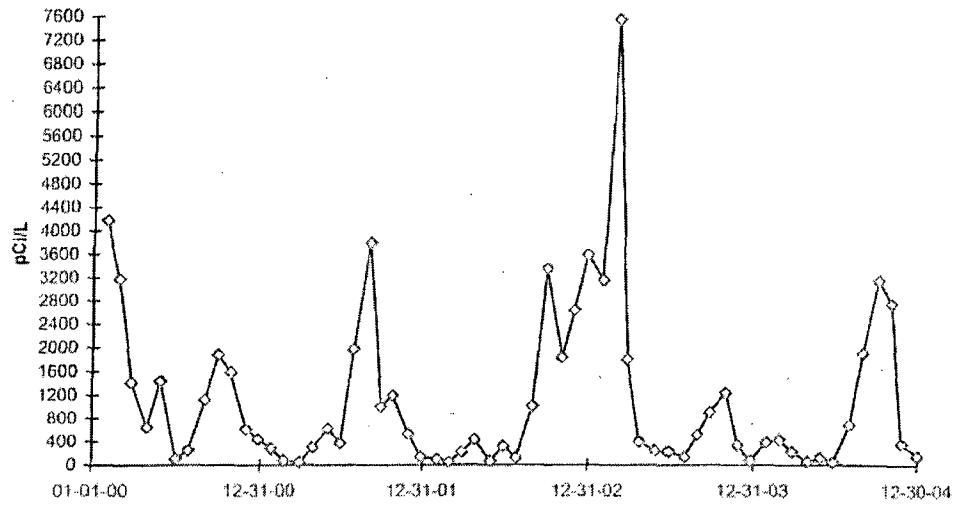
**FIGURE C-3 (cont.)**  
**Public Water - Gross Beta - Station BD-22**  
**Collected in the Vicinity of Braidwood Station, 2005 - 2006**

**BD-22 Wilmington**



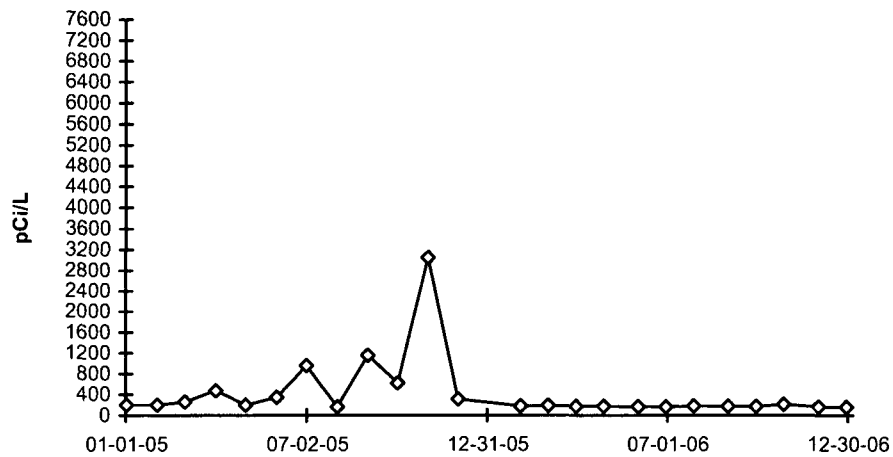
DUE TO VENDOR CHANGE, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE 2005 AND MDC VALUES AFTER JUNE 2005

**FIGURE C-4**  
**Public Water - Tritium - Station BD-22**  
**Collected in the Vicinity of Braidwood Station, 2000 - 2004**  
BD-22 Wilmington



**FIGURE C-4 (cont.)**  
**Public Water - Tritium - Station BD-22**  
**Collected in the Vicinity of Braidwood Station, 2005 - 2006**

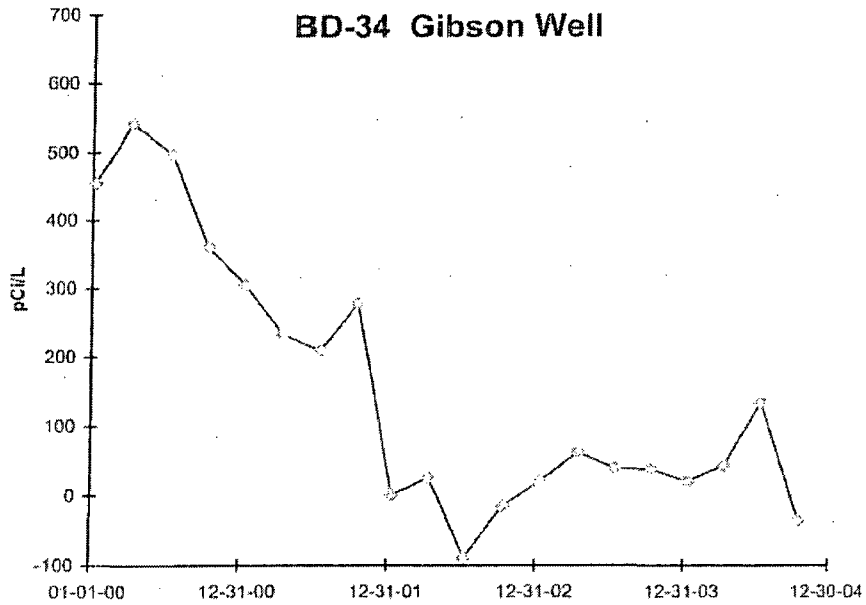
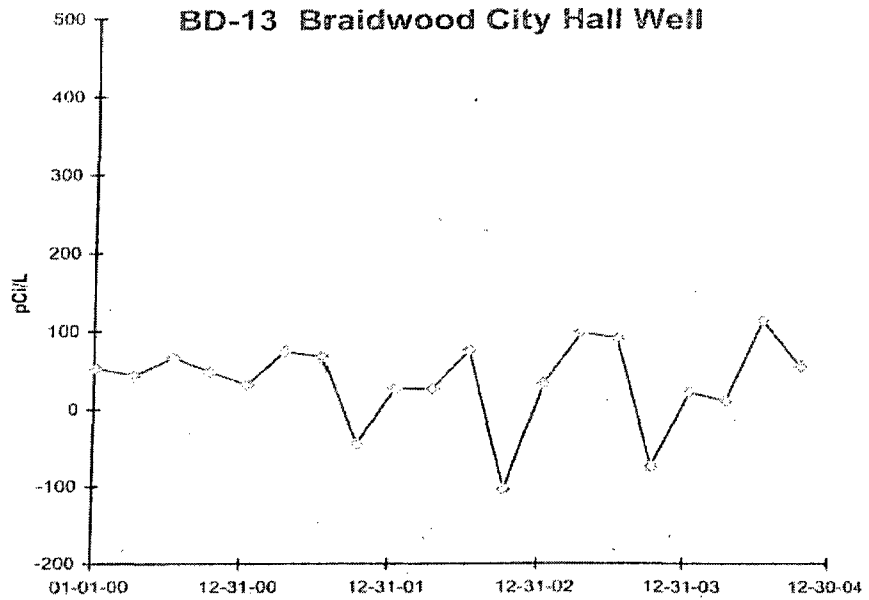
**BD-22 Wilmington**



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

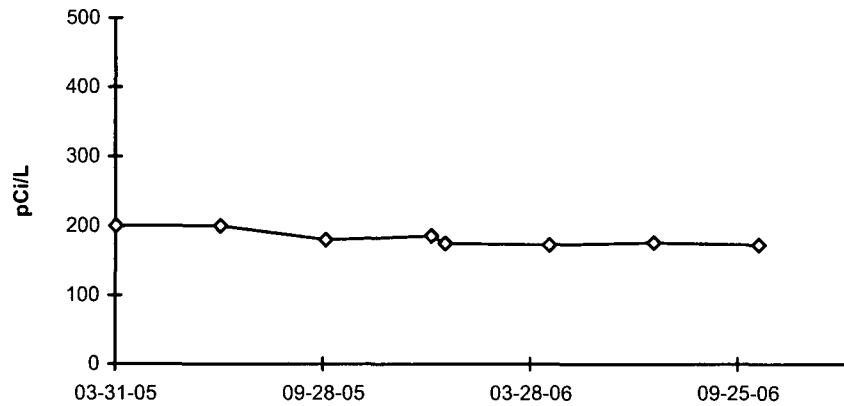


**FIGURE C-5**  
**Ground/Well Water - Tritium - Stations BD-13 and BD-34**  
**Collected in the Vicinity of Braidwood Station, 2000 - 2004**

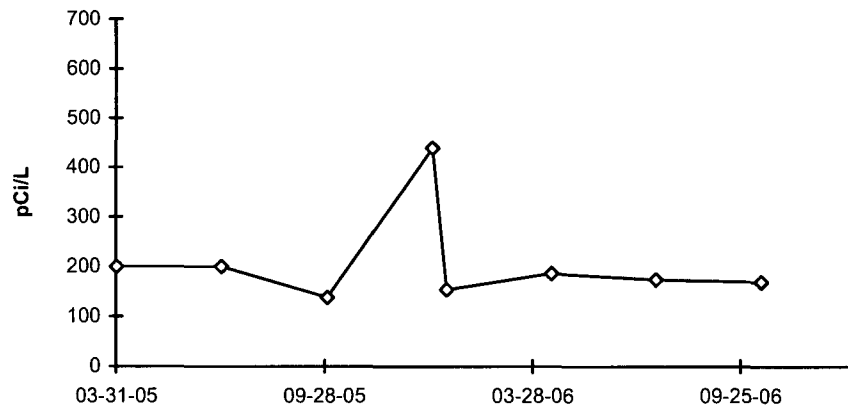


**FIGURE C-5 (cont.)**  
**Ground/Well Water - Tritium - Stations BD-13 and BD-34**  
**Collected in the Vicinity of Braidwood Station, 2005 - 2006**

**BD-13 Braidwood City Hall Well**

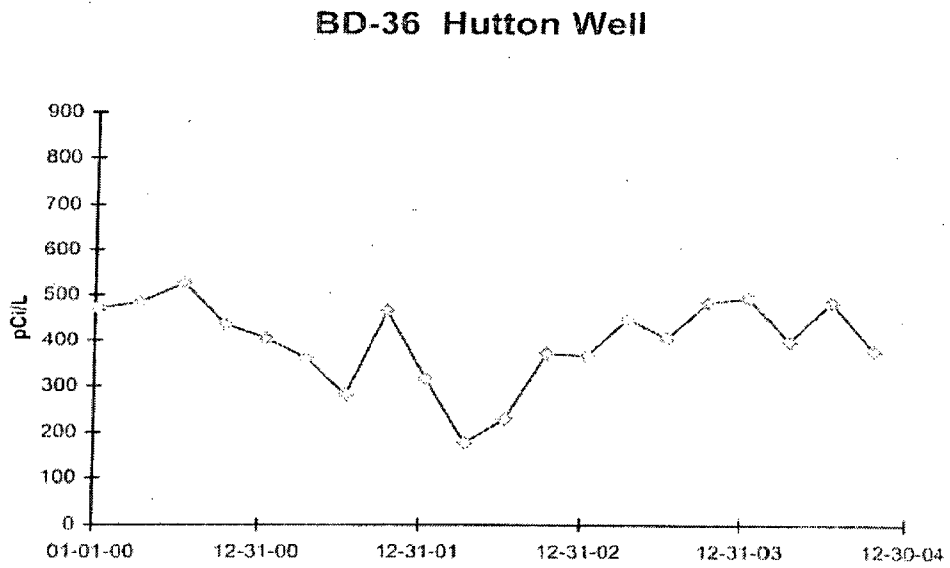
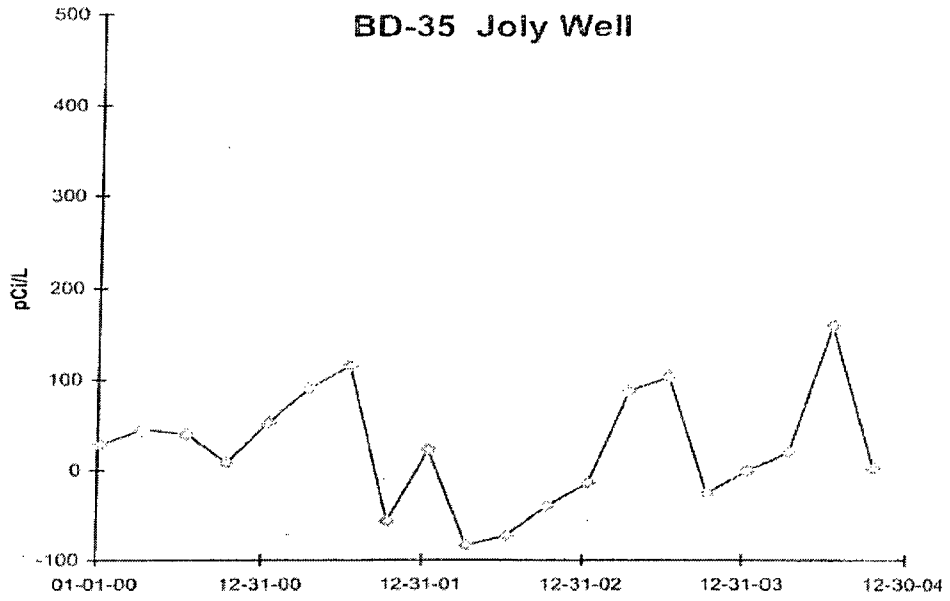


**BD-34 Gibson Well**



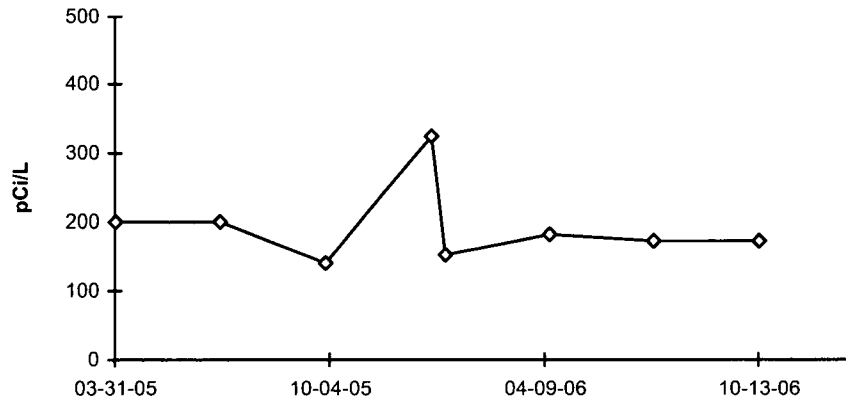
DUE TO VENDOR CHANGE IN 2005, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE 2005 AND MDC VALUES AFTER JUNE 2005

**FIGURE C-6**  
**Ground/Well Water - Tritium - Stations BD-35 and BD-36**  
**Collected in the Vicinity of Braidwood Station, 2000 - 2004**

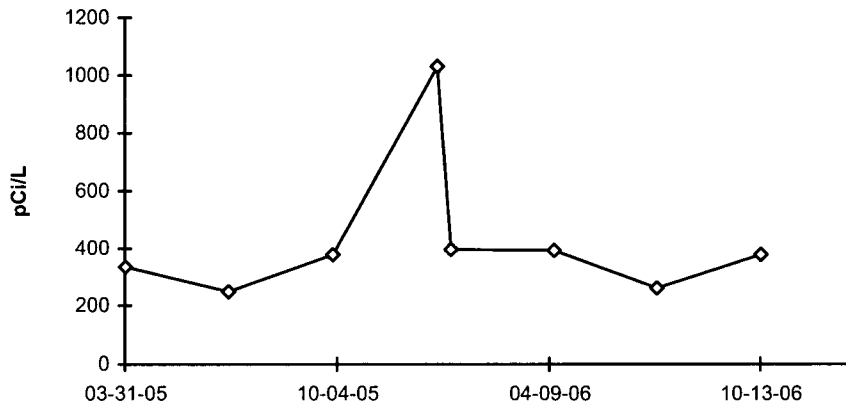


**FIGURE C-6 (cont.)**  
**Ground/Well Water - Tritium - Stations BD-35 and BD-36**  
**Collected in the Vicinity of Braidwood Station, 2000 - 2006**

**BD-35 Joly Well**



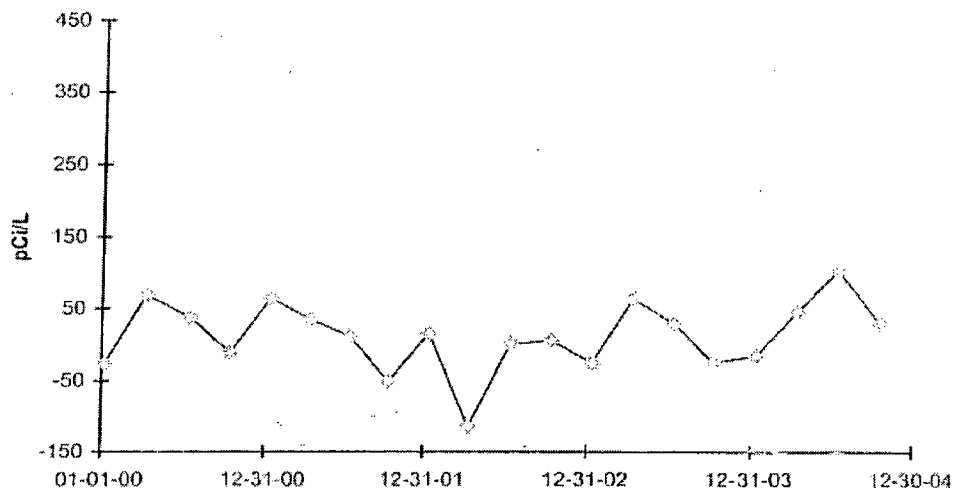
**BD-36 Hutton Well**



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

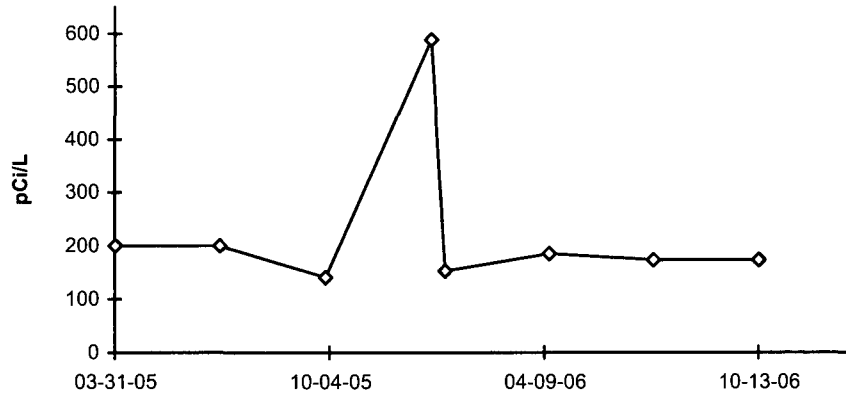
**FIGURE C-7**  
**Ground/Well Water - Tritium - Station BD-37**  
**Collected in the Vicinity of Braidwood Station, 2000 - 2004**

**BD-37 Nurczyk Well**



**FIGURE C-7 (cont.)**  
**Ground/Well Water - Tritium - Station BD-37**  
**Collected in the Vicinity of Braidwood Station, 2005 - 2006**

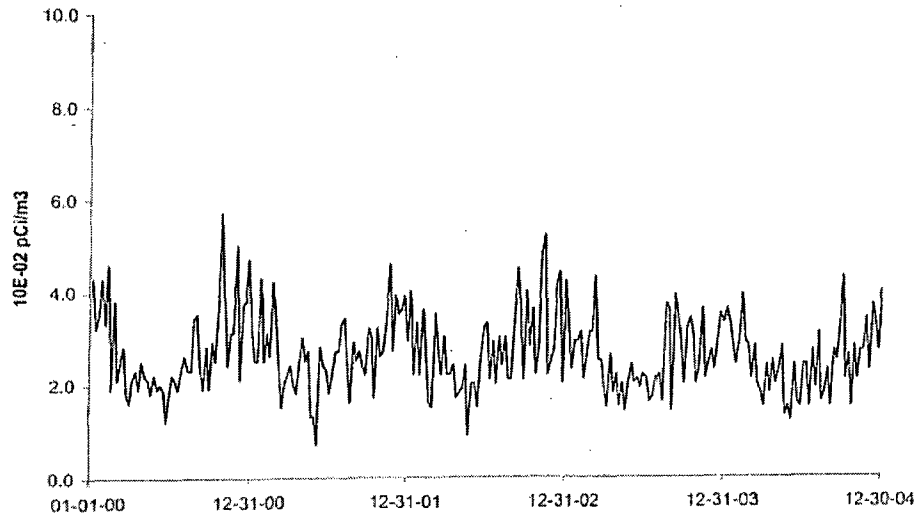
**BD-37 Nurczyk Well**



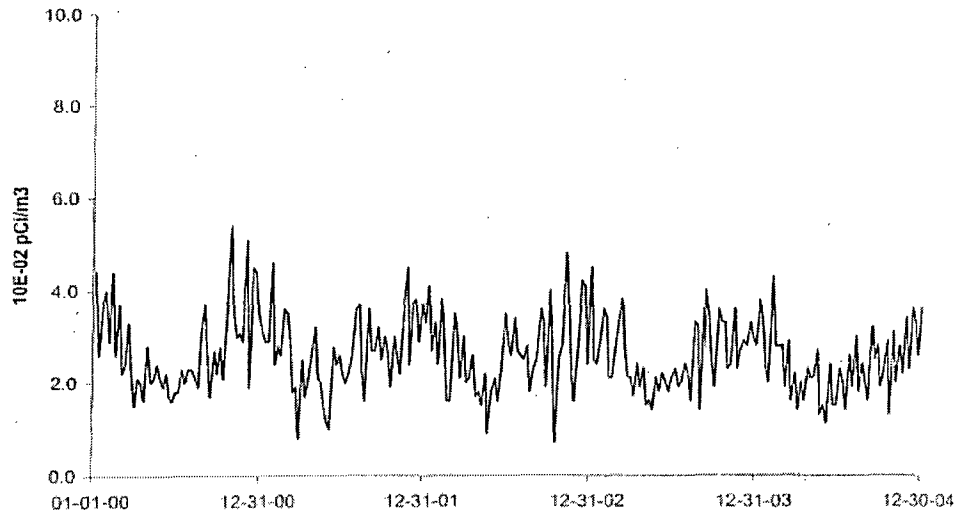
DUE TO VENDOR CHANGE IN 2005, < VALUES ARE LLD VALUES JANUARY THROUGH JUNE 2005 AND MDC VALUES AFTER JUNE 2005

**FIGURE C-8**  
**Air Particulates - Gross Beta- Stations BD-03 (C) and**  
**BD-06 Collected in the Vicinity of Braidwood Station, 2000 - 2004**

**BD-03 (C) County Line Road**

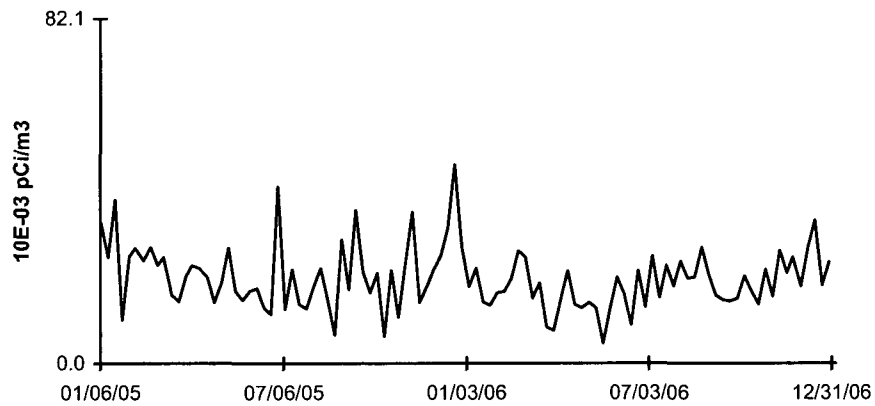


**BD-06 Godley**

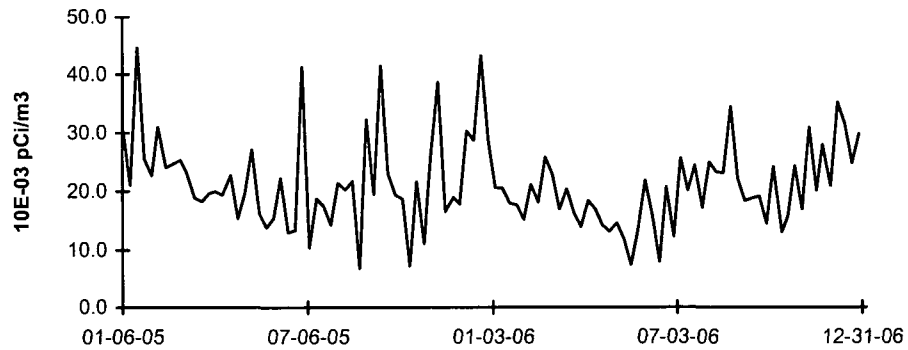


**FIGURE C-8 (cont.)**  
**Air Particulates - Gross Beta- Stations BD-03 (C) and**  
**BD-06 Collected in the Vicinity of Braidwood Station, 2005 - 2006**

**BD-03 (C) County Line Road**



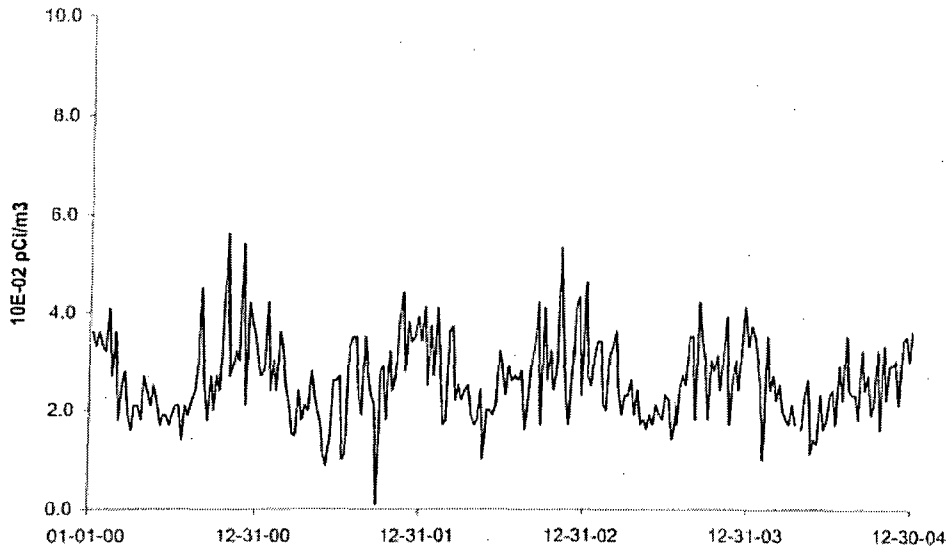
**BD-06 Godley**



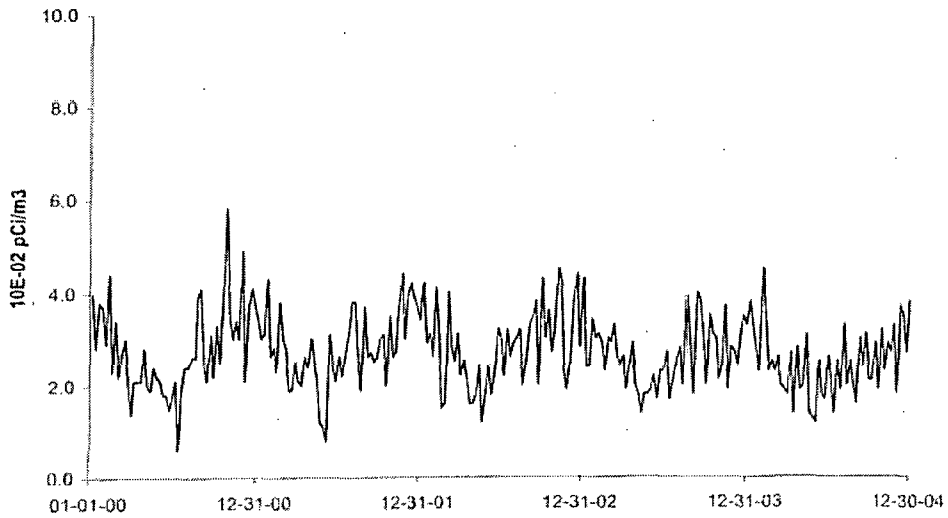
DUE TO VENDOR CHANGE, THE REPORTED UNITS CHANGED FROM E-02 PCI/M3 TO E-03 PCI/M3



**FIGURE C-9**  
**Air Particulates - Gross Beta- Stations BD-19 and**  
**BD-20 Collected in the Vicinity of Braidwood Station, 2000 - 2004**  
**BD-19 Nearsite, NW**

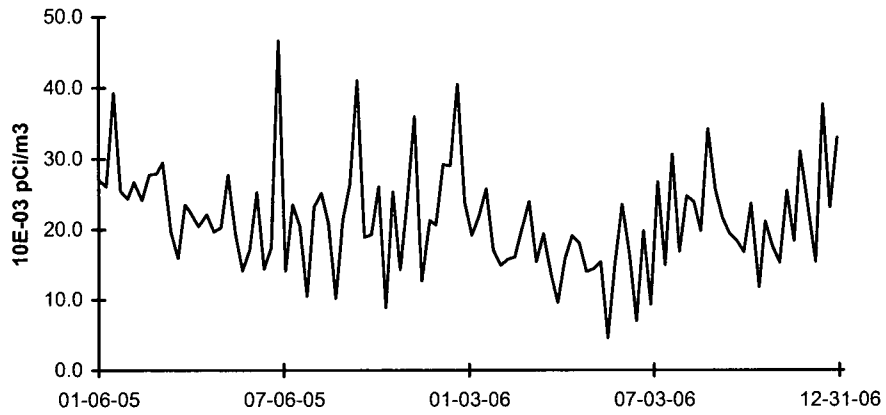


**BD-20 Nearsite, N**

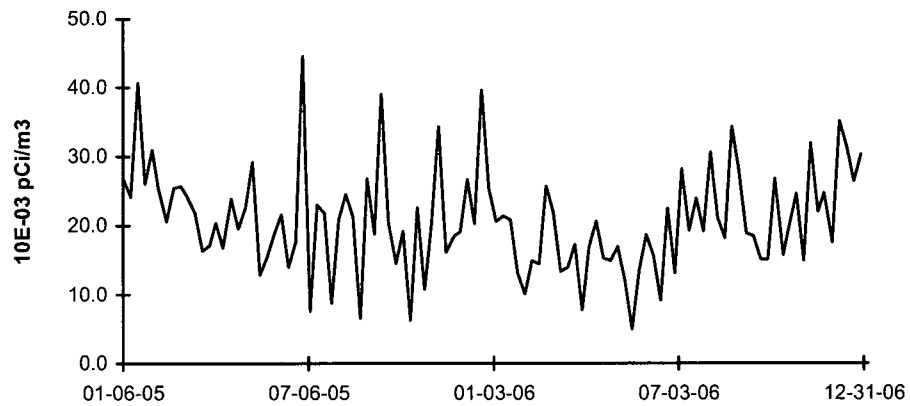


**FIGURE C-9 (cont.)**  
**Air Particulates - Gross Beta- Stations BD-19 and**  
**BD-20 Collected in the Vicinity of Braidwood Station, 2005 - 2006**

**BD-19 Nearsite, NW**

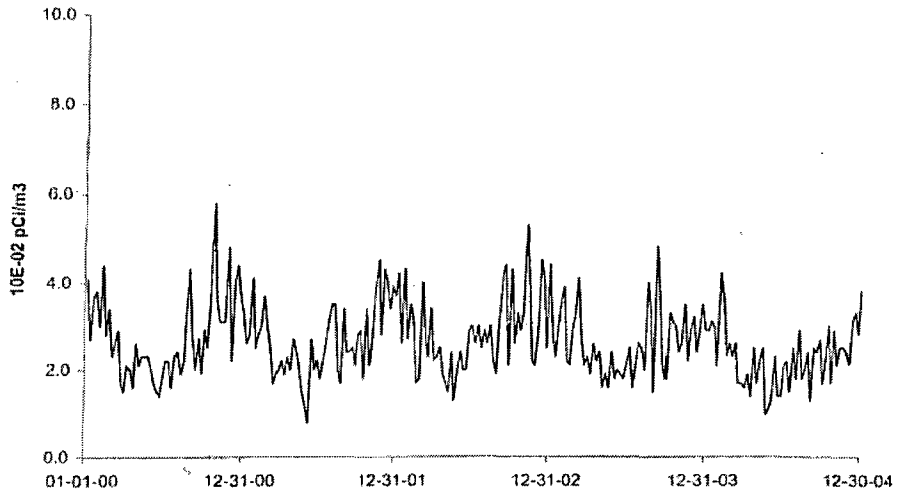


**BD-20 Neasite, N**



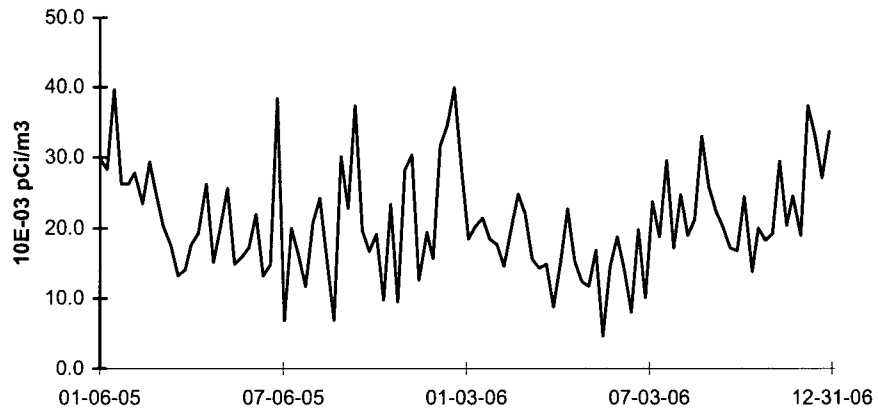
DUE TO VENDOR CHANGE, THE REPORTED UNITS CHANGED FROM E-02 PCI/M3 TO E-03 PCI/M3

**FIGURE C-10**  
**Air Particulates - Gross Beta- Station BD-21**  
**Collected in the Vicinity of Braidwood Station, 2000 - 2004**  
**BD-21 Nearsite, NE**



**FIGURE C-10 (cont.)**  
**Air Particulates - Gross Beta- Station BD-21**  
**Collected in the Vicinity of Braidwood Station, 2005 - 2006**

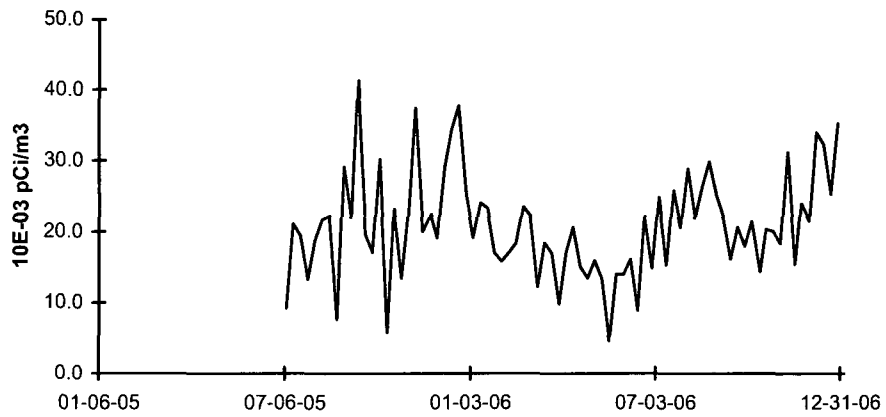
**BD-21 Nearsite, NE**



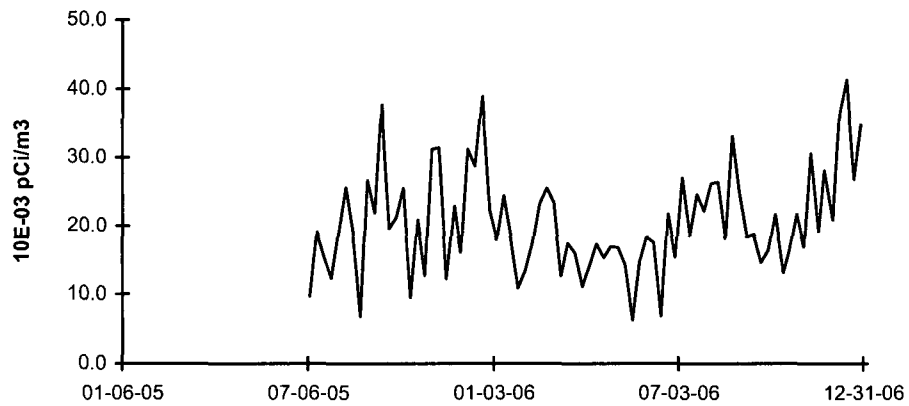
DUE TO VENDOR CHANGE, THE REPORTED UNITS CHANGED FROM E-02 PCI/M3 TO E-03 PCI/M3

**FIGURE C-11**  
**Air Particulates - Gross Beta- Stations BD-02 and**  
**BD-04 Collected in the Vicinity of Braidwood Station, 2005 - 2006**

**BD-02 Nearsite, NW**



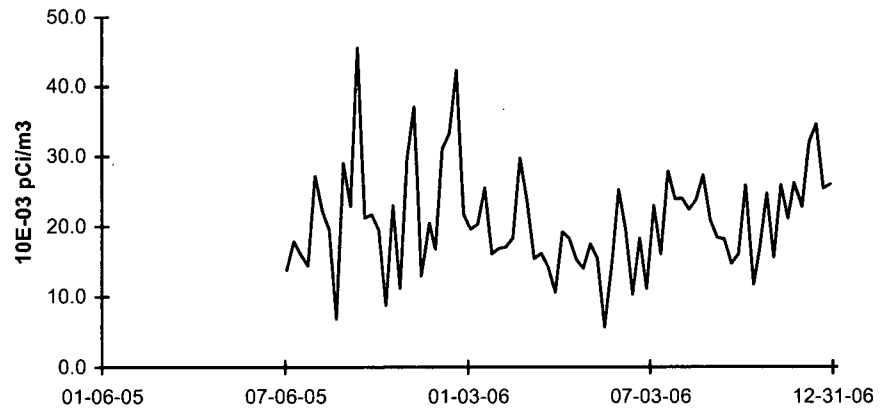
**BD-04 Neasite, N**



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

**FIGURE C-12**  
**Air Particulates - Gross Beta- Station BD-05**  
**Collected in the Vicinity of Braidwood Station, 2005 - 2006**

**BD-05 Nearsite, NE**



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

## **APPENDIX D**

# **INTER-LABORATORY COMPARISON PROGRAM**

TABLE D-1

**ANALYTICS ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM  
TELEDYNE BROWN ENGINEERING, 2006**

(PAGE 1 OF 3)

Month/Year	Identification Number	Matrix	Nuclide	Units	Reported Value (a)	Known Value (b)	Ratio (c) TBE/Analytics	Evaluation (d)			
March 2006	E4964-396	Milk	Sr-89	pCi/L	91.5	99.2	0.92	A			
			Sr-90	pCi/L	12.2	10.8	1.13	A			
March 2006	E4965-396	Milk	I-131	pCi/L	74.4	78.0	0.95	A			
			Ce-141	pCi/L	95.1	104	0.91	A			
			Cr-51	pCi/L	278	280	0.99	A			
			Cs-134	pCi/L	103	121	0.85	A			
			Cs-137	pCi/L	87.6	88.8	0.99	A			
			Co-58	pCi/L	93.9	105	0.89	A			
			Mn-54	pCi/L	90.0	93.3	0.96	A			
			Fe-59	pCi/L	83.0	86.6	0.96	A			
			Zn-65	pCi/L	178	176	1.01	A			
			Co-60	pCi/L	118	128	0.92	A			
			March 2006	E4967-396	AP	Ce-141	pCi	89.9	74	1.21	W
						Cr-51	pCi	253	200	1.27	W
						Cs-134	pCi	71.5	86.1	0.83	A
						Cs-137	pCi	67.5	63.3	1.07	A
Co-58	pCi	79.7				74.6	1.07	A			
Mn-54	pCi	74.9				67	1.12	A			
Fe-59	pCi	75.5				61.8	1.22	W			
Zn-65	pCi	146				126	1.16	A			
March 2006	E4966-396	Charcoal	I-131	pCi	87.4	86.2	1.01	A			
June 2006	E5018-396	Milk	Sr-89	pCi/L	118	129	0.91	A			
			Sr-90	pCi/L	9.29	9.74	0.95	A			
June 2006	E5019-396	Milk	I-131	pCi/L	49.9	63.2	0.79	W			
			Ce-141	pCi/L	174	184	0.95	A			
			Cr-51	pCi/L	266	259	1.03	A			
			Cs-134	pCi/L	111	127	0.88	A			
			Cs-137	pCi/L	116	117	0.99	A			
			Co-58	pCi/L	101	100	1.01	A			
			Mn-54	pCi/L	144	146	0.98	A			
			Fe-59	pCi/L	96.7	93.6	1.03	A			
			Zn-65	pCi/L	182	185	0.98	A			
			Co-60	pCi/L	126	129	0.98	A			
			June 2006	E5021-396	AP	Ce-141	pCi	113	124	0.91	A
						Cr-51	pCi	176	174	1.01	A
Cs-134	pCi	63.7				85.1	0.75	W			
Cs-137	pCi	76.8				79.0	0.97	A			
Co-58	pCi	63.1				67.4	0.94	A			
Mn-54	pCi	102				99	1.04	A			
Fe-59	pCi	64.6				62.9	1.03	A			
Zn-65	pCi	131				125	1.05	A			
Co-60	pCi	81.6	86.5	0.94	A						
June 2006	E5020-396	Charcoal	I-131	pCi	65.4	65.9	0.99	A			



TABLE D-1

ANALYTICS ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM  
TELEDYNE BROWN ENGINEERING, 2006

(PAGE 2 OF 3)

Month/Year	Identification Number	Matrix	Nuclide	Units	Reported Value (a)	Known Value (b)	Ratio (c) TBE/Analytics	Evaluation (d)			
September 2006	E5120-396	Milk	Sr-89	pCi/L	90.3	89.2	1.01	A			
			Sr-90	pCi/L	11.6	12.4	0.94	A			
September 2006	E5121-396	Milk	I-131	pCi/L	67.8	73.8	0.92	A			
			Ce-141	pCi/L	85.0	86.0	0.99	A			
			Cr-51	pCi/L	263	282	0.93	A			
			Cs-134	pCi/L	74.7	85.0	0.88	A			
			Cs-137	pCi/L	172	175	0.98	A			
			Co-58	pCi/L	107	109	0.98	A			
			Mn-54	pCi/L	110	113	0.98	A			
			Fe-59	pCi/L	46.6	43.7	1.07	A			
			Zn-65	pCi/L	144	145	0.99	A			
			Co-60	pCi/L	127	134	0.95	A			
			September 2006	E5123-396	AP	Ce-141	pCi	67.1	66.4	1.01	A
						Cr-51	pCi	223	217	1.03	A
						Cs-134	pCi	51.7	65.6	0.79	W
						Cs-137	pCi	134	135.0	0.99	A
Co-58	pCi	84.8				84.3	1.01	A			
Mn-54	pCi	95.2				87	1.10	A			
Fe-59	pCi	41.6				33.7	1.23	W			
Zn-65	pCi	123				112	1.10	A			
Co-60	pCi	98.9				103	0.96	A			
September 2006	E5122-396	Charcoal	I-131	pCi	77.7	90.7	0.86	A			
December 2006	E5172-396	Milk	Sr-89	pCi/L	72.4	72.0	1.01	A			
			Sr-90	pCi/L	7.05	5.90	1.19	A			
December 2006	E5173-396	Milk	I-131	pCi/L	71.9	70.8	1.02	A			
			Ce-141	pCi/L	268	294	0.91	A			
			Cr-51	pCi/L	420	433	0.97	A			
			Cs-134	pCi/L	128	147	0.87	A			
			Cs-137	pCi/L	231	237	0.97	A			
			Co-58	pCi/L	82.0	83.8	0.98	A			
			Mn-54	pCi/L	113	111	1.02	A			
			Fe-59	pCi/L	79.8	79.7	1.00	A			
			Zn-65	pCi/L	170	164	1.04	A			
			Co-60	pCi/L	265	281	0.94	A			
			December 2006	E5175-396	AP	Ce-141	pCi	220	210	1.05	A
						Cr-51	pCi	343	309	1.11	A
						Cs-134	pCi	90.8	105	0.86	A
						Cs-137	pCi	185	169.0	1.09	A
Co-58	pCi	65.0				59.7	1.09	A			
Mn-54	pCi	90.6				79	1.15	A			
Fe-59	pCi	70.7				56.7	1.25	W			
Zn-65	pCi	136				117	1.16	A			
Co-60	pCi	208				200	1.04	A			

TABLE D-1

**ANALYTICS ENVIRONMENTAL RADIOACTIVITY CROSS CHECK PROGRAM**  
**TELEDYNE BROWN ENGINEERING, 2006**  
(PAGE 3 OF 3)

Month/Year	Identification Number	Matrix	Nuclide	Units	Reported Value (a)	Known Value (b)	Ratio (c) TBE/Analytics	Evaluation (d)
December 2006	E5174-396	Charcoal	I-131	pCi	77.4	85.4	0.91	A

(1) Impurity detected but not measured by Analytics.

(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, 2006**  
(PAGE 1 OF 1)

Month/Year	Identification Number	Media	Nuclide	Units	Reported Value (a)	Known Value (b)	Control Limits	Evaluation (c)			
May 2006	Rad 65	Water	Sr-89	pCi/L	30.2	32.4	23.6 - 41.1	A			
			Sr-90	pCi/L	8.74	9.00	0.340 - 17.7	A			
			Ba-133	pCi/L	10.9	10.0	1.34 - 18.7	A			
			Cs-134	pCi/L	39.7	43.4	34.7 - 52.1	A			
			Cs-137	pCi/L	199	214	195 - 233	A			
			Co-60	pCi/L	111	113.0	103 - 123	A			
			Zn-65	pCi/L	146	152	126 - 178	A			
			Gr-A	pCi/L	22.9	21.3	12.1 - 30.5	A			
			Gr-B	pCi/L	23.7	23.0	14.3 - 31.7	A			
			Ra-226	pCi/L	2.64	3.02	2.23 - 3.81	A			
			U-Nat	pCi/L	74.9	69.1	57.1 - 81.1	A			
			H-3	pCi/L	7950	8130	6720 - 9540	A			
				Rad 65	Water	I-131	pCi/L	18.2	19.1	13.9 - 24.3	A
November 2006	Rad 67	Water	Sr-89	pCi/L	40.0	39.9	31.2 - 48.6	A			
			Sr-90	pCi/L	16.2	16.0	7.34 - 24.7	A			
			Ba-133	pCi/L	65.0	70.2	58.1 - 82.3	A			
			Cs-134	pCi/L	27.4	29.9	21.2 - 38.6	A			
			Cs-137	pCi/L	74.4	78.2	69.5 - 86.9	A			
			Co-60	pCi/L	61.6	62.3	53.6 - 71.0	A			
			Zn-65	pCi/L	277	277	229 - 325	A			
			Gr-A	pCi/L	23.3	28.7	16.3 - 41.1	A			
			Gr-B	pCi/L	22.0	20.9	12.2 - 29.6	A			
			U-Nat	pCi/L	3.18	3.20	0.00 - 8.40	A			
			H-3	pCi/L	2930	3050	2430 - 3670	A			
					Water	I-131	pCi/L	19.8	22.1	16.9 - 27.3	A

(a) Teledyne Brown Engineering reported result.

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

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

TABLE D-3

DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)  
TELEDYNE BROWN ENGINEERING, 2006

(PAGE 1 OF 3)

Month/Year	Identification Number	Media	Nuclide	Units	Reported Value (a)	Known Value (b)	Acceptance Range	Evaluation (c)
January 2006	06-MaW15	Water	Am-241	Bq/L	1.29	1.30	0.91 - 1.69	A
			Cs-134	Bq/L	79.2	95.1	66.57 - 123.63	A
			Cs-137	Bq/L	-0.188			A
			Co-57	Bq/L	151	166.12	116.28 - 215.96	A
			Co-60	Bq/L	141	153.50	107.45 - 199.55	A
			H-3	Bq/L	988	952.01	666.41 - 1237.61	A
			Fe-55	Bq/L	106.0	129.60	90.72 - 168.48	A
			Mn-54	Bq/L	297	315.00	220.50 - 409.50	A
			Ni-63	Bq/L	61.5	60.34	44.24 - 78.44	A
			Pu-238	Bq/L	0.961	0.91	0.64 - 1.18	A
			Pu-239/240	Bq/L	0.00965	0.00710	(1)	A
			Sr-90	Bq/L	12.6	13.16	9.21 - 17.11	A
			Tc-99	Bq/L	22.5	23.38	16.37 - 30.39	A
			U-234/233	Bq/L	2.20	2.09	1.46 - 2.72	A
			U-238	Bq/L	2.23	2.17	1.52 - 2.82	A
	Zn-65	Bq/L	219	228.16	159.71 - 296.61	A		
	06-GrW15	Water	Gr-A	Bq/L	0.575	0.581	>0.0 - 1.162	A
			Gr-B	Bq/L	1.52	1.13	0.56 - 1.70	A
	06-MaS15	Soil	Am-241	Bq/kg	48.8	57.08	39.96 - 74.20	A
			Cs-134	Bq/kg	15.9			N (2)
			Cs-137	Bq/kg	370	339.69	237.78 - 441.60	A
			Co-57	Bq/kg	667	656.29	459.40 - 853.18	A
			Co-60	Bq/kg	478	447.10	312.97 - 581.23	A
			Mn-54	Bq/kg	384	346.77	242.74 - 450.80	A
			Ni-63	Bq/kg	394	323.51	226.46 - 420.56	W
			K-40	Bq/kg	667	604	423 - 785	A
			Sr-90	Bq/kg	253	314.35	220.04 - 408.66	A
			Tc-99	Bq/kg	146	154.76	108.33 - 201.19	A
			Zn-65	Bq/kg	740	657.36	460.15 - 854.57	A
			06-RdF15	AP	Am-241	Bq/sample	0.0850	0.093
	Cs-134	Bq/sample			2.34	2.934	2.054 - 3.814	A
	Cs-137	Bq/sample			2.45	2.531	1.772 - 3.290	A
	Co-57	Bq/sample			3.87	4.096	2.867 - 5.325	A
	Co-60	Bq/sample			2.12	2.186	1.530 - 2.842	A
	Mn-54	Bq/sample			0.0206		not spiked	A
	Pu-238	Bq/sample			0.0766	0.067	0.047 - 0.087	A
	Pu-239/240	Bq/sample			0.00520	0.00041	(1)	A
Sr-90	Bq/sample	0.761			0.792	0.554 - 1.030	A	
U-234/233	Bq/sample	0.0217			0.020	0.014 - 0.026	A	
U-238	Bq/sample	0.0220			0.021	0.015 - 0.027	A	
Zn-65	Bq/sample	3.86			3.423	2.396 - 4.450	A	
06-GrF15	AP	Gr-A	Bq/sample	0.257	0.361	>0.0 - 0.722	A	
		Gr-B	Bq/sample	0.398	0.481	0.241 - 0.722	A	

TABLE D-3

DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)  
TELEDYNE BROWN ENGINEERING, 2006

(PAGE 2 OF 3)

Month/Year	Identification Number	Media	Nuclide	Units	Reported Value (a)	Known Value (b)	Acceptance Range	Evaluation (c)
January 2006	06-RdV15	Vegetation	Am-241	Bq/sample	0.156	0.156	0.109 - 0.203	A
			Cs-134	Bq/sample	0.369		not spiked	A
			Cs-137	Bq/sample	3.15	3.074	2.152 - 3.996	A
			Co-57	Bq/sample	10.1	8.578	6.005 - 11.151	A
			Co-60	Bq/sample	4.69	4.520	3.164 - 5.876	A
			Mn-54	Bq/sample	6.53	6.247	4.373 - 8.121	A
			Pu-238	Bq/sample	0.183	0.137	0.096 - 0.178	N (3)
			Pu-239/240	Bq/sample	0.111	0.164	0.115 - 0.213	N (3)
			Sr-90	Bq/sample	2.22	1.561	1.093 - 2.029	N (3)
			U-234/233	Bq/sample	0.208	0.208	0.146 - 0.270	A
			U-238	Bq/sample	0.176	0.216	0.151 - 0.281	A
			Zn-65	Bq/sample	10.5	9.798	6.859 - 12.737	A
July 2006	06-MaW16	Water	Am-241	Bq/L	2.09	2.31	1.62 - 3.00	A
			Cs-134	Bq/L	99.8	112.82	78.98 - 146.66	A
			Cs-137	Bq/L	191	196.14	137.30 - 254.98	A
			Co-57	Bq/L	203	213.08	149.16 - 277.00	A
			Co-60	Bq/L	46.2	47.5	33.2 - 61.8	A
			H-3	Bq/L	471	428.85	300.20 - 557.50	A
			Fe-55	Bq/L	173	165.4	115.8 - 215.0	A
			Ni-63	Bq/L	109	118.62	83.03 - 154.21	A
			Pu-238	Bq/L	1.50	1.39	0.97 - 1.81	A
			Pu-239/240	Bq/L	2.01	1.94	1.36 - 2.52	A
			Sr-90	Bq/L	13.7	15.69	10.98 - 20.40	A
			Tc-99	Bq/L	29.0	27.15	19.00 - 35.29	A
	U-234/233	Bq/L	2.19	2.15	1.50 - 2.80	A		
	U-238	Bq/L	2.25	2.22	1.55 - 2.89	A		
	Zn-65	Bq/L	178	176.37	123.46 - 229.28	A		
	06-GrW16	Water	Gr-A	Bq/L	1.52	1.033	>0.0 - 2.066	A
			Gr-B	Bq/L	1.18	1.03	0.52 - 1.54	A
	06-MaS16	Soil	Am-241	Bq/kg	83.6	105.47	73.83 - 137.11	W
			Cs-134	Bq/kg	393	452.13	316.49 - 587.77	A
			Cs-137	Bq/kg	522	525.73	368.01 - 683.45	A
			Co-57	Bq/kg	636	676.33	473.43 - 879.23	A
			Co-60	Bq/kg	3.78	1.98		A (4)
			Mn-54	Bq/kg	598	594.25	415.98 - 772.52	A
			Ni-63	Bq/kg	571	627.3	470.6 - 874.0	A
Pu-238			Bq/kg	71.2	82	57 - 107	A	
Pu-239/240			Bq/kg	0.487	0.93		A (4)	
K-40			Bq/kg	615	604	423 - 785	A	
Sr-90			Bq/kg	178	223.3	156.3 - 290.3	W	
Tc-99			Bq/kg	175	218.01	152.61 - 283.41	A	
U-234/233	Bq/kg	119	152.44	106.71 - 198.17	W			
U-238	Bq/kg	115	158.73	111.11 - 206.35	W			
Zn-65	Bq/kg	937	903.61	632.53 - 1174.69	A			

TABLE D-3

DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)  
TELEDYNE BROWN ENGINEERING, 2006

(PAGE 3 OF 3)

Month/Year	Identification Number	Media	Nuclide	Units	Reported Value (a)	Known Value (b)	Acceptance Range	Evaluation (c)		
July 2006	06-RdF16	AP	Am-241	Bq/sample	0.124	0.142	0.099 - 0.185	A		
			Cs-134	Bq/sample	2.62	3.147	2.203 - 4.091	A		
			Cs-137	Bq/sample	1.98	1.805	1.263 - 2.346	A		
			Co-57	Bq/sample	2.65	2.582	1.807 - 3.357	A		
			Co-60	Bq/sample	1.63	1.577	1.104 - 2.050	A		
			Mn-54	Bq/sample	2.10	1.92	1.34 - 2.50	A		
			Pu-238	Bq/sample	0.118	0.118	0.083 - 0.153	A		
			Pu-239/240	Bq/sample	0.00822		not spiked	A		
			Sr-90	Bq/sample	0.549	0.62	0.43 - 0.81	A		
			U-234/233	Bq/sample	0.140	0.134	0.094 - 0.174	A		
			U-238	Bq/sample	0.136	0.139	0.097 - 0.181	A		
			Zn-65	Bq/sample	-0.163		not spiked	A		
			06-GrF16	AP	Gr-A	Bq/sample	0.134	0.290	>0.0 - 0.580	A
					Gr-B	Bq/sample	0.358	0.359	0.180 - 0.538	A

(1) False positive test

(2) Evaluated as a false positive by MAPEP although we considered the result a non-detect due to the peak not being identified by the gamma software. For Cs-134, MAPEP suggests the Bi-214 is not being differentiated from the Cs-134 peak.

(3) Sr samples analyzed in triplicate and one high result of 2.43 pCi/kg biased the submitted results on the high side. We were unable to determine the cause for the higher result. Since we do not analyze vegetation for isotopic Pu, no NCR was initiated for the Pu failure. MAPEP suggest pyrosulfate fusion preparation prior to analysis for isotopic Pu in vegetation samples.

(4) Not detected, reported a statistically zero result. (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<sup>(a)</sup> STATISTICAL SUMMARY PROFICIENCY TESTING PROGRAM  
ENVIRONMENTAL, INC., 2006**

(Page 1 of 2)

Lab Code	Date	Analysis	Concentration (pCi/L)			Acceptance
			Laboratory Result <sup>b</sup>	ERA Result <sup>c</sup>	Control Limits	
STW-1078	01/16/06	Sr-89	49.9 ± 3.5	50.2	41.5 - 58.9	Pass
STW-1078	01/16/06	Sr-90	31.5 ± 1.5	30.7	22.0 - 39.4	Pass
STW-1079	01/16/06	Ba-133	86.5 ± 4.1	95.0	78.6 - 111.0	Pass
STW-1079	01/16/06	Co-60	96.3 ± 4.1	95.3	86.6 - 104.0	Pass
STW-1079	01/16/06	Cs-134	22.6 ± 3.0	23.1	14.4 - 31.8	Pass
STW-1079	01/16/06	Cs-137	109.0 ± 5.9	111.0	101.0 - 121.0	Pass
STW-1079	01/16/06	Zn-65	198.0 ± 11.2	192.0	159.0 - 225.0	Pass
STW-1080	01/16/06	Gr. Alpha	10.8 ± 1.4	9.6	1.0 - 18.3	Pass
STW-1080	01/16/06	Gr. Beta	56.9 ± 1.9	61.9	44.6 - 79.2	Pass
STW-1081	01/16/06	Ra-226	4.3 ± 0.4	4.6	3.4 - 5.8	Pass
STW-1081	01/16/06	Ra-228	7.1 ± 1.8	6.6	3.7 - 9.5	Pass
STW-1081	01/16/06	Uranium	20.7 ± 0.5	22.1	16.9 - 27.3	Pass
STW-1088	04/10/06	Sr-89	29.0 ± 1.8	32.4	23.7 - 41.1	Pass
STW-1088	04/10/06	Sr-90	8.7 ± 1.0	9.0	0.3 - 17.7	Pass
STW-1089	04/10/06	Ba-133	10.3 ± 0.4	10.0	1.3 - 18.7	Pass
STW-1089	04/10/06	Co-60	114.0 ± 2.8	113.0	103.0 - 123.0	Pass
STW-1089	04/10/06	Cs-134	41.9 ± 1.4	43.4	34.7 - 52.1	Pass
STW-1089	04/10/06	Cs-137	208.0 ± 1.1	214.0	195.0 - 233.0	Pass
STW-1089	04/10/06	Zn-65	154.0 ± 0.8	152.0	126.0 - 178.0	Pass
STW-1090	04/10/06	Gr. Alpha	13.4 ± 1.1	21.3	12.1 - 30.5	Pass
STW-1090	04/10/06	Gr. Beta	27.7 ± 2.1	23.0	14.3 - 31.7	Pass
STW-1091	04/10/06	I-131	22.0 ± 0.3	19.1	13.9 - 24.3	Pass
STW-1092	04/10/06	H-3	7960.0 ± 57.0	8130.0	6720.0 - 9540.0	Pass
STW-1092	04/10/06	Ra-226	2.9 ± 0.4	3.0	2.2 - 3.8	Pass
STW-1092	04/10/06	Ra-228	20.9 ± 1.2	19.1	10.8 - 27.4	Pass
STW-1092	04/10/06	Uranium	68.6 ± 3.4	69.1	57.1 - 81.1	Pass
STW-1094	07/10/06	Sr-89	15.9 ± 0.7	19.7	11.0 - 28.4	Pass
STW-1094	07/10/06	Sr-90	24.3 ± 0.4	25.9	17.2 - 34.6	Pass
STW-1095	07/10/06	Ba-133	94.9 ± 8.9	88.1	72.9 - 103.0	Pass
STW-1095	07/10/06	Co-60	104.0 ± 1.8	99.7	91.0 - 108.0	Pass
STW-1095	07/10/06	Cs-134	48.7 ± 1.3	54.1	45.4 - 62.8	Pass
STW-1095	07/10/06	Cs-137	236.0 ± 3.0	238.0	217.0 - 259.0	Pass
STW-1095	07/10/06	Zn-65	126.0 ± 8.0	121.0	100.0 - 142.0	Pass
STW-1096	07/10/06	Gr. Alpha	10.9 ± 1.0	10.0	1.3 - 18.6	Pass
STW-1096	07/10/06	Gr. Beta	9.7 ± 0.4	8.9	0.2 - 17.5	Pass
STW-1097	07/10/06	Ra-226	11.0 ± 0.5	10.7	7.9 - 13.5	Pass
STW-1097	07/10/06	Ra-228	12.2 ± 0.8	10.7	6.1 - 15.3	Pass
STW-1097	07/10/06	Uranium	43.4 ± 0.1	40.3	33.3 - 47.3	Pass

TABLE D-4

**ERA<sup>(a)</sup> STATISTICAL SUMMARY PROFICIENCY TESTING PROGRAM  
ENVIRONMENTAL, INC., 2006**

(Page 2 of 2)

Lab Code	Date	Analysis	Concentration (pCi/L)			Acceptance
			Laboratory Result <sup>b</sup>	ERA Result <sup>c</sup>	Control Limits	
STW-1104	10/06/06	Sr-89	38.4 ± 1.3	39.9	31.2 - 45.7	Pass
STW-1104	10/06/06	Sr-90	15.5 ± 0.5	16.0	7.3 - 24.7	Pass
STW-1105	10/06/06	Ba-133	64.9 ± 2.8	70.2	58.1 - 82.3	Pass
STW-1105	10/06/06	Co-60	61.6 ± 1.0	62.3	53.6 - 71.0	Pass
STW-1105	10/06/06	Cs-134	29.0 ± 0.9	29.9	21.2 - 38.6	Pass
STW-1105	10/06/06	Cs-137	77.8 ± 2.4	78.2	69.5 - 86.9	Pass
STW-1105	10/06/06	Zn-65	293.0 ± 2.4	277.0	229.0 - 325.0	Pass
STW-1106	10/06/06	Gr. Alpha	23.9 ± 2.5	28.7	16.3 - 41.1	Pass
STW-1106	10/06/06	Gr. Beta	23.7 ± 1.4	20.9	12.2 - 29.6	Pass
STW-1107 <sup>d</sup>	10/06/06	I-131	28.4 ± 1.2	22.1	16.9 - 27.3	Fail
STW-1108	10/06/06	Ra-226	14.5 ± 0.5	14.4	10.7 - 18.1	Pass
STW-1108	10/06/06	Ra-228	6.6 ± 0.4	5.9	3.3 - 8.4	Pass
STW-1108	10/06/06	Uranium	2.9 ± 0.1	3.2	0.0 - 8.4	Pass
STW-1109	10/06/06	H-3	3000.0 ± 142.0	3050.0	2430.0 - 3670.0	Pass

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

<sup>b</sup> Unless otherwise indicated, the laboratory result is given as the mean ± standard deviation for three determinations.

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

<sup>d</sup> The reported result was an average of three analyses, results ranged from 25.36 to 29.23 pCi/L.  
A fourth analysis was performed, result of analysis, 24.89 pCi/L.



**TABLE D-5 DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)<sup>a</sup>  
ENVIRONMENTAL, INC., 2006**

(Page 1 of 3)

Lab Code <sup>c</sup>	Date	Analysis	Concentration <sup>b</sup>			Acceptance
			Laboratory result	Known Activity	Control Limits <sup>d</sup>	
STVE-1082	01/01/06	Am-241	0.16 ± 0.06	0.16	0.11 - 0.20	Pass
STVE-1082	01/01/06	Co-57	10.40 ± 0.20	8.58	6.00 - 11.15	Pass
STVE-1082	01/01/06	Co-60	5.00 ± 0.20	4.52	3.16 - 5.88	Pass
STVE-1082 <sup>e</sup>	01/01/06	Cs-134	< 0.20	0.00		Pass
STVE-1082	01/01/06	Cs-137	3.40 ± 0.20	3.07	2.15 - 4.00	Pass
STVE-1082	01/01/06	Mn-54	6.90 ± 0.20	6.25	4.37 - 8.12	Pass
STVE-1082 <sup>f</sup>	01/01/06	Pu-238	0.08 ± 0.03	0.14	0.10 - 0.18	Fail
STVE-1082	01/01/06	Pu-239/40	0.17 ± 0.03	0.16	0.11 - 0.21	Pass
STVE-1082	01/01/06	Sr-90	1.40 ± 0.20	1.56	1.09 - 2.03	Pass
STVE-1082	01/01/06	U-233/4	0.24 ± 0.05	0.21	0.15 - 0.27	Pass
STVE-1082	01/01/06	U-238	0.19 ± 0.04	0.22	0.15 - 0.28	Pass
STVE-1082	01/01/06	Zn-65	11.10 ± 0.50	9.80	6.86 - 12.74	Pass
STSO-1083	01/01/06	Am-241	54.60 ± 5.50	57.08	39.96 - 74.20	Pass
STSO-1083	01/01/06	Co-57	762.90 ± 12.70	656.29	459.40 - 853.18	Pass
STSO-1083	01/01/06	Co-60	504.90 ± 3.10	447.10	312.97 - 581.23	Pass
STSO-1083 <sup>e</sup>	01/01/06	Cs-134	< 1.70	0.00		Pass
STSO-1083	01/01/06	Cs-137	406.50 ± 3.70	339.69	237.78 - 441.60	Pass
STSO-1083	01/01/06	K-40	719.20 ± 18.40	604.00	422.80 - 785.20	Pass
STSO-1083	01/01/06	Mn-54	415.60 ± 4.80	346.77	242.74 - 450.80	Pass
STSO-1083	01/01/06	Ni-63	261.40 ± 14.70	323.51	226.46 - 420.56	Pass
STVE-1083 <sup>f</sup>	01/01/06	Pu-238	14.60 ± 2.90	61.15	42.81 - 79.50	Fail
STVE-1083 <sup>f</sup>	01/01/06	Pu-239/40	14.60 ± 2.40	45.85	32.09 - 59.61	Fail
STVE-1083 <sup>f</sup>	01/01/06	U-233/4	13.50 ± 1.70	37.00	25.90 - 48.10	Fail
STVE-1083 <sup>f</sup>	01/01/06	U-238	15.40 ± 1.80	38.85	27.20 - 50.50	Fail
STSO-1083	01/01/06	Zn-65	783.40 ± 7.00	657.36	460.15 - 854.57	Pass
STAP-1084	01/01/06	Gr. Alpha	0.26 ± 0.02	0.36	0.00 - 0.72	Pass
STAP-1084	01/01/06	Gr. Beta	0.51 ± 0.03	0.48	0.24 - 0.72	Pass
STAP-1085	01/01/06	Am-241	0.12 ± 0.02	0.09	0.07 - 0.12	Pass
STAP-1085	01/01/06	Co-57	4.32 ± 0.10	4.10	2.87 - 5.32	Pass
STAP-1085	01/01/06	Co-60	2.24 ± 0.16	2.19	1.53 - 2.84	Pass
STAP-1085	01/01/06	Cs-134	2.96 ± 0.19	2.93	2.05 - 3.81	Pass
STAP-1085	01/01/06	Cs-137	2.64 ± 0.20	2.53	1.77 - 3.29	Pass
STAP-1085 <sup>f</sup>	01/01/06	Pu-238	0.03 ± 0.01	0.07	0.05 - 0.09	Fail
STAP-1085 <sup>e</sup>	01/01/06	Pu-239/40	< 0.01	0.00		Pass
STAP-1085	01/01/06	Sr-90	0.77 ± 0.21	0.79	0.55 - 1.03	Pass
STAP-1085	01/01/06	U-233/4	0.03 ± 0.01	0.02	0.01 - 0.03	Pass
STAP-1085	01/01/06	U-238	0.02 ± 0.01	0.02	0.01 - 0.03	Pass
STAP-1085	01/01/06	Zn-65	3.94 ± 0.44	3.42	2.40 - 4.45	Pass

**TABLE D-5 DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)<sup>a</sup>  
ENVIRONMENTAL, INC., 2006**

(Page 2 of 3)

Lab Code <sup>c</sup>	Date	Analysis	Concentration <sup>b</sup>			Acceptance
			Laboratory result	Known Activity	Control Limits <sup>d</sup>	
STW-1086	01/01/06	Am-241	1.29 ± 0.05	1.30	0.91 - 1.69	Pass
STW-1086	01/01/06	Co-57	177.10 ± 1.00	166.12	116.28 - 215.96	Pass
STW-1086	01/01/06	Co-60	158.30 ± 1.00	153.50	107.45 - 199.55	Pass
STW-1086	01/01/06	Cs-134	96.40 ± 1.50	95.10	66.57 - 123.63	Pass
STW-1086 <sup>e</sup>	01/01/06	Cs-137	< 0.80	0.00		Pass
STW-1086	01/01/06	Fe-55	102.50 ± 18.10	129.60	90.72 - 168.48	Pass
STW-1086	01/01/06	H-3	956.60 ± 16.50	952.01	666.41 - 1238.00	Pass
STW-1086	01/01/06	Mn-54	335.30 ± 2.20	315.00	220.50 - 409.50	Pass
STW-1086	01/01/06	Ni-63	62.90 ± 3.60	60.34	42.24 - 78.44	Pass
STW-1086	01/01/06	Pu-238	0.96 ± 0.07	0.91	0.70 - 1.30	Pass
STW-1086 <sup>e</sup>	01/01/06	Pu-239/40	< 0.20	0.00		Pass
STW-1086	01/01/06	Sr-90	12.80 ± 1.60	13.16	9.21 - 17.11	Pass
STW-1086	01/01/06	Tc-99	22.30 ± 1.20	23.38	16.37 - 30.39	Pass
STW-1086	01/01/06	U-233/4	2.02 ± 0.12	2.09	1.46 - 2.72	Pass
STW-1086	01/01/06	U-238	2.03 ± 0.12	2.17	1.52 - 2.82	Pass
STW-1086	01/01/06	Zn-65	249.50 ± 3.40	228.16	159.71 - 296.61	Pass
STW-1087	01/01/06	Gr. Alpha	0.59 ± 0.10	0.58	0.00 - 1.16	Pass
STW-1087	01/01/06	Gr. Beta	1.69 ± 0.07	1.13	0.56 - 1.70	Pass
STVE-1098 <sup>e</sup>	07/01/06	Co-57	< 0.14	0.00		Pass
STVE-1098 <sup>g</sup>	07/01/06	Co-60	6.89 ± 0.17	5.81	4.06 - 7.55	Pass
STVE-1098	07/01/06	Cs-134	8.46 ± 0.16	7.49	5.24 - 9.73	Pass
STVE-1098	07/01/06	Cs-137	6.87 ± 0.29	5.50	3.85 - 7.14	Pass
STVE-1098	07/01/06	Mn-54	10.36 ± 0.29	8.35	5.85 - 10.86	Pass
STVE-1098	07/01/06	Zn-65	7.46 ± 0.50	5.98	4.19 - 7.78	Pass
STSO-1099	07/01/06	Am-241	130.00 ± 11.60	105.47	73.83 - 137.11	Pass
STSO-1099	07/01/06	Co-57	784.90 ± 3.80	676.33	473.43 - 879.23	Pass
STSO-1099	07/01/06	Co-60	2.10 ± 0.90	1.98	0.00 - 5.00	Pass
STSO-1099	07/01/06	Cs-134	500.70 ± 7.40	452.13	316.49 - 587.77	Pass
STSO-1099	07/01/06	Cs-137	624.20 ± 4.90	525.73	368.01 - 683.45	Pass
STSO-1099	07/01/06	K-40	701.30 ± 3.40	604.00	423.00 - 785.00	Pass
STSO-1099	07/01/06	Mn-54	699.20 ± 5.20	594.25	415.98 - 772.52	Pass
STSO-1099	07/01/06	Ni-63	614.40 ± 17.10	672.30	470.60 - 874.00	Pass
STSO-1099	07/01/06	Pu-238	79.90 ± 5.80	82.00	57.00 - 107.00	Pass
STSO-1099 <sup>e</sup>	07/01/06	Pu-239/40	< 0.70	0.00		Pass
STSO-1099	07/01/06	U-233/4	150.50 ± 5.90	152.44	106.71 - 198.17	Pass
STSO-1099	07/01/06	U-238	151.60 ± 6.00	158.73	111.11 - 206.35	Pass
STSO-1099	07/01/06	Zn-65	1021.90 ± 9.20	903.61	632.53 - 1175.00	Pass

**TABLE D-5 DOE'S MIXED ANALYTE PERFORMANCE EVALUATION PROGRAM (MAPEP)<sup>a</sup>  
ENVIRONMENTAL, INC., 2006**

(Page 3 of 3)

Lab Code <sup>c</sup>	Date	Analysis	Concentration <sup>b</sup>		Control Limits <sup>d</sup>	Acceptance
			Laboratory result	Known Activity		
STAP-1100	07/01/06	Am-241	0.16 ± 0.03	0.14	0.10 - 0.19	Pass
STAP-1100	07/01/06	Co-57	2.17 ± 0.06	2.58	1.81 - 3.36	Pass
STAP-1100	07/01/06	Co-60	1.38 ± 0.07	1.58	1.10 - 2.05	Pass
STAP-1100	07/01/06	Cs-134	2.52 ± 0.13	3.15	2.20 - 4.09	Pass
STAP-1100	07/01/06	Cs-137	1.64 ± 0.08	1.81	1.26 - 2.35	Pass
STAP-1100	07/01/06	Mn-54	1.76 ± 0.18	1.92	1.34 - 2.50	Pass
STAP-1100	07/01/06	Pu-238	0.09 ± 0.02	0.12	0.08 - 0.15	Pass
STAP-1100	07/01/06	Sr-90	0.66 ± 0.21	0.62	0.43 - 0.81	Pass
STAP-1100	07/01/06	U-233/4	0.15 ± 0.02	0.13	0.09 - 0.17	Pass
STAP-1100	07/01/06	U-238	0.13 ± 0.02	0.14	0.10 - 0.18	Pass
STAP-1100 <sup>e</sup>	07/01/06	Zn-65	< 0.07	0.00		Pass
STAP-1101	07/01/06	Gr. Alpha	0.08 ± 0.03	0.29	0.00 - 0.58	Pass
STAP-1101	07/01/06	Gr. Beta	0.41 ± 0.05	0.36	0.18 - 0.54	Pass
STW-1102	07/01/06	Gr. Alpha	0.76 ± 0.07	1.03	0.00 - 2.07	Pass
STW-1102	07/01/06	Gr. Beta	1.23 ± 0.06	1.03	0.52 - 1.54	Pass
STW-1103	07/01/06	Am-241	1.86 ± 0.09	2.31	1.62 - 3.00	Pass
STW-1103	07/01/06	Co-57	224.10 ± 1.20	213.08	149.16 - 277.00	Pass
STW-1103	07/01/06	Co-60	49.40 ± 0.50	47.50	33.20 - 61.80	Pass
STW-1103	07/01/06	Cs-134	112.70 ± 0.90	112.82	78.97 - 146.66	Pass
STW-1103	07/01/06	Cs-137	206.60 ± 1.40	196.14	137.30 - 254.98	Pass
STW-1103	07/01/06	Fe-55	138.40 ± 5.40	165.40	115.80 - 215.00	Pass
STW-1103	07/01/06	H-3	446.50 ± 11.80	428.85	300.20 - 557.50	Pass
STW-1103 <sup>e</sup>	07/01/06	Mn-54	< 0.30	0.00		Pass
STW-1103	07/01/06	Ni-63	116.70 ± 3.60	118.62	83.03 - 154.21	Pass
STW-1103	07/01/06	Pu-238	1.27 ± 0.07	1.39	0.97 - 1.81	Pass
STW-1103	07/01/06	Pu-239/40	1.67 ± 0.08	1.94	1.36 - 2.52	Pass
STW-1103	07/01/06	Sr-90	16.40 ± 1.90	15.69	10.98 - 20.40	Pass
STW-1103	07/01/06	Tc-99	29.40 ± 1.10	27.15	19.00 - 35.29	Pass
STW-1103	07/01/06	U-233/4	1.97 ± 0.08	2.15	1.50 - 2.80	Pass
STW-1103	07/01/06	U-238	1.97 ± 0.08	2.22	1.55 - 2.89	Pass
STW-1103	07/01/06	Zn-65	192.50 ± 2.40	176.37	123.46 - 229.28	Pass

<sup>a</sup> 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

<sup>b</sup> Results are reported in units of Bq/kg (soil), Bq/L (water) or Bq/total sample (filters, vegetation).

<sup>c</sup> Laboratory codes as follows: STW (water), STAP (air filter), STSO (soil), STVE (vegetation).

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

<sup>e</sup> Included in the MAPEP as a false positive.

<sup>f</sup> Difficulties with the analyses for transuranics isotopes in solid samples (Filters, Soil and vegetation), were attributed to incomplete dissolution of the samples. Soil samples were repeated, results of reanalyses: Pu-238, 53.1 ± 5.3 bq/kg. Pu-239/240, 42.4 ± 4.7 bq/kg. U-233/4, 33.3 ± 3.5 bq/kg. U-238, 35.5 ± 3.6 bq/kg.

<sup>g</sup> The July vegetation sample was provided in two separate geometries, (100 ml. and 500 ml.). Results reported here used the 500 ml. standard size geometry. Results for the 100 ml. geometry showed approximately a 15% higher bias.

## **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 1.24E+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  $4.05\text{E}+01$  curies of fission and activation gases were released with a maximum quarterly average release rate of  $1.16\text{E}+00$   $\mu\text{Ci}/\text{sec}$  at Unit 1 and  $2.53\text{E}+00$   $\mu\text{Ci}/\text{sec}$  at Unit 2.

A total of  $3.43\text{E}-03$  curies of 1-131 were released during the year with a maximum average quarterly release rate of  $1.36\text{E}-04$   $\mu\text{Ci}/\text{sec}$  for Unit 1 and  $1.97\text{E}-04$   $\mu\text{Ci}/\text{sec}$  for Unit 2.

A total of  $5.71\text{E}-06$  curies of beta-gamma emitters were released as airborne particulate matter with a maximum average release rate of  $2.04\text{E}-07$   $\mu\text{Ci}/\text{sec}$  at Unit 1 and  $2.98\text{E}-07$   $\mu\text{Ci}/\text{sec}$  at Unit 2. Alpha-emitting radionuclides were below the lower limit of detection (LLD) for the year.

A total of  $1.81\text{E}+02$  curies of tritium were released with a maximum average quarterly release rate of  $3.81\text{E}+00$   $\text{uCi}/\text{sec}$  at Unit 1 and  $1.10\text{E}+01$   $\text{uCi}/\text{sec}$  at Unit 2.

### 1.2 Liquids Released to Kankakee River

A total of  $8.44\text{E}+05$  liters of radioactive liquid wastes (prior to dilution) containing  $3.60\text{E}-04$  curies (excluding tritium, noble gases and alpha) were discharged from the station. These wastes were released at a maximum quarterly diluted average concentration of  $4.99\text{E}-11$   $\mu\text{Ci}/\text{ml}$ . Alpha-emitting radionuclides were less than the LLD for the year. A total of  $3.52\text{E}+02$  curies of tritium was released from the station. Quarterly release activities are given in Table 1.2-1.

## 2.0 SOLID RADIOACTIVE WASTE

Solid radioactive wastes were shipped by truck to the Envirocare of Utah disposal facility; the Barnwell, South Carolina disposal facility and various waste processors. For detail, refer the Braidwood Station 2006 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.

Isopleth figures and any references to them were removed from the report in 2004 due to a Change Management decision between the station and the Met Tower contractor. Associated information for iodine and particulate concentrations in air under previous sections 3.1.2.1 and 3.1.3 has also been removed. Subsequent sections have been renumbered accordingly.

##### 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  $8.49\text{E-}02$  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  $1.10\text{E-}03$  mrem (Table 3.4-1). The maximum gamma air dose was  $1.87\text{E-}03$  mrad (Table 3.1-1) based on measured effluents and average meteorological data and  $1.93\text{E-}03$  mrad based on concurrent meteorological data (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  $7.0 \text{ mg/cm}^2$  and an occupancy factor of 1.0 is used. The skin dose from beta and gamma radiation for the year was  $3.07\text{E-}03$  mrem based on concurrent meteorological data (Table 3.4-1).

The maximum offsite beta air dose for the year was  $1.17\text{E-}03$  mrad (Table 3.1-1) based on measured effluents and average meteorological data and  $2.69\text{E-}03$  mrad based on concurrent meteorological data (Table 3.4-1).

### 3.1.2 Radioactive Iodine

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

#### 3.1.2.1 Dose to Thyroid

The hypothetical thyroid dose to the maximum exposed individual living near the station via ingestion of milk was calculated. The radionuclide considered was I-131 and the source of milk was taken to be the nearest dairy farm with the cows pastured from May through October. The maximum thyroid dose did not exceed  $1.65\text{E-}01$  mrem during the year (Table 3.1-1[infant]).

### 3.2 Liquid Effluent Pathways

The three principal pathways through the aquatic environment for potential doses to man from liquid waste are ingestion of potable water, eating aquatic foods, and exposure while on the shoreline. Not all of these pathways are significant or applicable at a given time or station but a reasonable approximation of the dose can be made by adjusting the dose formula for season of the year or type and degree of use of the aquatic environment. NRC developed

equations\* were used to calculate the doses to the whole body, lower GI tracts, thyroid, bone and skin; specific parameters for use in the equations are given in the Exelon Offsite Dose Calculation Manual. The maximum whole body dose for the year was 8.56E-02 mrem and no organ dose exceeded 9.84E-02 mrem (Table 3.2-1 [child]).

### 3.3 Assessment of Dose to Member of Public

During the period January to December, 2006, 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 mrad for gamma radiation or 10 mrad for beta radiation during any calendar quarter; 10 mrad for gamma radiation or 20 mrad for beta radiation during a calendar year).
- The RETS limits on dose to a member of the public due to iodine-131, iodine-133, tritium, and radionuclides in particulate form with half-lives greater than eight days in gaseous effluents released from each reactor unit (7.5 mrem to any organ during any calendar quarter; 15 mrem to any organ during any calendar year).
- The 10CFR20 limit on Total Effective Dose Equivalent to individual members of the public (100 mrem) during any calendar year.

### 4.0 SITE METEOROLOGY

A summary of the site meteorological measurements taken during each calendar quarter of the year is given in Appendix E. The data are presented as cumulative joint frequency distributions of the wind direction for the 203' level and wind speed class by atmospheric stability class

determined from the temperature difference between the 199' and 30' levels. Data recovery for these measurements was 99.7% during 2005.

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

## **APPENDIX E-1**

### **DATA TABLES AND FIGURES**

**Table 1.1-1**

**GASEOUS EFFLUENTS SUMMATION OF ALL RELEASES**

BRAIDWOOD NUCLEAR POWER STATION  
 ANNUAL EFFLUENT REPORT FOR 2006  
 GAS RELEASES  
 UNIT 1 (Docket Number 50-456)  
 SUMMATION OF ALL RELEASES

Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Est. Total Error%
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**A. Fission and Activation Gas Releases**

1. Total Release Activity	Ci	9.40E-01	4.97E+00	7.00E-01	9.26E+00	7.59
2. Average Release Rate	uCi/sec	1.21E-01	6.32E-01	8.81E-02	1.16E+00	
3. Percent of ODCM Limit - gamma	%	6.08E-05	9.30E-04	9.76E-04	1.72E-03	
4. Percent of ODCM Limit - beta	%	2.17E-04	1.48E-03	1.64E-03	3.65E-03	

**B. Iodine Releases**

1. Total I-131 Activity	Ci	1.35E-05	1.07E-03	1.28E-04	1.51E-04	33.20
2. Average Release Rate	uCi/sec	1.74E-06	1.36E-04	1.61E-05	1.90E-05	
3. Percent of ODCM Limit - gamma	%	3.02E-02	3.51E-01	6.22E-01	1.71E+00	

**C. Particulate (> 8 day half-life) Releases**

1. Gross Activity	Ci	1.60E-06	<LLD	<LLD	2.03E-07	19.80
2. Average Release Rate	uCi/sec	2.04E-07	0.00E+00	0.00E+00	2.55E-08	
3. Percent of ODCM Limit	%	N/A	N/A	N/A	N/A	
4. Gross Alpha Activity	Ci	<LLD	<LLD	<LLD	<LLD	

**D. Tritium Releases**

1. Total Release Activity	Ci	1.03E+01	4.51E+00	2.40E+01	3.03E+01	8.07
2. Average Release Rate	uCi/sec	1.32E+00	5.74E-01	3.02E+00	3.81E+00	
3. Percent of ODCM Limit	%	3.02E-02	3.51E-01	6.22E-01	1.71E+00	

**Table 1.1-1 (continued)**

**GASEOUS EFFLUENTS SUMMATION OF ALL RELEASES**

BRAIDWOOD NUCLEAR POWER STATION  
 ANNUAL EFFLUENT REPORT FOR 2006  
 GAS RELEASES  
 UNIT 2 (Docket Number 50-457)  
 SUMMATION OF ALL RELEASES

Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Est. Total Error%
-------	---------	---------	---------	---------	-------------------

**A. Fission and Activation Gas Releases**

1. Total Activity Released	Ci	2.70E-01	3.59E+00	7.29E-01	2.01E+01	7.59
2. Average Release Rate	uCi/sec	3.47E-02	4.57E-01	9.17E-02	2.53E+00	
3. Percent of ODCM Limit - gamma	%	6.34E-06	7.65E-04	8.14E-04	2.41E-03	
4. Percent of ODCM Limit - beta	%	8.64E-05	1.09E-03	1.25E-03	5.35E-03	

**B. Iodine Releases**

1. Total I-131 Activity	Ci	<LLD	1.55E-03	1.59E-05	5.11E-04	33.20
2. Average Release Rate	uCi/sec	0.00E+00	1.97E-04	2.00E-06	6.43E-05	
3. Percent of ODCM Limit	%	1.02E-02	4.55E-01	4.98E-01	4.08E+00	

**C. Particulate (> 8 Day Half-Life) Releases**

1. Gross Activity	Ci	2.32E-06	1.36E-06	<LLD	2.76E-08	19.80
2. Average Release Rate	uCi/sec	2.98E-07	1.75E-07	0.00E+00	3.55E-09	
3. Percent of ODCM Limit	%	N/A	N/A	N/A	N/A	
4. Gross Alpha Activity	Ci	<LLD	<LLD	<LLD	<LLD	

**D. Tritium Releases**

1. Total Release Activity	Ci	7.19E+00	1.75E+01	1.58E-01	8.71E+01	8.07
2. Average Release Rate	uCi/sec	9.25E-01	2.23E+00	1.99E-02	1.10E+01	
3. Percent of ODCM Limit	%	1.02E-02	4.55E-01	4.98E-01	4.08E+00	



**Table 1.2-1**

**LIQUID EFFLUENTS SUMMATION OF ALL RELEASES**

BRAIDWOOD NUCLEAR POWER STATION  
 ANNUAL EFFLUENT REPORT FOR 2006  
 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	0.00E+00	0.00E+00	0.00E+00	1.80E-04	2.64
2. Average Concentration Released	uCi/ml	0.00E+00	0.00E+00	0.00E+00	4.99E-11	
3. Percent of limit	%	*	*	*	*	

**B. Tritium**

1. Total Activity Released	Ci	1.89E-01	1.85E+00	2.07E+00	1.72E+02	5.85
2. Average Concentration Released	uCi/ml	4.04E-08	5.91E-07	5.55E-07	4.76E-05	
3. % of Limit (1E-2 uCi/ml)	%	4.04E-04	5.91E-03	5.55E-03	4.76E-01	

**C. Dissolved Noble Gases**

1. Total Activity Released	Ci	0.00E+00	0.00E+00	0.00E+00	3.84E-06	2.64
2. Average Concentration Released	uCi/ml	0.00E+00	0.00E+00	0.00E+00	1.06E-12	
3. % of Limit (2E-4 uCi/ml)	%	0.00E+00	0.00E+00	0.00E+00	5.32E-07	

**D. Gross Alpha**

1. Total Activity Released	Ci	<LLD	<LLD	<LLD	<LLD	14.70
2. Average Concentration Released	uCi/ml	<LLD	<LLD	<LLD	<LLD	

**E. Volume of Releases**

1. Volume of Liquid Waste to Discharge	liters	0.00E+00	0.00E+00	0.00E+00	4.22E+05
2. Volume of Dilution Water	liters	4.68E+09	3.13E+09	3.73E+09	3.61E+09

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

**Table 1.2-1 (continued)**

**LIQUID EFFLUENTS SUMMATION OF ALL RELEASES**

BRAIDWOOD NUCLEAR POWER STATION  
 ANNUAL EFFLUENT REPORT FOR 2006  
 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	0.00E+00	0.00E+00	0.00E+00	1.80E-04	2.64
2. Average Concentration Released	uCi/ml	0.00E+00	0.00E+00	0.00E+00	4.99E-11	
3. Percent of Limit	%	*	*	*	*	

**B. Tritium**

1. Total Activity Released	Ci	1.89E-01	1.85E+00	2.07E+00	1.72E+02	5.85
2. Average Concentration Released	uCi/ml	4.04E-08	5.91E-07	5.55E-07	4.76E-05	
3. % of Limit (1E-3 uCi/ml)	%	4.04E-03	5.91E-03	5.55E-03	4.76E-01	

**C. Dissolved Noble Gases**

1. Total Activity Released	Ci	0.00E+00	0.00E+00	0.00E+00	3.84E-06	2.64
2. Average Concentration Released	uCi/ml	0.00E+00	0.00E+00	0.00E+00	1.06E-12	
3. % of Limit (2E-4 uCi/ml)	%	0.00E+00	0.00E+00	0.00E+00	5.32E-07	

**D. Gross Alpha**

1. Total Activity Released	Ci	<LLD	<LLD	<LLD	<LLD	14.70
2. Average Concentration Released	uCi/ml	<LLD	<LLD	<LLD	<LLD	

**E. Volume of Releases**

1. Volume of Liquid Waste to Discharge	liters	0.00E+00	0.00E+00	0.00E+00	4.22E+05	
2. Volume of Dilution Water	liters	4.68E+09	3.13E+09	3.73E+09	3.61E+09	

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

**Table 3.1-1**

**MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES**

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

Release ID.....: 1 All Gas Release Types  
 Period Start Date....: 01/01/2006 00:00  
 Period End Date.....: 01/01/2007 00:00  
 Period Duration (min): 5.256E+05  
 Coefficient Type.....: Historical  
 Unit.....: 1  
 Receptor.....: 5 Composite Crit. Receptor - IP  
 Distance (meters)....: 0.0  
 Compass Point.....: 0.0

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

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	INFANT	THYROID	2.57E-01	31-day	2.25E-01	1.14E+02	3.00E-01	8.56E+01
Qrtr->End	INFANT	THYROID	2.57E-01	Quarter	5.63E+00	4.57E+00	7.50E+00	3.42E+00
Year->End	INFANT	THYROID	2.57E-01	Annual	1.13E+01	2.28E+00	1.50E+01	1.71E+00

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

Nuclide	Percentage
H-3	4.48E+00
I-131	9.46E+01
I-132	2.60E-03
I-133	8.41E-01
CE-141	~ 4.44E-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	1.49E-02	31-day	1.50E-01	9.94E+00	2.00E-01	7.46E+00
Qrtr->End	CHILD	TBODY	1.49E-02	Quarter	5.25E+00	2.84E-01	7.50E+00	1.99E-01
Year->End	CHILD	TBODY	1.49E-02	Annual	1.05E+01	1.42E-01	1.50E+01	9.94E-02

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

Nuclide	Percentage
H-3	9.86E+01
I-131	1.23E+00
I-132	4.67E-03
I-133	1.52E-02
CE-141	7.78E-05

Date/Time: 04/19/2007 10:16 retDasID: RetDas

**Table 3.1-1 (continued)**

**MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES**

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

Release ID.....: 1 All Gas Release Types  
 Period Start Date....: 01/01/2006 00:00  
 Period End Date.....: 01/01/2007 00:00  
 Period Duration (min): 5.256E+05  
 Coefficient Type.....: Historical  
 Unit.....: 1  
 Receptor.....: 4 Composite Crit. Receptor - NG  
 Distance (meters)....: 0.0  
 Compass Point.....: 0.0

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

Dose Period	Dose Type	Dose (mrad)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	Gamma	1.72E-04	31-day	1.50E-01	1.15E-01	2.00E-01	8.62E-02
Qrtr->End	Gamma	1.72E-04	Quarter	3.75E+00	4.60E-03	5.00E+00	3.45E-03
Year->End	Gamma	1.72E-04	Annual	7.50E+00	2.30E-03	1.00E+01	1.72E-03

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

Nuclide	Percentage
AR-41	3.21E+00
KR-85M	6.99E-01
KR-85	3.60E-01
KR-87	3.95E-01
XE-133M	6.84E-01
KR-88	9.43E+00
XE-131M	2.97E-01
XE-135	2.57E+01
XE-133	5.92E+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	7.31E-04	31-day	3.00E-01	2.44E-01	4.00E-01	1.83E-01
Qrtr->End	Beta	7.31E-04	Quarter	7.50E+00	9.74E-03	1.00E+01	7.31E-03
Year->End	Beta	7.31E-04	Annual	1.50E+01	4.87E-03	2.00E+01	3.65E-03

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

Nuclide	Percentage
AR-41	4.36E-01
KR-85M	4.31E-01
KR-85	1.57E+01
KR-87	2.54E-01
XE-133M	1.19E+00
KR-88	7.00E-01
XE-131M	8.12E-01
XE-135	1.27E+01
XE-133	6.78E+01

Date/Time: 04/19/2007 10:16 retDasID: RetDas

**Table 3.1-1 (continued)**

**MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES**

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

Release ID.....: 1 All Gas Release Types  
 Period Start Date....: 01/01/2006 00:00  
 Period End Date.....: 01/01/2007 00:00  
 Period Duration (min): 5.256E+05  
 Coefficient Type.....: Historical  
 Unit.....: 2  
 Receptor.....: 5 Composite Crit. Receptor - IP  
 Distance (meters)....: 0.0  
 Compass Point.....: 0.0

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

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	INFANT	THYROID	6.11E-01	31-day	2.25E-01	2.72E+02	3.00E-01	2.04E+02
Qrtr->End	INFANT	THYROID	6.11E-01	Quarter	5.63E+00	1.09E+01	7.50E+00	8.15E+00
Year->End	INFANT	THYROID	6.11E-01	Annual	1.13E+01	5.44E+00	1.50E+01	4.08E+00

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

Nuclide	Percentage
H-3	3.17E+00
I-131	9.67E+01
I-132	1.68E-03
I-133	1.62E-01

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

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	TBODY	2.54E-02	31-day	1.50E-01	1.69E+01	2.00E-01	1.27E+01
Qrtr->End	CHILD	TBODY	2.54E-02	Quarter	5.25E+00	4.83E-01	7.50E+00	3.38E-01
Year->End	CHILD	TBODY	2.54E-02	Annual	1.05E+01	2.41E-01	1.50E+01	1.69E-01

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

Nuclide	Percentage
H-3	9.82E+01
I-131	1.76E+00
I-132	4.26E-03
I-133	4.06E-03

**Table 3.1-1 (continued)**

**MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES**

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

Release ID.....: 1 All Gas Release Types  
 Period Start Date....: 01/01/2006 00:00  
 Period End Date.....: 01/01/2007 00:00  
 Period Duration (min): 5.256E+05  
 Coefficient Type.....: Historical  
 Unit.....: 2  
 Receptor.....: 4 Composite Crit. Receptor - NG  
 Distance (meters)....: 0.0  
 Compass Point.....: 0.0

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

Dose Period	Dose Type	Dose (mrad)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	Gamma	2.41E-04	31-day	1.50E-01	1.61E-01	2.00E-01	1.20E-01
Qrtr->End	Gamma	2.41E-04	Quarter	3.75E+00	6.43E-03	5.00E+00	4.82E-03
Year->End	Gamma	2.41E-04	Annual	7.50E+00	3.21E-03	1.00E+01	2.41E-03

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

Nuclide	Percentage
AR-41	1.63E+00
XE-137	0.00E+00
KR-85M	5.01E-01
KR-85	2.58E-01
KR-87	2.83E-01
XE-133M	4.89E-01
KR-88	6.75E+00
XE-131M	2.12E-01
XE-135	1.83E+01
XE-133	7.15E+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	1.07E-03	31-day	3.00E-01	3.57E-01	4.00E-01	2.68E-01
Qrtr->End	Beta	1.07E-03	Quarter	7.50E+00	1.43E-02	1.00E+01	1.07E-02
Year->End	Beta	1.07E-03	Annual	1.50E+01	7.14E-03	2.00E+01	5.35E-03

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

Nuclide	Percentage
AR-41	2.11E-01
XE-137	0.00E+00
KR-85M	2.94E-01
KR-85	1.07E+01
KR-87	1.73E-01
XE-133M	8.13E-01
KR-88	4.78E-01
XE-131M	5.54E-01
XE-135	8.62E+00
XE-133	7.81E+01

Date/Time: 04/19/2007 10:32 retDasID: RetDas

**Table 3.2-1**

**MAXIMUM DOSES RESULTING FROM LIQUID EFFLUENTS**

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

Release ID.....: 1 All Liquid Release Types  
 Period Start Date.....: 01/01/2006 00:00  
 Period End Date.....: 01/01/2007 00:00  
 Period Duration (mins): 5.256E+05  
 Unit.....: 1  
 Receptor.....: 0 Liquid Receptor

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

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	GILLI	5.97E-02	31-day	1.50E-01	3.98E+01	2.00E-01	2.99E+01
Qrtr->End	CHILD	GILLI	5.97E-02	Quarter	3.75E+00	1.59E+00	5.00E+00	1.19E+00
Year->End	CHILD	GILLI	5.97E-02	Annual	7.50E+00	7.96E-01	1.00E+01	5.97E-01

Critical Pathway.....: 0 Potable Water (PWtr)  
 Major Contributors.....: 0.0 % or greater to total  
 Nuclide Percentage  
 -----  
 H-3 1.00E+02  
 CO-60 7.57E-03

=== 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	5.97E-02	31-day	4.50E-02	1.33E+02	6.00E-02	9.95E+01
Qrtr->End	CHILD	TBODY	5.97E-02	Quarter	1.13E+00	5.31E+00	1.50E+00	3.98E+00
Year->End	CHILD	TBODY	5.97E-02	Annual	2.25E+00	2.65E+00	3.00E+00	1.99E+00

Critical Pathway.....: 0 Potable Water (PWtr)  
 Major Contributors.....: 0.0 % or greater to total  
 Nuclide Percentage  
 -----  
 H-3 1.00E+02  
 CO-60 4.04E-03

**Table 3.2-1 (continued)**

**MAXIMUM DOSES RESULTING FROM LIQUID EFFLUENTS**

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

Release ID.....: 1 All Liquid Release Types  
 Period Start Date.....: 01/01/2006 00:00  
 Period End Date.....: 01/01/2007 00:00  
 Period Duration (mins): 5.256E+05  
 Unit.....: 2  
 Receptor.....: 0 Liquid Receptor

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

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	GILLI	5.97E-02	31-day	1.50E-01	3.98E+01	2.00E-01	2.99E+01
Qrtr->End	CHILD	GILLI	5.97E-02	Quarter	3.75E+00	1.59E+00	5.00E+00	1.19E+00
Year->End	CHILD	GILLI	5.97E-02	Annual	7.50E+00	7.96E-01	1.00E+01	5.97E-01

Critical Pathway.....: 0 Potable Water (PWtr)  
 Major Contributors.....: 0.0 % or greater to total  
 Nuclide Percentage  
 -----  
 H-3 1.00E+02  
 CO-60 7.57E-03

=== 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	5.97E-02	31-day	4.50E-02	1.33E+02	6.00E-02	9.95E+01
Qrtr->End	CHILD	TBODY	5.97E-02	Quarter	1.13E+00	5.31E+00	1.50E+00	3.98E+00
Year->End	CHILD	TBODY	5.97E-02	Annual	2.25E+00	2.65E+00	3.00E+00	1.99E+00

Critical Pathway.....: 0 Potable Water (PWtr)  
 Major Contributors.....: 0.0 % or greater to total  
 Nuclide Percentage  
 -----  
 H-3 1.00E+02  
 CO-60 4.04E-03



**Table 3.3-1**

**10CFR20 COMPLIANCE ASSESSMENT**

Braidwood Nuclear Station

Unit 1

10 CFR 20 Compliance Assessment

Period of Assessment: 1/1/06 through 12/31/06  
Calculated 5/8/07

**10 CFR 20.1301(A)(1) COMPLIANCE**

Total Effective Dose Equivalent (TEDE)	mrem/year	4.41E-01
10 CFR 20.1301(a)(1) limit	mrem/year	100.00
	% of limit	0.44

**COMPLIANCE SUMMARY**

	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	Total
TEDE (mrem)	1.46E-02	8.30E-02	8.01E-02	2.63E-02	4.41E-01

**Table 3.3-1 (continued)**

**10CFR20 COMPLIANCE ASSESSMENT**

Braidwood Nuclear Station

Unit 2

10 CFR 20 Compliance Assessment

Period of Assessment: 1/1/06 through 12/31/06  
Calculated 5/8/07

**10 CFR 20.1301(A)(1) COMPLIANCE**

Total Effective Dose Equivalent (TEDE)	mrem/year	7.97E-01
10 CFR 20.1301(a)(1) limit	mrem/year	100.00
	% of limit	0.80

**COMPLIANCE SUMMARY**

	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	Total
TEDE (mrem)	1.16E-02	1.02E-01	4.59E-02	6.37E-01	7.97E-01

**Table 3.4-1**

**MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES BASED ON  
CONCURRENT METEOROLOGICAL DATA**

Braidwood Station - Unit 1

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

2006

TYPE OF DOSE	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	ANNUAL
GAMMA AIR (mrad)	4.690E-06 (NNW)	9.010E-05 (WNW)	5.600E-06 ( W )	1.080E-04 (NNW)	1.908E-04 (NNW)
BETA AIR (mrad)	5.390E-05 (WNW)	5.620E-04 (WNW)	6.310E-05 ( W )	8.150E-04 (NNW)	1.250E-03 (NNW)
WHOLE BODY (mrem)	2.270E-06 (NNW)	5.340E-05 ( SW)	3.100E-06 ( W )	5.490E-05 (NNW)	9.870E-05 (NNW)
SKIN (mrem)	2.200E-05 (WNW)	2.990E-04 (WNW)	2.620E-05 ( W )	3.540E-04 (NNW)	5.948E-04 (NNW)
ORGAN (mrem)	3.030E-04 (WNW)	2.760E-04 (WNW)	1.180E-03 ( W )	1.530E-03 (NNW)	2.732E-03 (NNW)
CRITICAL PERSON	Teenager	Teenager	Teenager	Teenager	Teenager
CRITICAL ORGAN	Thyroid	Thyroid	Thyroid	Thyroid	Thyroid

COMPLIANCE STATUS

TYPE OF DOSE	10 CFR 50 APP. I		10 CFR 50 APP. I	
	QUARTERLY OBJECTIVE	% OF APP. I	YEARLY OBJECTIVE	% OF APP. I
GAMMA AIR (mrad)	5.0	0.00	10.0	0.00
BETA AIR (mrad)	10.0	0.01	20.0	0.01
WHOLE BODY (mrem)	2.5	0.00	5.0	0.00
SKIN (mrem)	7.5	0.00	15.0	0.00
ORGAN (mrem)	7.5	0.02	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: 3/29/2007

**Table 3.4-1 (continued)**

**MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES BASED ON  
CONCURRENT METEOROLOGICAL DATA**

Braidwood Station - Unit 2

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

2006

TYPE OF DOSE	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	ANNUAL
GAMMA AIR (mrad)	4.930E-07 (NNW)	7.630E-05 (WNW)	5.880E-06 ( W )	2.340E-04 (NNW)	3.021E-04 (NNW)
BETA AIR (mrad)	2.150E-05 (WNW)	4.440E-04 (WNW)	6.530E-05 ( W )	1.660E-03 (NNW)	1.995E-03 (NNW)
WHOLE BODY (mrem)	2.060E-07 (NNW)	4.660E-05 ( SW)	2.890E-06 ( W )	1.210E-04 (NNW)	1.577E-04 (NNW)
SKIN (mrem)	1.060E-05 (WNW)	2.600E-04 (WNW)	2.660E-05 ( W )	6.750E-04 (NNW)	8.790E-04 (NNW)
ORGAN (mrem)	2.110E-04 (WNW)	4.030E-04 (WNW)	7.620E-04 ( W )	4.420E-03 (NNW)	5.354E-03 (NNW)
CRITICAL PERSON	Teenager	Teenager	Teenager	Teenager	Teenager
CRITICAL ORGAN	Liver	Thyroid	Thyroid	Thyroid	Thyroid

COMPLIANCE STATUS

TYPE OF DOSE	10 CFR 50 APP. I		10 CFR 50 APP. I	
	QUARTERLY OBJECTIVE	% OF APP. I	YEARLY OBJECTIVE	% OF APP. I
GAMMA AIR (mrad)	5.0	0.00	10.0	0.00
BETA AIR (mrad)	10.0	0.02	20.0	0.01
WHOLE BODY (mrem)	2.5	0.00	5.0	0.00
SKIN (mrem)	7.5	0.01	15.0	0.01
ORGAN (mrem)	7.5	0.06	15.0	0.04
CRITICAL PERSON		Teenager		Teenager
CRITICAL ORGAN		Thyroid		Thyroid

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

Date of calculation: 3/29/2007

## **APPENDIX F**

### **METEOROLOGICAL**

Braidwood Nuclear Station

Period of Record: January - March 2006  
 Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	10	4	0	0	14
NNE	0	1	1	0	0	0	2
NE	0	1	1	0	0	0	2
ENE	0	1	1	0	0	0	2
E	0	6	3	0	0	0	9
ESE	0	4	2	0	0	0	6
SE	0	2	1	0	0	0	3
SSE	0	1	10	4	0	0	15
S	0	0	3	3	0	0	6
SSW	0	0	2	6	2	0	10
SW	0	1	5	3	3	0	12
WSW	0	5	6	4	1	0	16
W	0	1	18	2	0	1	22
WNW	0	10	15	5	2	0	32
NW	1	9	16	1	0	0	27
NNW	0	1	19	2	0	0	22
Variable	0	0	0	0	0	0	0
Total	1	43	113	34	8	1	200

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 Nuclear Station

Period of Record: January - March 2006

Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)

Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	3	1	0	0	6
NNE	0	2	2	0	0	0	4
NE	0	1	1	0	0	0	2
ENE	0	0	2	0	0	0	2
E	0	0	0	0	0	0	0
ESE	0	0	1	0	0	0	1
SE	0	1	0	1	0	0	2
SSE	0	1	4	5	0	0	10
S	0	0	2	3	0	0	5
SSW	0	1	2	3	1	0	7
SW	0	0	0	2	0	0	2
WSW	0	1	2	0	0	1	4
W	1	2	2	0	0	0	5
WNW	0	3	3	1	1	0	8
NW	0	2	3	1	0	0	6
NNW	0	7	3	0	0	0	10
Variable	0	0	0	0	0	0	0
Total	1	23	30	17	2	1	74

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 Nuclear Station

Period of Record: January - March 2006  
 Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	3	5	0	0	0	8
NNE	0	1	2	1	0	0	4
NE	0	4	3	0	0	0	7
ENE	0	1	3	0	0	0	4
E	0	2	1	0	0	0	3
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	2	1	2	0	0	5
S	0	0	0	3	0	0	3
SSW	0	0	0	5	0	0	5
SW	0	1	0	2	0	0	3
WSW	0	1	1	1	2	0	5
W	0	3	8	0	0	1	12
WNW	1	1	4	0	0	0	6
NW	0	2	2	0	0	0	4
NNW	0	5	6	2	0	0	13
Variable	0	0	0	0	0	0	0
Total	1	26	36	16	2	1	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: 0



Braidwood Nuclear Station

Period of Record: January - March 2006  
 Stability Class - Neutral - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	19	28	2	0	0	49
NNE	2	26	33	5	0	0	66
NE	0	17	33	15	0	0	65
ENE	9	31	22	0	0	0	62
E	4	16	4	0	0	0	24
ESE	1	11	14	0	0	0	26
SE	0	26	10	0	0	0	36
SSE	0	12	21	9	0	0	42
S	0	3	40	14	0	0	57
SSW	0	2	10	23	1	0	36
SW	0	5	42	17	2	0	66
WSW	0	21	21	3	1	0	46
W	3	15	20	25	9	0	72
WNW	4	42	86	24	5	0	161
NW	3	39	35	2	0	0	79
NNW	3	30	55	31	0	0	119
Variable	0	0	0	0	0	0	0
Total	29	315	474	170	18	0	1006

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 Nuclear Station

Period of Record: January - March 2006  
 Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	7	6	1	0	0	0	14
NNE	14	12	2	0	0	0	28
NE	16	4	0	3	0	0	23
ENE	13	9	2	1	0	0	25
E	26	16	0	0	0	0	42
ESE	9	27	14	0	0	0	50
SE	2	20	21	0	0	0	43
SSE	0	17	25	7	0	0	49
S	0	11	41	11	1	0	64
SSW	0	1	14	26	2	0	43
SW	1	6	18	5	0	0	30
WSW	0	30	8	0	0	0	38
W	6	23	2	0	0	0	31
WNW	20	28	4	2	1	0	55
NW	15	29	1	0	0	0	45
NNW	6	14	5	1	0	0	26
Variable	0	0	0	0	0	0	0
Total	135	253	158	56	4	0	606

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 Nuclear Station

Period of Record: January - March 2006  
 Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	4	3	0	0	0	0	7
NNE	3	0	0	0	0	0	3
NE	5	2	0	0	0	0	7
ENE	7	0	0	0	0	0	7
E	6	0	0	0	0	0	6
ESE	6	4	0	0	0	0	10
SE	1	0	0	0	0	0	1
SSE	0	1	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	0	1	0	0	0	0	1
SW	0	1	1	0	0	0	2
WSW	1	4	0	0	0	0	5
W	7	22	0	0	0	0	29
WNW	14	18	0	0	0	0	32
NW	17	2	0	0	0	0	19
NNW	6	1	0	0	0	0	7
Variable	0	0	0	0	0	0	0
Total	77	59	1	0	0	0	137

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 Nuclear Station

Period of Record: January - March 2006  
 Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	0	0	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	1	0	0	0	0	0	1
E	2	0	0	0	0	0	2
ESE	2	0	0	0	0	0	2
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	1	0	0	0	0	0	1
SW	1	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0
W	4	1	0	0	0	0	5
WNW	0	0	0	0	0	0	0
NW	6	0	0	0	0	0	6
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	20	1	0	0	0	0	21

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 Nuclear Station

Period of Record: January - March 2006  
 Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction -----	Wind Speed (in mph)						Total -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	> 24 -----	
N	0	0	8	4	1	0	13
NNE	0	1	1	0	0	0	2
NE	0	0	1	0	0	0	1
ENE	0	0	0	2	0	0	2
E	0	2	4	6	0	0	12
ESE	0	1	1	2	0	0	4
SE	0	2	0	3	1	0	6
SSE	0	0	5	4	3	1	13
S	0	0	3	1	4	0	8
SSW	0	0	0	0	3	4	7
SW	0	1	1	6	2	3	13
WSW	0	1	9	8	1	1	20
W	0	0	9	5	2	1	17
WNW	0	3	10	11	4	4	32
NW	0	4	8	19	1	0	32
NNW	0	0	8	9	1	0	18
Variable	0	0	0	0	0	0	0
Total	0	15	68	80	23	14	200

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

Braidwood Nuclear Station

Period of Record: January - March 2006  
 Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	4	0	1	0	6
NNE	0	2	3	0	0	0	5
NE	0	0	0	1	0	0	1
ENE	0	0	0	2	0	0	2
E	0	0	0	0	0	0	0
ESE	0	0	0	1	0	0	1
SE	0	0	1	2	3	0	6
SSE	0	0	3	1	2	1	7
S	0	0	2	1	4	0	7
SSW	0	0	1	0	2	1	4
SW	0	0	0	1	1	0	2
WSW	0	0	3	1	0	1	5
W	0	1	2	0	0	0	3
WNW	1	1	4	3	1	1	11
NW	0	2	4	0	1	0	7
NNW	0	2	2	4	0	0	8
Variable	0	0	0	0	0	0	0
Total	1	9	29	17	15	4	75

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

Braidwood Nuclear Station

Period of Record: January - March 2006  
 Stability Class - Slightly Unstable ~ 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction -----	Wind Speed (in mph)						Total -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	> 24 -----	
N	0	1	4	2	0	0	7
NNE	0	1	2	0	1	0	4
NE	0	1	2	3	0	0	6
ENE	0	1	1	3	0	0	5
E	0	0	1	1	0	0	2
ESE	0	1	0	0	0	0	1
SE	0	0	2	0	0	0	2
SSE	0	0	0	1	2	1	4
S	0	0	0	0	3	0	3
SSW	0	0	0	0	4	1	5
SW	0	0	1	1	0	0	2
WSW	0	0	4	1	0	2	7
W	0	2	5	2	0	1	10
WNW	0	0	3	2	1	0	6
NW	0	1	4	0	1	0	6
NNW	0	4	3	3	2	0	12
Variable	0	0	0	0	0	0	0
Total	0	12	32	19	14	5	82

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

Braidwood Nuclear Station

Period of Record: January - March 2006  
 Stability Class - Neutral - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	8	24	17	1	0	50
NNE	1	7	29	22	6	0	65
NE	0	5	9	23	23	0	60
ENE	0	9	23	22	3	0	57
E	0	4	16	10	0	0	30
ESE	0	0	8	7	10	0	25
SE	0	5	18	18	6	0	47
SSE	0	3	13	12	11	2	41
S	0	1	6	21	25	0	53
SSW	0	0	3	7	22	9	41
SW	0	2	12	30	14	1	59
WSW	0	6	23	16	5	1	51
W	1	4	14	9	16	15	59
WNW	2	9	35	58	26	20	150
NW	2	3	33	46	21	2	107
NNW	1	8	37	41	21	5	113
Variable	0	0	0	0	0	0	0
Total	7	74	303	359	210	55	1008

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



Braidwood Nuclear Station

Period of Record: January - March 2006  
 Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	4	9	2	0	0	17
NNE	0	12	14	3	0	0	29
NE	2	10	9	2	2	1	26
ENE	2	6	9	0	1	0	18
E	4	10	24	10	1	0	49
ESE	0	5	12	21	6	0	44
SE	3	4	14	28	1	0	50
SSE	0	1	13	25	8	5	52
S	0	0	8	30	16	6	60
SSW	0	1	1	17	26	13	58
SW	0	2	7	7	5	1	22
WSW	2	1	16	16	0	0	35
W	0	2	12	11	0	0	25
WNW	0	6	21	15	3	1	46
NW	0	13	34	8	0	0	55
NNW	0	2	21	6	0	0	29
Variable	0	0	0	0	0	0	0
Total	15	79	224	201	69	27	615

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

Braidwood Nuclear Station

Period of Record: January - March 2006  
 Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	3	5	1	0	0	9
NNE	0	3	8	0	0	0	11
NE	0	1	7	1	0	0	9
ENE	1	2	3	0	0	0	6
E	1	0	1	0	0	0	2
ESE	1	1	0	3	0	0	5
SE	1	3	1	1	0	0	6
SSE	2	3	3	0	0	0	8
S	0	1	0	0	0	0	1
SSW	1	0	1	1	1	0	4
SW	1	0	0	0	0	0	1
WSW	0	0	0	1	0	0	1
W	1	1	4	10	0	0	16
WNW	1	2	11	9	0	0	23
NW	1	2	20	6	0	0	29
NNW	1	4	13	0	0	0	18
Variable	0	0	0	0	0	0	0
Total	12	26	77	33	1	0	149

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

Braidwood Nuclear Station

Period of Record: January - March 2006

Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

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

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

Braidwood Nuclear Station

Period of Record: April - June 2006

Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	11	13	1	0	0	25
NNE	0	11	18	2	0	0	31
NE	0	29	16	2	0	0	47
ENE	0	11	4	0	0	0	15
E	0	10	3	0	0	0	13
ESE	1	6	5	0	0	0	12
SE	1	10	8	1	0	0	20
SSE	0	26	6	1	0	0	33
S	3	8	14	4	0	0	29
SSW	0	8	18	9	0	0	35
SW	0	2	8	4	0	0	14
WSW	0	5	1	4	0	0	10
W	0	14	13	11	0	0	38
WNW	0	15	23	10	0	0	48
NW	0	19	17	3	0	0	39
NNW	1	20	18	2	0	0	41
Variable	0	0	0	0	0	0	0
Total	6	205	185	54	0	0	450

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 Nuclear Station

Period of Record: April - June 2006

Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	3	1	0	0	0	4
NNE	1	4	8	0	1	0	14
NE	0	8	4	1	0	0	13
ENE	1	3	0	0	0	0	4
E	0	0	0	0	0	0	0
ESE	0	1	2	0	0	0	3
SE	0	2	1	1	0	0	4
SSE	0	4	3	1	0	0	8
S	0	3	3	0	1	0	7
SSW	0	2	2	0	0	0	4
SW	0	2	3	1	0	0	6
WSW	1	3	2	2	0	0	8
W	0	3	5	0	0	0	8
WNW	0	4	3	1	0	0	8
NW	0	4	5	1	0	0	10
NNW	1	0	1	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	4	46	43	8	2	0	103

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 Nuclear Station

Period of Record: April - June 2006

Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)

Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	4	0	0	0	0	5
NNE	0	2	0	0	0	0	2
NE	1	4	3	0	0	0	8
ENE	1	1	0	0	0	0	2
E	1	0	0	0	0	0	1
ESE	2	0	3	0	0	0	5
SE	1	0	0	0	0	0	1
SSE	0	1	5	1	0	0	7
S	0	0	8	1	0	0	9
SSW	0	0	5	1	0	0	6
SW	1	1	1	0	0	0	3
WSW	0	1	2	0	0	0	3
W	0	1	0	0	0	0	1
WNW	0	0	1	0	0	0	1
NW	2	5	0	2	0	0	9
NNW	0	7	1	1	0	0	9
Variable	0	0	0	0	0	0	0
Total	10	27	29	6	0	0	72

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 Nuclear Station

Period of Record: April - June 2006  
 Stability Class - Neutral - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	6	14	4	0	0	0	24
NNE	2	32	24	10	1	0	69
NE	8	49	20	5	0	0	82
ENE	5	29	12	0	0	0	46
E	2	13	7	1	0	0	23
ESE	0	14	18	0	0	0	32
SE	2	6	11	11	0	0	30
SSE	3	8	24	9	0	0	44
S	2	8	17	4	2	0	33
SSW	1	4	11	4	0	0	20
SW	0	5	22	4	0	0	31
WSW	1	11	7	1	0	0	20
W	3	18	11	7	0	0	39
WNW	2	17	30	8	0	0	57
NW	2	6	14	4	0	0	26
NNW	6	11	9	1	0	0	27
Variable	0	0	0	0	0	0	0
Total	45	245	241	69	3	0	603

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 Nuclear Station

Period of Record: April - June 2006  
 Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	8	9	1	0	0	0	18
NNE	5	16	2	0	0	0	23
NE	14	12	0	1	0	0	27
ENE	23	13	1	0	0	0	37
E	16	9	2	0	0	0	27
ESE	8	28	14	2	0	0	52
SE	5	18	6	2	0	0	31
SSE	6	30	21	1	0	0	58
S	2	37	50	4	1	0	94
SSW	4	9	11	11	1	0	36
SW	3	22	7	2	0	0	34
WSW	5	22	2	1	0	0	30
W	8	16	1	0	0	0	25
WNW	13	17	3	0	0	0	33
NW	12	14	2	0	0	0	28
NNW	4	14	1	0	0	0	19
Variable	0	0	0	0	0	0	0
Total	136	286	124	24	2	0	572

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 Nuclear Station

Period of Record: April - June 2006  
 Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	5	4	0	0	0	0	9
NNE	2	4	0	0	0	0	6
NE	2	0	0	0	0	0	2
ENE	5	1	0	0	0	0	6
E	20	0	0	0	0	0	20
ESE	14	6	1	0	0	0	21
SE	4	11	0	0	0	0	15
SSE	2	4	0	0	0	0	6
S	2	2	0	0	0	0	4
SSW	3	3	0	0	0	0	6
SW	2	7	1	0	0	0	10
WSW	5	17	0	0	0	0	22
W	20	3	0	0	0	0	23
WNW	25	10	0	0	0	0	35
NW	13	1	0	0	0	0	14
NNW	14	3	0	0	0	0	17
Variable	0	0	0	0	0	0	0
Total	138	76	2	0	0	0	216

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 Nuclear Station

Period of Record: April - June 2006  
 Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	4	1	0	0	0	0	5
NNE	5	0	0	0	0	0	5
NE	0	0	0	0	0	0	0
ENE	5	0	0	0	0	0	5
E	3	0	0	0	0	0	3
ESE	2	1	0	0	0	0	3
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	1	1	0	0	0	0	2
SW	1	1	0	0	0	0	2
WSW	4	7	0	0	0	0	11
W	9	3	0	0	0	0	12
WNW	9	1	0	0	0	0	10
NW	7	0	0	0	0	0	7
NNW	5	0	0	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	55	15	0	0	0	0	70

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 Nuclear Station

Period of Record: April - June 2006

Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)

Winds Measured at 203 Feet

Wind Direction -----	Wind Speed (in mph)						Total -----
	1-3 -----	4-7 -----	8-12' -----	13-18 -----	19-24 -----	> 24 -----	
N	0	6	12	8	0	0	26
NNE	0	3	16	8	3	0	30
NE	0	14	14	15	2	0	45
ENE	0	10	11	0	0	0	21
E	0	7	6	3	1	0	17
ESE	0	2	6	6	0	0	14
SE	1	10	6	5	0	1	23
SSE	0	18	6	2	1	0	27
S	1	6	15	10	3	1	36
SSW	0	5	5	7	5	0	22
SW	0	1	2	7	2	0	12
WSW	0	3	6	1	4	0	14
W	0	1	13	5	7	1	27
WNW	0	4	10	20	10	1	45
NW	0	10	17	14	2	0	43
NNW	0	13	20	7	3	0	43
Variable	0	0	0	0	0	0	0
Total	2	113	165	118	43	4	445

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

Braidwood Nuclear Station

Period of Record: April - June 2006

Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)

Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	3	1	0	0	0	4
NNE	0	5	4	5	1	1	16
NE	0	3	4	3	1	0	11
ENE	1	2	2	1	1	0	7
E	0	0	0	0	0	0	0
ESE	0	0	1	2	0	1	4
SE	0	2	2	1	0	0	5
SSE	0	1	0	3	1	0	5
S	0	2	2	2	0	1	7
SSW	0	1	3	2	0	0	6
SW	1	1	2	3	0	0	7
WSW	0	1	2	2	2	0	7
W	0	3	3	1	0	0	7
WNW	0	2	2	2	1	0	7
NW	1	3	1	4	1	1	11
NNW	0	0	1	1	0	0	2
Variable	0	0	0	0	0	0	0
Total	3	29	30	32	8	4	106

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 Nuclear Station

Period of Record: April - June 2006  
 Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	4	1	0	0	0	5
NNE	0	1	0	1	0	0	2
NE	1	1	5	1	0	0	8
ENE	0	1	0	0	0	0	1
E	1	1	0	0	0	0	2
ESE	1	0	0	2	1	0	4
SE	1	1	0	1	0	1	4
SSE	0	1	0	5	0	0	6
S	1	0	1	5	0	0	7
SSW	0	0	2	2	1	0	5
SW	0	0	2	1	0	0	3
WSW	0	0	1	1	0	0	2
W	0	0	0	0	0	0	0
WNW	0	0	2	0	1	0	3
NW	0	2	2	2	1	2	9
NNW	1	3	4	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	6	15	20	21	4	3	69

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 Nuclear Station

Period of Record: April - June 2006

Stability Class - Neutral - 199Ft-30Ft Delta-T (F)

Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	10	7	3	0	0	21
NNE	1	13	17	13	6	5	55
NE	3	7	45	35	4	3	97
ENE	3	9	29	11	5	0	57
E	0	7	12	4	5	0	28
ESE	1	1	3	23	8	1	37
SE	1	2	3	13	12	7	38
SSE	0	5	5	12	8	2	32
S	0	3	6	12	2	5	28
SSW	0	2	3	14	7	2	28
SW	1	0	8	13	2	1	25
WSW	0	0	7	9	1	1	18
W	0	5	14	5	2	2	28
WNW	1	7	14	13	25	5	65
NW	0	4	6	10	9	2	31
NNW	4	9	11	4	1	1	30
Variable	0	0	0	0	0	0	0
Total	16	84	190	194	97	37	618

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

Braidwood Nuclear Station

Period of Record: April - June 2006  
 Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	2	10	3	0	0	16
NNE	0	8	20	1	0	0	29
NE	0	8	14	7	0	1	30
ENE	0	9	18	5	0	0	32
E	0	7	21	9	3	0	40
ESE	3	2	7	18	12	6	48
SE	2	2	11	9	2	1	27
SSE	1	2	15	26	3	2	49
S	1	3	10	69	13	2	98
SSW	1	2	4	13	9	6	35
SW	0	3	20	9	1	0	33
WSW	3	3	15	4	2	0	27
W	0	7	17	2	0	0	26
WNW	0	10	11	14	0	0	35
NW	1	2	17	3	2	0	25
NNW	1	2	22	3	0	0	28
Variable	0	0	0	0	0	0	0
Total	14	72	232	195	47	18	578

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 Nuclear Station

Period of Record: April - June 2006

Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	7	6	3	0	0	16
NNE	0	4	5	4	0	0	13
NE	0	4	5	0	0	0	9
ENE	1	3	2	0	0	0	6
E	1	4	11	0	0	0	16
ESE	0	1	4	8	0	0	13
SE	0	3	13	10	0	0	26
SSE	0	2	2	2	0	0	6
S	0	1	2	1	0	0	4
SSW	0	0	7	1	0	0	8
SW	0	4	4	2	0	0	10
WSW	1	2	8	1	0	0	12
W	1	3	9	9	0	0	22
WNW	1	2	16	9	0	0	28
NW	1	2	12	4	0	0	19
NNW	1	2	17	0	0	0	20
Variable	0	0	0	0	0	0	0
Total	7	44	123	54	0	0	228

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 Nuclear Station

Period of Record: April - June 2006

Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	9	6	0	0	0	16
NNE	1	7	4	1	0	0	13
NE	3	3	1	0	0	0	7
ENE	0	0	1	0	0	0	1
E	0	1	0	0	0	0	1
ESE	2	3	3	2	0	0	10
SE	2	6	0	0	0	0	8
SSE	0	3	0	0	0	0	3
S	1	0	0	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	1	0	0	0	1
WSW	0	0	3	2	0	0	5
W	0	1	3	2	0	0	6
WNW	1	2	5	4	0	0	12
NW	2	1	3	1	0	0	7
NNW	1	4	7	0	0	0	12
Variable	0	0	0	0	0	0	0
Total	14	40	37	12	0	0	103

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 Nuclear Station

Period of Record: July - September 2006

Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)

Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	3	0	0	0	5
NNE	0	2	4	0	0	0	6
NE	0	21	21	0	0	0	42
ENE	0	15	1	0	0	0	16
E	0	8	0	0	0	0	8
ESE	0	3	0	0	0	0	3
SE	4	13	1	0	0	0	18
SSE	0	16	8	0	0	0	24
S	0	15	10	0	0	0	25
SSW	0	6	19	6	0	0	31
SW	0	14	32	7	0	0	53
WSW	3	14	16	0	0	0	33
W	0	38	8	2	0	0	48
WNW	2	23	6	0	0	0	31
NW	1	17	1	0	0	0	19
NNW	1	9	8	0	0	0	18
Variable	0	0	0	0	0	0	0
Total	11	216	138	15	0	0	380

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 Nuclear Station

Period of Record: July - September 2006

Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)

Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	3	0	0	0	0	3
NNE	0	3	1	0	0	0	4
NE	0	3	6	0	0	0	9
ENE	0	10	0	0	0	0	10
E	0	3	0	0	0	0	3
ESE	0	1	0	0	0	0	1
SE	1	4	1	0	0	0	6
SSE	0	4	1	0	0	0	5
S	0	3	2	0	0	0	5
SSW	0	0	3	0	0	0	3
SW	0	2	5	3	0	0	10
WSW	1	2	2	0	0	0	5
W	0	5	0	0	0	0	5
WNW	1	2	0	0	0	0	3
NW	1	6	0	0	0	0	7
NNW	1	7	2	0	0	0	10
Variable	0	0	0	0	0	0	0
Total	5	58	23	3	0	0	89

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 Nuclear Station

Period of Record: July - September 2006  
 Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	1	0	0	0	0	3
NNE	0	5	1	0	0	0	6
NE	1	8	4	0	0	0	13
ENE	1	7	0	0	0	0	8
E	1	1	0	0	0	0	2
ESE	1	2	0	0	0	0	3
SE	1	4	0	0	0	0	5
SSE	0	4	2	1	0	0	7
S	0	3	2	0	0	0	5
SSW	0	0	1	0	0	0	1
SW	0	5	8	1	0	0	14
WSW	0	2	5	0	0	0	7
W	0	6	5	0	0	0	11
WNW	1	2	0	0	0	0	3
NW	2	2	1	0	0	0	5
NNW	0	0	2	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	10	52	31	2	0	0	95

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 Nuclear Station

Period of Record: July - September 2006

Stability Class - Neutral - 199Ft-30Ft Delta-T (F)

Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	3	14	6	0	0	0	23
NNE	3	14	21	0	0	0	38
NE	5	44	15	0	0	0	64
ENE	18	42	2	0	0	0	62
E	11	15	0	0	0	0	26
ESE	5	6	0	0	0	0	11
SE	1	24	3	0	0	0	28
SSE	1	24	8	0	0	0	33
S	0	19	16	1	0	0	36
SSW	1	7	17	2	0	0	27
SW	1	21	34	4	0	0	60
WSW	1	19	5	0	0	0	25
W	6	22	8	1	0	0	37
WNW	3	16	9	0	0	0	28
NW	5	11	0	0	0	0	16
NNW	5	10	14	0	0	0	29
Variable	0	0	0	0	0	0	0
Total	69	308	158	8	0	0	543

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 Nuclear Station

Period of Record: July - September 2006  
 Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	3	13	4	0	0	0	20
NNE	6	25	5	0	0	0	36
NE	12	28	1	0	0	0	41
ENE	37	10	0	0	0	0	47
E	30	10	0	0	0	0	40
ESE	19	14	0	0	0	0	33
SE	10	42	14	0	0	0	66
SSE	7	53	14	0	0	0	74
S	3	48	20	0	0	0	71
SSW	3	19	35	2	0	0	59
SW	0	29	52	2	0	0	83
WSW	4	45	4	0	0	0	53
W	8	15	2	0	0	0	25
WNW	23	8	3	0	0	0	34
NW	13	7	0	0	0	0	20
NNW	11	17	1	1	0	0	30
Variable	0	0	0	0	0	0	0
Total	189	383	155	5	0	0	732

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 Nuclear Station

Period of Record: July - September 2006

Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	3	0	0	0	0	0	3
NNE	7	1	0	0	0	0	8
NE	11	2	0	0	0	0	13
ENE	7	0	0	0	0	0	7
E	16	0	0	0	0	0	16
ESE	27	5	0	0	0	0	32
SE	5	6	0	0	0	0	11
SSE	7	2	0	0	0	0	9
S	4	4	0	0	0	0	8
SSW	0	6	0	0	0	0	6
SW	3	5	3	0	0	0	11
WSW	8	6	1	0	0	0	15
W	17	5	0	0	0	0	22
WNW	21	0	0	0	0	0	21
NW	2	0	0	0	0	0	2
NNW	3	0	0	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	141	42	4	0	0	0	187

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 Nuclear Station

Period of Record: July - September 2006  
 Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	0	0	0	0	0	2
NNE	1	0	0	0	0	0	1
NE	3	0	0	0	0	0	3
ENE	5	0	0	0	0	0	5
E	15	0	0	0	0	0	15
ESE	5	0	0	0	0	0	5
SE	5	2	0	0	0	0	7
SSE	2	0	0	0	0	0	2
S	2	1	0	0	0	0	3
SSW	2	0	0	0	0	0	2
SW	5	0	0	0	0	0	5
WSW	7	8	0	0	0	0	15
W	25	8	0	0	0	0	33
WNW	10	0	0	0	0	0	10
NW	3	0	0	0	0	0	3
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	93	19	0	0	0	0	112

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



Braidwood Nuclear Station

Period of Record: July - September 2006  
 Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	3	5	1	0	0	9
NNE	0	1	4	0	0	0	5
NE	0	3	17	10	0	0	30
ENE	0	8	17	4	0	0	29
E	0	6	3	0	0	0	9
ESE	0	4	2	0	0	0	6
SE	1	9	5	2	0	0	17
SSE	0	12	6	5	0	0	23
S	0	11	7	9	0	0	27
SSW	0	4	12	14	6	1	37
SW	1	8	19	22	3	0	53
WSW	0	11	12	5	0	0	28
W	0	21	15	3	1	0	40
WNW	0	13	11	7	1	0	32
NW	4	7	4	2	0	0	17
NNW	0	7	13	1	0	0	21
Variable	0	0	0	0	0	0	0
Total	6	128	152	85	11	1	383

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: 3

Braidwood Nuclear Station

Period of Record: July - September 2006  
 Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	3	3	0	0	0	6
NNE	0	0	2	0	0	0	2
NE	0	0	4	5	0	0	9
ENE	0	2	7	1	0	0	10
E	0	4	1	0	0	0	5
ESE	0	0	1	0	0	0	1
SE	0	4	1	1	0	0	6
SSE	0	3	1	1	0	0	5
S	0	1	2	3	0	0	6
SSW	0	0	0	3	0	0	3
SW	0	1	1	4	3	0	9
WSW	0	2	3	0	0	0	5
W	0	2	2	0	0	0	4
WNW	0	2	1	0	0	0	3
NW	0	2	5	0	0	0	7
NNW	1	4	3	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	1	30	37	18	3	0	89

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

Braidwood Nuclear Station

Period of Record: July - September 2006  
 Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	3	0	1	0	0	5
NNE	0	0	2	0	0	0	2
NE	0	3	7	3	0	0	13
ENE	0	1	7	1	0	0	9
E	1	1	1	0	0	0	3
ESE	0	1	3	0	0	0	4
SE	0	1	2	0	0	0	3
SSE	0	3	2	2	2	0	9
S	0	0	3	1	0	0	4
SSW	0	0	2	1	0	0	3
SW	1	1	7	4	1	0	14
WSW	0	3	4	1	1	0	9
W	0	2	2	4	0	0	8
WNW	0	1	1	0	0	0	2
NW	0	1	1	1	0	0	3
NNW	1	2	1	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	4	23	45	19	4	0	95

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

Braidwood Nuclear Station

Period of Record: July - September 2006  
 Stability Class - Neutral - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	10	9	3	0	0	22
NNE	1	5	11	8	0	0	25
NE	2	7	36	22	0	0	67
ENE	3	17	34	7	0	0	61
E	1	17	23	0	0	0	41
ESE	1	5	4	1	0	0	11
SE	0	4	19	3	1	0	27
SSE	0	10	15	12	3	0	40
S	0	4	15	10	2	0	31
SSW	1	3	8	23	8	0	43
SW	0	7	21	21	3	0	52
WSW	0	7	12	2	1	0	22
W	0	7	12	5	1	0	25
WNW	1	5	15	11	1	0	33
NW	1	5	8	4	0	0	18
NNW	0	4	12	8	0	0	24
Variable	0	0	0	0	0	0	0
Total	11	117	254	140	20	0	542

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

Braidwood Nuclear Station

Period of Record: July - September 2006  
 Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	6	13	3	0	0	23
NNE	1	3	16	2	0	0	22
NE	2	6	28	10	0	0	46
ENE	0	15	32	6	0	0	53
E	2	16	20	0	0	0	38
ESE	0	6	15	5	1	0	27
SE	0	13	29	20	8	1	71
SSE	1	10	33	20	1	0	65
S	1	6	37	44	2	0	90
SSW	0	2	19	59	13	0	93
SW	0	6	21	30	5	0	62
WSW	1	8	22	12	1	0	44
W	1	4	16	7	0	0	28
WNW	1	6	17	5	0	0	29
NW	2	6	11	1	0	0	20
NNW	1	10	15	2	1	0	29
Variable	0	0	0	0	0	0	0
Total	14	123	344	226	32	1	740

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

Braidwood Nuclear Station

Period of Record: July - September 2006

Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)  
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	3	2	0	0	0	5
NNE	0	0	1	1	0	0	2
NE	0	1	7	1	0	0	9
ENE	0	4	7	3	0	0	14
E	0	6	6	0	0	0	12
ESE	0	4	8	9	0	0	21
SE	0	2	19	4	0	0	25
SSE	1	1	6	0	0	0	8
S	0	2	5	0	0	0	7
SSW	0	2	8	0	0	0	10
SW	2	6	4	7	0	0	19
WSW	1	5	3	6	0	0	15
W	1	1	5	2	0	0	9
WNW	1	2	8	3	0	0	14
NW	1	2	10	2	0	0	15
NNW	0	3	6	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	7	44	105	38	0	0	194

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: 3

Braidwood Nuclear Station

Period of Record: July - September 2006

Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)

Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	0	0	0	0	2
NNE	0	1	1	0	0	0	2
NE	1	2	3	2	0	0	8
ENE	0	0	1	0	0	0	1
E	0	1	2	1	0	0	4
ESE	0	4	1	10	0	0	15
SE	0	2	1	0	0	0	3
SSE	2	5	3	0	0	0	10
S	1	4	1	0	0	0	6
SSW	2	6	3	0	0	0	11
SW	0	7	4	0	0	0	11
WSW	0	5	7	3	0	0	15
W	0	4	5	12	0	0	21
WNW	2	4	4	4	0	0	14
NW	0	9	10	3	0	0	22
NNW	1	3	2	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	9	59	48	35	0	0	151

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

Braidwood Nuclear Station

Period of Record: October - December 2006  
 Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	1	3	0	0	0	4
NE	0	1	0	0	0	0	1
ENE	0	1	1	0	0	0	2
E	0	3	0	0	0	0	3
ESE	0	0	0	0	0	0	0
SE	0	1	2	0	0	0	3
SSE	1	6	3	0	0	0	10
S	0	3	2	2	0	0	7
SSW	0	3	10	2	0	0	15
SW	0	2	5	0	0	0	7
WSW	0	5	3	1	1	0	10
W	0	4	4	6	5	0	19
WNW	0	2	9	7	0	0	18
NW	0	4	6	0	0	0	10
NNW	0	1	1	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	1	37	49	18	6	0	111

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 Nuclear Station

Period of Record: October - December 2006

Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)

Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	1	1	0	0	0	2
NE	1	1	0	0	0	0	2
ENE	1	2	0	0	0	0	3
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	1	0	0	0	1
SSE	0	1	1	0	0	0	2
S	0	0	2	0	0	0	2
SSW	0	2	5	0	0	0	7
SW	0	0	1	0	0	0	1
WSW	0	0	0	0	0	0	0
W	0	2	1	2	0	0	5
WNW	0	3	8	2	0	0	13
NW	0	1	3	1	0	0	5
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	2	13	23	5	0	0	43

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 Nuclear Station

Period of Record: October - December 2006  
 Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	2	0	0	0	2
NNE	0	0	2	0	0	0	2
NE	0	1	0	0	0	0	1
ENE	0	1	0	0	0	0	1
E	0	2	0	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	2	0	0	0	0	2
SSE	0	3	5	0	0	0	8
S	0	2	7	1	0	0	10
SSW	1	3	7	0	0	0	11
SW	0	1	1	2	0	0	4
WSW	0	2	0	1	0	0	3
W	0	1	3	0	0	0	4
WNW	0	1	2	0	0	0	3
NW	0	3	1	0	0	0	4
NNW	1	0	3	1	0	0	5
Variable	0	0	0	0	0	0	0
Total	2	22	33	5	0	0	62

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

Braidwood Nuclear Station

Period of Record: October - December 2006  
 Stability Class - Neutral - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction -----	Wind Speed (in mph)						Total -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	> 24 -----	
N	1	5	25	11	1	0	43
NNE	5	12	28	24	1	0	70
NE	3	17	16	4	0	0	40
ENE	6	16	4	0	0	0	26
E	9	14	2	0	0	0	25
ESE	2	24	6	1	0	0	33
SE	1	22	22	2	0	0	47
SSE	2	35	41	1	0	0	79
S	0	15	39	31	0	0	85
SSW	0	10	37	38	4	0	89
SW	0	18	26	22	0	0	66
WSW	2	17	26	6	0	0	51
W	2	7	44	19	1	0	73
WNW	5	23	38	3	0	0	69
NW	6	23	16	1	0	0	46
NNW	4	27	47	17	0	0	95
Variable	0	0	0	0	0	0	0
Total	48	285	417	180	7	0	937

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 Nuclear Station

Period of Record: October - December 2006

Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	3	2	1	0	0	8
NNE	3	10	2	0	0	0	15
NE	9	2	0	0	0	0	11
ENE	13	8	4	0	0	0	25
E	11	14	1	0	0	0	26
ESE	8	16	0	0	0	0	24
SE	4	53	11	0	0	0	68
SSE	2	52	64	2	0	0	120
S	0	29	79	14	0	0	122
SSW	1	15	29	36	1	0	82
SW	3	18	15	9	0	0	45
WSW	7	63	25	1	0	0	96
W	4	34	21	5	0	0	64
WNW	16	28	7	2	0	0	53
NW	10	24	2	0	0	0	36
NNW	1	13	4	0	0	0	18
Variable	0	0	0	0	0	0	0
Total	94	382	266	70	1	0	813

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 Nuclear Station

Period of Record: October - December 2006  
 Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	3	0	0	0	0	4
NNE	1	0	0	0	0	0	1
NE	4	0	0	0	0	0	4
ENE	6	1	0	0	0	0	7
E	4	0	0	0	0	0	4
ESE	3	5	0	0	0	0	8
SE	3	9	0	0	0	0	12
SSE	1	12	2	0	0	0	15
S	2	2	0	0	0	0	4
SSW	3	5	2	0	0	0	10
SW	2	5	0	0	0	0	7
WSW	6	16	0	0	0	0	22
W	12	14	1	0	0	0	27
WNW	11	3	0	0	0	0	14
NW	2	0	0	0	0	0	2
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	61	75	5	0	0	0	141

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

Braidwood Nuclear Station

Period of Record: October - December 2006  
 Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	1	0	0	0	0	0	1
NE	1	0	0	0	0	0	1
ENE	0	0	0	0	0	0	0
E	1	1	0	0	0	0	2
ESE	2	1	0	0	0	0	3
SE	4	1	0	0	0	0	5
SSE	0	1	0	0	0	0	1
S	1	0	0	0	0	0	1
SSW	1	0	0	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	6	10	0	0	0	0	16
W	6	0	0	0	0	0	6
WNW	0	0	0	0	0	0	0
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	23	14	0	0	0	0	37

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 Nuclear Station

Period of Record: October - December 2006

Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)  
Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	1	0	0	0	0	1
NE	0	0	1	3	0	0	4
ENE	0	0	0	0	0	0	0
E	0	0	5	0	0	0	5
ESE	0	0	0	0	0	0	0
SE	0	0	2	1	0	0	3
SSE	1	4	5	0	0	0	10
S	0	2	2	1	2	0	7
SSW	0	1	3	10	1	0	15
SW	0	0	6	1	0	0	7
WSW	0	0	6	0	1	5	12
W	0	2	6	1	4	1	14
WNW	0	0	5	3	4	3	15
NW	0	1	6	7	1	1	16
NNW	0	0	2	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	1	11	49	27	13	10	111

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: 5

Braidwood Nuclear Station

Period of Record: October - December 2006  
 Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

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

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: 5



Braidwood Nuclear Station

Period of Record: October - December 2006

Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	3	0	0	3
NNE	0	1	0	0	0	0	1
NE	0	0	0	2	0	0	2
ENE	0	1	0	0	0	0	1
E	0	1	1	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	1	2	1	0	0	4
SSE	0	1	7	0	0	0	8
S	1	0	1	7	1	0	10
SSW	0	1	5	2	1	0	9
SW	0	0	1	2	1	0	4
WSW	0	2	0	0	1	0	3
W	0	0	2	1	0	0	3
WNW	0	0	0	3	0	0	3
NW	0	1	1	1	1	0	4
NNW	1	0	2	2	0	0	5
Variable	0	0	0	0	0	0	0
Total	2	9	22	24	5	0	62

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

Braidwood Nuclear Station

Period of Record: October - December 2006

Stability Class - Neutral - 199Ft-30Ft Delta-T (F)

Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	4	9	20	12	1	46
NNE	2	5	7	15	23	6	58
NE	2	4	14	21	7	1	49
ENE	1	6	15	4	0	0	26
E	1	6	20	5	2	0	34
ESE	0	0	6	16	6	2	30
SE	0	7	20	17	7	0	51
SSE	0	15	24	38	4	0	81
S	1	4	17	22	35	4	83
SSW	0	4	23	28	39	8	102
SW	0	7	16	18	14	0	55
WSW	0	6	10	18	8	0	42
W	1	2	14	31	16	3	67
WNW	2	6	12	33	12	2	67
NW	0	11	11	21	5	0	48
NNW	2	15	33	32	15	0	97
Variable	0	0	0	0	0	0	0
Total	12	102	251	339	205	27	936

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: 5

Braidwood Nuclear Station

Period of Record: October - December 2006  
 Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	0	5	1	0	1	8
NNE	0	2	7	3	0	0	12
NE	1	4	1	1	0	0	7
ENE	0	6	8	3	0	0	17
E	1	6	11	13	0	0	31
ESE	4	3	8	5	0	0	20
SE	1	3	31	34	0	0	69
SSE	0	2	31	60	13	0	106
S	0	1	24	82	32	4	143
SSW	0	2	15	35	38	9	99
SW	0	4	16	10	7	0	37
WSW	0	2	39	29	6	0	76
W	0	5	20	34	9	0	68
WNW	0	3	20	21	3	1	48
NW	0	3	22	12	2	0	39
NNW	4	7	28	3	0	0	42
Variable	0	0	0	0	0	0	0
Total	12	53	286	346	110	15	822

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 6  
 Hours of missing stability measurements in all stability classes: 5

Braidwood Nuclear Station

Period of Record: October - December 2006  
 Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	1	3	0	0	4
NE	0	1	2	0	0	0	3
ENE	1	1	2	0	0	0	4
E	0	0	6	0	0	0	6
ESE	2	1	3	0	0	0	6
SE	0	2	3	4	0	0	9
SSE	0	2	8	13	0	0	23
S	0	1	4	3	0	0	8
SSW	0	0	5	3	0	0	8
SW	0	0	5	1	0	0	6
WSW	1	0	6	1	0	0	8
W	0	3	6	10	0	0	19
WNW	0	1	6	13	0	0	20
NW	0	3	19	0	0	0	22
NNW	1	1	3	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	5	16	79	51	0	0	151

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: 5

Braidwood Nuclear Station

Period of Record: October - December 2006

Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)  
 Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	1	1	0	0	0	2
ENE	0	0	0	0	0	0	0
E	0	1	0	1	0	0	2
ESE	0	0	0	2	0	0	2
SE	0	0	1	1	0	0	2
SSE	1	1	1	1	0	0	4
S	0	2	1	1	0	0	4
SSW	0	8	1	0	0	0	9
SW	5	8	3	0	0	0	16
WSW	1	1	0	0	0	0	2
W	1	5	7	4	0	0	17
WNW	0	1	1	3	0	0	5
NW	0	0	0	0	0	0	0
NNW	0	1	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	8	29	16	13	0	0	66

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: 5

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## **APPENDIX G**

### **ANNUAL RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM REPORT (ARGPPR)**