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U. S. Nuclear Regulatory Commission
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Dresden Nuclear Power Station Units 1, 2, and 3
Facility Operating Licenses DPR-2, DPR-19, and DPR-25
NRC Docket Nos. 50-010, 50-237, and 50-249

Subject: Dresden Nuclear Power Station Annual Radiological Environmental Operating Report for 2003

The attached "Annual Radiological Environmental Operating Report," is submitted in accordance with Section 6.9.A.3 of the Unit 1 Dresden Nuclear Power Station Technical Specifications and Section 5.6.2, "Annual Radiological Environmental Operating Report," of the Units 2 and 3 Technical Specifications. This report provides the results of the radiological environmental and meteorological monitoring programs for the 2003 calendar year.

Should you have any questions concerning this letter, please contact Mr. Jeff Hansen, Regulatory Assurance Manager, at (815) 416-2800.

Respectfully,

David B Wozniak for/

Danny G. Bost
Site Vice President
Dresden Nuclear Power Station

Enclosure

cc: Regional Administrator - NRC Region III
NRC Senior Resident - Dresden Nuclear Power Station

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# DRESDEN STATION

# ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

2003

MAY 2004

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# INTRODUCTION

The Dresden Station is located approximately twelve miles southwest of Joliet, Illinois at the confluence of the Des Plaines and Kankakee Rivers where they form the Illinois River. This station uses two boiling water reactors (G.E. design) to generate electricity. Unit 1, which began operating in 1960 and had a rated power output of 200 megawatts electrical (MWe), was shut down permanently on August 31, 1984 and is currently being decommissioned. Unit 2 net rated power output was increased to 912 MWe in 2001; Unit 3 net rated power output was increased to 912 MWe in 2002. Liquid radwaste from Unit 1 is transferred to Units 2 and 3 for collective processing and discharge.

Liquid effluents from Dresden are released to the Illinois River in controlled batches after radioassay of each batch. Gaseous effluents are released to the atmosphere after delay to permit decay of short-lived (noble) gases. Releases to the atmosphere are calculated on the basis of analyses of weekly grab samples of noble gases 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 and reported to the Nuclear Regulatory Commission as required per Technical Specifications. Airborne concentrations of noble gases, I-131, and particulate radioactivity in offsite areas are calculated using isotopic composition of control effluent and meteorological data.

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

## SUMMARY

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

The Total Effective Dose Equivalent (TEDE) for the period due to licensed activities at Dresden Station calculated for the maximally-exposed individual is 8.01 mrem. The annual limit on TEDE is 100 mrem. This value is largely dominated by the direct radiation constituent from the Unit 2 and Unit 3 turbines (7.99 mrem). The balance of the calculated maximum dose (0.02 mrem) is due to exposure from radionuclides released from the Station in liquid and gaseous effluents.

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 in gaseous effluents to the atmosphere during the year are listed in Table 1.1-1. A total of 1.97E+02 curies of noble gases with a maximum quarterly average release rate of 8.38E+00 µCi/sec were released from Dresden Units 1, 2 and 3.

A total of 4.90E-03 curies of I-131 were released during the year with a maximum quarterly average release rate of 2.68E-04 µCi/sec.

A total of 7.79E-03 curies of beta-gamma emitters were released as airborne particulate matter with a maximum quarterly average release rate of 3.37E-04 µCi/sec. Alpha emitting radionuclides totaled 2.59E-05 curies. Also, 4.60E+01 curies of tritium were released with a maximum quarterly average release rate of 3.21E+00 µCi/sec.

### 1.2 Liquids Released to Illinois River

Measured concentrations and isotopic composition of radioactivity released in liquid effluents during the year are listed in Table 1.2-1.

A total of 2.31E+07 liters of radioactive liquid wastes containing 1.89E-03 curies of fission and activation products (excluding tritium, noble gases and gross alpha) were discharged from the station. These wastes were released at a maximum quarterly average diluted concentration of 1.16E-08 µCi/ml from all units. During the same period, 1.40E+01 curies of tritium were released with a maximum quarterly average diluted concentration of 1.91E-06 µCi/ml. A total of 1.82E-06 curies of alpha-emitting radionuclides were released.

## 2.0 SOLID RADIOACTIVE WASTE

Solid radioactive wastes were shipped by truck to the Barnwell disposal facility, the Envirocare disposal facility or to waste processors. For more detail, refer to the Dresden Station 2003 Annual Radiological Effluent Release Report.

## 3.0 DOSE TO MAN

### 3.1 Gaseous Effluent Pathways

#### 3.1.1 Noble Gases

To demonstrate compliance with the applicable regulations regarding public radiation dose due to gaseous effluents from Dresden Station, two methods are reported in the following sections. Both methods employ measured isotopic composition and release rates from the station.

Assumed "average meteorological data" are used in ODCM-required calculations performed at least every 31 days. These data use a ten-year average (1/1/1978-12/31/1987) for Dresden Station. Actual "concurrent meteorological

data" is used to recalculate the quarterly release information using actual meteorological data for the period.

3.1.1.1 Gamma Air Dose Rates

Offsite gamma air and total body doses are shown in Table 3.1-1 and were calculated based on measured release rates, isotopic composition of the noble gases, and average meteorological data for the period. Doses based on concurrent meteorological data are shown in Table 3.4-1. Isodose contours based on concurrent meteorological data for gamma air dose are shown in Figure 3.0-1.

Based on measured effluents and average meteorological data, the maximum total body dose (from all units) to an individual is calculated to be 2.12E-03 mrem (Table 3.1-1) for the year, with an occupancy or shielding factor of 0.7 included. The maximum total body dose from all units based on measured effluents and concurrent meteorological data would be 3.83E-03 mrem (Table 3.4-1). The maximum gamma air dose based on measured effluents and average meteorological data was 2.81E-03 mrad (Table 3.1-1) and 4.15E-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 the 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 assumed to have a thickness of 0.07 mm and an occupancy factor of 1.0 is used. The skin dose from beta and gamma radiation based on measured effluents and average meteorological data for the year was 2.38E-03 mrem (Table 3.1-1) and 4.85E-03 mrem based on concurrent meteorological data (Table 3.4-1).

The air concentrations of radioactive noble gases at the offsite receptor locations are given in Figure 3.0-2. The maximum offsite beta air dose based on measured effluents and average meteorological data for the year was 2.58E-04 mrad (Table 3.1-1) and 8.10E-04 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. The radioiodine, I-131, released during routine operation of the station, may be made available to man resulting in a dose to the thyroid. The principal pathway of interest for this radionuclide is ingestion of radioiodine in milk. Calculations made in previous years indicate that contributions to doses

from inhalation of I-131 and I-133 and from ingestion of I-133 in milk are negligible.

3.1.2.1 Iodine Concentrations in Air

The calculated concentration contours for iodine in air are shown in Figure 3.0-3. These calculations include an iodine cloud depletion factor which accounts for the phenomenon of elemental iodine deposition on the ground. The maximum iodine offsite average concentration is estimated to be 8.85E-05 pCi/$m^3$ for the year (Table 3.4-1).

3.1.2.2 Dose to Thyroid

The hypothetical thyroid dose to a 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 is calculated to be 3.40E-02 mrem during the year (Table 3.1-1 [child]).

3.1.3 Concentrations of Particulates in Air

Concentration contours of radioactive airborne particulates are shown in Figure 3.0-4. The maximum offsite average concentration is estimated to be 4.03E-01 pCi/$m^3$ (Table 3.4-1).

3.2 Liquid Effluent Pathways

The three principal pathways for potential dose to man from liquid waste effluents are ingestion of potable water, ingesting aquatic foods, and exposure while on the shoreline. Not all of these pathways are 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 tract, thyroid, bone and skin; specific parameters for use in the equations are given in the Dresden Station Offsite Dose Calculation Manual. The maximum total body dose and organ dose for the year was 1.08E-04 mrem (adult) and 1.49E-04 mrem (child), respectively (Table 3.2-1).

3.3 Assessment of Dose to Member of Public

During the period January to December, 2003, Dresden Station did not exceed the following limits as shown in Table 3.1-1 and Table 3.2-1 (based on average meteorological data) and as shown in Table 3.4-1 (based on concurrent meteorological data):

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

- The RETS limits on dose or dose commitment to a member of the public due to radioactive materials in liquid effluents from each reactor unit (1.5 mrem to the total body or 5 mrem to any organ during any calendar quarter; 3 mrem to the total body or 10 mrem to any organ during any 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 any 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 8 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) from the site.

## 4.0 SITE METEOROLOGY

A summary of the site meteorological measurements taken during each calendar quarter of the year is given in Appendix II. The data are presented as cumulative joint frequency distributions of the wind direction for the 35' and 300' levels and wind speed class by atmospheric stability class determined from the temperature difference between the 150' and 35' and between the 300' and 35' levels, respectively. Data recovery for all measurements on the tower was 99.9% during 2003 (Table 3.4-1).

## 5.0 ENVIRONMENTAL MONITORING

Table 5.0-1 and Table 5.0-2 provide an outline of the Radiological Environmental Monitoring Program (REMP) as required in the ODCM. Tables 5.0-3 to 5.0-6 summarize data for the year by quarter. A detailed listing of all data is given in Appendix III.

Specific findings for various environmental media are discussed below.

### 5.1 Gamma Radiation

External radiation dose from onsite sources and noble gases released to the atmosphere was measured using $CaF_2$ thermoluminescent dosimeters (TLDs). Each location consists of 2 TLD sets. Quarterly average external radiation dose for the year was 24.4 ± 3.2 mR at indicator locations and 21.9 ± 2.4 mR at control locations. TLD results are listed in Section 6.0 in Appendix III and locations are shown in Figures 5.0-1 and 5.0-2.

5.2 Airborne I-131 and Particulate Radioactivity

Locations of the samplers are shown in Figure 5.0-1. Airborne I-131 remained below the LLD of 0.07 pCi/$m^3$ throughout the year in all analyzed samples.

Gross beta concentrations ranged from 0.8E-02 to 5.0E-02 pCi/$m^3$ and averaged 2.5E-02 pCi/$m^3$, and were similar to those measured in previous years (except for the period from May 17 through June 7, 1986 when it was influenced by the nuclear reactor accident at Chernobyl). The mean beta measurement value was below the control mean value for every quarter. Quarterly gamma isotopic results were below the LLD level of 0.01 pCi/$m^3$.

No radioactivity attributable to station operation was detected in any sample.

5.3 Terrestrial Activity

Vegetables were collected in the third quarter and analyzed for I-131 and gamma-emitting nuclides. All nuclides were below the limits of detection, indicating that there was no measurable amount of radioactivity attributable to the station releases.

5.4 Aquatic Radioactivity

Surface water samples were collected weekly from three locations, shown in Figure 5.0-2, and composited monthly for gross beta and gamma-emitters. Quarterly composites were analyzed for tritium. Cs-134 and Cs-137 levels were below the detection limit of 15 and 18 pCi/L, respectively. All other gamma emitters were below their respective LLDs in all samples collected during the year.

Gross beta at D-51 (Dresden Lock & Dam) averaged 5.3 pCi/L with a range of 2.6 to 6.9 pCi/L; D-52 (DesPlaines River) gross beta averaged 7.1 pCi/L with a range of 3.3 to 13.6 pCi/L; D-54 (Kankakee River) gross beta averaged 3.5 pCi/L with a range of 2.0-5.5 pCi/L.

Tritium concentration was below the LLD of 200 pCi/L in all samples collected from D-54 (Kankakee River). D-51 (Dresden Lock & Dam) averaged 715 pCi/L with a range of 277 to 1,626 pCi/L; D-52 (DesPlaines River had a first quarter high of 230 pCi/L; remaining quarters were below LLD.

Well water samples were collected quarterly and analyzed for tritium and gamma-emitting nuclides. Gamma-emitters were below LLD for all samples during the year; tritium activity at D-35 (Dresden Lock & Dam) was also below LLD. Tritium activity at D-23 (Thorsen Well) averaged 722 pCi/L with a third quarter high of 839 pCi/L.

Levels of gamma radioactivity in fish samples were measured and found in all cases to be below the lower limits of detection for the program. The results were similar to those obtained in 1983 through 2002.

Sediment samples were collected twice and analyzed by gamma spectroscopy. The May levels of Cs-134 and Cs-137 were below the LLD levels of 0.15 and 0.18 pCi/g

dry weight, respectively. Cs-134 was also below LLD in the October sample; Cs-137 showed an activity of 0.44 pCi/g dry weight. Other gamma emitters were below their respective LLDs for the program.

Fish, sediment and water locations are shown in Figure 5.0-2.

5.5 Milk

Milk sample locations are shown in Figure 5.0-1. Milk samples were collected biweekly during the grazing season (May through October) and monthly during the balance of the year from the Vince Biros Farm (D-25). I-131 was determined for each sample by chemical separation of I-131 and beta counting.

I-131 remained below the ODCM-required detection limits of 1.0 pCi/L. The results were similar to those obtained during the 1983 - 2002 period except for samples collected during the second and third quarters of 1986. I-131 detected in milk samples during this period is attributable to the nuclear accident at Chernobyl.

5.6 Listing of Missed Samples

All samples were collected as scheduled except for those listed in Listing of Missed Samples, Appendix III.

5.7 Program Modifications

New control surface water location, D-54 (Kankakee River), was added to the program in 2003.

## 6.0 ANALYTICAL PROCEDURES

Procedures used during the period covered in this report remained essentially unchanged. A summary of the procedures used for analyzing radioactivity in environmental samples is given in Appendix VI of the report for the period January - December 1993.

## 7.0 MILCH ANIMALS AND NEAREST CATTLE CENSUS

Census of milch animals and nearest cattle were conducted within a 6.2-mile radius of the station. The survey was conducted by "door-to-door" canvas by A. Lewis on August 27, 2003. Results of the milch animal and nearest cattle census are presented on pages 38 and 39, Section 5.0 of Appendix III.

There are no dairy farms within a 6.2-mile radius of the Dresden Nuclear Power Station.

## 8.0 NEAREST RESIDENCES CENSUS

The nearest resident census was conducted by A. Lewis on August 27, 2003. Results of the nearest resident census are presented page 40, Section 5.0 of Appendix III.

## 9.0 DREDGE SPOILS RESULTS

According to the Army Corp. of Engineers in August 2003, dredging was performed in the past year and sampled per ODCM requirements. Dredge spoils results are on page 57, Section 8.0 of Appendix III. The detectable levels of Cs-137 are attributed to the deposition of atmospheric fallout from the accident at Chernobyl. This is based on the absence of radionuclides normally attributed to effluent streams from an operating reactor, such as Co-60 and Mn-54.

## 10.0 INTERLABORATORY COMPARISON PROGRAM RESULTS

Environmental Incorporated's Interlaboratory Comparison Program Results are presented in Appendix IV.

## 11.0 ERRATA DATA

There is no errata data for 2003.

DRESDEN

# APPENDIX I

## DATA TABLES AND FIGURES

# Table 1.1-1

DRESDEN NUCLEAR POWER STATION
UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT
January Through December 2003

DOCKET NUMBERS: 50-010/50-237/50-249

SUMMATION OF ALL GASEOUS RELEASES

| | Units | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | Est. Total Error, % |
|---|---|---|---|---|---|---|
| A. FISSION & ACTIVATION GASES | | | | | | |
| 1. Total Release | Ci | 4.12E+01 | 6.59E+01 | 5.17E+01 | 3.82E+01 | 18.9% |
| 2. Average Release Rate for the Period | µCi/sec | 5.30E+00 | 8.38E+00 | 6.50E+00 | 4.80E+00 | |
| 3. Percent of Technical Specification Limit | % | * | * | * | * | |
| B. IODINES | | | | | | |
| 1. Total Iodine-131 | Ci | 1.04E-03 | 8.43E-04 | 8.87E-04 | 2.13E-03 | 29.8% |
| 2. Average Release Rate of I-131 for the Period | µCi/sec | 1.33E-04 | 1.07E-04 | 1.12E-04 | 2.68E-04 | |
| 3. Percent of Technical Specification Limit | % | * | * | * | * | |
| 4. Total Iodine-131, Iodine-133 and Iodine-135 | Ci | 5.55E-03 | 3.18E-03 | 3.34E-03 | 4.66E-03 | |
| C. PARTICULATES | | | | | | |
| 1. Particulates with half-lives > 8 days | Ci | 1.81E-03 | 1.10E-03 | 2.20E-03 | 2.68E-03 | 28.2% |
| 2. Average Release Rate for the Period | µCi/sec | 2.33E-04 | 1.40E-04 | 2.77E-04 | 3.37E-04 | |
| 3. Percent of Technical Specification Limit | % | * | * | * | * | |
| 4. Gross Alpha Radioactivity | Ci | 1.24E-05 | 5.24E-06 | 8.30E-06 | <LLD | |
| D. TRITIUM | | | | | | |
| 1. Total Release | Ci | 2.49E+01 | 8.16E+00 | 8.63E+00 | 4.31E+00 | 7.63% |
| 2. Average Release Rate for the Period | µCi/sec | 3.21E+00 | 1.04E+00 | 1.09E+00 | 5.43E-01 | |
| 3. Percent of Technical Specification Limit | % | * | * | * | * | |

*The information is contained in the Radiological Impact on Man section of the report. Total airborne release data are provided which include fission and activation gases, iodines, particulates, and tritium.

# Table 1.2-1

DRESDEN NUCLEAR POWER STATION
UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT
January Through December 2003

DOCKET NUMBERS: 50-010/50-237/50-249

SUMMATION OF ALL LIQUID RELEASES

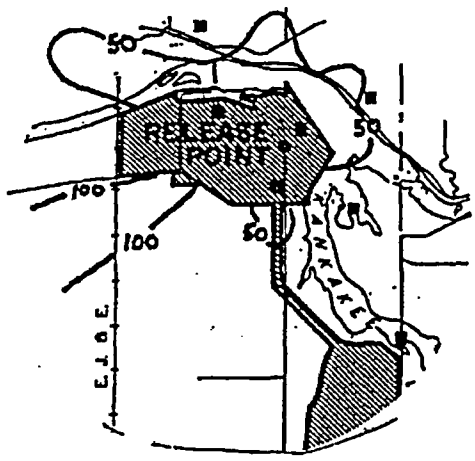
| | Units | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | Est. Total Error, % |
|---|---|---|---|---|---|---|
| A. FISSION & ACTIVATION PRODUCTS | | | | | | |
| 1. Total Release (not including H-3, gases, alpha) | Ci | 1.77E-03 | <LLD | <LLD | 1.23E-04 | 13.5% |
| 2. Average Diluted Conc. During Period | µCi/ml | 6.68E-09 | <LLD | <LLD | 1.16E-08 | |
| 3. Percent of Technical Specification Limit | % | * | * | * | * | |
| B. TRITIUM | | | | | | |
| 1. Total Release | Ci | 1.40E+01 | <LLD | <LLD | 2.02E-02 | 12.1% |
| 2. Average Diluted Conc. During Release | µCi/ml | 5.28E-09 | <LLD | <LLD | 1.91E-06 | |
| 3. Percent of Technical Specification Limit | % | * | * | * | * | |
| C. DISSOLVED AND ENTRAINED GASES | | | | | | |
| 1. Total Release | Ci | <LLD | <LLD | <LLD | <LLD | 20.3% |
| 2. Average Diluted Conc. During Period | µCi/ml | <LLD | <LLD | <LLD | <LLD | |
| 3. Percent of Technical Specification Limit | % | * | * | * | * | |
| D. GROSS ALPHA ACTIVITY | | | | | | |
| 1. Total Release | Ci | 1.82E-06 | <LLD | <LLD | <LLD | 5.58% |
| E. VOLUME OF WASTE RELEASED (prior to dilution) | Liters | 3.99E+06 | 4.90E+06 | 3.59E+06 | 1.06E+07 | 1.00% |
| F. VOLUME OF DILUTION WATER USED DURING PERIOD | Liters | 2.61E+08 | 0 | 0 | 0 | 5.00% |

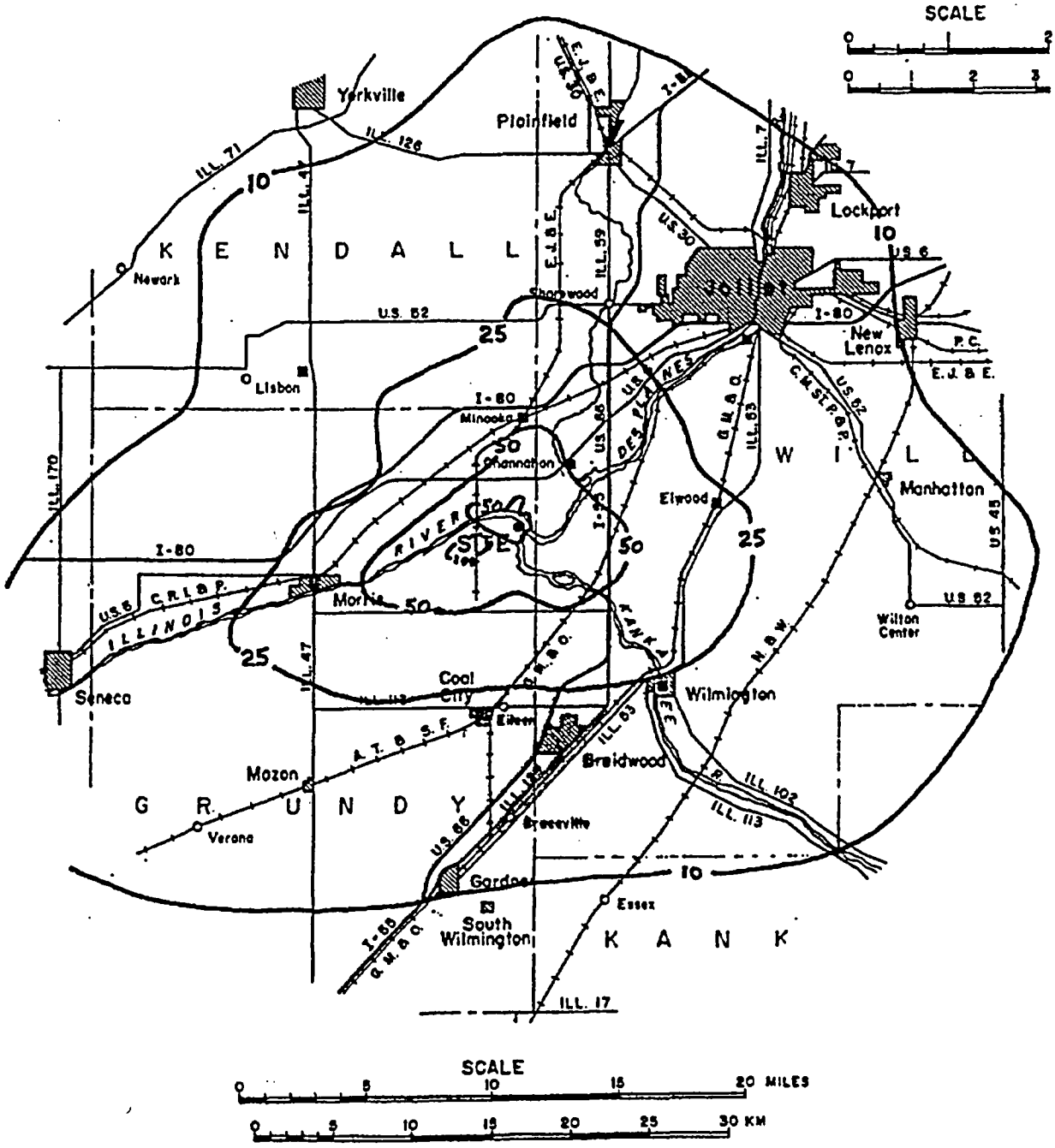
*The information is contained in the Radiological Impact on Man section of the report.

Figure 3.0-1

Estimated Cumulative Gamma Dose (In mrad) from the Dresden Station for the period January-December 2003

Isopleth Labels
Small figure - multiply by $10^{-5}$
Large figure - multiply by $10^{-3}$



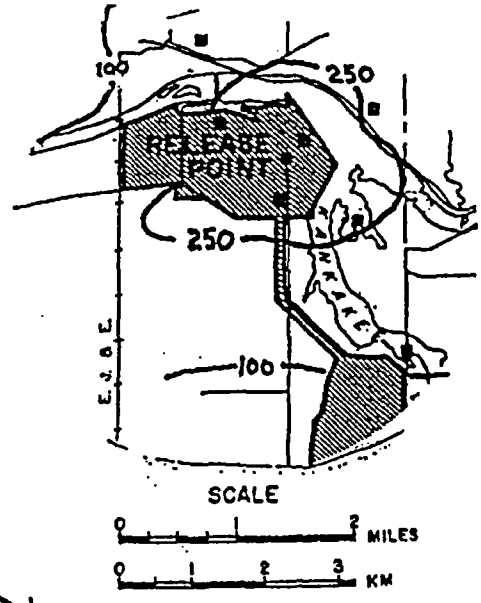

SCALE
0 2 MILES
0 2 3 KM

SCALE
0 5 10 15 20 MILES
0 5 10 15 20 25 30 KM

Figure 3.0-2

Estimated Total Concentrations (in pCi/m3) of Noble Gases from the Dresden Station for the period January-December 2003

Isopleth Labels
Small figure - multiply by $10^{-2}$
Large figure - multiply by $10^{-0}$



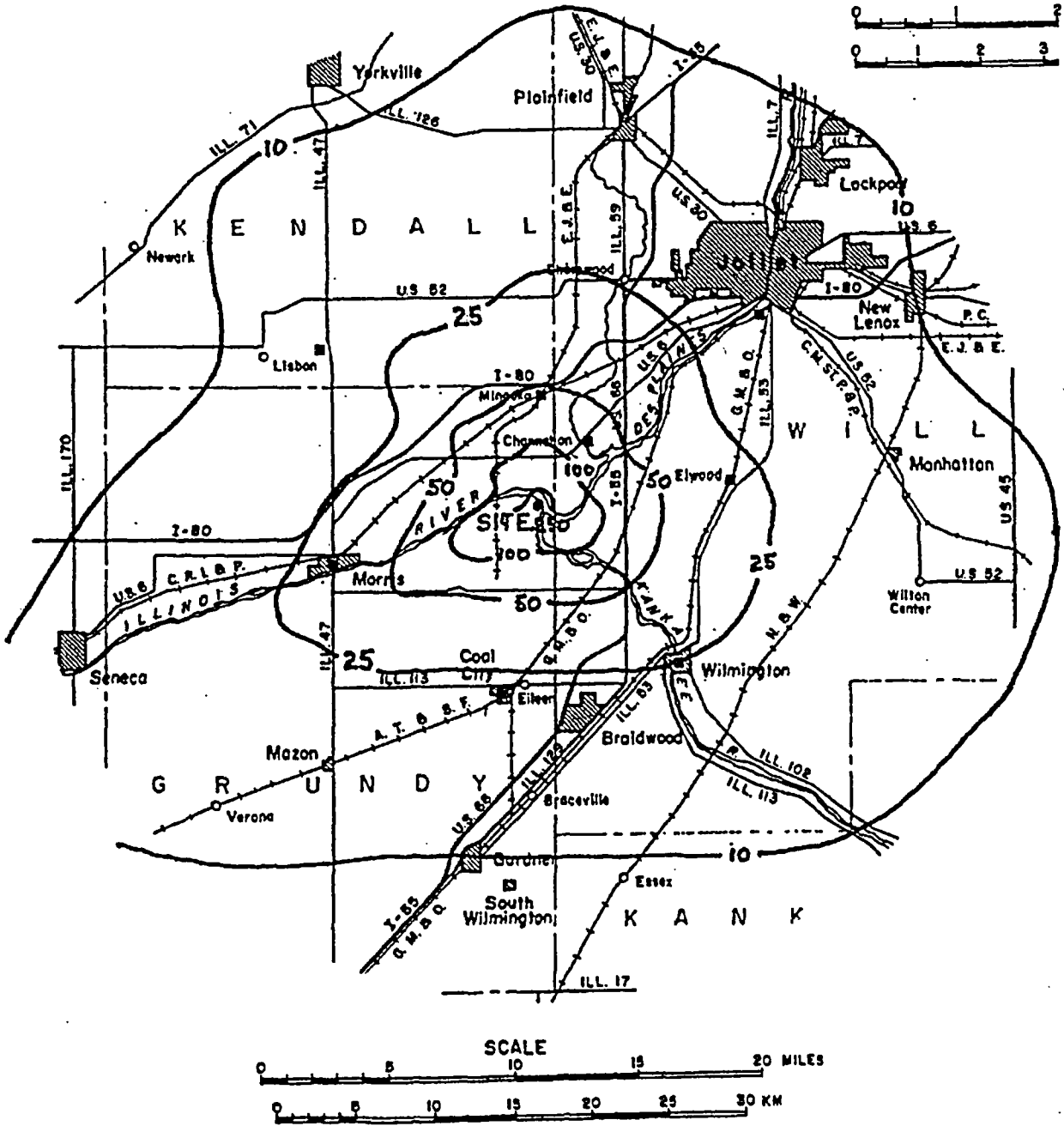



Figure 3.0-3

Estimated Total Concentrations (in pCi/m3) of Iodines from the Dresden Station for the period January-December 2003

Isopleth Labels
Small figure - multiply by $10^{-7}$
Large figure - multiply by $10^{-5}$

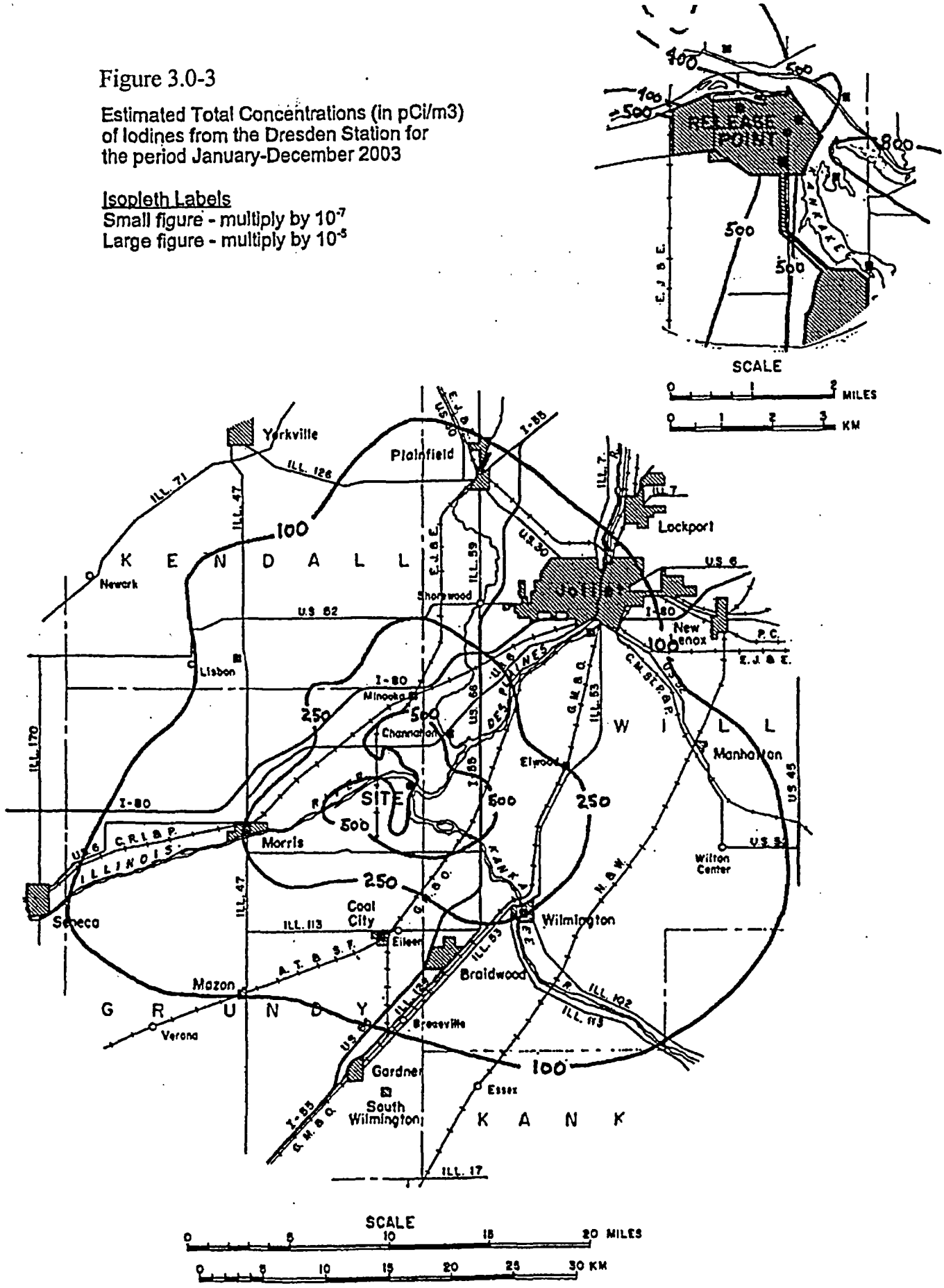


Figure 3.0-4

Estimated Total Concentrations (in pCi/m3)
of Particulates from the Dresden Station
for the period January-December 2003

Isopleth Labels
Small figure - multiply by $10^{-3}$
Large figure - multiply by $10^{-1}$

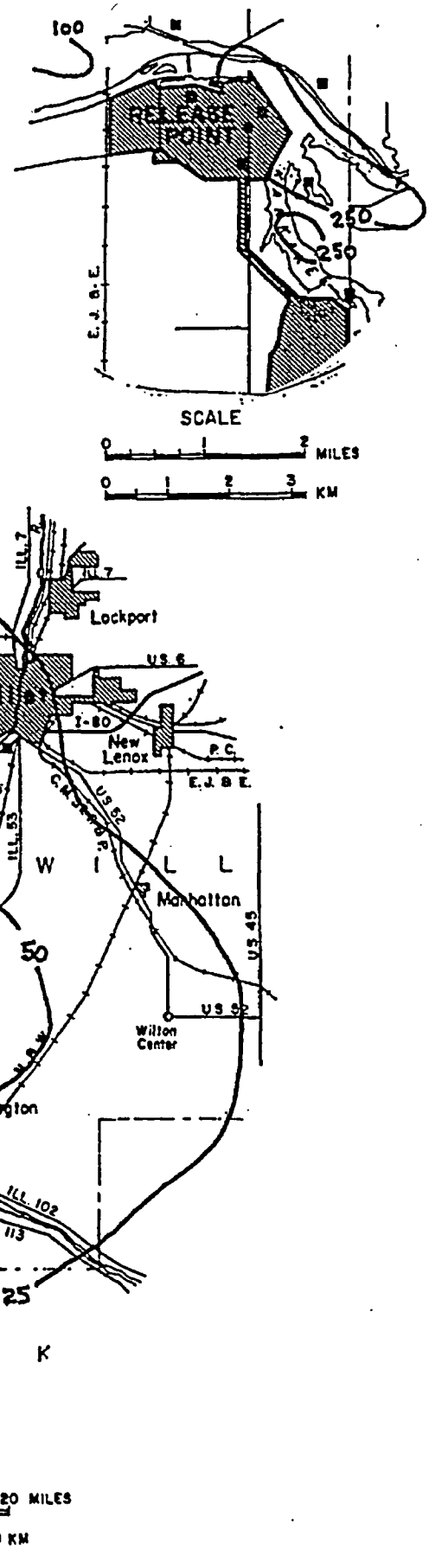


Table 3.1-1

DRESDEN NUCLEAR POWER STATION
UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT
January Through December 2003

RADIOLOGICAL IMPACT ON MAN*

UNIT 1

1. Airborne Releases

| | Maximum Doses from Airborne Releases | | | | | Yearly Obj. | Annual Dose |
|---|---|---|---|---|---|---|---|
| | Quarterly Obj. | 1st QTR | 2nd QTR | 3rd QTR | 4th QTR | | |
| Gamma Air (mrad) | 5.0 mrad | 0.00E+00 (e) | 0.00E+00 (e) | 0.00E+00 (e) | 0.00E+00 (e) | 10.0 mrad | 0.00E+00 (e) |
| Beta Air (mrad) | 10.0 mrad | 0.00E+00 (e) | 0.00E+00 (e) | 0.00E+00 (e) | 0.00E+00 (e) | 20.0 mrad | 0.00E+00 (e) |
| Total Body (mrem) | 2.5 mrem | 0.00E+00 (e) | 0.00E+00 (e) | 0.00E+00 (e) | 0.00E+00 (e) | 5.0 mrem | 0.00E+00 (e) |
| Skin (mrem) | 7.5 mrem | 0.00E+00 (e) | 0.00E+00 (e) | 0.00E+00 (e) | 0.00E+00 (e) | 15.0 mrem | 0.00E+00 (e) |
| Organ (mrem) | 7.5 mrem | 1.95E-05 (c) | 5.03E-06 (t,a) | 4.43E-06 (a) | 7.95E-4 (i,c) | 15.0 mrem | 8.17E-04 (c) |
| Critical Organ | | Lung | GI_LLI | GI_LLI | Liver (i) Bone (c) | | Liver |

UNIT 2

2. Airborne Releases

| | Maximum Doses from Airborne Releases | | | | | Yearly Obj. | Annual Dose |
|---|---|---|---|---|---|---|---|
| | Quarterly Obj. | 1st QTR | 2nd QTR | 3rd QTR | 4th QTR | | |
| Gamma Air (mrad) | 5.0 mrad | 1.80E-04 (e) | 2.33E-04 (e) | 3.07E-04 (e) | 1.10E-04 (e) | 10.0 mrad | 8.30E-04 (e) |
| Beta Air (mrad) | 10.0 mrad | 1.46E-05 (e) | 1.91E-05 (e) | 2.12E-05 (e) | 1.60E-05 (e) | 20.0 mrad | 6.88E-05 (e) |
| Total Body (mrem) | 2.5 mrem | 1.69E-04 (e) | 1.76E-04 (e) | 2.31E-04 (e) | 8.26E-05 (e) | 5.0 mrem | 6.26E-04 (e) |
| Skin (mrem) | 7.5 mrem | 1.52E-04 (e) | 1.95E-04 (e) | 2.54E-04 (e) | 9.38E-05 (e) | 15.0 mrem | 6.95E-04 (e) |
| Organ (mrem) | 7.5 mrem | 3.71E-04 (c) | 3.03E-03 (c) | 4.14E-03 (c) | 3.31E-03 (c) | 15.0 mrem | 1.09E-02 (c) |
| Critical Organ | | Lung | Thyroid | Thyroid | Thyroid | | Thyroid |

* The doses reported include abnormal releases. These doses are the highest among the four analyzed receptors as described in parentheses [(i)=infant, (c)=child, (t)=teenager, (a)=adult, (e)=every receptor has the same value].

Table 3.1-1 (continued)

DRESDEN NUCLEAR POWER STATION
UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT
January Through December 2003

RADIOLOGICAL IMPACT ON MAN*

UNIT 3

3. Airborne Releases

| | Maximum Doses from Airborne Releases | | | | | Yearly Obj. | Annual Dose |
|---|---|---|---|---|---|---|---|
| | Quarterly Obj. | 1st QTR | 2nd QTR | 3rd QTR | 4th QTR | | |
| Gamma Air (mrad) | 5.0 mrad | 4.94E-04 (e) | 5.27E-04 (e) | 4.81E-04 (e) | 4.79E-04 (e) | 10.0 mrad | 1.98E-03 (e) |
| Beta Air (mrad) | 10.0 mrad | 4.41E-05 (e) | 4.76E-05 (e) | 4.23E-05 (e) | 5.95E-05 (e) | 20.0 mrad | 1.89E-04 (e) |
| Total Body (mrem) | 2.5 mrem | 3.72E-04 (e) | 3.97E-04 (e) | 3.63E-04 (e) | 3.61E-04 (e) | 5.0 mrem | 1.49E-03 (e) |
| Skin (mrem) | 7.5 mrem | 4.19E-04 (e) | 4.44E-04 (e) | 4.06E-04 (e) | 4.08E-04 (e) | 15.0 mrem | 1.68E-03 (e) |
| Organ (mrem) | 7.5 mrem | 2.16E-03 (c) | 7.12E-03 (c) | 9.05E-03 (c) | 4.75E-03 (c) | 15.0 mrem | 2.31E-02 (c) |
| Critical Organ | | Thyroid | Thyroid | Thyroid | Thyroid | | Thyroid |

* The doses reported include abnormal releases. These doses are the highest among the four analyzed receptors as described in parentheses [(i)=infant, (c)=child, (t)=teenager, (a)=adult, (e)=every receptor has the same value].

Table 3.2-1

DRESDEN NUCLEAR POWER STATION
UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT
January Through December 2003

RADIOLOGICAL IMPACT ON MAN*

UNIT 1

1. Liquid Releases

| | Maximum Doses from Aquatic Effluents | | | | | Yearly Obj. | Annual Dose |
|---|---|---|---|---|---|---|---|
| | Quarterly Obj. | 1st QTR | 2nd QTR | 3rd QTR | 4th QTR | | |
| Total Body (mrem) | 1.5 mrem | None | None | None | None | 3.0 mrem | None |
| Organ (mrem) | 5.0 mrem | None | None | None | None | 10.0 mrem | None |
| Critical Organ | | None | None | None | None | | None |

UNIT 2

2. Liquid Releases

| | Maximum Doses from Aquatic Effluents | | | | | Yearly Obj. | Annual Dose |
|---|---|---|---|---|---|---|---|
| | Quarterly Obj. | 1st QTR | 2nd QTR | 3rd QTR | 4th QTR | | |
| Total Body (mrem) | 1.5 mrem | 5.58E-05 (a) | 0.00E+00 (e) | 0.00E+00 (e) | 3.86E-09 (c) | 3.0 mrem | 5.58E-05 (a) |
| Organ (mrem) | 5.0 mrem | 7.71E-05 (c) | 0.00E+00 (e) | 0.00E+00 (e) | 2.30E-08 (a) | 10.0 mrem | 7.71E-05 (c) |
| Critical Organ | | Liver | None | None | GI_LLI | | Liver |

UNIT 3

3. Liquid Releases

| | Maximum Doses from Aquatic Effluents | | | | | Yearly Obj. | Annual Dose |
|---|---|---|---|---|---|---|---|
| | Quarterly Obj. | 1st QTR | 2nd QTR | 3rd QTR | 4th QTR | | |
| Total Body (mrem) | 1.5 mrem | 5.19E-05 (a) | 0.00E+00 (e) | 0.00E+00 (e) | 2.36E-07 (c) | 3.0 mrem | 5.21E-05 (a) |
| Organ (mrem) | 5.0 mrem | 7.14E-05 (c) | 0.00E+00 (e) | 0.00E+00 (e) | 1.65E-06 (a) | 10.0 mrem | 7.20E-05 (c) |
| Critical Organ | | Liver | None | None | Liver | | Liver |

* The doses reported include abnormal releases. These doses are the highest among the four analyzed receptors as described in parentheses [(i)=infant, (c)=child, (t)=teenager, (a)=adult, (e)=every receptor has the same value].

# Table 3.3-1

DRESDEN STATION UNIT ONE

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/03 TO 12/31/03

CALCULATED 04/22/04

1. 10 CFR 20.1301 (a)(1) Compliance

| | | |
|---|---|---|
| Total Effective Dose Eqivalent, | mrem/yr | 8.10E-04 |
| 10 CFR 20.1301 (a)(1) limit | mrem/yr | 100.0 |
| | % of limit | 0.00 |

Compliance Summary - 10CFR20

| | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | % of Limit |
|---|---|---|---|---|---|
| TEDE | 1.82E-05 | 4.82E-06 | 4.26E-06 | 7.88E-04 | 0.00 |

RESULTS BASED UPON: ODCM ANNEX REVISION 1.1 JULY 1994
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

Table 3.3-1 (continued)

DRESDEN STATION UNIT ONE

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/03 TO 12/31/03

CALCULATED 04/22/04

2. 10 CFR 20.1301 (d)/40 CFR 190 Compliance

| | | Dose (mrem) | Limit (mrem) | % of Limit |
|---|---|---|---|---|
| Whole Body | Plume | 0.00E+00 | | |
| (DDE) | Skyshine | 0.00E+00 | | |
| | Ground | 7.98E-04 | | |
| | Total | 7.98E-04 | 25.0 | 0.00 |
| Organ Dose | Thyroid | 1.11E-05 | 75.0 | 0.00 |
| (CDE) | Gonads | 1.27E-05 | 25.0 | 0.00 |
| | Breast | 1.11E-05 | 25.0 | 0.00 |
| | Lung | 1.24E-05 | 25.0 | 0.00 |
| | Marrow | 1.18E-05 | 25.0 | 0.00 |
| | Bone | 1.12E-05 | 25.0 | 0.00 |
| | Remainder | 1.43E-05 | 25.0 | 0.00 |
| | CEDE | 1.27E-05 | | |
| | TEDE | 8.10E-04 | 100.0 | 0.00 |

RESULTS BASED UPON: ODCM ANNEX REVISION 1.1 JULY 1994
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

Table 3.3-1 (continued)

DRESDEN STATION UNIT TWO

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/03 TO 12/31/03

CALCULATED 04/22/04

1. 10 CFR 20.1301 (a)(1) Compliance

| | | |
|---|---|---|
| Total Effective Dose Eqivalent, | mrem/yr | 3.95E+00 |
| 10 CFR 20.1301 (a)(1) limit | mrem/yr | 100.0 |
| | % of limit | 3.95 |

Compliance Summary - 10CFR20

| | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | % of Limit |
|---|---|---|---|---|---|
| TEDE | 1.10E+00 | 1.09E+00 | 1.10E+00 | 6.52E-01 | 3.95 |

RESULTS BASED UPON: ODCM ANNEX REVISION 1.1 JULY 1994
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

Table 3.3-1 (continued)

DRESDEN STATION UNIT TWO

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/03 TO 12/31/03

CALCULATED 04/22/04

2. 10 CFR 20.1301 (d)/40 CFR 190 Compliance

| | | Dose (mrem) | Limit (mrem) | % of Limit |
|---|---|---|---|---|
| Whole Body | Plume | 6.26E-04 | | |
| (DDE) | Skyshine | 3.94E+00 | | |
| | Ground | 2.31E-03 | | |
| | Total | 3.94E+00 | 25.0 | 15.77 |
| Organ Dose | Thyroid | 3.95E-03 | 75.0 | 0.01 |
| (CDE) | Gonads | 2.92E-03 | 25.0 | 0.01 |
| | Breast | 2.86E-03 | 25.0 | 0.01 |
| | Lung | 2.93E-03 | 25.0 | 0.01 |
| | Marrow | 2.88E-03 | 25.0 | 0.01 |
| | Bone | 2.87E-03 | 25.0 | 0.01 |
| | Remainder | 3.01E-03 | 25.0 | 0.01 |
| | CEDE | 2.96E-03 | | |
| | TEDE | 3.95E+00 | 100.0 | 3.95 |

RESULTS BASED UPON: ODCM ANNEX REVISION 1.1 JULY 1994
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

Table 3.3-1 (continued)

DRESDEN STATION UNIT THREE

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/03 TO 12/31/03

CALCULATED 04/22/04

1. 10 CFR 20.1301 (a)(1) Compliance

| | | |
|---|---|---|
| Total Effective Dose Eqivalent, | mrem/yr | 4.06E+00 |
| 10 CFR 20.1301 (a)(1) limit | mrem/yr | 100.0 |
| | % of limit | 4.06 |

Compliance Summary - 10CFR20

| | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | % of Limit |
|---|---|---|---|---|---|
| TEDE | 1.07E+00 | 1.01E+00 | 1.11E+00 | 8.78E-01 | 4.06 |

RESULTS BASED UPON: ODCM ANNEX REVISION 1.1 JULY 1994
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

Table 3.3-1 (continued)

DRESDEN STATION UNIT THREE

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/03 TO 12/31/03

CALCULATED 04/22/04

2. 10 CFR 20.1301 (d)/40 CFR 190 Compliance

| | | Dose (mrem) | Limit (mrem) | % of Limit |
|---|---|---|---|---|
| Whole Body | Plume | 1.49E-03 | | |
| (DDE) | Skyshine | 4.05E+00 | | |
| | Ground | 3.50E-03 | | |
| | Total | 4.06E+00 | 25.0 | 16.23 |
| Organ Dose | Thyroid | 9.09E-03 | 75.0 | 0.01 |
| (CDE) | Gonads | 7.28E-03 | 25.0 | 0.03 |
| | Breast | 7.21E-03 | 25.0 | 0.03 |
| | Lung | 7.30E-03 | 25.0 | 0.03 |
| | Marrow | 7.24E-03 | 25.0 | 0.03 |
| | Bone | 7.22E-03 | 25.0 | 0.03 |
| | Remainder | 7.42E-03 | 25.0 | 0.03 |
| | CEDE | 7.36E-03 | | |
| | TEDE | 4.06E+00 | 100.0 | 4.06 |

RESULTS BASED UPON: ODCM ANNEX REVISION 1.1 JULY 1994
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

# Table 3.4-1

Dresden Station - Unit 1

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

2003

| TYPE OF DOSE | FIRST QUARTER | SECOND QUARTER | THIRD QUARTER | FOURTH QUARTER | ANNUAL |
|---|---|---|---|---|---|
| GAMMA AIR (mrad) | 0.000E+00( N ) | 0.000E+00( N ) | 0.000E+00( N ) | 0.000E+00( N ) | 0.000E+00( N ) |
| BETA AIR (mrad) | 0.000E+00( N ) | 0.000E+00( N ) | 0.000E+00( N ) | 0.000E+00( N ) | 0.000E+00( N ) |
| WHOLE BODY (mrem) | 3.700E-06(ESE) | 1.412E-06(ENE) | 7.170E-07(ESE) | 2.728E-04( SE) | 2.766E-04( SE) |
| SKIN (mrem) | 4.360E-06(ESE) | 1.661E-06(ENE) | 8.430E-07(ESE) | 3.182E-04( SE) | 3.226E-04( SE) |
| ORGAN (mrem) | 5.390E-07(ESE) | 1.195E-07(SSW) | 1.149E-07( N ) | 4.270E-06(SSE) | 4.270E-06(SSE) |
| CRITICAL PERSON | Teenager | Teenager | Teenager | Child | Child |
| CRITICAL ORGAN | Lung | Lung | Lung | Bone | Bone |

COMPLIANCE STATUS

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

Calculation used release data from the following:

Unit 1 - Ground
Unit 1 - Vent
Unit 1 - Chimney

Date of calculation: 5/ 4/2004

# Table 3.4-1 (continued)

Dresden Station - Unit 2

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

2003

| TYPE OF DOSE | FIRST QUARTER | SECOND QUARTER | THIRD QUARTER | FOURTH QUARTER | ANNUAL |
|---|---|---|---|---|---|
| GAMMA AIR (mrad) | 3.533E-04(SSE) | 5.780E-04(WSW) | 5.840E-04( NW) | 1.843E-04(NNW) | 1.240E-03(WSW) |
| BETA AIR (mrad) | 5.714E-05(ESE) | 1.270E-04(WSW) | 7.520E-05(WSW) | 3.305E-05( SE) | 2.295E-04(WSW) |
| WHOLE BODY (mrem) | 2.691E-04(SSE) | 1.820E-04( S ) | 3.229E-04(NNE) | 3.848E-04( SE) | 9.505E-04( SE) |
| SKIN (mrem) | 3.297E-04(SSE) | 2.260E-04( S ) | 4.225E-04(NNE) | 4.591E-04( SE) | 1.208E-03(SSE) |
| ORGAN (mrem) | 1.070E-05(ESE) | 1.899E-05(WSW) | 2.364E-05(NNW) | 9.979E-05( N ) | 1.409E-04( N ) |
| CRITICAL PERSON | Child | Child | Child | Teenager | Teenager |
| CRITICAL ORGAN | Thyroid | Thyroid | Thyroid | Lung | Lung |

COMPLIANCE STATUS

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

Calculation used release data from the following:

Unit 2 - Ground
Unit 2 - Vent
Unit 2 - Chimney

Date of calculation: 5/ 4/2004

# Table 3.4-1 (continued)

Dresden Station - Unit 3

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

2003

| TYPE OF DOSE | FIRST QUARTER | SECOND QUARTER | THIRD QUARTER | FOURTH QUARTER | ANNUAL |
|---|---|---|---|---|---|
| GAMMA AIR (mrad) | 9.873E-04(SSE) | 1.340E-03(WSW) | 9.540E-04( NW) | 8.168E-04(NNW) | 2.912E-03( N ) |
| BETA AIR (mrad) | 1.709E-04(ESE) | 3.150E-04(WSW) | 1.560E-04(WSW) | 1.560E-04( SE) | 5.800E-04(WSW) |
| WHOLE BODY (mrem) | 8.936E-04(SSE) | 4.190E-04( S ) | 5.728E-04(NNE) | 1.155E-03( SE) | 2.602E-03(SSE) |
| SKIN (mrem) | 1.093E-03(SSE) | 5.487E-04(SSE) | 7.682E-04(NNE) | 1.394E-03( SE) | 3.324E-03(SSE) |
| ORGAN (mrem) | 9.324E-05(ESE) | 6.491E-05(WSW) | 5.786E-05( N ) | 1.009E-04(ESE) | 2.161E-04(SSE) |
| CRITICAL PERSON | Child | Child | Teenager | Teenager | Teenager |
| CRITICAL ORGAN | Thyroid | Thyroid | Lung | Lung | Lung |

COMPLIANCE STATUS

| TYPE OF DOSE | 10 CFR 50 APP. I QUARTERLY OBJECTIVE | % OF APP. I | 10 CFR 50 APP.I YEARLY OBJECTIVE | % OF APP. I |
|---|---|---|---|---|
| GAMMA AIR (mrad) | 5.0 | 0.03 | 10.0 | 0.03 |
| BETA AIR (mrad) | 10.0 | 0.00 | 20.0 | 0.00 |
| WHOLE BODY (mrem) | 2.5 | 0.05 | 5.0 | 0.05 |
| SKIN (mrem) | 7.5 | 0.02 | 15.0 | 0.02 |
| ORGAN (mrem) | 7.5 | 0.00 | 15.0 | 0.00 |
| CRITICAL PERSON | | Teenager | | Teenager |
| CRITICAL ORGAN | | Lung | | Lung |

Calculation used release data from the following:

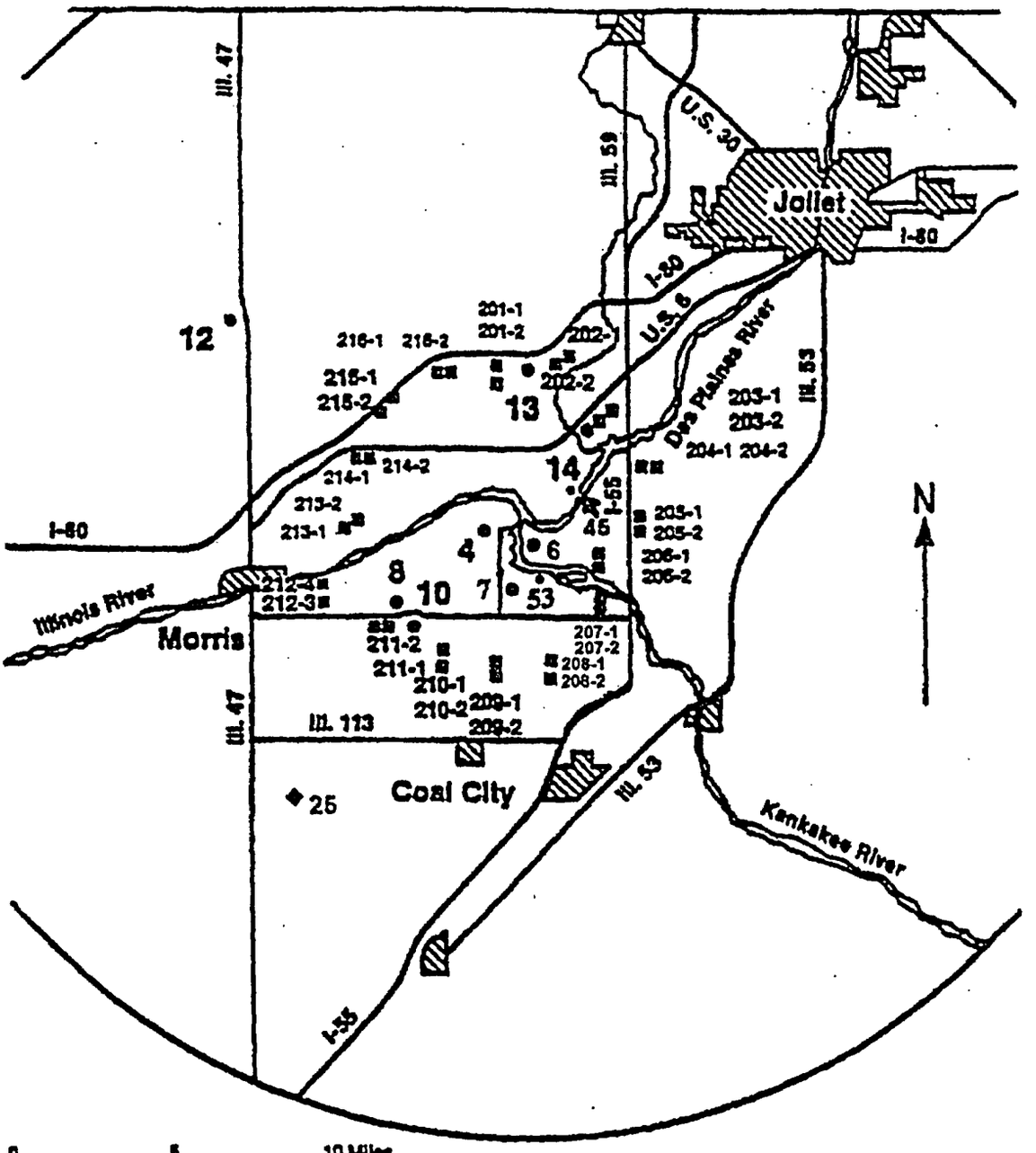
Unit 3 - Ground
Unit 3 - Vent
Unit 3 - Chimney

| Maximum Offsite Values (pCi/m3) | |
|---|---|
| Iodine | 8.85E-05 |
| Particulate Matter | 4.03E-01 |
| Data Recovery (priority parameters) | 99.9% |

Date of calculation: 5/ 4/2004

# Figure 5.0-1

DRESDEN




0 5 10 Miles

0 10 20 Kilometers

- Air Sampling Location
- TLD Location
- Milk

| Dresden Station Units 1,2 & 3 | |
|---|---|
| Fixed Air Sampling and TLD Sites, Outer Ring TLD Locations and Milk Location | |
| D-01 Onsite Station 1 | D-12 (C) Lisbon |
| D-02 Onsite Station 2 | D-13 Minooka |
| D-03 Onsite Station 3 | D-14 Channahon |
| D-04 Collins Road | D-45 McKinley Woods |
| D-07 Clay Products | D-53 Grundy County Road |
| D-08 Prairie Parks | D-25 Biros Farm (Milk) |
| D-10 Goose Lake Village | |

# Figure 5.0-2

DRESDEN

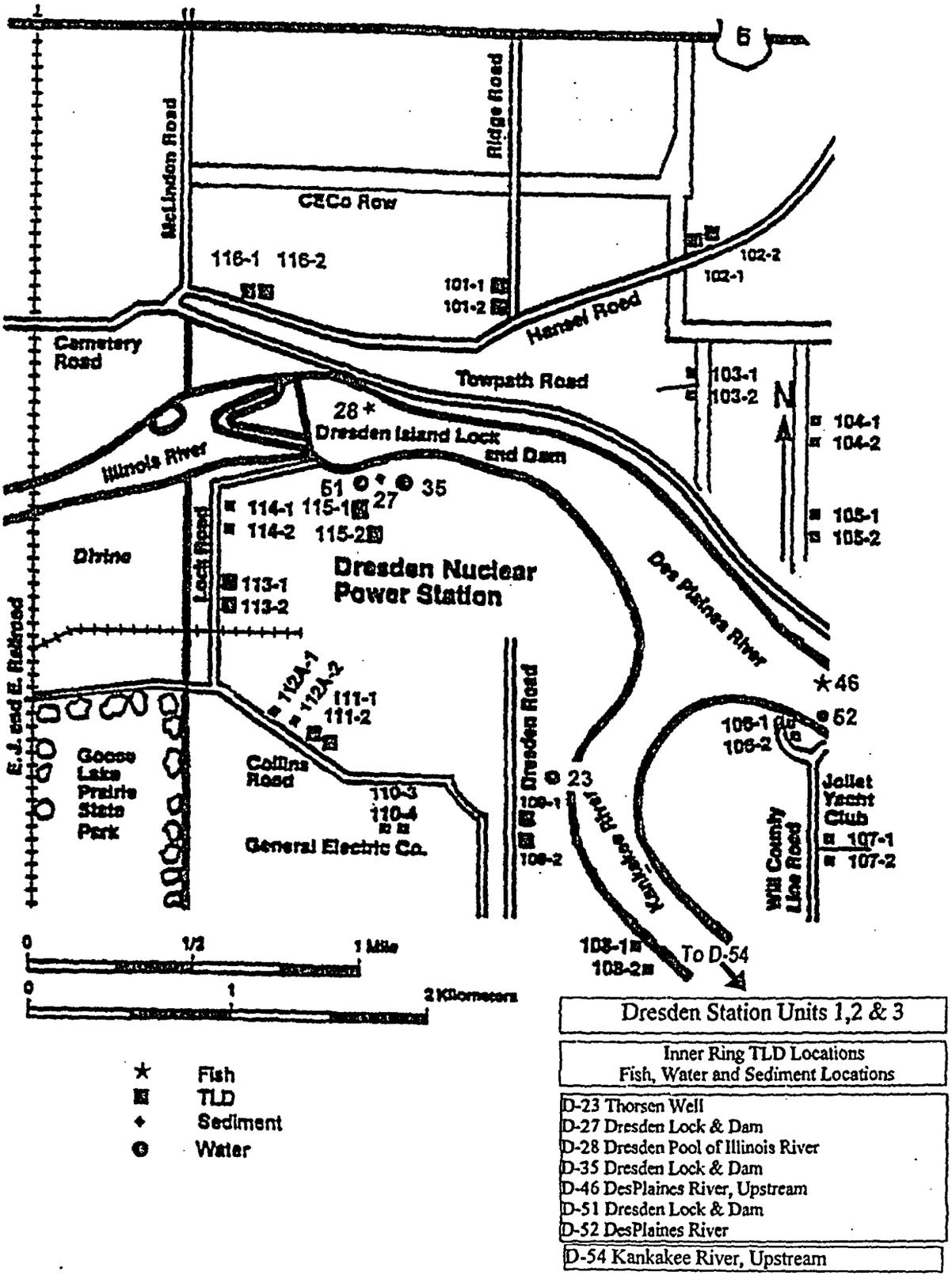


TABLE 5.0-1

| Dresden Station Radiological Environmental Monitoring Locations | Air Sampling | TLD | Vegetables | Fish | Milk | Sediments | Surface Water | Well Water |
|---|---|---|---|---|---|---|---|---|
| D-01 Onsite Station 1 | ✓ | ✓ | | | | | | |
| D-02 Onsite Station 2 | ✓ | ✓ | | | | | | |
| D-03 Onsite Station 3 | ✓ | ✓ | | | | | | |
| D-04 Collins Road | ✓ | ✓ | | | | | | |
| D-07 Clay Products | ✓ | ✓ | | | | | | |
| D-08 Prairie Parks | ✓ | ✓ | | | | | | |
| D-10 Goose Lake Village | ✓ | ✓ | | | | | | |
| D-12 Lisbon | ✓ | ✓ | | | | | | |
| D-13 Minooka | ✓ | ✓ | | | | | | |
| D-14 Channahon | ✓ | ✓ | | | | | | |
| D-23 Thorsen Well | | | | | | | | ✓ |
| D-25 Vince Biros Farm | | | | | ✓ | | | |
| D-27 Dresden Lock & Dam | | | | | | ✓ | | |
| D-28 Dresden Pool at Illinois River | | | | ✓ | | | | |
| D-35 Dresden Lock & Dam | | | | | | | | ✓ |
| D-46 DesPlaines River, Upstream | | | | ✓ | | | | |
| D-45 McKinley Woods Road | ✓ | ✓ | | | | | | |
| D-51 Dresden Lock & Dam | | | | | | | ✓ | |
| D-52 DesPlaines River. | | | | | | | ✓ | |
| D-53 Grundy County Road | ✓ | ✓ | | | | | | |
| D-54 Kankakee River | | | | | | | ✓ | |
| D-Quad 1 | | | ✓ | | | | | |
| D-Quad 2 | | | ✓ | | | | | |
| D-Quad 3 | | | ✓ | | | | | |
| D-Quad 4 | | | ✓ | | | | | |
| D-Control | | | ✓ | | | | | |

CENSUS
Dairy
Residence
Cattle

TABLE 5.0-2

DRESDEN STATION

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM, SAMPLING LOCATIONS

1. AIR SAMPLERS

| Site Code[a] | Location | Distance (miles) | Direction | Sector |
|---|---|---|---|---|
| D-01 | Onsite Station 1 | 0.6 | NW | Q |
| D-02 | Onsite Station 2 | 0.3 | NE | C |
| D-03 | Onsite Station 3 | 0.4 | S | J |
| D-04 | Collins Road | 0.9 | W | N |
| D-07 | Clay Products | 2.0 | S | J |
| D-08 | Prairie Parks | 4.0 | SW | L |
| D-10 | Goose Lake Village | 3.8 | SSW | K |
| D-12 (C) | Lisbon | 10.0 | NW | Q |
| D-13 | Minooka | 4.5 | N | A |
| D-14 | Channahon | 3.5 | NE | C |
| D-45 | McKinley Woods Road | 1.5 | ENE | D |
| D-53 | Grundy County Road | 2.1 | SSE | H |

2. TLDs

a. Same as No. 1.

b. Special TLD Locations

| Site Code | Distance (miles) | Direction | Sector |
|---|---|---|---|
| Inner Ring | | | |
| D-101-1,2 | 1.0 | N | A |
| D-102-1,2 | 1.3 | NNE | B |
| D-103-1,2 | 1.2 | NE | C |
| D-104-1,2 | 1.5 | ENE | D |
| D-105-1,2 | 1.4 | E | E |
| D-106-1,2 | 0.9 | ESE | F |
| D-107-1,2 | 1.3 | SE | G |
| D-108-1,2 | 1.9 | SSE | H |
| D-109-1,2 | 0.8 | S | J |
| D-110-3,4 | 0.8 | SSW | K |
| D-111-1,2 | 0.6 | SW | L |

[a] Control (reference) locations are denoted by a "C" after site code. All other locations are indicators.

TABLE 5.0-2 (continued)

DRESDEN STATION

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM, SAMPLING LOCATIONS

2. TLDs (cont.)

b. Special TLD Locations (continued)

| Site Code | Distance (miles) | Direction | Sector |
|---|---|---|---|
| Inner Ring (continued) | | | |
| D-112a-1,2 | 0.8 | WSW | M |
| D-113-1,2 | 0.9 | W | N |
| D-114-1,2 | 1.0 | WNW | P |
| D-115-1,2 | 0.8 | NW | Q |
| D-116-1,2 | 1.0 | NNW | R |
| Outer Ring | | | |
| D-201-1,2 | 4.5 | N | A |
| D-202-1,2 | 5.0 | NNE | B |
| D-203-1,2 | 4.5 | NE | C |
| D-204-1,2 | 5.0 | ENE | D |
| D-205-1,2 | 4.2 | E | E |
| D-206-1,2 | 3.5 | ESE | F |
| D-207-1,2 | 4.5 | SE | G |
| D-208-1,2 | 5.0 | SSE | H |
| D-209-1,2 | 5.0 | S | J |
| D-210-1,2 | 4.8 | SSW | K |
| D-211-1,2 | 5.0 | SW | L |
| D-212-3,4 | 6.0 | WSW | M |
| D-213-1,2 | 4.5 | W | N |
| D-214-1,2 | 4.5 | WNW | P |
| D-215-1,2 | 5.1 | NW | Q |
| D-216-1,2 | 4.8 | NNW | R |

3. MILK

| Site Code[a] | Location | Distance (miles) | Direction | Sector |
|---|---|---|---|---|
| D-25 (C) | Vince Biros Farm | 11.5 | SW | L |

[a] Control (reference) locations are denoted by a "C" after site code. All other locations are indicators.

TABLE 5.0-2 (continued)

DRESDEN STATION

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM, SAMPLING LOCATIONS

4. GROUND/WELL WATER

| Site Code[a] | Location | Distance (miles) | Direction | Sector |
|---|---|---|---|---|
| D-23 | Thorsen Well | 0.7 | S | J |
| D-35 | Dresden Lock & Dam | 0.5 | NW | Q |

5. SURFACE WATER

| Site Code | Location | Distance (miles) | Direction | Sector |
|---|---|---|---|---|
| D-51 | Dresden Lock & Dam | 0.5 | NW | Q |
| D-52 (C) | DesPlaines River | 0.9 | ESE | F |
| D-54 (C) | Kankakee River | 8.5 | SE | G |

6. FISH

| Site Code | Location | Distance (miles) | Direction | Sector |
|---|---|---|---|---|
| D-28 | Dresden Pool of Illinois River | 0.5 | NW | Q |
| DSP-46(C) | DesPlaines River, Upstream | 0.9 | E | E |

7. SEDIMENT

| Site Code | Location | Distance (miles) | Direction | Sector |
|---|---|---|---|---|
| D-27 | Dresden Lock & Dam | 0.5 | NW | Q |

8. VEGETATION

| Site Code | Location | Distance (miles) | Direction | Sector |
|---|---|---|---|---|
| Quad 1 | Chris Locknar | 2.8 | NE | C |
| Quad 2 | Robert Pagliano | 3.2 | SSE | H |
| Quad 3 | Jim Bloom | 3.9 | SSW | K |
| Quad 4 | J.D.Carmichael | 1.6 | NNW | R |
| Control (C) | Glasscock Farm | 12.8 | ENE | D |

[a] Control (reference) locations are denoted by a "C" after site code. All other locations are indicators.

# TABLE 5.0-2 (continued)

DRESDEN STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM, SAMPLE COLLECTION AND ANALYSES

| Sample Media | Location Code[a] | Location Site | Collection Frequency | Type of Analysis | Frequency of Analysis |
|---|---|---|---|---|---|
| 1. Airborne Particulates | Onsite, Nearfield and Control | | Filter exchange weekly | Gross Beta Gamma Isot. | Weekly Quarterly Composite (or if weekly gross beta in a sample exceeds 5X the average concentration of preceding calendar quarter). |
| | D-01 | Onsite 1 | | | |
| | D-02 | Onsite 2 | | | |
| | D-03 | Onsite 3 | | | |
| | D-04 | Collins Road | | | |
| | D-07 | Clay Products | | | |
| | D-12 (C) | Lisbon | | | |
| | D-45 | McKinley Woods Road | | | |
| | D-53 | Grundy County Road | | | |
| | Far Field | | | Gamma Isot. | If gross beta in a sample exceeds 10 times the yearly mean of control samples and radioactivity is confirmed as having its origins in airborne effluents released from the station. |
| | D-08 | Prairie Parks | | | |
| | D-10 | Goose Lake Village | | | |
| | D-13 | Minooka | | | |
| | D-14 | Channahon | | | |
| 2. Airborne Iodine | Same as 1. | | Canister exchange biweekly | I-131 | Biweekly |
| 3. Air Sampling Train | Same as 1. | | - | Test and Maintenance | Weekly |
| 4. TLDs a. | Same as 1. (two TLDs per location) | | Quarterly | Gamma | Quarterly |
| b. | D-101-1,2 | Inner Ring | | | |
| | 102-1,2 | | | | |
| | 103-1,2 | | | | |
| | 104-1,2 | | | | |
| | 105-1,2 | | | | |
| | 106-1,2 | | | | |
| | 107-1,2 | | | | |
| | 108-1,2 | | | | |
| | 109-1,2 | | | | |
| | 110-3,4 | | | | |
| | 111-1,2 | | | | |
| | 112a-1,2 | | | | |
| | 113-1,2 | | | | |
| | 114-1,2 | | | | |
| | 115-1,2 | | | | |
| | 116-1,2 | | | | |
| c. | D-201-1,2 | Outer Ring | | | |
| | 202-1,2 | | | | |
| | 203-1,2 | | | | |
| | 204-1,2 | | | | |
| | 205-1,2 | | | | |
| | 206-1,2 | | | | |
| | 207-1,2 | | | | |

[a] Control (background) locations are denoted by a "C" in this column. All other location are indicators.

# TABLE 5.0-2 (continued)

DRESDEN STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM, SAMPLE COLLECTION AND ANALYSES

| Sample Media | Location Code[a] | Location Site | Collection Frequency | Type of Analysis | Frequency of Analysis |
|---|---|---|---|---|---|
| 4. TLDs (continued) | | | | | |
| | D-208-1,2 | Outer Ring | Quarterly | Gamma | Quarterly |
| | 209-1,2 | | | | |
| | 210-1,2 | | | | |
| | 211-1,2 | | | | |
| | 212-3,4 | | | | |
| | 213-1,2 | | | | |
| | 214-1,2 | | | | |
| | 215-1,2 | | | | |
| | 216-1,2 | | | | |
| 5. Milk | D-25 | Biros Farm | Biweekly: May-October Monthly: November-April | I-131 Gamma Isot. | Biweekly: May-October Monthly: November-April |
| 6. Vegetables | Quad 1 | Chris Locknar | Annually - two varieties from each location as available at harvest. | Gamma Isot. I-131 | Annually Annually |
| | Quad 2 | Robert Pagliano | | | |
| | Quad 3 | Jim Bloom | | | |
| | Quad 4 | J.D. Carmichael | | | |
| | Control | Glasscock Farm | | | |
| 7. Ground/Well Water | D-23 | Thorsen Well | Quarterly | Gamma Isot. Tritium | Quarterly |
| | D-35 | Dresden Lock & Dam | | | |
| 8. Surface Water | D-51 | Dresden Lock & Dam | Weekly | Gross Beta Gamma Isot. Tritium | Monthly composite. Monthly composite. Quarterly composite. |
| | D-52 (C) | DesPlaines River, Upstream | | | |
| | D-54 (C) | Kankakee River, Upstream | | | |
| 9. Fish (at least two species) | D-28 | Dresden Pool of Illinois River | Two times/year | Gamma Isot. | Two times/year on edible portions only. |
| | D-46 (C) | DesPlaines River, Upstream | | | |
| 10. Sediments | D-27 | Dresden Lock & Dam | Semiannually | Gamma Isot. | Semiannually |
| 11. Land Use Census | | | | | |
| Milch Animals | | | | | |
| a. Site Boundary to 2 miles | | | - | a. Enumeration by a door to door or equivalent counting technique. | Annually during grazing season. |

[a] Control (background) locations are denoted by a "C" in this column. All other location are indicators.

# TABLE 5.0-2 (continued)

DRESDEN STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM, SAMPLE COLLECTION AND ANALYSES

| Sample Media | Location Code[a] | Location Site | Collection Frequency | Type of Analysis | Frequency of Analysis |
|---|---|---|---|---|---|
| 11. Land Use Census (continued) | | | | | |
| | b. | 2 miles to 6.2 miles | - | b. Using referenced information from county agricultural agents or other reliable sources. | |
| | c. | At dairies listed in Item 5. | - | c. Inquire as to feeding practices:<br>1. Pasture only.<br>2. Feed and chop only.<br>3. Pasture and feed: if both, ask farmer to estimate fraction of food from pasture: <25%, 25-50%, 50-75%, or >75%. | Annually during grazing season. |
| Nearest Residence | | In all sectors up to 6.2 miles. | - | - | Annually during grazing season. |

[a] Control (background) locations are denoted by a "C" in this column. All other location are indicators.

# Table 5.0-3

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Dresden Nuclear Power Station Docket No. 50-10, 50-237, 50-249
Location of Facility Grundy, Illinois Reporting Period 1st Quarter 2003
(County, State)

| Sample Type (Units) | Type and Number of Analyses | | LLD | Indicator Locations Mean[a] Range | Location with Highest Quarterly Mean | Highest Mean[a] Range | Control Locations Mean[a] Range | Number of Non-routine Results |
|---|---|---|---|---|---|---|---|---|
| Air Particulates ($pCi/m^3$) | Gross Beta | 95 | 0.01 | 0.029 (82/82) (0.013-0.043) | D-02, Onsite Station 2 0.3 mi. NE, Sector C | .033 (4/4) 0.027-0.039) | 0.031 (13/13) (0.021-0.047) | 0 |
| | Gamma Spec. | 8 | | | | | | |
| | Cs-134 | | 0.05 | <LLD | - | - | <LLD | 0 |
| | Cs-137 | | 0.06 | <LLD | - | - | <LLD | 0 |
| | Other Gammas | | 0.01-0.04 | <LLD | - | - | <LLD | 0 |
| Airborne Iodine ($pCi/m^3$) | I-131 | 52 | 0.07 | <LLD | - | - | <LLD | 0 |
| Milk (pCi/L) | I-131 | 3 | 1 | None | - | - | <LLD | 0 |
| | Gamma Spec. | 3 | | | | | | |
| | Cs-134 | | 15 | None | - | - | <LLD | 0 |
| | Cs-137 | | 18 | None | - | - | <LLD | 0 |
| | Ba-140 | | 60 | None | - | - | <LLD | 0 |
| | La-140 | | 15 | None | - | - | <LLD | 0 |
| | Other Gammas | | 10-15 | None | - | - | <LLD | 0 |
| Surface Water (pCi/L) | Gross Beta | 6 | 4 | 6.4 (3/3) (6.0-6.9) | D-52, DesPlaines River, 0.9 mi. ESE Sector F | 10.7 (3/3) (9.0-13.6) | 10.7 (3/3) (9.0-13.6) | 0 |
| | Gamma Spec. | 6 | | | | | | |
| | Cs-134 | | 15 | <LLD | - | - | <LLD | 0 |
| | Cs-137 | | 18 | <LLD | - | - | <LLD | 0 |
| | Other ODCM-Required Gammas | | 15-60 | <LLD | - | - | <LLD | 0 |
| | Tritium | 2 | 200 | 1,626 (1/1) | D-51, Dresden Lock & Dam, 0.5 mi. NW Sector Q | 1,626 (1/1) | 230 (1/1) | 0 |
| Well Water (pCi/L) | Tritium | 2 | 200 | 609 (1/2) | D-23 Thorsen Well 0.7 mi. S, Sector J | 609 (1/1) | None | 0 |
| | Gamma Spec. | 2 | | | | | | |
| | Cs-134 | | 15 | <LLD | - | - | None | 0 |
| | Cs-137 | | 18 | <LLD | - | - | None | 0 |
| | Other ODCM-Required Gammas | | 15-60 | <LLD | - | - | None | 0 |
| Gamma Background (TLDs) (mR/Qtr.) | Gamma Dose | 87 | 9.7 | 25.8 (85/85) (19.0-32.0) | D-201-2, 4.5 mi. N Sector A | 32.0 (1/1) | 23.5 (2/2) (21.0-26.0) | 0 |

[a] Mean and range based on detectable measurements only. Fractions indicated in parentheses.

# Table 5.0-4

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY
Name of Facility Dresden Nuclear Power Station Docket No. 50-10, 50-237, 50-249
Location of Facility Grundy, Illinois Reporting Period 2nd Quarter 2003
(County, State)

| Sample Type (Units) | Type and Number of Analyses | | LLD | Indicator Locations Mean[a] Range | Location with Highest Quarterly Mean | Highest Mean[a] Range | Control Locations Mean[a] Range | Number of Non-routine Results |
|---|---|---|---|---|---|---|---|---|
| Air Particulates ($pCi/m^3$) | Gross Beta | 91 | 0.01 | 0.018 (78/78) (0.010-0.028) | D-12, Lisbon, 10 mi. NW, Sector Q | 0.020 (13/13) (0.014-0.023) | 0.020 (13/13) (0.014-0.023) | 0 |
| | Gamma Spec. | 7 | | | | | | |
| | Cs-134 | | 0.05 | <LLD | - | - | <LLD | 0 |
| | Cs-137 | | 0.06 | <LLD | - | - | <LLD | 0 |
| | Other Gammas | | 0.01-0.04 | <LLD | - | - | <LLD | 0 |
| Airborne Iodine ($pCi/m^3$) | I-131 | 48 | 0.07 | <LLD | - | - | <LLD | 0 |
| Milk (pCi/L) | I-131 | 6 | 1 | None | - | - | <LLD | 0 |
| | Gamma Spec. | 6 | | | | | | |
| | Cs-134 | | 15 | None | - | - | <LLD | 0 |
| | Cs-137 | | 18 | None | - | - | <LLD | 0 |
| | Ba-140 | | 60 | None | - | - | <LLD | 0 |
| | La-140 | | 15 | None | - | - | <LLD | 0 |
| | Other Gammas | | 10-15 | None | - | - | <LLD | 0 |
| Fish (pCi/g wet) | Gamma Spec. | 4 | | | | | | |
| | Cs-134 | | 0.13 | <LLD | - | - | <LLD | 0 |
| | Cs-137 | | 0.15 | <LLD | - | - | <LLD | 0 |
| | Other ODCM-Required Gammas | | 0.13-0.26 | <LLD | - | - | <LLD | 0 |
| | Other Gammas | | 0.20-0.30 | <LLD | - | - | <LLD | 0 |
| Bottom Sediments (pCi/g dry) | Gamma Spec. | 1 | | | | | | |
| | Cs-134 | | 0.15 | <LLD | - | - | None | 0 |
| | Cs-137 | | 0.18 | <LLD | - | - | None | 0 |
| | Other Gammas | | 0.10-0.60 | <LLD | - | - | None | 0 |

[a] Mean and range based on detectable measurements only. Fractions indicated in parentheses.

# Table 5.0-4 (continued)

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Dresden Nuclear Power Station Docket No. 50-10, 50-237, 50-249
Location of Facility Grundy, Illinois Reporting Period 2nd Quarter 2003
(County, State)

| Sample Type (Units) | Type and Number of Analyses | LLD | Indicator Locations Mean[a] Range | Location with Highest Quarterly Mean | Highest Mean[a] Range | Control Locations Mean[a] Range | Number of Non-routine Results |
|---|---|---|---|---|---|---|---|
| Surface Water (pCi/L) | Gross Beta 9 | 4 | 5.2 (3/3) (4.0-5.9) | D-52, DesPlaines River, 0.9 mi. ESE, Sector F | 6.9 (3/3) (5.2-8.1) | 6.9 (3/6) (5.2-8.1) | 0 |
| | Gamma Spec. 9 | | | | | | |
| | Cs-134 | 15 | <LLD | - | - | <LLD | 0 |
| | Cs-137 | 18 | <LLD | - | - | <LLD | 0 |
| | Other ODCM-Required Gammas | 15-60 | <LLD | - | - | <LLD | 0 |
| | Tritium 2 | 200 | 294 (1/1) | D-51, Dresden Lock and Dam, 0.5 mi NW, Sector Q | 294 (1/1) | <LLD | 0 |
| Well Water (pCi/L) | Tritium 2 | 200 | 729 (1/2) | D-23, Thorsen Well 0.7 mi. S, Sector J | 729 (1/1) | None | 0 |
| | Gamma Spec. 2 | | | | | | |
| | Cs-134 | 15 | <LLD | - | - | None | 0 |
| | Cs-137 | 18 | <LLD | - | - | None | 0 |
| | Other ODCM-Required Gammas | 15-60 | <LLD | - | - | None | 0 |
| Gamma Background (TLDs) (mR/Qtr.) | Gamma Dose 88 | 9.7 | 22.8 (86/86) (18.0-29.0) | D-110-4, 0.8 mi SSW, Sector K | 29.0 (1/1) | 19.0 (2/2) (19.0-19.0) | 0 |

[a] Mean and range based on detectable measurements only. Fractions indicated in parentheses.

# Table 5.0-5

## RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Dresden Nuclear Power Station Docket No. 50-10, 50-237, 50-249
Location of Facility Grundy, Illinois Reporting Period 3rd Quarter 2003
(County, State)

| Sample Type (Units) | Type and Number of Analyses | | LLD | Indicator Locations Mean[a] Range | Location with Highest Quarterly Mean | Highest Mean[a] Range | Control Locations Mean[a] Range | Number of Non-routine Results |
|---|---|---|---|---|---|---|---|---|
| Air Particulates ($pCi/m^3$) | Gross Beta | 91 | 0.01 | 0.025 (89/91) (0.011-0.049) | D-12, Lisbon 10 mi. NW, Sector Q | 0.029 (13/13) (0.020-0.050) | 0.029 (13/13) (0.020-0.050) | 0 |
| | Gamma Spec. | 7 | | | | | | |
| | Cs-134 | | 0.05 | <LLD | - | - | <LLD | 0 |
| | Cs-137 | | 0.06 | <LLD | - | - | <LLD | 0 |
| | Other Gammas | | 0.01-0.04 | <LLD | - | - | <LLD | 0 |
| Airborne Iodine ($pCi/m^3$) | I-131 | 56 | 0.07 | <LLD | - | - | <LLD | 0 |
| Milk (pCi/L) | I-131 | 6 | 1 | None | - | - | <LLD | 0 |
| | Gamma Spec. | 6 | | | | | | |
| | Cs-134 | | 15 | None | - | - | <LLD | 0 |
| | Cs-137 | | 18 | None | - | - | <LLD | 0 |
| | Ba -140 | | 60 | None | - | - | <LLD | 0 |
| | La-140 | | 15 | None | - | - | <LLD | 0 |
| | Other Gammas | | 10-15 | | | | | |
| Vegetation (pCi/g wet) | I-131 | 11 | 0.06 | <LLD | - | - | <LLD | 0 |
| | Gamma Spec. | 11 | | | | | | |
| | Cs-134 | | 0.06 | <LLD | - | - | <LLD | 0 |
| | Cs-137 | | 0.08 | <LLD | - | - | <LLD | 0 |
| | Other Gammas | | 0.01-0.10 | <LLD | - | - | <LLD | 0 |
| Surface Water (pCi/L) | Gross Beta | 6 | 4 | 5.0 (3/3) (4.7-5.5) | D-52 DesPlaines River 0.9 mi. ESE, Sector F | 6.1 (3/3) (5.8-6.7) | 5.3 (5/6) (4.0-6.7) | 0 |
| | Gamma Spec. | 6 | | | | | | |
| | Cs-134 | | 15 | <LLD | - | - | <LLD | 0 |
| | Cs-137 | | 18 | <LLD | - | - | <LLD | 0 |
| | Other ODCM-Required Gammas | | 15-60 | <LLD | - | - | <LLD | 0 |
| | Tritium | 2 | 200 | 662 (1/1) | D-51, Dresden Lock & Dam, 0.5 mi. NW, Sector Q | 662 (1/1) | <LLD | 0 |

[a] Mean and range based on detectable measurements only. Fractions indicated in parentheses.

# Table 5.0-5 (continued)

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Dresden Nuclear Power Station Docket No. 50-10, 50-237, 50-249
Location of Facility Grundy., Illinois Reporting Period 3rd Quarter 2003
(County, State)

| Sample Type (Units) | Type and Number of Analyses | LLD | Indicator Locations Mean[a] Range | Location with Highest Quarterly Mean | Highest Mean[a] Range | Control Locations Mean[a] Range | Number of Non-routine Results |
|---|---|---|---|---|---|---|---|
| Well Water (pCi/L) | Tritium 2 | 200 | 839 (1/2) | D-23, Thorsen Well 0.7 mi. S, Sector J | 839 (1/1) | None | 0 |
| | Gamma Spec. 2 | | | | | | |
| | Cs-134 | 15 | <LLD | - | - | None | 0 |
| | Cs-137 | 18 | <LLD | - | - | None | 0 |
| | Other ODCM-Required Gammas | 15-60 | <LLD | - | - | None | 0 |
| Gamma Background (TLDs) (mR/Qtr.) | Gamma Dose 88 | 9.7 | 22.7 (86/86) (18.0-29.0) | D-214-2, 4.5 mi. WNW, Sector P | 29.0 (1/1) | 21.5 (2/2) (21.0-22.0) | 0 |

[a] Mean and range based on detectable measurements only. Fractions indicated in parentheses.

# Table 5.0-6

## RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Dresden Nuclear Power Station Docket No. 50-10, 50-237, 50-249
Location of Facility Grundy, Illinois Reporting Period 4th Quarter 2003
(County, State)

| Sample Type (Units) | Type and Number of Analyses | | LLD | Indicator Locations Mean[a] Range | Location with Highest Quarterly Mean | Highest Mean[a] Range | Control Locations Mean[a] Range | Number of Non-routine Results |
|---|---|---|---|---|---|---|---|---|
| Air Particulates ($pCi/m^3$) | Gross Beta | 90 | 0.01 | 0.027 (77/77) (0.013-0.041) | D-03, Onsite Station 3, 0.6 miS, Sector J | 0.029 (13/13) (0.019-0.041) | 0.028 (13/13) (0.015-0.042) | 0 |
| | Gamma Spec. | 8 | | | | | | |
| | Cs-134 | | 0.05 | <LLD | - | - | <LLD | 0 |
| | Cs-137 | | 0.06 | <LLD | - | - | <LLD | 0 |
| | Other Gammas | | 0.01-0.04 | <LLD | - | - | <LLD | 0 |
| Airborne Iodine ($pCi/m^3$) | I-131 | 42 | 0.07 | <LLD | - | - | <LLD | 0 |
| Milk (pCi/L) | I-131 | 5 | 1 | None | - | - | <LLD | 0 |
| | Gamma Spec. | 5 | | | | | | |
| | Cs-134 | | 15 | None | - | - | <LLD | 0 |
| | Cs-137 | | 18 | None | - | - | <LLD | 0 |
| | Ba-140 | | 60 | None | - | - | <LLD | 0 |
| | La-140 | | 15 | None | - | - | <LLD | 0 |
| | Other Gammas | | 10-15 | None | - | - | <LLD | 0 |
| Fish (pCi/g wet) | Gamma Spec. | 4 | | | | | | |
| | Cs-134 | | 0.13 | <LLD | - | - | <LLD | 0 |
| | Cs-137 | | 0.15 | <LLD | - | - | <LLD | 0 |
| | Other ODCM-Required Gammas | | 0.13-0.26 | <LLD | - | - | <LLD | 0 |
| | Other Gammas | | 0.20-0.30 | <LLD | - | - | <LLD | 0 |
| Bottom Sediments (pCi/g dry) | Gamma Spec. | 1 | | | | | | |
| | Cs-134 | | 0.15 | <LLD | - | - | None | 0 |
| | Cs-137 | | 0.18 | <LLD | - | - | None | 0 |
| | Other Gammas | | 0.10-0.60 | <LLD | - | - | None | 0 |

[a] Mean and range based on detectable measurements only. Fractions indicated in parentheses.

# Table 5.0-6 (continued)

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Dresden Nuclear Power Station Docket No. 50-10, 50-237, 50-249
Location of Facility Grundy, Illinois Reporting Period 4th Quarter 2003
(County, State)

| Sample Type (Units) | Type and Number of Analyses | LLD | Indicator Locations Mean[a] Range | Location with Highest Quarterly Mean | Highest Mean[a] Range | Control Locations Mean[a] Range | Number of Non-routine Results |
|---|---|---|---|---|---|---|---|
| Surface Water (pCi/L) | Gross Beta 6 | 4 | 5.6 (2/3) (5.0-6.2) | D-51, Dresden Lock & Dam, 0.5 mi. NW, Sector Q | 5.6 (2/3) (5.0-6.2) | 5.3 (3/6) (4.8-5.6) | 0 |
| | Gamma Spec. 6 | | | | | | |
| | Cs-134 | 15 | <LLD | - | - | <LLD | 0 |
| | Cs-137 | 18 | <LLD | - | - | <LLD | 0 |
| | Other ODCM-Required Gammas | 15-60 | <LLD | - | - | <LLD | 0 |
| | Tritium 2 | 200 | 277 (1/1) | D-51, Dresden Lock & Dam, 0.5 mi. NW, Sector Q | 277 (1/1) | <LLD | 0 |
| Well Water (pCi/L) | Gamma Spec. 2 | | | | | | |
| | Cs-134 | 15 | <LLD | - | - | None | 0 |
| | Cs-137 | 18 | <LLD | - | - | None | 0 |
| | Other ODCM-Required Gammas | 15-60 | <LLD | - | - | None | 0 |
| | Tritium 2 | 200 | 711 (1/2) | D-23, Thorsen Well, 0.7 mi. S, Sector J | 711 (1/1) | None | 0 |
| Gamma Background (TLDs) (mR/Qtr.) | Gamma Dose 88 | 9.7 | 26.4 (86/86) (21.0-33.0) | D-214.1, 4.5 mi. WNW, Sector P | 33.0 (1/1) | 23.5 (2/2) (23.0-24.0) | 0 |

[a] Mean and range based on detectable measurements only. Fractions indicated in parentheses.
[b] Locations D-214-1,2 had identical means of 33 mR. Only D-214-1 is detailed in this summary.

DRESDEN

# APPENDIX II

# METEOROLOGICAL DATA

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Extremely Unstable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 1 | 2 | 0 | 0 | 0 | 3 |
| NNE | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| NE | 0 | 2 | 8 | 1 | 0 | 0 | 11 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| SW | 0 | 0 | 0 | 3 | 3 | 0 | 6 |
| WSW | 0 | 0 | 0 | 4 | 0 | 0 | 4 |
| W | 0 | 0 | 4 | 9 | 0 | 0 | 13 |
| WNW | 0 | 1 | 8 | 15 | 0 | 0 | 24 |
| NW | 0 | 1 | 14 | 3 | 0 | 0 | 18 |
| NNW | 0 | 6 | 4 | 0 | 0 | 0 | 10 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 11 | 43 | 35 | 3 | 0 | 92 |

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

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Moderately Unstable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| NNE | 0 | 1 | 2 | 0 | 0 | 0 | 3 |
| NE | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| ENE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| SE | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| SSW | 0 | 0 | 2 | 4 | 1 | 0 | 7 |
| SW | 0 | 0 | 2 | 1 | 0 | 0 | 3 |
| WSW | 0 | 1 | 2 | 0 | 0 | 0 | 3 |
| W | 0 | 1 | 1 | 2 | 0 | 0 | 4 |
| WNW | 0 | 0 | 6 | 2 | 0 | 0 | 8 |
| NW | 0 | 2 | 10 | 0 | 0 | 0 | 12 |
| NNW | 0 | 2 | 1 | 1 | 0 | 0 | 4 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 8 | 32 | 10 | 1 | 0 | 51 |

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

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Slightly Unstable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| NNE | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| NE | 0 | 2 | 0 | 2 | 0 | 0 | 4 |
| ENE | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| S | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| SSW | 0 | 0 | 1 | 4 | 0 | 0 | 5 |
| SW | 0 | 2 | 3 | 5 | 1 | 0 | 11 |
| WSW | 0 | 1 | 4 | 4 | 0 | 0 | 9 |
| W | 0 | 0 | 4 | 1 | 0 | 0 | 5 |
| WNW | 0 | 1 | 5 | 9 | 0 | 0 | 15 |
| NW | 0 | 4 | 4 | 1 | 0 | 0 | 9 |
| NNW | 0 | 1 | 4 | 2 | 0 | 0 | 7 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 16 | 28 | 30 | 1 | 0 | 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: 0

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Neutral - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 3 | 22 | 19 | 11 | 0 | 0 | 55 |
| NNE | 1 | 17 | 19 | 11 | 0 | 0 | 48 |
| NE | 1 | 13 | 40 | 28 | 0 | 0 | 82 |
| ENE | 0 | 12 | 15 | 0 | 0 | 0 | 27 |
| E | 1 | 4 | 21 | 0 | 0 | 0 | 26 |
| ESE | 0 | 12 | 4 | 2 | 0 | 0 | 18 |
| SE | 0 | 8 | 5 | 3 | 0 | 0 | 16 |
| SSE | 2 | 11 | 16 | 10 | 5 | 0 | 44 |
| S | 2 | 11 | 38 | 9 | 0 | 0 | 60 |
| SSW | 2 | 8 | 26 | 11 | 2 | 0 | 49 |
| SW | 2 | 9 | 18 | 28 | 2 | 0 | 59 |
| WSW | 2 | 10 | 11 | 15 | 0 | 0 | 38 |
| W | 6 | 19 | 25 | 12 | 0 | 0 | 62 |
| WNW | 4 | 23 | 27 | 26 | 1 | 0 | 81 |
| NW | 6 | 29 | 26 | 1 | 0 | 0 | 62 |
| NNW | 5 | 26 | 48 | 9 | 0 | 0 | 88 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 37 | 234 | 358 | 176 | 10 | 0 | 815 |

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

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Slightly Stable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 1 | 15 | 9 | 0 | 0 | 0 | 25 |
| NNE | 5 | 12 | 3 | 1 | 0 | 0 | 21 |
| NE | 5 | 11 | 15 | 9 | 0 | 0 | 40 |
| ENE | 7 | 12 | 0 | 0 | 0 | 0 | 19 |
| E | 5 | 29 | 7 | 3 | 0 | 0 | 44 |
| ESE | 9 | 19 | 16 | 0 | 0 | 0 | 44 |
| SE | 6 | 5 | 7 | 3 | 0 | 0 | 21 |
| SSE | 7 | 28 | 14 | 12 | 0 | 0 | 61 |
| S | 1 | 31 | 30 | 21 | 1 | 0 | 84 |
| SSW | 4 | 18 | 21 | 10 | 0 | 0 | 53 |
| SW | 4 | 17 | 17 | 9 | 1 | 0 | 48 |
| WSW | 6 | 11 | 15 | 4 | 0 | 0 | 36 |
| W | 9 | 38 | 72 | 9 | 1 | 0 | 129 |
| WNW | 10 | 51 | 57 | 13 | 0 | 0 | 131 |
| NW | 11 | 46 | 45 | 1 | 1 | 0 | 104 |
| NNW | 9 | 33 | 42 | 1 | 0 | 0 | 85 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 99 | 376 | 370 | 96 | 4 | 0 | 945 |

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

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Moderately Stable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNE | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| NE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| ENE | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| E | 1 | 8 | 0 | 0 | 0 | 0 | 9 |
| ESE | 2 | 6 | 0 | 0 | 0 | 0 | 8 |
| SE | 2 | 13 | 0 | 0 | 0 | 0 | 15 |
| SSE | 1 | 18 | 0 | 0 | 0 | 0 | 19 |
| S | 4 | 11 | 1 | 0 | 0 | 0 | 16 |
| SSW | 5 | 20 | 1 | 0 | 0 | 0 | 26 |
| SW | 2 | 6 | 4 | 0 | 0 | 0 | 12 |
| WSW | 5 | 6 | 0 | 0 | 0 | 0 | 11 |
| W | 3 | 5 | 1 | 0 | 0 | 0 | 9 |
| WNW | 3 | 5 | 0 | 0 | 0 | 0 | 8 |
| NW | 3 | 4 | 0 | 0 | 0 | 0 | 7 |
| NNW | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 36 | 105 | 7 | 0 | 0 | 0 | 148 |

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

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Extremely Stable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| ESE | 2 | 2 | 0 | 0 | 0 | 0 | 4 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| S | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| SSW | 2 | 3 | 0 | 0 | 0 | 0 | 5 |
| SW | 2 | 3 | 0 | 0 | 0 | 0 | 5 |
| WSW | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| W | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| WNW | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NW | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NNW | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 15 | 13 | 0 | 0 | 0 | 0 | 28 |

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

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Extremely Unstable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

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

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: 1

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Moderately Unstable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

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

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

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Slightly Unstable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 1 | 2 | 2 | 0 | 0 | 5 |
| NNE | 0 | 0 | 0 | 3 | 1 | 0 | 4 |
| NE | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| ENE | 0 | 2 | 1 | 0 | 0 | 0 | 3 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ESE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| SE | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 2 | 0 | 1 | 2 | 5 |
| S | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| SSW | 0 | 0 | 0 | 6 | 1 | 0 | 7 |
| SW | 0 | 1 | 1 | 5 | 3 | 2 | 12 |
| WSW | 0 | 2 | 2 | 1 | 3 | 0 | 8 |
| W | 0 | 2 | 1 | 2 | 1 | 1 | 7 |
| WNW | 0 | 1 | 3 | 9 | 4 | 2 | 19 |
| NW | 0 | 2 | 3 | 8 | 0 | 0 | 13 |
| NNW | 0 | 1 | 7 | 4 | 3 | 0 | 15 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 14 | 27 | 42 | 17 | 7 | 107 |

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: 1

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Neutral - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 2 | 10 | 13 | 34 | 11 | 5 | 75 |
| NNE | 2 | 3 | 21 | 13 | 19 | 8 | 66 |
| NE | 0 | 8 | 17 | 25 | 42 | 4 | 96 |
| ENE | 1 | 7 | 23 | 26 | 1 | 0 | 58 |
| E | 1 | 5 | 11 | 12 | 5 | 0 | 34 |
| ESE | 0 | 5 | 4 | 2 | 6 | 0 | 17 |
| SE | 0 | 15 | 9 | 5 | 3 | 0 | 32 |
| SSE | 0 | 4 | 7 | 16 | 8 | 2 | 37 |
| S | 1 | 10 | 31 | 31 | 17 | 1 | 91 |
| SSW | 1 | 3 | 23 | 30 | 4 | 1 | 62 |
| SW | 1 | 4 | 18 | 34 | 25 | 3 | 85 |
| WSW | 1 | 7 | 9 | 14 | 22 | 3 | 56 |
| W | 1 | 14 | 23 | 29 | 10 | 4 | 81 |
| WNW | 3 | 12 | 25 | 47 | 46 | 15 | 148 |
| NW | 1 | 11 | 26 | 49 | 11 | 6 | 104 |
| NNW | 2 | 14 | 33 | 67 | 19 | 2 | 137 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 17 | 132 | 293 | 434 | 249 | 54 | 1179 |

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: 1

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Slightly Stable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 2 | 1 | 9 | 12 | 1 | 0 | 25 |
| NNE | 0 | 0 | 1 | 4 | 1 | 0 | 6 |
| NE | 1 | 2 | 9 | 8 | 0 | 0 | 20 |
| ENE | 3 | 8 | 4 | 1 | 0 | 0 | 16 |
| E | 3 | 6 | 3 | 6 | 2 | 0 | 20 |
| ESE | 2 | 3 | 11 | 9 | 2 | 0 | 27 |
| SE | 1 | 11 | 16 | 18 | 4 | 0 | 50 |
| SSE | 0 | 5 | 13 | 7 | 2 | 0 | 27 |
| S | 1 | 2 | 21 | 16 | 7 | 9 | 56 |
| SSW | 0 | 2 | 15 | 18 | 14 | 1 | 50 |
| SW | 0 | 4 | 7 | 19 | 7 | 4 | 41 |
| WSW | 0 | 2 | 5 | 17 | 8 | 1 | 33 |
| W | 0 | 4 | 11 | 15 | 14 | 10 | 54 |
| WNW | 1 | 5 | 10 | 44 | 31 | 3 | 94 |
| NW | 0 | 4 | 17 | 45 | 5 | 0 | 71 |
| NNW | 1 | 3 | 10 | 31 | 11 | 0 | 56 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 15 | 62 | 162 | 270 | 109 | 28 | 646 |

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: 1

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Moderately Stable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| ENE | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| E | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| ESE | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| SE | 0 | 0 | 1 | 6 | 0 | 0 | 7 |
| SSE | 0 | 0 | 2 | 6 | 1 | 0 | 9 |
| S | 1 | 2 | 3 | 6 | 6 | 0 | 18 |
| SSW | 0 | 0 | 5 | 15 | 2 | 0 | 22 |
| SW | 0 | 2 | 1 | 6 | 0 | 0 | 9 |
| WSW | 0 | 2 | 10 | 6 | 0 | 0 | 18 |
| W | 2 | 3 | 3 | 5 | 0 | 0 | 13 |
| WNW | 0 | 0 | 6 | 3 | 0 | 0 | 9 |
| NW | 0 | 1 | 5 | 4 | 1 | 0 | 11 |
| NNW | 0 | 1 | 1 | 2 | 0 | 0 | 4 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 16 | 39 | 61 | 10 | 0 | 130 |

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 1

Dresden Nuclear Station

Period of Record: January - March 2003
Stability Class - Extremely Stable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

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

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: 1

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Extremely Unstable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 5 | 6 | 0 | 0 | 0 | 11 |
| NNE | 0 | 8 | 15 | 0 | 0 | 0 | 23 |
| NE | 0 | 32 | 25 | 0 | 0 | 0 | 57 |
| ENE | 0 | 28 | 5 | 0 | 0 | 0 | 33 |
| E | 0 | 4 | 3 | 2 | 0 | 0 | 9 |
| ESE | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| SE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| SSE | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| S | 0 | 0 | 2 | 1 | 0 | 0 | 3 |
| SSW | 1 | 1 | 8 | 3 | 1 | 0 | 14 |
| SW | 0 | 1 | 1 | 2 | 1 | 0 | 5 |
| WSW | 1 | 2 | 8 | 9 | 0 | 0 | 20 |
| W | 1 | 0 | 1 | 1 | 0 | 0 | 3 |
| WNW | 0 | 2 | 2 | 8 | 0 | 0 | 12 |
| NW | 0 | 5 | 6 | 0 | 0 | 0 | 11 |
| NNW | 0 | 10 | 10 | 1 | 0 | 0 | 21 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 106 | 92 | 27 | 2 | 0 | 230 |

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

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Moderately Unstable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| NNE | 0 | 3 | 2 | 0 | 0 | 0 | 5 |
| NE | 0 | 12 | 3 | 0 | 0 | 0 | 15 |
| ENE | 0 | 9 | 2 | 0 | 0 | 0 | 11 |
| E | 1 | 2 | 3 | 1 | 0 | 0 | 7 |
| ESE | 0 | 2 | 1 | 1 | 0 | 0 | 4 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| S | 0 | 1 | 2 | 3 | 0 | 0 | 6 |
| SSW | 0 | 0 | 5 | 5 | 0 | 0 | 10 |
| SW | 0 | 0 | 0 | 3 | 1 | 0 | 4 |
| WSW | 0 | 1 | 5 | 1 | 0 | 0 | 7 |
| W | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| WNW | 0 | 2 | 0 | 3 | 0 | 0 | 5 |
| NW | 0 | 2 | 3 | 0 | 0 | 0 | 5 |
| NNW | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 36 | 34 | 17 | 1 | 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

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Slightly Unstable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 1 | 3 | 0 | 0 | 0 | 0 | 4 |
| NNE | 2 | 3 | 0 | 0 | 0 | 0 | 5 |
| NE | 1 | 9 | 6 | 0 | 0 | 0 | 16 |
| ENE | 0 | 5 | 4 | 0 | 0 | 0 | 9 |
| E | 0 | 1 | 2 | 0 | 0 | 0 | 3 |
| ESE | 0 | 2 | 1 | 0 | 0 | 0 | 3 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 1 | 2 | 0 | 0 | 0 | 3 |
| S | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| SSW | 0 | 1 | 3 | 2 | 1 | 0 | 7 |
| SW | 0 | 1 | 2 | 1 | 0 | 0 | 4 |
| WSW | 1 | 1 | 2 | 2 | 0 | 0 | 6 |
| W | 0 | 1 | 3 | 0 | 0 | 0 | 4 |
| WNW | 0 | 2 | 1 | 1 | 0 | 0 | 4 |
| NW | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NNW | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 31 | 33 | 7 | 1 | 0 | 77 |

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

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Neutral - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 8 | 25 | 7 | 0 | 0 | 0 | 40 |
| NNE | 11 | 41 | 21 | 0 | 0 | 0 | 73 |
| NE | 8 | 58 | 35 | 0 | 0 | 0 | 101 |
| ENE | 4 | 26 | 22 | 1 | 0 | 0 | 53 |
| E | 6 | 20 | 34 | 7 | 0 | 0 | 67 |
| ESE | 3 | 16 | 15 | 9 | 0 | 0 | 43 |
| SE | 4 | 6 | 5 | 4 | 0 | 0 | 19 |
| SSE | 3 | 9 | 15 | 3 | 0 | 0 | 30 |
| S | 2 | 4 | 8 | 8 | 0 | 0 | 22 |
| SSW | 4 | 5 | 8 | 16 | 7 | 0 | 40 |
| SW | 3 | 4 | 3 | 6 | 4 | 0 | 20 |
| WSW | 2 | 10 | 12 | 11 | 1 | 7 | 43 |
| W | 4 | 15 | 6 | 3 | 7 | 2 | 37 |
| WNW | 3 | 14 | 12 | 6 | 0 | 0 | 35 |
| NW | 2 | 6 | 11 | 1 | 0 | 0 | 20 |
| NNW | 14 | 14 | 7 | 0 | 0 | 0 | 35 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 81 | 273 | 221 | 75 | 19 | 9 | 678 |

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

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Slightly Stable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 22 | 15 | 4 | 0 | 0 | 0 | 41 |
| NNE | 24 | 41 | 1 | 0 | 0 | 0 | 66 |
| NE | 13 | 79 | 15 | 1 | 0 | 0 | 108 |
| ENE | 3 | 48 | 20 | 1 | 0 | 0 | 72 |
| E | 3 | 49 | 27 | 2 | 0 | 0 | 81 |
| ESE | 0 | 27 | 15 | 6 | 0 | 0 | 48 |
| SE | 6 | 6 | 9 | 2 | 0 | 0 | 23 |
| SSE | 6 | 15 | 23 | 4 | 0 | 0 | 48 |
| S | 8 | 22 | 17 | 14 | 3 | 1 | 65 |
| SSW | 4 | 13 | 12 | 10 | 7 | 0 | 46 |
| SW | 6 | 17 | 11 | 4 | 1 | 0 | 39 |
| WSW | 6 | 9 | 10 | 0 | 4 | 0 | 29 |
| W | 3 | 20 | 7 | 2 | 0 | 0 | 32 |
| WNW | 6 | 10 | 6 | 3 | 0 | 0 | 25 |
| NW | 6 | 8 | 7 | 0 | 0 | 0 | 21 |
| NNW | 17 | 16 | 7 | 0 | 0 | 0 | 40 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 133 | 395 | 191 | 49 | 15 | 1 | 784 |

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

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Moderately Stable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 20 | 3 | 0 | 0 | 0 | 0 | 23 |
| NNE | 12 | 6 | 0 | 0 | 0 | 0 | 18 |
| NE | 2 | 2 | 0 | 0 | 0 | 0 | 4 |
| ENE | 5 | 1 | 0 | 0 | 0 | 0 | 6 |
| E | 5 | 2 | 1 | 0 | 0 | 0 | 8 |
| ESE | 6 | 11 | 2 | 0 | 0 | 0 | 19 |
| SE | 1 | 4 | 0 | 0 | 0 | 0 | 5 |
| SSE | 8 | 12 | 1 | 0 | 0 | 0 | 21 |
| S | 10 | 15 | 2 | 0 | 0 | 0 | 27 |
| SSW | 3 | 10 | 2 | 0 | 0 | 0 | 15 |
| SW | 4 | 13 | 6 | 0 | 0 | 0 | 23 |
| WSW | 3 | 2 | 0 | 0 | 0 | 0 | 5 |
| W | 2 | 2 | 0 | 0 | 0 | 0 | 4 |
| WNW | 7 | 12 | 0 | 0 | 0 | 0 | 19 |
| NW | 18 | 1 | 0 | 0 | 0 | 0 | 19 |
| NNW | 17 | 1 | 0 | 0 | 0 | 0 | 18 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 123 | 97 | 14 | 0 | 0 | 0 | 234 |

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

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Extremely Stable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNE | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 5 | 2 | 0 | 0 | 0 | 0 | 7 |
| SSE | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| S | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| SSW | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| SW | 9 | 5 | 0 | 0 | 0 | 0 | 14 |
| WSW | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| W | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| WNW | 3 | 1 | 0 | 0 | 0 | 0 | 4 |
| NW | 14 | 0 | 0 | 0 | 0 | 0 | 14 |
| NNW | 13 | 0 | 0 | 0 | 0 | 0 | 13 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 68 | 13 | 0 | 0 | 0 | 0 | 81 |

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

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Extremely Unstable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 2 | 3 | 0 | 0 | 5 |
| NNE | 0 | 0 | 1 | 6 | 5 | 0 | 12 |
| NE | 0 | 1 | 10 | 7 | 3 | 0 | 21 |
| ENE | 0 | 4 | 2 | 1 | 0 | 0 | 7 |
| E | 0 | 1 | 3 | 1 | 0 | 0 | 5 |
| ESE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 1 | 2 | 0 | 1 | 4 |
| SW | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| WSW | 0 | 0 | 0 | 4 | 2 | 0 | 6 |
| W | 1 | 0 | 0 | 0 | 1 | 0 | 2 |
| WNW | 0 | 0 | 0 | 1 | 4 | 2 | 7 |
| NW | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| NNW | 0 | 1 | 2 | 3 | 3 | 1 | 10 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 8 | 21 | 29 | 19 | 4 | 82 |

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

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Moderately Unstable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| NNE | 0 | 1 | 3 | 4 | 2 | 0 | 10 |
| NE | 0 | 3 | 6 | 4 | 2 | 0 | 15 |
| ENE | 0 | 6 | 17 | 0 | 0 | 0 | 23 |
| E | 0 | 4 | 1 | 3 | 0 | 0 | 8 |
| ESE | 0 | 1 | 2 | 0 | 0 | 0 | 3 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 3 | 0 | 1 | 0 | 0 | 4 |
| S | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| SSW | 0 | 0 | 2 | 7 | 1 | 0 | 10 |
| SW | 1 | 0 | 0 | 1 | 0 | 0 | 2 |
| WSW | 1 | 1 | 3 | 4 | 3 | 2 | 14 |
| W | 0 | 1 | 1 | 0 | 1 | 0 | 3 |
| WNW | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| NW | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| NNW | 0 | 2 | 4 | 2 | 2 | 0 | 10 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 22 | 44 | 29 | 11 | 5 | 113 |

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

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Slightly Unstable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 3 | 6 | 0 | 0 | 9 |
| NNE | 0 | 3 | 3 | 3 | 1 | 2 | 12 |
| NE | 0 | 4 | 12 | 3 | 1 | 0 | 20 |
| ENE | 0 | 16 | 12 | 0 | 0 | 0 | 28 |
| E | 0 | 2 | 8 | 5 | 1 | 0 | 16 |
| ESE | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| SE | 0 | 3 | 0 | 2 | 0 | 0 | 5 |
| SSE | 1 | 2 | 1 | 5 | 0 | 0 | 9 |
| S | 0 | 0 | 0 | 3 | 1 | 0 | 4 |
| SSW | 0 | 0 | 1 | 9 | 4 | 2 | 16 |
| SW | 0 | 0 | 0 | 3 | 4 | 3 | 10 |
| WSW | 0 | 1 | 5 | 2 | 5 | 0 | 13 |
| W | 0 | 0 | 3 | 2 | 0 | 0 | 5 |
| WNW | 0 | 1 | 5 | 0 | 0 | 2 | 8 |
| NW | 0 | 2 | 5 | 7 | 0 | 1 | 15 |
| NNW | 0 | 2 | 1 | 1 | 0 | 0 | 4 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 37 | 60 | 51 | 17 | 10 | 176 |

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

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Neutral - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 1 | 12 | 20 | 10 | 7 | 0 | 50 |
| NNE | 2 | 14 | 28 | 36 | 9 | 1 | 90 |
| NE | 0 | 14 | 64 | 45 | 7 | 0 | 130 |
| ENE | 2 | 29 | 74 | 22 | 3 | 0 | 130 |
| E | 2 | 14 | 23 | 43 | 15 | 2 | 99 |
| ESE | 1 | 7 | 17 | 16 | 14 | 3 | 58 |
| SE | 1 | 8 | 10 | 12 | 5 | 2 | 38 |
| SSE | 1 | 10 | 12 | 11 | 2 | 0 | 36 |
| S | 3 | 2 | 3 | 14 | 4 | 3 | 29 |
| SSW | 0 | 4 | 7 | 15 | 11 | 14 | 51 |
| SW | 2 | 3 | 2 | 6 | 10 | 7 | 30 |
| WSW | 1 | 4 | 6 | 12 | 10 | 14 | 47 |
| W | 0 | 6 | 16 | 9 | 6 | 9 | 46 |
| WNW | 0 | 6 | 8 | 9 | 8 | 9 | 40 |
| NW | 0 | 4 | 4 | 8 | 17 | 1 | 34 |
| NNW | 1 | 7 | 6 | 14 | 7 | 0 | 35 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 17 | 144 | 300 | 282 | 135 | 65 | 943 |

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

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Slightly Stable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 1 | 11 | 12 | 3 | 0 | 27 |
| NNE | 0 | 4 | 24 | 36 | 3 | 0 | 67 |
| NE | 1 | 8 | 43 | 33 | 1 | 0 | 86 |
| ENE | 1 | 25 | 32 | 1 | 0 | 1 | 60 |
| E | 2 | 7 | 21 | 21 | 3 | 0 | 54 |
| ESE | 0 | 1 | 6 | 15 | 1 | 0 | 23 |
| SE | 1 | 4 | 6 | 7 | 3 | 0 | 21 |
| SSE | 1 | 2 | 6 | 2 | 8 | 1 | 20 |
| S | 3 | 2 | 7 | 16 | 18 | 9 | 55 |
| SSW | 0 | 2 | 11 | 20 | 15 | 11 | 59 |
| SW | 0 | 2 | 8 | 22 | 10 | 0 | 42 |
| WSW | 0 | 5 | 10 | 6 | 2 | 1 | 24 |
| W | 0 | 6 | 8 | 13 | 0 | 0 | 27 |
| WNW | 0 | 1 | 8 | 9 | 0 | 0 | 18 |
| NW | 1 | 1 | 1 | 9 | 4 | 0 | 16 |
| NNW | 0 | 3 | 0 | 8 | 0 | 0 | 11 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 10 | 74 | 202 | 230 | 71 | 23 | 610 |

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

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Moderately Stable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 1 | 3 | 3 | 11 | 0 | 0 | 18 |
| NNE | 0 | 4 | 6 | 7 | 0 | 0 | 17 |
| NE | 1 | 0 | 14 | 9 | 1 | 0 | 25 |
| ENE | 4 | 1 | 0 | 0 | 0 | 0 | 5 |
| E | 1 | 3 | 5 | 0 | 0 | 0 | 9 |
| ESE | 1 | 0 | 1 | 7 | 0 | 0 | 9 |
| SE | 0 | 1 | 11 | 6 | 4 | 0 | 22 |
| SSE | 0 | 2 | 7 | 5 | 0 | 0 | 14 |
| S | 0 | 1 | 4 | 6 | 6 | 0 | 17 |
| SSW | 0 | 1 | 1 | 5 | 4 | 0 | 11 |
| SW | 1 | 2 | 9 | 11 | 7 | 0 | 30 |
| WSW | 0 | 1 | 4 | 5 | 0 | 0 | 10 |
| W | 0 | 5 | 3 | 4 | 0 | 0 | 12 |
| WNW | 0 | 1 | 1 | 4 | 2 | 0 | 8 |
| NW | 0 | 3 | 1 | 3 | 3 | 0 | 10 |
| NNW | 0 | 5 | 2 | 0 | 0 | 0 | 7 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 9 | 33 | 72 | 83 | 27 | 0 | 224 |

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: 2

Dresden Nuclear Station

Period of Record: April - June 2003
Stability Class - Extremely Stable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| NNE | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| NE | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSE | 0 | 1 | 2 | 1 | 0 | 0 | 4 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SSW | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| SW | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| WSW | 0 | 3 | 2 | 2 | 0 | 0 | 7 |
| W | 0 | 1 | 1 | 1 | 0 | 0 | 3 |
| WNW | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| NW | 1 | 0 | 1 | 2 | 0 | 0 | 4 |
| NNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 5 | 16 | 8 | 1 | 0 | 31 |

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

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Extremely Unstable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 2 | 19 | 0 | 0 | 0 | 0 | 21 |
| NNE | 0 | 16 | 0 | 0 | 0 | 0 | 16 |
| NE | 1 | 13 | 10 | 0 | 0 | 0 | 24 |
| ENE | 0 | 19 | 8 | 0 | 0 | 0 | 27 |
| E | 0 | 6 | 5 | 0 | 0 | 0 | 11 |
| ESE | 0 | 7 | 2 | 0 | 0 | 0 | 9 |
| SE | 0 | 7 | 5 | 0 | 0 | 0 | 12 |
| SSE | 2 | 2 | 5 | 3 | 0 | 0 | 12 |
| S | 0 | 3 | 4 | 0 | 0 | 0 | 7 |
| SSW | 0 | 4 | 16 | 8 | 0 | 0 | 28 |
| SW | 0 | 4 | 9 | 6 | 0 | 0 | 19 |
| WSW | 1 | 3 | 15 | 0 | 0 | 0 | 19 |
| W | 0 | 5 | 9 | 1 | 0 | 0 | 15 |
| WNW | 0 | 13 | 19 | 0 | 0 | 0 | 32 |
| NW | 0 | 7 | 4 | 0 | 0 | 0 | 11 |
| NNW | 2 | 19 | 1 | 0 | 0 | 0 | 22 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 8 | 147 | 112 | 18 | 0 | 0 | 285 |

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

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Moderately Unstable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 3 | 2 | 0 | 0 | 0 | 0 | 5 |
| NNE | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| NE | 0 | 5 | 1 | 0 | 0 | 0 | 6 |
| ENE | 1 | 1 | 1 | 0 | 0 | 0 | 3 |
| E | 1 | 2 | 3 | 0 | 0 | 0 | 6 |
| ESE | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| SE | 0 | 5 | 3 | 0 | 0 | 0 | 8 |
| SSE | 1 | 3 | 7 | 1 | 0 | 0 | 12 |
| S | 0 | 1 | 5 | 0 | 0 | 0 | 6 |
| SSW | 0 | 4 | 2 | 2 | 0 | 0 | 8 |
| SW | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| WSW | 0 | 4 | 5 | 0 | 0 | 0 | 9 |
| W | 0 | 5 | 4 | 0 | 0 | 0 | 9 |
| WNW | 1 | 2 | 6 | 0 | 0 | 0 | 9 |
| NW | 2 | 4 | 3 | 0 | 0 | 0 | 9 |
| NNW | 2 | 4 | 0 | 0 | 0 | 0 | 6 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 12 | 48 | 42 | 3 | 0 | 0 | 105 |

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

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Slightly Unstable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 3 | 1 | 0 | 0 | 0 | 0 | 4 |
| NNE | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| NE | 1 | 4 | 2 | 0 | 0 | 0 | 7 |
| ENE | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| E | 1 | 7 | 0 | 0 | 0 | 0 | 8 |
| ESE | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| SE | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| SSE | 0 | 3 | 3 | 1 | 0 | 0 | 7 |
| S | 0 | 4 | 4 | 1 | 0 | 0 | 9 |
| SSW | 1 | 3 | 5 | 0 | 0 | 0 | 9 |
| SW | 0 | 4 | 2 | 2 | 0 | 0 | 8 |
| WSW | 0 | 6 | 3 | 0 | 0 | 0 | 9 |
| W | 0 | 3 | 7 | 0 | 0 | 0 | 10 |
| WNW | 0 | 3 | 4 | 0 | 0 | 0 | 7 |
| NW | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| NNW | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 7 | 54 | 32 | 4 | 0 | 0 | 97 |

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

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Neutral - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 8 | 5 | 0 | 0 | 0 | 0 | 13 |
| NNE | 4 | 8 | 0 | 0 | 0 | 0 | 12 |
| NE | 4 | 38 | 3 | 0 | 0 | 0 | 45 |
| ENE | 3 | 23 | 7 | 0 | 0 | 0 | 33 |
| E | 5 | 17 | 2 | 0 | 0 | 0 | 24 |
| ESE | 2 | 14 | 8 | 0 | 0 | 0 | 24 |
| SE | 0 | 8 | 14 | 0 | 0 | 0 | 22 |
| SSE | 3 | 9 | 17 | 1 | 0 | 0 | 30 |
| S | 6 | 11 | 15 | 2 | 0 | 0 | 34 |
| SSW | 5 | 11 | 18 | 6 | 0 | 0 | 40 |
| SW | 5 | 15 | 18 | 0 | 0 | 0 | 38 |
| WSW | 10 | 23 | 12 | 0 | 0 | 0 | 45 |
| W | 3 | 22 | 21 | 5 | 0 | 0 | 51 |
| WNW | 3 | 18 | 14 | 0 | 0 | 0 | 35 |
| NW | 8 | 6 | 5 | 0 | 0 | 0 | 19 |
| NNW | 7 | 9 | 1 | 0 | 0 | 0 | 17 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 76 | 237 | 155 | 14 | 0 | 0 | 482 |

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

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Slightly Stable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 19 | 10 | 1 | 0 | 0 | 0 | 30 |
| NNE | 20 | 14 | 1 | 0 | 0 | 0 | 35 |
| NE | 10 | 37 | 3 | 0 | 0 | 0 | 50 |
| ENE | 4 | 50 | 0 | 0 | 0 | 0 | 54 |
| E | 7 | 26 | 6 | 0 | 0 | 0 | 39 |
| ESE | 4 | 30 | 9 | 0 | 0 | 0 | 43 |
| SE | 2 | 29 | 18 | 0 | 0 | 0 | 49 |
| SSE | 9 | 29 | 14 | 0 | 0 | 0 | 52 |
| S | 14 | 35 | 21 | 4 | 0 | 0 | 74 |
| SSW | 11 | 34 | 16 | 0 | 0 | 0 | 61 |
| SW | 14 | 28 | 5 | 0 | 0 | 0 | 47 |
| WSW | 8 | 18 | 1 | 0 | 0 | 0 | 27 |
| W | 16 | 33 | 19 | 0 | 0 | 0 | 68 |
| WNW | 17 | 39 | 4 | 0 | 0 | 0 | 60 |
| NW | 18 | 16 | 3 | 0 | 0 | 0 | 37 |
| NNW | 27 | 18 | 1 | 0 | 0 | 0 | 46 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 200 | 446 | 122 | 4 | 0 | 0 | 772 |

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

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Moderately Stable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 8 | 1 | 0 | 0 | 0 | 0 | 9 |
| NNE | 7 | 1 | 0 | 0 | 0 | 0 | 8 |
| NE | 2 | 5 | 0 | 0 | 0 | 0 | 7 |
| ENE | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| E | 4 | 3 | 1 | 0 | 0 | 0 | 8 |
| ESE | 7 | 19 | 0 | 0 | 0 | 0 | 26 |
| SE | 8 | 16 | 4 | 0 | 0 | 0 | 28 |
| SSE | 25 | 16 | 0 | 0 | 0 | 0 | 41 |
| S | 15 | 11 | 0 | 0 | 0 | 0 | 26 |
| SSW | 14 | 13 | 2 | 0 | 0 | 0 | 29 |
| SW | 14 | 24 | 1 | 0 | 0 | 0 | 39 |
| WSW | 14 | 6 | 1 | 0 | 0 | 0 | 21 |
| W | 14 | 7 | 1 | 0 | 0 | 0 | 22 |
| WNW | 10 | 6 | 0 | 0 | 0 | 0 | 16 |
| NW | 15 | 5 | 1 | 0 | 0 | 0 | 21 |
| NNW | 15 | 1 | 0 | 0 | 0 | 0 | 16 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 175 | 134 | 11 | 0 | 0 | 0 | 320 |

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

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Extremely Stable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| ENE | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| ESE | 1 | 4 | 1 | 0 | 0 | 0 | 6 |
| SE | 3 | 3 | 0 | 0 | 0 | 0 | 6 |
| SSE | 5 | 3 | 0 | 0 | 0 | 0 | 8 |
| S | 11 | 2 | 0 | 0 | 0 | 0 | 13 |
| SSW | 7 | 3 | 0 | 0 | 0 | 0 | 10 |
| SW | 12 | 11 | 0 | 0 | 0 | 0 | 23 |
| WSW | 11 | 0 | 0 | 0 | 0 | 0 | 11 |
| W | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| WNW | 3 | 1 | 0 | 1 | 0 | 0 | 5 |
| NW | 14 | 0 | 0 | 0 | 0 | 0 | 14 |
| NNW | 6 | 1 | 0 | 0 | 0 | 0 | 7 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 86 | 28 | 1 | 1 | 0 | 0 | 116 |

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

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Extremely Unstable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

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

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: 4

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Moderately Unstable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 6 | 3 | 1 | 0 | 0 | 10 |
| NNE | 0 | 2 | 3 | 2 | 0 | 0 | 7 |
| NE | 0 | 2 | 6 | 6 | 0 | 0 | 14 |
| ENE | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| E | 0 | 0 | 3 | 3 | 0 | 0 | 6 |
| ESE | 0 | 1 | 4 | 0 | 0 | 0 | 5 |
| SE | 0 | 4 | 3 | 0 | 0 | 0 | 7 |
| SSE | 0 | 0 | 2 | 1 | 2 | 0 | 5 |
| S | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| SSW | 0 | 1 | 3 | 5 | 0 | 0 | 9 |
| SW | 0 | 1 | 1 | 3 | 1 | 0 | 6 |
| WSW | 0 | 1 | 2 | 3 | 1 | 0 | 7 |
| W | 0 | 2 | 1 | 3 | 0 | 0 | 6 |
| WNW | 0 | 1 | 8 | 4 | 4 | 0 | 17 |
| NW | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| NNW | 0 | 5 | 1 | 1 | 0 | 0 | 7 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 26 | 48 | 34 | 8 | 0 | 116 |

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: 4

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Slightly Unstable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 2 | 8 | 0 | 0 | 0 | 10 |
| NNE | 1 | 6 | 4 | 3 | 0 | 0 | 14 |
| NE | 0 | 1 | 3 | 4 | 0 | 0 | 8 |
| ENE | 0 | 5 | 8 | 0 | 0 | 0 | 13 |
| E | 1 | 4 | 9 | 1 | 0 | 0 | 15 |
| ESE | 0 | 5 | 2 | 0 | 0 | 0 | 7 |
| SE | 0 | 6 | 5 | 3 | 0 | 0 | 14 |
| SSE | 0 | 2 | 8 | 3 | 2 | 0 | 15 |
| S | 0 | 1 | 4 | 2 | 1 | 0 | 8 |
| SSW | 0 | 6 | 3 | 12 | 0 | 1 | 22 |
| SW | 0 | 2 | 3 | 4 | 1 | 1 | 11 |
| WSW | 0 | 3 | 5 | 7 | 0 | 0 | 15 |
| W | 0 | 0 | 6 | 4 | 1 | 0 | 11 |
| WNW | 0 | 4 | 8 | 5 | 1 | 0 | 18 |
| NW | 0 | 2 | 2 | 3 | 0 | 0 | 7 |
| NNW | 2 | 8 | 0 | 1 | 1 | 0 | 12 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 57 | 78 | 52 | 7 | 2 | 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: 4

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Neutral - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 2 | 8 | 10 | 5 | 1 | 0 | 26 |
| NNE | 1 | 8 | 19 | 14 | 0 | 0 | 42 |
| NE | 0 | 5 | 25 | 18 | 0 | 0 | 48 |
| ENE | 3 | 22 | 41 | 2 | 0 | 0 | 68 |
| E | 1 | 16 | 15 | 8 | 1 | 0 | 41 |
| ESE | 2 | 4 | 14 | 5 | 0 | 0 | 25 |
| SE | 4 | 12 | 11 | 9 | 0 | 0 | 36 |
| SSE | 1 | 9 | 16 | 14 | 1 | 0 | 41 |
| S | 5 | 10 | 11 | 25 | 1 | 1 | 53 |
| SSW | 6 | 8 | 14 | 16 | 5 | 0 | 49 |
| SW | 5 | 13 | 8 | 16 | 4 | 0 | 46 |
| WSW | 4 | 20 | 18 | 19 | 2 | 0 | 63 |
| W | 2 | 17 | 17 | 17 | 8 | 0 | 61 |
| WNW | 2 | 8 | 13 | 26 | 6 | 1 | 56 |
| NW | 2 | 8 | 7 | 8 | 3 | 1 | 29 |
| NNW | 2 | 7 | 4 | 3 | 0 | 0 | 16 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 42 | 175 | 243 | 205 | 32 | 3 | 700 |

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: 4

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Slightly Stable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 3 | 12 | 16 | 1 | 1 | 33 |
| NNE | 0 | 2 | 14 | 13 | 0 | 0 | 29 |
| NE | 3 | 6 | 23 | 11 | 0 | 0 | 43 |
| ENE | 2 | 17 | 32 | 0 | 0 | 0 | 51 |
| E | 1 | 8 | 13 | 8 | 2 | 0 | 32 |
| ESE | 0 | 4 | 11 | 12 | 6 | 0 | 33 |
| SE | 0 | 7 | 19 | 27 | 1 | 0 | 54 |
| SSE | 2 | 6 | 15 | 23 | 2 | 0 | 48 |
| S | 1 | 6 | 17 | 42 | 6 | 2 | 74 |
| SSW | 2 | 8 | 23 | 29 | 10 | 1 | 73 |
| SW | 1 | 6 | 14 | 25 | 2 | 0 | 48 |
| WSW | 0 | 10 | 11 | 15 | 0 | 0 | 36 |
| W | 3 | 12 | 15 | 26 | 9 | 0 | 65 |
| WNW | 0 | 7 | 11 | 29 | 4 | 0 | 51 |
| NW | 3 | 5 | 14 | 15 | 4 | 0 | 41 |
| NNW | 1 | 4 | 9 | 13 | 5 | 0 | 32 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 19 | 111 | 253 | 304 | 52 | 4 | 743 |

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: 4

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Moderately Stable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 4 | 4 | 5 | 0 | 0 | 13 |
| NNE | 0 | 2 | 8 | 6 | 1 | 0 | 17 |
| NE | 1 | 1 | 2 | 5 | 0 | 0 | 9 |
| ENE | 0 | 6 | 4 | 0 | 0 | 0 | 10 |
| E | 1 | 3 | 0 | 2 | 0 | 0 | 6 |
| ESE | 1 | 9 | 3 | 3 | 2 | 0 | 18 |
| SE | 2 | 4 | 12 | 15 | 2 | 0 | 35 |
| SSE | 0 | 6 | 16 | 17 | 0 | 0 | 39 |
| S | 1 | 4 | 17 | 6 | 5 | 0 | 33 |
| SSW | 1 | 3 | 10 | 20 | 1 | 0 | 35 |
| SW | 6 | 10 | 11 | 11 | 4 | 0 | 42 |
| WSW | 1 | 6 | 8 | 10 | 0 | 0 | 25 |
| W | 2 | 4 | 9 | 7 | 0 | 1 | 23 |
| WNW | 3 | 6 | 6 | 6 | 0 | 0 | 21 |
| NW | 1 | 7 | 6 | 10 | 0 | 0 | 24 |
| NNW | 0 | 2 | 1 | 0 | 1 | 0 | 4 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 20 | 77 | 117 | 123 | 16 | 1 | 354 |

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: 4

Dresden Nuclear Station

Period of Record: July - September 2003
Stability Class - Extremely Stable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NNE | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| NE | 0 | 3 | 3 | 1 | 0 | 0 | 7 |
| ENE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| ESE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SE | 0 | 1 | 0 | 2 | 0 | 0 | 3 |
| SSE | 0 | 1 | 2 | 2 | 0 | 0 | 5 |
| S | 0 | 0 | 0 | 4 | 0 | 0 | 4 |
| SSW | 0 | 0 | 1 | 1 | 1 | 0 | 3 |
| SW | 1 | 0 | 3 | 2 | 2 | 0 | 8 |
| WSW | 0 | 0 | 2 | 2 | 0 | 0 | 4 |
| W | 0 | 0 | 9 | 1 | 0 | 0 | 10 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 0 | 1 | 3 | 0 | 0 | 0 | 4 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 10 | 24 | 15 | 3 | 0 | 53 |

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: 4

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Extremely Unstable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 1 | 11 | 0 | 0 | 0 | 0 | 12 |
| NNE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 4 | 4 | 0 | 0 | 0 | 8 |
| ENE | 1 | 6 | 0 | 0 | 0 | 0 | 7 |
| E | 0 | 4 | 2 | 0 | 0 | 0 | 6 |
| ESE | 0 | 4 | 1 | 0 | 0 | 0 | 5 |
| SE | 0 | 2 | 2 | 0 | 0 | 0 | 4 |
| SSE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| S | 0 | 0 | 6 | 3 | 0 | 0 | 9 |
| SSW | 0 | 0 | 3 | 7 | 0 | 0 | 10 |
| SW | 0 | 0 | 7 | 2 | 2 | 0 | 11 |
| WSW | 0 | 3 | 11 | 3 | 1 | 0 | 18 |
| W | 0 | 4 | 7 | 6 | 0 | 0 | 17 |
| WNW | 0 | 3 | 28 | 3 | 0 | 0 | 34 |
| NW | 0 | 2 | 7 | 6 | 0 | 0 | 15 |
| NNW | 0 | 10 | 5 | 0 | 0 | 0 | 15 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 55 | 83 | 30 | 3 | 0 | 173 |

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Moderately Unstable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 1 | 1 | 1 | 0 | 0 | 0 | 3 |
| ENE | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| E | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| ESE | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| SE | 1 | 2 | 2 | 0 | 0 | 0 | 5 |
| SSE | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| S | 0 | 0 | 4 | 3 | 1 | 0 | 8 |
| SSW | 0 | 0 | 2 | 1 | 1 | 0 | 4 |
| SW | 0 | 1 | 0 | 2 | 3 | 0 | 6 |
| WSW | 0 | 1 | 3 | 1 | 0 | 0 | 5 |
| W | 0 | 3 | 4 | 0 | 1 | 0 | 8 |
| WNW | 0 | 0 | 4 | 1 | 0 | 0 | 5 |
| NW | 0 | 1 | 5 | 1 | 0 | 0 | 7 |
| NNW | 0 | 3 | 1 | 0 | 0 | 0 | 4 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 19 | 30 | 9 | 6 | 0 | 66 |

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Slightly Unstable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| NNE | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| ESE | 0 | 2 | 2 | 0 | 0 | 0 | 4 |
| SE | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| SSE | 0 | 3 | 2 | 1 | 0 | 0 | 6 |
| S | 0 | 1 | 2 | 3 | 1 | 0 | 7 |
| SSW | 0 | 0 | 2 | 1 | 0 | 0 | 3 |
| SW | 0 | 0 | 1 | 3 | 0 | 0 | 4 |
| WSW | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| W | 0 | 5 | 5 | 1 | 1 | 0 | 12 |
| WNW | 0 | 4 | 3 | 0 | 0 | 0 | 7 |
| NW | 2 | 4 | 2 | 1 | 0 | 0 | 9 |
| NNW | 1 | 0 | 1 | 1 | 0 | 0 | 3 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 26 | 23 | 11 | 2 | 0 | 66 |

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Neutral - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 1 | 12 | 2 | 0 | 0 | 0 | 15 |
| NNE | 4 | 5 | 4 | 3 | 0 | 0 | 16 |
| NE | 2 | 9 | 8 | 0 | 0 | 0 | 19 |
| ENE | 1 | 12 | 1 | 0 | 0 | 0 | 14 |
| E | 0 | 39 | 23 | 1 | 0 | 0 | 63 |
| ESE | 2 | 22 | 24 | 2 | 0 | 0 | 50 |
| SE | 2 | 9 | 14 | 5 | 0 | 0 | 30 |
| SSE | 4 | 17 | 30 | 20 | 1 | 0 | 72 |
| S | 1 | 13 | 34 | 24 | 12 | 0 | 84 |
| SSW | 1 | 10 | 32 | 26 | 4 | 0 | 73 |
| SW | 2 | 10 | 17 | 7 | 1 | 0 | 37 |
| WSW | 2 | 15 | 6 | 3 | 1 | 0 | 27 |
| W | 2 | 25 | 35 | 26 | 0 | 2 | 90 |
| WNW | 4 | 23 | 49 | 19 | 4 | 1 | 100 |
| NW | 7 | 26 | 57 | 18 | 0 | 0 | 108 |
| NNW | 5 | 25 | 15 | 9 | 0 | 0 | 54 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 40 | 272 | 351 | 163 | 23 | 3 | 852 |

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Slightly Stable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 6 | 16 | 3 | 0 | 0 | 0 | 25 |
| NNE | 8 | 5 | 4 | 0 | 0 | 0 | 17 |
| NE | 12 | 14 | 0 | 0 | 0 | 0 | 26 |
| ENE | 6 | 13 | 0 | 0 | 0 | 0 | 19 |
| E | 5 | 34 | 11 | 0 | 0 | 0 | 50 |
| ESE | 6 | 34 | 16 | 0 | 0 | 0 | 56 |
| SE | 2 | 17 | 8 | 2 | 0 | 0 | 29 |
| SSE | 4 | 19 | 26 | 10 | 6 | 0 | 65 |
| S | 5 | 9 | 28 | 18 | 4 | 0 | 64 |
| SSW | 7 | 19 | 36 | 12 | 6 | 0 | 80 |
| SW | 3 | 19 | 16 | 5 | 0 | 0 | 43 |
| WSW | 7 | 14 | 11 | 5 | 0 | 0 | 37 |
| W | 11 | 31 | 5 | 1 | 0 | 0 | 48 |
| WNW | 16 | 36 | 29 | 12 | 0 | 0 | 93 |
| NW | 17 | 44 | 26 | 1 | 0 | 0 | 88 |
| NNW | 7 | 25 | 7 | 0 | 0 | 0 | 39 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 122 | 349 | 226 | 66 | 16 | 0 | 779 |

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Moderately Stable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| NNE | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NE | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| ENE | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| E | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| ESE | 3 | 22 | 0 | 0 | 0 | 0 | 25 |
| SE | 5 | 16 | 3 | 0 | 0 | 0 | 24 |
| SSE | 7 | 4 | 0 | 0 | 0 | 0 | 11 |
| S | 8 | 5 | 0 | 0 | 0 | 0 | 13 |
| SSW | 4 | 4 | 0 | 0 | 0 | 0 | 8 |
| SW | 4 | 9 | 2 | 0 | 0 | 0 | 15 |
| WSW | 5 | 5 | 2 | 0 | 0 | 0 | 12 |
| W | 6 | 12 | 0 | 0 | 0 | 0 | 18 |
| WNW | 8 | 16 | 0 | 0 | 0 | 0 | 24 |
| NW | 7 | 1 | 0 | 0 | 0 | 0 | 8 |
| NNW | 11 | 3 | 0 | 0 | 0 | 0 | 14 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 78 | 99 | 7 | 0 | 0 | 0 | 184 |

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Extremely Stable - 150Ft-35Ft Delta-T (F)
Winds Measured at 35 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| ESE | 2 | 5 | 0 | 0 | 0 | 0 | 7 |
| SE | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| SSW | 9 | 1 | 0 | 0 | 0 | 0 | 10 |
| SW | 10 | 6 | 0 | 0 | 0 | 0 | 16 |
| WSW | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| W | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 3 | 1 | 0 | 0 | 0 | 0 | 4 |
| NNW | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 41 | 16 | 0 | 0 | 0 | 0 | 57 |

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Extremely Unstable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

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

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Moderately Unstable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| NNE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 3 | 0 | 2 | 0 | 0 | 5 |
| ENE | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| ESE | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| SE | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| SSE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 0 | 3 | 1 | 0 | 4 |
| SSW | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| SW | 0 | 0 | 1 | 1 | 0 | 1 | 3 |
| WSW | 0 | 0 | 0 | 3 | 2 | 0 | 5 |
| W | 0 | 0 | 3 | 2 | 1 | 0 | 6 |
| WNW | 0 | 1 | 3 | 9 | 1 | 1 | 15 |
| NW | 0 | 0 | 0 | 1 | 2 | 2 | 5 |
| NNW | 0 | 2 | 5 | 2 | 0 | 0 | 9 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 8 | 25 | 23 | 7 | 4 | 67 |

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Slightly Unstable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 3 | 2 | 0 | 0 | 0 | 5 |
| NNE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NE | 0 | 1 | 0 | 2 | 0 | 0 | 3 |
| ENE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| ESE | 0 | 1 | 3 | 0 | 0 | 0 | 4 |
| SE | 0 | 2 | 2 | 0 | 0 | 0 | 4 |
| SSE | 0 | 0 | 1 | 1 | 1 | 0 | 3 |
| S | 0 | 0 | 0 | 5 | 2 | 0 | 7 |
| SSW | 0 | 0 | 5 | 1 | 4 | 0 | 10 |
| SW | 0 | 0 | 4 | 0 | 0 | 1 | 5 |
| WSW | 0 | 0 | 3 | 4 | 0 | 2 | 9 |
| W | 0 | 0 | 1 | 2 | 2 | 2 | 7 |
| WNW | 0 | 0 | 4 | 8 | 0 | 0 | 12 |
| NW | 0 | 1 | 2 | 2 | 2 | 0 | 7 |
| NNW | 0 | 4 | 1 | 0 | 0 | 0 | 5 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 14 | 30 | 25 | 11 | 5 | 85 |

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Neutral - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 8 | 8 | 3 | 2 | 0 | 21 |
| NNE | 1 | 4 | 4 | 2 | 4 | 3 | 18 |
| NE | 1 | 8 | 5 | 7 | 2 | 0 | 23 |
| ENE | 0 | 12 | 17 | 1 | 0 | 0 | 30 |
| E | 0 | 12 | 36 | 26 | 7 | 0 | 81 |
| ESE | 0 | 10 | 12 | 27 | 4 | 0 | 53 |
| SE | 2 | 12 | 11 | 6 | 10 | 2 | 43 |
| SSE | 1 | 6 | 23 | 39 | 26 | 6 | 101 |
| S | 0 | 4 | 12 | 30 | 23 | 21 | 90 |
| SSW | 1 | 4 | 18 | 20 | 31 | 11 | 85 |
| SW | 1 | 6 | 5 | 22 | 9 | 6 | 49 |
| WSW | 0 | 7 | 15 | 7 | 3 | 8 | 40 |
| W | 2 | 13 | 28 | 29 | 24 | 23 | 119 |
| WNW | 1 | 10 | 20 | 42 | 26 | 8 | 107 |
| NW | 3 | 14 | 27 | 57 | 37 | 5 | 143 |
| NNW | 1 | 11 | 24 | 17 | 10 | 3 | 66 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 14 | 141 | 265 | 335 | 218 | 96 | 1069 |

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Slightly Stable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 1 | 2 | 9 | 12 | 3 | 0 | 27 |
| NNE | 1 | 5 | 0 | 13 | 6 | 0 | 25 |
| NE | 0 | 2 | 11 | 2 | 0 | 0 | 15 |
| ENE | 2 | 8 | 12 | 0 | 0 | 0 | 22 |
| E | 0 | 6 | 9 | 8 | 0 | 0 | 23 |
| ESE | 2 | 4 | 11 | 15 | 7 | 0 | 39 |
| SE | 0 | 9 | 12 | 20 | 2 | 1 | 44 |
| SSE | 0 | 3 | 21 | 14 | 5 | 8 | 51 |
| S | 3 | 3 | 1 | 16 | 23 | 18 | 64 |
| SSW | 0 | 4 | 9 | 22 | 35 | 8 | 78 |
| SW | 1 | 8 | 9 | 25 | 10 | 1 | 54 |
| WSW | 1 | 7 | 11 | 14 | 10 | 0 | 43 |
| W | 0 | 5 | 21 | 19 | 4 | 1 | 50 |
| WNW | 1 | 6 | 13 | 24 | 25 | 9 | 78 |
| NW | 1 | 5 | 16 | 37 | 13 | 1 | 73 |
| NNW | 0 | 5 | 5 | 20 | 3 | 0 | 33 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 13 | 82 | 170 | 261 | 146 | 47 | 719 |

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Moderately Stable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 2 | 2 | 7 | 3 | 0 | 14 |
| NNE | 0 | 1 | 2 | 1 | 0 | 0 | 4 |
| NE | 0 | 1 | 2 | 1 | 0 | 0 | 4 |
| ENE | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| E | 1 | 1 | 2 | 0 | 0 | 0 | 4 |
| ESE | 0 | 0 | 2 | 5 | 0 | 0 | 7 |
| SE | 0 | 0 | 1 | 13 | 1 | 0 | 15 |
| SSE | 0 | 0 | 10 | 15 | 1 | 0 | 26 |
| S | 0 | 1 | 3 | 6 | 4 | 0 | 14 |
| SSW | 0 | 1 | 2 | 2 | 2 | 0 | 7 |
| SW | 0 | 3 | 4 | 5 | 1 | 0 | 13 |
| WSW | 0 | 0 | 7 | 6 | 1 | 0 | 14 |
| W | 0 | 2 | 6 | 5 | 1 | 0 | 14 |
| WNW | 0 | 1 | 3 | 20 | 6 | 0 | 30 |
| NW | 0 | 0 | 1 | 7 | 0 | 0 | 8 |
| NNW | 0 | 1 | 3 | 3 | 1 | 0 | 8 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 17 | 50 | 96 | 21 | 0 | 185 |

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

Dresden Nuclear Station

Period of Record: October - December 2003
Stability Class - Extremely Stable - 300Ft-35Ft Delta-T (F)
Winds Measured at 300 Feet

| Wind Direction | Wind Speed (in mph) 1-3 | 4-7 | 8-12 | 13-18 | 19-24 | > 24 | Total |
|---|---|---|---|---|---|---|---|
| N | 0 | 0 | 0 | 6 | 0 | 0 | 6 |
| NNE | 0 | 0 | 0 | 7 | 0 | 0 | 7 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ENE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| ESE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| SE | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| SSE | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| S | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| SSW | 0 | 0 | 1 | 2 | 2 | 0 | 5 |
| SW | 0 | 0 | 7 | 8 | 1 | 0 | 16 |
| WSW | 0 | 3 | 5 | 7 | 0 | 0 | 15 |
| W | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| WNW | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NNW | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Variable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 6 | 15 | 35 | 4 | 0 | 60 |

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

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# APPENDIX III

## 2003 REMP SAMPLE RESULTS

TABLE OF CONTENTS

## LIST OF TABLES

## 1.0 INTRODUCTION

The following constitutes the 2003 Progress Report for the Radiological Environmental Monitoring Program conducted at the Dresden Nuclear Power Station, Morris, Illinois. Results of completed analyses are presented in the attached tables.

Data obtained in the program are well within the ranges previously encountered in the program and to be expected in the environmental media sampled.

For all gamma isotopic analyses, spectrum is computer scanned from 80 to 2048 keV. Specifically included are Mn-54, Fe-59, Co-58, Co-60, Zn-65, Zr-95, Nb-95, I-131, Ba-140, La-140, Cs-134 and Cs-137. Naturally occurring gamma-emitters, such as K-40 and Ra daughters, are frequently detected but not listed here. The data is reported in the format of x±2s;2TPU, where "x" is the significant result, "s" is the one standard deviation counting uncertainty, and TPU is the total propagated uncertainty at the one sigma confidence level.

Locations denoted by a "(C)" after site code refer to control locations.

All concentrations, except gross beta, are decay corrected to the time of collection.

TLD data is provided by Exelon Generation Company.

Deviations from Scheduled Sampling and Corrective Actions Taken

All samples were collected within the scheduled period unless noted otherwise in the Listing of Missed Samples.

Unusual Environmental Measurements

None for 2003.

| Sample Type | Location Code | Collection Date | Comments |
|---|---|---|---|

## 2.0 LISTING OF MISSED SAMPLES

| Sample Type | Location Code | Expected Collection Date | Reason |
|---|---|---|---|
| A/I | D-02 | 01-31-03 | No AP sample; power outage. Charcoal runtime = 1 week plus 28.3 hours. Station Point of Contact notified. |
| A | D-02 | 02-07-03 to 12-26-03 | No sample; no electricity. Unable to field check pump. |
| TLD | OTHER | 03-07-03 | TLD found missing during monthly visual check; placed Spare #D2031955 ARE. |
| A/I | D-07 | 10-10-03 | No particulate sample due to blown fuse; runtime of 16.5 hours does not support viable air sample. Charcoal volume based on one week plus 16.5 hours. |

## 3.0 LISTING OF TABLE ANOMALIES

| Sample Type | Location Code | Collection Date | Reason |
|---|---|---|---|
| A | D-04 | 03-21-03 | Low reading of 164.6 hours possibly due to storms in area. |
| TLD | OTHER | 05-02-03 | Collector moved TLDs D-203-1 & 2 to new utility poles after road widening. |
| A/I | D-07 | 05-09-03 | Low reading of 80.4 hours due to power outage. Station Point of Contact notified. |
| A | D-07 | 05-16-03 | Low reading of 153.9 hours due to recent power restoration. |
| A | D-01 | 07-11-03 | Low meter reading of 140.6 hours possibly due to storms in area. |
| A | D-03 | 07-11-03 | Low meter reading of 120.0 hours possibly due to storms in area. |
| A | D-04 | 07-11-03 | Low meter reading of 125.0 hours possibly due to storms in area. |
| A | D-07 | 07-18-03 | Estimated timer reading; collector placed new timer. |
| A | D-07 | 07-25-03 | No apparent reason for low timer reading of 160.8 hours. |
| A | D-07 | 10-10-03 | No electricity due to blown fuse; collector replaced fuse. |

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## 4.0 ANALYSES DATA TABLES

Table 1. Airborne Particulates and Iodine Cartridges

Collection: Airborne Particulates - Continuous; weekly exchange
Iodine cartridges - Continuous; biweekly exchange

Required LLD: Gross Beta = 0.01, I-131 = 0.07 pCi/m³

Units: $10^{-2}$ pCi/m³

D-01 Onsite Station 1

| Date Collected | Volume (m³) | Gross Beta | I-131[a] | Date Collected | Volume (m³) | Gross Beta | I-131[a] |
|---|---|---|---|---|---|---|---|
| 01-03-03 | 279 | 4.0 ± 0.5 ; 0.9 | -0.3 ± 0.3 ; 0.3 | 07-04-03 | 289 | 2.6 ± 0.3 ; 0.6 | -1.0 ± 0.4 ; 0.4 |
| 01-10-03 | 287 | 2.5 ± 0.4 ; 0.6 | - | 07-11-03 | 238[b] | 2.2 ± 0.3 ; 0.5 | - |
| 01-17-03 | 283 | 2.2 ± 0.3 ; 0.5 | 0.5 ± 0.3 ; 0.3 | 07-18-03 | 283 | 1.5 ± 0.3 ; 0.4 | 0.9 ± 0.3 ; 0.4 |
| 01-24-03 | 285 | 3.0 ± 0.4 ; 0.7 | - | 07-25-03 | 284 | 1.7 ± 0.3 ; 0.4 | - |
| 01-31-03 | 285 | 3.3 ± 0.4 ; 0.7 | 0.8 ± 0.5 ; 0.5 | 08-01-03 | 283 | 1.8 ± 0.3 ; 0.5 | 0.2 ± 0.3 ; 0.3 |
| 02-07-03 | 285 | 3.0 ± 0.4 ; 0.7 | - | 08-08-03 | 300 | 2.0 ± 0.3 ; 0.5 | - |
| 02-14-03 | 284 | 2.1 ± 0.4 ; 0.5 | 0.7 ± 0.4 ; 0.4 | 08-15-03 | 284 | 2.0 ± 0.3 ; 0.5 | -0.5 ± 0.3 ; 0.3 |
| 02-21-03 | 283 | 1.5 ± 0.4 ; 0.5 | - | 08-22-03 | 275 | 3.1 ± 0.4 ; 0.7 | - |
| 02-28-03 | 284 | 2.9 ± 0.4 ; 0.7 | 0.1 ± 0.4 ; 0.4 | 08-29-03 | 284 | 3.9 ± 0.4 ; 0.8 | 0.4 ± 0.3 ; 0.4 |
| 03-07-03 | 288 | 3.2 ± 0.4 ; 0.7 | - | 09-05-03 | 285 | 1.6 ± 0.3 ; 0.4 | - |
| 03-14-03 | 284 | 3.8 ± 0.4 ; 0.8 | -0.1 ± 0.4 ; 0.4 | 09-12-03 | 285 | 4.1 ± 0.4 ; 0.9 | -0.0 ± 0.3 ; 0.3 |
| 03-21-03 | 284 | 2.3 ± 0.3 ; 0.5 | - | 09-19-03 | 283 | 3.1 ± 0.4 ; 0.7 | - |
| 03-28-03 | 283 | 1.8 ± 0.4 ; 0.5 | -0.3 ± 0.3 ; 0.4 | 09-26-03 | 287 | 2.0 ± 0.4 ; 0.5 | -0.1 ± 0.3 ; 0.3 |
| 1st Qtr. Mean±s.d. | | 2.7 ± 0.7 | 0.2± 0.5 | 3rd Qtr. Mean±s.d. | | 2.4 ± 0.9 | -0.0± 0.6 |
| 04-04-03 | 298 | 1.7 ± 0.3 ; 0.5 | - | 10-03-03 | 291 | 1.5 ± 0.3 ; 0.4 | - |
| 04-11-03 | 275 | 1.6 ± 0.4 ; 0.5 | -0.0 ± 0.3 ; 0.3 | 10-10-03 | 281 | 3.5 ± 0.4 ; 0.8 | -0.3 ± 0.3 ; 0.3 |
| 04-18-03 | 283 | 2.5 ± 0.4 ; 0.6 | - | 10-17-03 | 282 | 2.4 ± 0.4 ; 0.6 | - |
| 04-25-03 | 283 | 1.6 ± 0.4 ; 0.5 | 0.0 ± 0.3 ; 0.3 | 10-24-03 | 284 | 3.2 ± 0.4 ; 0.7 | 1.2 ± 0.3 ; 0.4 |
| 05-02-03 | 285 | 2.1 ± 0.3 ; 0.5 | - | 10-31-03 | 287 | 2.0 ± 0.4 ; 0.5 | - |
| 05-09-03 | 287 | 1.0 ± 0.3 ; 0.3 | 0.2 ± 0.4 ; 0.4 | 11-07-03 | 285 | 2.5 ± 0.4 ; 0.6 | 0.7 ± 0.3 ; 0.3 |
| 05-16-03 | 282 | 1.6 ± 0.3 ; 0.4 | - | 11-14-03 | 287 | 2.6 ± 0.3 ; 0.6 | - |
| 05-23-03 | 287 | 1.2 ± 0.3 ; 0.3 | 0.6 ± 0.4 ; 0.4 | 11-21-03 | 284 | 2.2 ± 0.3 ; 0.5 | 0.5 ± 0.4 ; 0.4 |
| 05-30-03 | 280 | 1.7 ± 0.3 ; 0.4 | - | 11-28-03 | 284 | 2.4 ± 0.4 ; 0.6 | - |
| 06-06-03 | 291 | 2.0 ± 0.3 ; 0.5 | 0.1 ± 0.3 ; 0.3 | 12-05-03 | 285 | 2.6 ± 0.4 ; 0.6 | 0.1 ± 0.3 ; 0.3 |
| 06-12-03 | 244 | 1.2 ± 0.4 ; 0.4 | - | 12-12-03 | 285 | 2.2 ± 0.4 ; 0.5 | - |
| 06-20-03 | 336 | 1.8 ± 0.3 ; 0.4 | 0.3 ± 0.4 ; 0.4 | 12-19-03 | 284 | 2.7 ± 0.4 ; 0.6 | 0.3 ± 0.4 ; 0.4 |
| 06-27-03 | 275 | 1.9 ± 0.3 ; 0.5 | - | 12-26-03 | 285 | 3.0 ± 0.4 ; 0.7 | - |
| 2nd Qtr. Mean±s.d. | | 1.7 ± 0.4 | 0.2± 0.2 | 4th Qtr. Mean±s.d. | | 2.5 ± 0.5 | 0.4± 0.5 |

[a] Volume based on a two week collection period.
[b] Volume low; possibly due to storms in area.

Table 1. Airborne Particulates and Iodine Cartridges

Collection: Airborne Particulates - Continuous; weekly exchange
Iodine cartridges - Continuous; biweekly exchange

Required LLD: Gross Beta = 0.01, I-131 = 0.07 pCi/m³

Units: $10^{-2}$ pCi/m³

D-02 Onsite Station 2

| Date Collected | Volume (m³) | Gross Beta | I-131[a] | Date Collected | Volume (m³) | Gross Beta | I-131[a] |
|---|---|---|---|---|---|---|---|
| 01-03-03 | 286 | 3.8 ± 0.4 ; 0.8 | -0.1 ± 0.5 ; 0.5 | 07-04-03 | NS[c] | - | - |
| 01-10-03 | 290 | 2.9 ± 0.4 ; 0.7 | - | 07-11-03 | NS[c] | - | - |
| 01-17-03 | 283 | 2.7 ± 0.4 ; 0.6 | 0.0 ± 0.4 ; 0.4 | 07-18-03 | NS[c] | - | - |
| 01-24-03 | 294 | 3.9 ± 0.4 ; 0.8 | - | 07-25-03 | NS[c] | - | - |
| 01-31-03 | NS[b] | - | 0.4 ± 0.7 ; 0.7 | 08-01-03 | NS[c] | - | - |
| 02-07-03 | NS[c] | - | - | 08-08-03 | NS[c] | - | - |
| 02-14-03 | NS[c] | - | - | 08-15-03 | NS[c] | - | - |
| 02-21-03 | NS[c] | - | - | 08-22-03 | NS[c] | - | - |
| 02-28-03 | NS[c] | - | - | 08-29-03 | NS[c] | - | - |
| 03-07-03 | NS[c] | - | - | 09-05-03 | NS[c] | - | - |
| 03-14-03 | NS[c] | - | - | 09-12-03 | NS[c] | - | - |
| 03-21-03 | NS[c] | - | - | 09-19-03 | NS[c] | - | - |
| 03-28-03 | NS[c] | - | - | 09-26-03 | NS[c] | - | - |
| 1st Qtr. Mean±s.d. | | 3.3 0.6 | 0.1± 0.2 | 3rd Qtr. Mean±s.d. | | | ± |
| 04-04-03 | NS[c] | - | - | 10-03-03 | NS[c] | - | - |
| 04-11-03 | NS[c] | - | - | 10-10-03 | NS[c] | - | - |
| 04-18-03 | NS[c] | - | - | 10-17-03 | NS[c] | - | - |
| 04-25-03 | NS[c] | - | - | 10-24-03 | NS[c] | - | - |
| 05-02-03 | NS[c] | - | - | 10-31-03 | NS[c] | - | - |
| 05-09-03 | NS[c] | - | - | 11-07-03 | NS[c] | - | - |
| 05-16-03 | NS[c] | - | - | 11-14-03 | NS[c] | - | - |
| 05-23-03 | NS[c] | - | - | 11-21-03 | NS[c] | - | - |
| 05-30-03 | NS[c] | - | - | 11-28-03 | NS[c] | - | - |
| 06-06-03 | NS[c] | - | - | 12-05-03 | NS[c] | - | - |
| 06-12-03 | NS[c] | - | - | 12-12-03 | NS[c] | - | - |
| 06-20-03 | NS[c] | - | - | 12-19-03 | NS[c] | - | - |
| 06-27-03 | NS[c] | - | - | 12-26-03 | NS[c] | - | - |
| 2nd Qtr. Mean±s.d. | | | ± | 4th Qtr. Mean±s.d. | | | ± |

[a] Volume based on a two week collection period.
[b] "NS" = No sample; electricity off; not enough run time (28.3 hrs.) for viable air filter sample; charcoal volume based on one week plus 28.3 hours.
[c] "NS" = No sample; electricity off.

Table 1. Airborne Particulates and Iodine Cartridges

Collection: Airborne Particulates - Continuous; weekly exchange
Iodine cartridges - Continuous; biweekly exchange

Required LLD: Gross Beta = 0.01, I-131 = 0.07 pCi/m³

Units: $10^{-2}$ pCi/m³

D-03 Onsite Station 3

| Date Collected | Volume (m³) | Gross Beta | I-131[a] | Date Collected | Volume (m³) | Gross Beta | I-131[a] |
|---|---|---|---|---|---|---|---|
| 01-03-03 | 281 | 4.3 ± 0.5 ; 0.9 | 0.2 ± 0.4 ; 0.4 | 07-04-03 | 288 | 2.8 ± 0.3 ; 0.6 | 0.4 ± 0.4 ; 0.4 |
| 01-10-03 | 286 | 2.9 ± 0.4 ; 0.7 | - | 07-11-03 | 203[b] | 0.9 ± 0.3 ; 0.3 | - |
| 01-17-03 | 284 | 2.3 ± 0.3 ; 0.5 | 0.0 ± 0.3 ; 0.3 | 07-18-03 | 284 | 1.1 ± 0.3 ; 0.4 | 0.5 ± 0.4 ; 0.4 |
| 01-24-03 | 286 | 3.3 ± 0.4 ; 0.7 | - | 07-25-03 | 285 | 1.8 ± 0.3 ; 0.4 | - |
| 01-31-03 | 286 | 3.9 ± 0.4 ; 0.8 | 0.9 ± 0.4 ; 0.4 | 08-01-03 | 283 | 2.5 ± 0.3 ; 0.6 | 0.8 ± 0.3 ; 0.3 |
| 02-07-03 | 285 | 3.7 ± 0.4 ; 0.8 | - | 08-08-03 | 300 | 2.2 ± 0.3 ; 0.5 | - |
| 02-14-03 | 284 | 2.2 ± 0.4 ; 0.6 | 0.5 ± 0.4 ; 0.4 | 08-15-03 | 284 | 2.4 ± 0.3 ; 0.5 | 0.0 ± 0.3 ; 0.3 |
| 02-21-03 | 283 | 1.5 ± 0.4 ; 0.5 | - | 08-22-03 | 274 | 3.7 ± 0.4 ; 0.8 | - |
| 02-28-03 | 284 | 2.8 ± 0.4 ; 0.7 | 0.2 ± 0.3 ; 0.3 | 08-29-03 | 284 | 3.9 ± 0.4 ; 0.8 | 0.0 ± 0.4 ; 0.4 |
| 03-07-03 | 283 | 2.8 ± 0.4 ; 0.6 | - | 09-05-03 | 285 | 1.6 ± 0.3 ; 0.5 | - |
| 03-14-03 | 286 | 3.3 ± 0.4 ; 0.7 | 0.1 ± 0.4 ; 0.4 | 09-12-03 | 285 | 4.9 ± 0.5 ; 1.0 | -1.0 ± 0.3 ; 0.4 |
| 03-21-03 | 285 | 1.9 ± 0.3 ; 0.5 | - | 09-19-03 | 283 | 3.6 ± 0.4 ; 0.8 | - |
| 03-28-03 | 283 | 2.1 ± 0.4 ; 0.5 | -0.1 ± 0.3 ; 0.3 | 09-26-03 | 287 | 2.5 ± 0.4 ; 0.6 | 1.0 ± 0.3 ; 0.4 |
| 1st Qtr. Mean±s.d. | | 2.9 ± 0.8 | 0.3± 0.3 | 3rd Qtr. Mean±s.d. | | 2.6 ± 1.2 | 0.3± 0.7 |
| 04-04-03 | 298 | 2.3 ± 0.4 ; 0.5 | - | 10-03-03 | 290 | 1.9 ± 0.3 ; 0.5 | - |
| 04-11-03 | 275 | 1.6 ± 0.4 ; 0.5 | -0.2 ± 0.4 ; 0.4 | 10-10-03 | 282 | 4.1 ± 0.4 ; 0.9 | 0.4 ± 0.4 ; 0.4 |
| 04-18-03 | 283 | 2.7 ± 0.4 ; 0.6 | - | 10-17-03 | 282 | 2.4 ± 0.4 ; 0.6 | - |
| 04-25-03 | 283 | 1.7 ± 0.4 ; 0.5 | 0.4 ± 0.4 ; 0.4 | 10-24-03 | 284 | 3.6 ± 0.4 ; 0.8 | 0.3 ± 0.3 ; 0.3 |
| 05-02-03 | 285 | 1.9 ± 0.3 ; 0.4 | - | 10-31-03 | 282 | 2.2 ± 0.4 ; 0.5 | - |
| 05-09-03 | 287 | 1.4 ± 0.3 ; 0.4 | 0.2 ± 0.4 ; 0.4 | 11-07-03 | 290 | 2.9 ± 0.4 ; 0.7 | 0.3 ± 0.3 ; 0.3 |
| 05-16-03 | 282 | 1.8 ± 0.3 ; 0.5 | - | 11-14-03 | 286 | 3.2 ± 0.4 ; 0.7 | - |
| 05-23-03 | 286 | 1.4 ± 0.3 ; 0.4 | 0.0 ± 0.4 ; 0.4 | 11-21-03 | 280 | 2.3 ± 0.3 ; 0.5 | -0.3 ± 0.4 ; 0.4 |
| 05-30-03 | 284 | 1.7 ± 0.3 ; 0.4 | - | 11-28-03 | 284 | 2.9 ± 0.4 ; 0.7 | - |
| 06-06-03 | 282 | 2.0 ± 0.3 ; 0.5 | -0.2 ± 0.4 ; 0.4 | 12-05-03 | 285 | 2.5 ± 0.4 ; 0.6 | 0.8 ± 0.3 ; 0.4 |
| 06-12-03 | 246 | 1.1 ± 0.4 ; 0.4 | - | 12-12-03 | 285 | 2.8 ± 0.4 ; 0.6 | - |
| 06-20-03 | 336 | 1.8 ± 0.3 ; 0.4 | -0.3 ± 0.3 ; 0.3 | 12-19-03 | 285 | 2.9 ± 0.4 ; 0.7 | -0.6 ± 0.3 ; 0.3 |
| 06-27-03 | 272 | 2.2 ± 0.4 ; 0.5 | - | 12-26-03 | 285 | 3.6 ± 0.4 ; 0.8 | - |
| 2nd Qtr. Mean±s.d. | | 1.8 ± 0.4 | -0.0± 0.3 | 4th Qtr. Mean±s.d. | | 2.9 ± 0.6 | 0.2± 0.5 |

[a] Volume based on a two week collection period.
[b] Volume low; possibly due to storms in area.

Table 1. Airborne Particulates and Iodine Cartridges

Collection: Airborne Particulates - Continuous; weekly exchange
Iodine cartridges - Continuous; biweekly exchange

Required LLD: Gross Beta = 0.01, I-131 = 0.07 pCi/m³

Units: $10^{-2}$ pCi/m³

D-04 Collins Road

| Date Collected | Volume (m³) | Gross Beta | I-131[a] | Date Collected | Volume (m³) | Gross Beta | I-131[a] |
|---|---|---|---|---|---|---|---|
| 01-03-03 | 279 | 4.3 ± 0.5 ; 0.9 | -0.4 ± 0.5 ; 0.5 | 07-04-03 | 289 | 2.8 ± 0.3 ; 0.6 | -0.7 ± 0.4 ; 0.4 |
| 01-10-03 | 287 | 3.1 ± 0.4 ; 0.7 | - | 07-11-03 | 212[c] | 2.0 ± 0.4 ; 0.5 | - |
| 01-17-03 | 283 | 2.8 ± 0.4 ; 0.6 | -0.1 ± 0.3 ; 0.3 | 07-18-03 | 282 | 1.7 ± 0.3 ; 0.5 | -0.3 ± 0.4 ; 0.4 |
| 01-24-03 | 285 | 3.3 ± 0.4 ; 0.7 | - | 07-25-03 | 285 | 1.8 ± 0.3 ; 0.4 | - |
| 01-31-03 | 286 | 3.6 ± 0.4 ; 0.7 | 0.5 ± 0.4 ; 0.4 | 08-01-03 | 284 | 1.8 ± 0.3 ; 0.5 | -0.1 ± 0.3 ; 0.3 |
| 02-07-03 | 285 | 3.0 ± 0.4 ; 0.6 | - | 08-08-03 | 300 | 2.1 ± 0.3 ; 0.5 | - |
| 02-14-03 | 284 | 2.5 ± 0.4 ; 0.6 | 0.2 ± 0.4 ; 0.4 | 08-15-03 | 275 | 2.0 ± 0.3 ; 0.5 | 0.1 ± 0.3 ; 0.3 |
| 02-21-03 | 279 | 1.6 ± 0.4 ; 0.5 | - | 08-22-03 | 274 | 3.7 ± 0.4 ; 0.8 | - |
| 02-28-03 | 284 | 3.4 ± 0.4 ; 0.7 | 0.3 ± 0.3 ; 0.3 | 08-29-03 | 294 | 3.9 ± 0.4 ; 0.8 | 0.0 ± 0.4 ; 0.4 |
| 03-07-03 | 285 | 3.6 ± 0.4 ; 0.8 | - | 09-05-03 | 285 | 1.5 ± 0.3 ; 0.4 | - |
| 03-14-03 | 288 | 4.0 ± 0.4 ; 0.8 | -0.0 ± 0.3 ; 0.3 | 09-12-03 | 285 | 4.4 ± 0.5 ; 0.9 | 0.4 ± 0.3 ; 0.3 |
| 03-21-03 | 279[b] | 2.3 ± 0.3 ; 0.5 | - | 09-19-03 | 283 | 3.4 ± 0.4 ; 0.7 | - |
| 03-28-03 | 283 | 1.9 ± 0.4 ; 0.5 | 0.4 ± 0.4 ; 0.4 | 09-26-03 | 287 | 2.1 ± 0.4 ; 0.5 | -0.5 ± 0.4 ; 0.4 |
| 1st Qtr. Mean±s.d. | | 3.0 ± 0.8 | 0.1 ± 0.3 | 3rd Qtr. Mean±s.d. | | 2.6 ± 1.0 | -0.2 ± 0.4 |
| 04-04-03 | 298 | 1.9 ± 0.3 ; 0.5 | - | 10-03-03 | 291 | 1.3 ± 0.3 ; 0.4 | - |
| 04-11-03 | 275 | 2.0 ± 0.4 ; 0.5 | 0.1 ± 0.3 ; 0.3 | 10-10-03 | 280 | 3.9 ± 0.4 ; 0.8 | 0.4 ± 0.3 ; 0.3 |
| 04-18-03 | 283 | 2.5 ± 0.4 ; 0.6 | - | 10-17-03 | 282 | 2.9 ± 0.4 ; 0.6 | - |
| 04-25-03 | 283 | 2.1 ± 0.4 ; 0.5 | -0.1 ± 0.3 ; 0.3 | 10-24-03 | 284 | 3.3 ± 0.4 ; 0.7 | -0.1 ± 0.3 ; 0.3 |
| 05-02-03 | 285 | 2.3 ± 0.3 ; 0.5 | - | 10-31-03 | 287 | 2.2 ± 0.4 ; 0.5 | - |
| 05-09-03 | 287 | 1.6 ± 0.3 ; 0.4 | 0.0 ± 0.4 ; 0.4 | 11-07-03 | 290 | 2.2 ± 0.4 ; 0.5 | 0.3 ± 0.4 ; 0.4 |
| 05-16-03 | 282 | 2.2 ± 0.4 ; 0.5 | - | 11-14-03 | 287 | 2.8 ± 0.4 ; 0.6 | - |
| 05-23-03 | 286 | 1.6 ± 0.3 ; 0.4 | -0.4 ± 0.4 ; 0.4 | 11-21-03 | 284 | 2.4 ± 0.3 ; 0.6 | -0.1 ± 0.3 ; 0.3 |
| 05-30-03 | 281 | 1.8 ± 0.3 ; 0.5 | - | 11-28-03 | 284 | 2.7 ± 0.4 ; 0.6 | - |
| 06-06-03 | 287 | 2.1 ± 0.3 ; 0.5 | 0.1 ± 0.4 ; 0.4 | 12-05-03 | 285 | 2.4 ± 0.4 ; 0.6 | 0.4 ± 0.3 ; 0.3 |
| 06-12-03 | 245 | 1.3 ± 0.4 ; 0.4 | - | 12-12-03 | 285 | 2.5 ± 0.4 ; 0.6 | - |
| 06-20-03 | 336 | 1.8 ± 0.3 ; 0.4 | -0.2 ± 0.3 ; 0.3 | 12-19-03 | 284 | 2.8 ± 0.4 ; 0.6 | 0.2 ± 0.4 ; 0.4 |
| 06-27-03 | 275 | 2.2 ± 0.4 ; 0.5 | - | 12-26-03 | 285 | 3.4 ± 0.4 ; 0.7 | - |
| 2nd Qtr. Mean±s.d. | | 1.9 ± 0.3 | -0.1 ± 0.2 | 4th Qtr. Mean±s.d. | | 2.7 ± 0.6 | 0.2 ± 0.2 |

[a] Volume based on a two week collection period.
[b] Volume slightly low, lower timer reading of 164.6 hours possibly due to storms in area.
[c] Volume low; possibly due to storms in area.

Table 1. Airborne Particulates and Iodine Cartridges

Collection: Airborne Particulates - Continuous; weekly exchange
Iodine cartridges - Continuous; biweekly exchange

Required LLD: Gross Beta = 0.01, I-131 = 0.07 pCi/m³

Units: $10^{-2}$ pCi/m³

D-07 Clay Products

| Date Collected | Volume (m³) | Gross Beta | I-131[a] | Date Collected | Volume (m³) | Gross Beta | I-131[a] |
|---|---|---|---|---|---|---|---|
| 01-03-03 | 283 | 4.3 ± 0.5 ; 0.9 | 0.1 ± 0.3 ; 0.3 | 07-04-03 | 290 | 2.5 ± 0.3 ; 0.6 | 0.4 ± 0.3 ; 0.3 |
| 01-10-03 | 285 | 3.1 ± 0.4 ; 0.7 | - | 07-11-03 | 280 | 1.6 ± 0.3 ; 0.4 | - |
| 01-17-03 | 285 | 2.5 ± 0.3 ; 0.6 | -0.5 ± 0.4 ; 0.4 | 07-18-03 | 285[d] | 1.8 ± 0.3 ; 0.5 | 0.6 ± 0.3 ; 0.4 |
| 01-24-03 | 284 | 3.1 ± 0.4 ; 0.7 | - | 07-25-03 | 273[e] | 2.3 ± 0.3 ; 0.5 | - |
| 01-31-03 | 285 | 3.6 ± 0.4 ; 0.8 | 0.6 ± 0.4 ; 0.5 | 08-01-03 | 285 | 2.0 ± 0.3 ; 0.5 | -0.3 ± 0.3 ; 0.4 |
| 02-07-03 | 287 | 3.8 ± 0.4 ; 0.8 | - | 08-08-03 | 297 | 1.9 ± 0.3 ; 0.5 | - |
| 02-14-03 | 282 | 1.9 ± 0.4 ; 0.5 | 0.2 ± 0.3 ; 0.3 | 08-15-03 | 264 | 2.1 ± 0.3 ; 0.5 | -0.7 ± 0.3 ; 0.4 |
| 02-21-03 | 285 | 1.5 ± 0.4 ; 0.5 | - | 08-22-03 | 271 | 3.5 ± 0.4 ; 0.8 | - |
| 02-28-03 | 284 | 2.8 ± 0.4 ; 0.7 | 0.6 ± 0.3 ; 0.3 | 08-29-03 | 284 | 3.8 ± 0.4 ; 0.8 | 0.7 ± 0.4 ; 0.4 |
| 03-07-03 | 286 | 2.8 ± 0.3 ; 0.6 | - | 09-05-03 | 288 | 1.4 ± 0.3 ; 0.4 | - |
| 03-14-03 | 285 | 3.8 ± 0.4 ; 0.8 | 0.3 ± 0.4 ; 0.4 | 09-12-03 | 282 | 3.8 ± 0.4 ; 0.8 | -0.1 ± 0.3 ; 0.3 |
| 03-21-03 | 285 | 1.9 ± 0.3 ; 0.5 | - | 09-19-03 | 284 | 3.4 ± 0.4 ; 0.7 | - |
| 03-28-03 | 283 | 2.1 ± 0.4 ; 0.5 | -0.2 ± 0.4 ; 0.4 | 09-26-03 | 285 | 2.4 ± 0.4 ; 0.6 | 0.3 ± 0.3 ; 0.3 |
| 1st Qtr. Mean±s.d. | | 2.9 ± 0.9 | 0.1 ± 0.4 | 3rd Qtr. Mean±s.d. | | 2.5 ± 0.8 | 0.1 ± 0.5 |
| 04-04-03 | 293 | 2.0 ± 0.4 ; 0.5 | - | 10-03-03 | 291 | 1.4 ± 0.3 ; 0.4 | - |
| 04-11-03 | 271 | 1.7 ± 0.4 ; 0.5 | 0.4 ± 0.3 ; 0.3 | 10-10-03 | NS[f] | - | 0.4 ± 0.6 ; 0.6 |
| 04-18-03 | 287 | 2.4 ± 0.4 ; 0.6 | - | 10-17-03 | 284 | 2.4 ± 0.4 ; 0.6 | - |
| 04-25-03 | 283 | 1.9 ± 0.4 ; 0.5 | -0.3 ± 0.4 ; 0.4 | 10-24-03 | 284 | 3.1 ± 0.4 ; 0.7 | 0.2 ± 0.3 ; 0.3 |
| 05-02-03 | 287 | 2.2 ± 0.3 ; 0.5 | - | 10-31-03 | 282 | 2.2 ± 0.4 ; 0.5 | - |
| 05-09-03 | 136[b] | 1.9 ± 0.6 ; 0.7 | -0.3 ± 0.5 ; 0.5 | 11-07-03 | 287 | 2.4 ± 0.4 ; 0.6 | 0.4 ± 0.3 ; 0.3 |
| 05-16-03 | 261[c] | 1.8 ± 0.4 ; 0.5 | - | 11-14-03 | 285 | 3.4 ± 0.4 ; 0.7 | - |
| 05-23-03 | 288 | 1.4 ± 0.3 ; 0.4 | 0.6 ± 0.4 ; 0.4 | 11-21-03 | 284 | 2.6 ± 0.4 ; 0.6 | -0.2 ± 0.4 ; 0.4 |
| 05-30-03 | 283 | 1.4 ± 0.3 ; 0.4 | - | 11-28-03 | 283 | 3.0 ± 0.4 ; 0.7 | - |
| 06-06-03 | 288 | 2.0 ± 0.3 ; 0.5 | 0.1 ± 0.4 ; 0.4 | 12-05-03 | 286 | 2.5 ± 0.4 ; 0.6 | -0.0 ± 0.4 ; 0.4 |
| 06-12-03 | 241 | 1.7 ± 0.4 ; 0.5 | - | 12-12-03 | 284 | 3.0 ± 0.4 ; 0.7 | - |
| 06-20-03 | 337 | 1.7 ± 0.3 ; 0.4 | -0.1 ± 0.3 ; 0.3 | 12-19-03 | 287 | 3.4 ± 0.4 ; 0.7 | -0.2 ± 0.3 ; 0.3 |
| 06-27-03 | 276 | 2.1 ± 0.4 ; 0.5 | - | 12-26-03 | 285 | 3.3 ± 0.4 ; 0.7 | - |
| 2nd Qtr. Mean±s.d. | | 1.9 ± 0.3 | 0.1 ± 0.4 | 4th Qtr. Mean±s.d. | | 2.7 ± 0.6 | 0.1 ± 0.3 |

[a] Volume based on a two week collection period.
[b] Volume low due to power outage.
[c] Volume low due to recent power restoration.
[d] Timer reading estimated; collector placed new timer.
[e] Volume low; no apparent reason for low timer reading of 160.8 hours.
[f] No particluate sample due to blown fuse; runtime (16.5 hrs.) does not support viable air particulate sample; charcoal volume = 320m³ - 1 week + 16.5 hrs.

Table 1. Airborne Particulates and Iodine Cartridges

Collection: Airborne Particulates - Continuous; weekly exchange
Iodine cartridges - Continuous; biweekly exchange

Required LLD: Gross Beta = 0.01, I-131 = 0.07 pCi/m³

Units: $10^{-2}$ pCi/m³

D-12 (C) Lisbon

| Date Collected | Volume (m³) | Gross Beta | I-131* | Date Collected | Volume (m³) | Gross Beta | I-131* |
|---|---|---|---|---|---|---|---|
| 01-03-03 | 282 | 4.7 ± 0.5 ; 1.0 | 0.2 ± 0.4 ; 0.4 | 07-04-03 | 285 | 2.2 ± 0.3 ; 0.5 | -0.7 ± 0.4 ; 0.4 |
| 01-10-03 | 285 | 2.7 ± 0.4 ; 0.6 | - | 07-11-03 | 273 | 3.8 ± 0.4 ; 0.8 | - |
| 01-17-03 | 285 | 2.9 ± 0.4 ; 0.6 | -0.1 ± 0.3 ; 0.3 | 07-18-03 | 285 | 2.1 ± 0.3 ; 0.5 | 0.0 ± 0.3 ; 0.3 |
| 01-24-03 | 285 | 3.4 ± 0.4 ; 0.7 | - | 07-25-03 | 285 | 2.0 ± 0.3 ; 0.5 | - |
| 01-31-03 | 275 | 3.4 ± 0.4 ; 0.7 | 0.4 ± 0.4 ; 0.4 | 08-01-03 | 285 | 2.4 ± 0.3 ; 0.5 | 0.4 ± 0.3 ; 0.3 |
| 02-07-03 | 288 | 3.8 ± 0.4 ; 0.8 | - | 08-08-03 | 300 | 2.1 ± 0.3 ; 0.5 | - |
| 02-14-03 | 282 | 2.5 ± 0.4 ; 0.6 | -0.5 ± 0.4 ; 0.4 | 08-15-03 | 275 | 2.1 ± 0.3 ; 0.5 | 0.0 ± 0.4 ; 0.4 |
| 02-21-03 | 285 | 2.1 ± 0.4 ; 0.5 | - | 08-22-03 | 271 | 3.9 ± 0.5 ; 0.8 | - |
| 02-28-03 | 285 | 3.5 ± 0.4 ; 0.8 | 0.1 ± 0.4 ; 0.4 | 08-29-03 | 284 | 4.0 ± 0.4 ; 0.8 | -0.7 ± 0.4 ; 0.4 |
| 03-07-03 | 286 | 2.8 ± 0.3 ; 0.6 | - | 09-05-03 | 288 | 2.0 ± 0.4 ; 0.5 | - |
| 03-14-03 | 290 | 3.6 ± 0.4 ; 0.8 | -0.1 ± 0.3 ; 0.3 | 09-12-03 | 282 | 5.0 ± 0.5 ; 1.0 | 0.5 ± 0.4 ; 0.4 |
| 03-21-03 | 285 | 2.3 ± 0.3 ; 0.5 | - | 09-19-03 | 285 | 3.4 ± 0.4 ; 0.7 | - |
| 03-28-03 | 279 | 2.3 ± 0.4 ; 0.6 | 0.0 ± 0.3 ; 0.3 | 09-26-03 | 285 | 2.6 ± 0.4 ; 0.6 | -0.3 ± 0.4 ; 0.4 |
| 1st Qtr. Mean±s.d. | | 3.1 ± 0.7 | 0.0 ± 0.3 | 3rd Qtr. Mean±s.d. | | 2.9 ± 1.0 | -0.1 ± 0.5 |
| 04-04-03 | 288 | 2.1 ± 0.4 ; 0.5 | - | 10-03-03 | 290 | 1.5 ± 0.3 ; 0.4 | - |
| 04-11-03 | 280 | 2.1 ± 0.4 ; 0.5 | -0.0 ± 0.3 ; 0.3 | 10-10-03 | 281 | 4.2 ± 0.5 ; 0.9 | -1.0 ± 0.4 ; 0.4 |
| 04-18-03 | 287 | 2.3 ± 0.4 ; 0.6 | - | 10-17-03 | 284 | 2.7 ± 0.4 ; 0.6 | - |
| 04-25-03 | 283 | 2.0 ± 0.4 ; 0.5 | 0.0 ± 0.4 ; 0.4 | 10-24-03 | 284 | 3.1 ± 0.4 ; 0.7 | 0.9 ± 0.3 ; 0.3 |
| 05-02-03 | 287 | 2.1 ± 0.3 ; 0.5 | - | 10-31-03 | 287 | 2.0 ± 0.4 ; 0.5 | - |
| 05-09-03 | 285 | 1.6 ± 0.3 ; 0.4 | 0.2 ± 0.4 ; 0.4 | 11-07-03 | 287 | 2.7 ± 0.4 ; 0.6 | -0.8 ± 0.3 ; 0.4 |
| 05-16-03 | 283 | 2.3 ± 0.4 ; 0.6 | - | 11-14-03 | 285 | 3.2 ± 0.4 ; 0.7 | - |
| 05-23-03 | 287 | 1.5 ± 0.3 ; 0.4 | 0.0 ± 0.3 ; 0.3 | 11-21-03 | 286 | 2.4 ± 0.3 ; 0.6 | 0.0 ± 0.3 ; 0.3 |
| 05-30-03 | 278 | 2.1 ± 0.3 ; 0.5 | - | 11-28-03 | 283 | 3.1 ± 0.4 ; 0.7 | - |
| 06-06-03 | 286 | 2.2 ± 0.4 ; 0.5 | -0.2 ± 0.4 ; 0.4 | 12-05-03 | 286 | 2.6 ± 0.4 ; 0.6 | 0.3 ± 0.3 ; 0.3 |
| 06-12-03 | 243 | 1.4 ± 0.4 ; 0.5 | - | 12-12-03 | 284 | 2.7 ± 0.4 ; 0.6 | - |
| 06-20-03 | 337 | 1.9 ± 0.3 ; 0.4 | 0.3 ± 0.4 ; 0.4 | 12-19-03 | 287 | 3.0 ± 0.4 ; 0.7 | -0.0 ± 0.3 ; 0.3 |
| 06-27-03 | 273 | 2.1 ± 0.4 ; 0.5 | - | 12-26-03 | 285 | 3.8 ± 0.4 ; 0.8 | - |
| 2nd Qtr. Mean±s.d. | | 2.0 ± 0.3 | 0.1 ± 0.2 | 4th Qtr. Mean±s.d. | | 2.8 ± 0.7 | -0.1 ± 0.7 |

* Volume based on a two week collection period.

Table 1. Airborne Particulates and Iodine Cartridges

Collection: Airborne Particulates - Continuous; weekly exchange
Iodine cartridges - Continuous; biweekly exchange

Required LLD: Gross Beta = 0.01, I-131 = 0.07 pCi/m³

Units: $10^{-2}$ pCi/m³

D-45 McKinley Woods Road

| Date Collected | Volume (m³) | Gross Beta | I-131* | Date Collected | Volume (m³) | Gross Beta | I-131* |
|---|---|---|---|---|---|---|---|
| 01-03-03 | 282 | 4.0 ± 0.5 ; 0.8 | -0.1 ± 0.5 ; 0.5 | 07-04-03 | 284 | 2.5 ± 0.3 ; 0.6 | 0.1 ± 0.4 ; 0.4 |
| 01-10-03 | 285 | 2.8 ± 0.4 ; 0.6 | - | 07-11-03 | 285 | 1.8 ± 0.3 ; 0.4 | - |
| 01-17-03 | 285 | 2.0 ± 0.3 ; 0.5 | -0.5 ± 0.4 ; 0.4 | 07-18-03 | 285 | 1.7 ± 0.3 ; 0.4 | 0.4 ± 0.3 ; 0.3 |
| 01-24-03 | 285 | 3.1 ± 0.4 ; 0.7 | - | 07-25-03 | 285 | 2.2 ± 0.3 ; 0.5 | - |
| 01-31-03 | 285 | 3.1 ± 0.4 ; 0.7 | 0.6 ± 0.4 ; 0.4 | 08-01-03 | 290 | 2.1 ± 0.3 ; 0.5 | 0.8 ± 0.3 ; 0.4 |
| 02-07-03 | 288 | 3.2 ± 0.4 ; 0.7 | - | 08-08-03 | 300 | 2.3 ± 0.3 ; 0.5 | - |
| 02-14-03 | 287 | 2.3 ± 0.4 ; 0.6 | -0.3 ± 0.4 ; 0.4 | 08-15-03 | 285 | 1.7 ± 0.3 ; 0.4 | -1.3 ± 0.3 ; 0.4 |
| 02-21-03 | 285 | 1.3 ± 0.4 ; 0.4 | - | 08-22-03 | 270 | 3.4 ± 0.4 ; 0.8 | - |
| 02-28-03 | 285 | 3.1 ± 0.4 ; 0.7 | -0.7 ± 0.4 ; 0.4 | 08-29-03 | 275 | 3.8 ± 0.4 ; 0.8 | 0.8 ± 0.4 ; 0.4 |
| 03-07-03 | 286 | 3.3 ± 0.4 ; 0.7 | - | 09-05-03 | 285 | 1.7 ± 0.3 ; 0.5 | - |
| 03-14-03 | 284 | 3.1 ± 0.4 ; 0.7 | -0.1 ± 0.4 ; 0.4 | 09-12-03 | 285 | 4.0 ± 0.4 ; 0.8 | -0.6 ± 0.4 ; 0.4 |
| 03-21-03 | 285 | 2.3 ± 0.3 ; 0.5 | - | 09-19-03 | 290 | 3.4 ± 0.4 ; 0.7 | - |
| 03-28-03 | 279 | 1.9 ± 0.4 ; 0.5 | 0.3 ± 0.4 ; 0.4 | 09-26-03 | 280 | 2.2 ± 0.4 ; 0.5 | 0.0 ± 0.3 ; 0.3 |
| 1st Qtr. Mean±s.d. | | 2.7 ± 0.7 | -0.1 ± 0.4 | 3rd Qtr. Mean±s.d. | | 2.5 ± 0.8 | 0.0 ± 0.8 |
| 04-04-03 | 289 | 1.9 ± 0.4 ; 0.5 | - | 10-03-03 | 288 | 1.6 ± 0.3 ; 0.4 | - |
| 04-11-03 | 285 | 1.5 ± 0.3 ; 0.4 | -0.4 ± 0.3 ; 0.3 | 10-10-03 | 283 | 3.8 ± 0.4 ; 0.8 | 0.1 ± 0.3 ; 0.3 |
| 04-18-03 | 287 | 2.4 ± 0.4 ; 0.6 | - | 10-17-03 | 284 | 2.4 ± 0.4 ; 0.6 | - |
| 04-25-03 | 283 | 1.6 ± 0.4 ; 0.5 | 0.2 ± 0.4 ; 0.4 | 10-24-03 | 284 | 3.2 ± 0.4 ; 0.7 | 0.9 ± 0.3 ; 0.4 |
| 05-02-03 | 287 | 1.8 ± 0.3 ; 0.4 | - | 10-31-03 | 287 | 2.1 ± 0.4 ; 0.5 | - |
| 05-09-03 | 281 | 1.2 ± 0.3 ; 0.4 | 0.1 ± 0.4 ; 0.4 | 11-07-03 | 287 | 2.3 ± 0.4 ; 0.6 | 0.3 ± 0.4 ; 0.4 |
| 05-16-03 | 287 | 2.1 ± 0.3 ; 0.5 | - | 11-14-03 | 285 | 2.9 ± 0.4 ; 0.6 | - |
| 05-23-03 | 287 | 1.3 ± 0.3 ; 0.4 | -0.5 ± 0.4 ; 0.4 | 11-21-03 | 285 | 2.3 ± 0.3 ; 0.5 | -0.1 ± 0.3 ; 0.3 |
| 05-30-03 | 283 | 2.0 ± 0.3 ; 0.5 | - | 11-28-03 | 288 | 3.0 ± 0.4 ; 0.7 | - |
| 06-06-03 | 286 | 2.0 ± 0.3 ; 0.5 | 0.2 ± 0.3 ; 0.3 | 12-05-03 | 291 | 2.9 ± 0.4 ; 0.6 | -0.6 ± 0.3 ; 0.3 |
| 06-12-03 | 243 | 1.5 ± 0.4 ; 0.5 | - | 12-12-03 | 289 | 2.6 ± 0.4 ; 0.6 | - |
| 06-20-03 | 338 | 1.8 ± 0.3 ; 0.4 | 0.1 ± 0.4 ; 0.4 | 12-19-03 | 291 | 3.0 ± 0.4 ; 0.7 | 0.3 ± 0.3 ; 0.3 |
| 06-27-03 | 273 | 1.9 ± 0.3 ; 0.5 | - | 12-26-03 | 285 | 3.8 ± 0.4 ; 0.8 | - |
| 2nd Qtr. Mean±s.d. | | 1.8 ± 0.3 | -0.0 ± 0.3 | 4th Qtr. Mean±s.d. | | 2.8 ± 0.6 | 0.1 ± 0.5 |

* Volume based on a two week collection period.

Table 1. Airborne Particulates and Iodine Cartridges

Collection: Airborne Particulates - Continuous; weekly exchange
Iodine cartridges - Continuous; biweekly exchange

Required LLD: Gross Beta = 0.01, I-131 = 0.07 pCi/m³

Units: $10^{-2}$ pCi/m³

D-53 Grundy County Road

| Date Collected | Volume (m³) | Gross Beta | I-131* | Date Collected | Volume (m³) | Gross Beta | I-131* |
|---|---|---|---|---|---|---|---|
| 01-03-03 | 279 | 3.9 ± 0.5 ; 0.8 | 0.1 ± 0.4 ; 0.4 | 07-04-03 | 290 | 2.8 ± 0.3 ; 0.6 | 0.1 ± 0.4 ; 0.4 |
| 01-10-03 | 287 | 2.3 ± 0.4 ; 0.6 | - | 07-11-03 | 281 | 2.4 ± 0.3 ; 0.5 | - |
| 01-17-03 | 283 | 2.5 ± 0.3 ; 0.6 | 0.0 ± 0.4 ; 0.4 | 07-18-03 | 282 | 1.8 ± 0.3 ; 0.5 | -0.5 ± 0.3 ; 0.3 |
| 01-24-03 | 285 | 3.1 ± 0.4 ; 0.7 | - | 07-25-03 | 285 | 1.9 ± 0.3 ; 0.4 | - |
| 01-31-03 | 286 | 3.3 ± 0.4 ; 0.7 | 0.2 ± 0.4 ; 0.4 | 08-01-03 | 284 | 2.2 ± 0.3 ; 0.5 | 0.2 ± 0.3 ; 0.3 |
| 02-07-03 | 285 | 3.4 ± 0.4 ; 0.7 | - | 08-08-03 | 300 | 2.5 ± 0.3 ; 0.6 | - |
| 02-14-03 | 284 | 2.0 ± 0.4 ; 0.5 | 0.1 ± 0.4 ; 0.4 | 08-15-03 | 294 | 2.2 ± 0.3 ; 0.5 | -0.4 ± 0.3 ; 0.3 |
| 02-21-03 | 283 | 1.5 ± 0.4 ; 0.5 | - | 08-22-03 | 275 | 4.1 ± 0.5 ; 0.9 | - |
| 02-28-03 | 284 | 2.9 ± 0.4 ; 0.7 | 0.1 ± 0.3 ; 0.3 | 08-29-03 | 284 | 3.8 ± 0.4 ; 0.8 | -1.0 ± 0.4 ; 0.4 |
| 03-07-03 | 292 | 3.0 ± 0.4 ; 0.7 | - | 09-05-03 | 280 | 0.8 ± 0.3 ; 0.3 | - |
| 03-14-03 | 281 | 4.1 ± 0.4 ; 0.9 | 0.1 ± 0.4 ; 0.4 | 09-12-03 | 284 | 2.0 ± 0.4 ; 0.5 | -0.6 ± 0.3 ; 0.3 |
| 03-21-03 | 284 | 2.2 ± 0.3 ; 0.5 | - | 09-19-03 | 288 | 2.5 ± 0.4 ; 0.6 | - |
| 03-28-03 | 283 | 2.3 ± 0.4 ; 0.6 | 0.3 ± 0.3 ; 0.4 | 09-26-03 | 281 | 2.4 ± 0.4 ; 0.6 | -0.4 ± 0.4 ; 0.4 |
| 1st Qtr. Mean±s.d. | | 2.8 ± 0.8 | 0.1 ± 0.1 | 3rd Qtr. Mean±s.d. | | 2.4 ± 0.8 | -0.4 ± 0.4 |
| 04-04-03 | 298 | 2.0 ± 0.3 ; 0.5 | - | 10-03-03 | 292 | 1.6 ± 0.3 ; 0.4 | - |
| 04-11-03 | 276 | 1.8 ± 0.4 ; 0.5 | -0.6 ± 0.4 ; 0.4 | 10-10-03 | 280 | 3.9 ± 0.4 ; 0.8 | -0.1 ± 0.4 ; 0.4 |
| 04-18-03 | 282 | 2.8 ± 0.4 ; 0.6 | - | 10-17-03 | 282 | 2.4 ± 0.4 ; 0.6 | - |
| 04-25-03 | 283 | 1.6 ± 0.4 ; 0.5 | 0.0 ± 0.4 ; 0.4 | 10-24-03 | 284 | 3.4 ± 0.4 ; 0.7 | -0.1 ± 0.4 ; 0.4 |
| 05-02-03 | 291 | 1.8 ± 0.3 ; 0.4 | - | 10-31-03 | 287 | 2.0 ± 0.4 ; 0.5 | - |
| 05-09-03 | 282 | 1.4 ± 0.3 ; 0.4 | -0.2 ± 0.4 ; 0.4 | 11-07-03 | 285 | 2.5 ± 0.4 ; 0.6 | 0.4 ± 0.3 ; 0.3 |
| 05-16-03 | 283 | 1.8 ± 0.3 ; 0.5 | - | 11-14-03 | 286 | 3.4 ± 0.4 ; 0.7 | - |
| 05-23-03 | 286 | 1.4 ± 0.3 ; 0.4 | -0.1 ± 0.4 ; 0.4 | 11-21-03 | 284 | 2.5 ± 0.4 ; 0.6 | 0.9 ± 0.3 ; 0.4 |
| 05-30-03 | 278 | 1.8 ± 0.3 ; 0.5 | - | 11-28-03 | 284 | 2.9 ± 0.4 ; 0.6 | - |
| 06-06-03 | 296 | 2.1 ± 0.3 ; 0.5 | 0.1 ± 0.3 ; 0.3 | 12-05-03 | 285 | 2.5 ± 0.4 ; 0.6 | 0.9 ± 0.3 ; 0.3 |
| 06-12-03 | 249 | 1.7 ± 0.4 ; 0.5 | - | 12-12-03 | 285 | 3.0 ± 0.4 ; 0.7 | - |
| 06-20-03 | 334 | 1.8 ± 0.3 ; 0.4 | 0.1 ± 0.4 ; 0.4 | 12-19-03 | 284 | 3.1 ± 0.4 ; 0.7 | -0.1 ± 0.3 ; 0.3 |
| 06-27-03 | 275 | 2.6 ± 0.4 ; 0.6 | - | 12-26-03 | 285 | 3.2 ± 0.4 ; 0.7 | - |
| 2nd Qtr. Mean±s.d. | | 1.9 ± 0.4 | -0.1 ± 0.3 | 4th Qtr. Mean±s.d. | | 2.8 ± 0.6 | 0.3 ± 0.5 |

* Volume based on a two week collection period.

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Table 2. Airborne Particulates

Collection: Quarterly composites of weekly collections
ODCM-
Required LLDs: Cs-134 = 0.05, Cs-137 = 0.06 pCi/m³
Other LLDs: Mn-54 = 0.01; Fe-59 = 0.015; Co-58, Co-60 = 0.01; Zn-65 = 0.04; Zr/Nb-95 = 0.01; Ba/La-140 = 0.025 pCi/m³

Units: $10^{-4}$ pCi/m³

Sample Description and Concentration

D-01 Onsite Station 1

| 2003 Collection Period | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. |
|---|---|---|---|---|
| Lab Code | CDAP-2123 | CDAP-4161 | CDAP-6466 | CDAP-8023 |
| Volume | 3,703 | 3,715 | 3,666 | 3,712 |
| Mn-54 | -1.5 ± 5.3 ; 5.3 | -0.9 ± 5.4 ; 5.4 | -7.3 ± 6.9 ; 7.0 | 4.2 ± 4.5 ; 4.6 |
| Fe-59 | -7.8 ± 8.6 ; 8.7 | -6.5 ± 6.8 ; 6.9 | 5.6 ± 7.1 ; 7.1 | -7.7 ± 8.6 ; 8.7 |
| Co-58 | -2.2 ± 4.7 ; 4.8 | -1.3 ± 4.3 ; 4.3 | 3.5 ± 4.6 ; 4.6 | 1.0 ± 4.7 ; 4.7 |
| Co-60 | -1.5 ± 5.4 ; 5.4 | -0.6 ± 5.6 ; 5.6 | -1.3 ± 6.9 ; 6.9 | 3.7 ± 5.4 ; 5.4 |
| Zn-65 | 1.6 ± 9.6 ; 9.6 | 14.3 ± 8.6 ; 8.9 | -4.8 ± 12.0 ; 12.0 | -8.0 ± 14.3 ; 14.3 |
| Nb/Zr-95 | -5.7 ± 6.0 ; 6.1 | 1.0 ± 5.4 ; 5.4 | -1.6 ± 6.4 ; 6.4 | -3.1 ± 4.9 ; 5.0 |
| Cs-134 | 2.9 ± 5.2 ; 5.2 | 2.7 ± 6.3 ; 6.3 | 3.6 ± 5.4 ; 5.5 | 4.8 ± 5.6 ; 5.7 |
| Cs-137 | 1.7 ± 5.3 ; 5.3 | -6.2 ± 5.9 ; 6.0 | 6.3 ± 4.8 ; 4.9 | -1.9 ± 6.6 ; 6.7 |
| Ba/La-140 | -24.3 ± 6.6 ; 7.9 | 25.5 ± 6.9 ; 8.2 | 22.1 ± 3.7 ; 5.4 | -9.5 ± 7.3 ; 7.4 |

D-02 Onsite Station 2

| 2003 Collection Period | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. |
|---|---|---|---|---|
| Lab Code | CDAP-2124 | NS [a] | NS [a] | NS [a] |
| Volume | 1,156 | | | |
| Mn-54 | -1.8 ± 10.8 ; 10.8 | - | - | - |
| Fe-59 | 39.7 ± 11.1 ; 13.2 | - | - | - |
| Co-58 | -1.7 ± 8.7 ; 8.7 | - | - | - |
| Co-60 | -6.2 ± 12.3 ; 12.3 | - | - | - |
| Zn-65 | 20.0 ± 19.5 ; 19.8 | - | - | - |
| Nb/Zr-95 | -15.6 ± 8.9 ; 9.3 | - | - | - |
| Cs-134 | 4.2 ± 10.5 ; 10.6 | - | - | - |
| Cs-137 | 5.1 ± 10.5 ; 10.6 | - | - | - |
| Ba/La-140 | -793.6 ± 12.0 ; 141.8 | - | - | - |

[a] "NS" = No sample; power out.

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Table 2. Airborne Particulates

Collection: Quarterly composites of weekly collections
ODCM-
Required LLDs: Cs-134 = 0.05, Cs-137 = 0.06 pCi/m³
Other LLDs: Mn-54 = 0.01; Fe-59 = 0.015; Co-58, Co-60 = 0.01; Zn-65 = 0.04; Zr/Nb-95 = 0.01; Ba/La-140 = 0.025 pCi/m³

Units: $10^{-4}$ pCi/m³

Sample Description and Concentration

D-03 Onsite Station 3

| 2003 Collection Period | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. |
|---|---|---|---|---|
| Lab Code | CDAP-2125 | CDAP-4162 | CDAP-6467 | CDAP-8024 |
| Volume | 3,703 | 3,706 | 3,633 | 3,707 |
| Mn-54 | 2.4 ± 6.5 ; 6.5 | 1.8 ± 4.0 ; 4.0 | -0.6 ± 5.0 ; 5.0 | 2.7 ± 6.0 ; 6.1 |
| Fe-59 | -3.3 ± 9.4 ; 9.4 | -11.9 ± 7.9 ; 8.2 | 3.4 ± 6.6 ; 6.7 | 8.8 ± 9.5 ; 9.7 |
| Co-58 | -2.3 ± 5.2 ; 5.2 | -2.3 ± 5.2 ; 5.2 | 2.5 ± 5.6 ; 5.6 | 5.8 ± 4.9 ; 5.0 |
| Co-60 | 6.4 ± 7.4 ; 7.5 | 0.1 ± 4.2 ; 4.2 | 3.6 ± 3.5 ; 3.6 | 5.3 ± 4.2 ; 4.3 |
| Zn-65 | -3.2 ± 8.2 ; 8.2 | 7.1 ± 8.8 ; 8.9 | -6.5 ± 11.8 ; 11.8 | -13.6 ± 11.5 ; 11.8 |
| Nb/Zr-95 | 7.5 ± 5.5 ; 5.6 | -8.7 ± 6.0 ; 6.2 | -16.4 ± 5.1 ; 5.8 | -8.7 ± 5.6 ; 5.8 |
| Cs-134 | -5.4 ± 6.4 ; 6.4 | 12.2 ± 5.9 ; 6.3 | 1.6 ± 5.0 ; 5.0 | -3.3 ± 6.3 ; 6.3 |
| Cs-137 | -5.9 ± 6.8 ; 6.9 | 2.0 ± 6.2 ; 6.2 | -0.7 ± 6.3 ; 6.3 | -1.1 ± 5.2 ; 5.2 |
| Ba/La-140 | 36.9 ± 4.8 ; 8.1 | 5.6 ± 5.8 ; 5.9 | 67.1 ± 6.6 ; 13.6 | 27.4 ± 6.9 ; 8.4 |

D-04 Collins Road

| 2003 Collection Period | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. |
|---|---|---|---|---|
| Lab Code | CDAP-2126 | CDAP-4163 | CDAP-6468 | CDAP-8025 |
| Volume | 3,695 | 3,711 | 3,641 | 3,717 |
| Mn-54 | 2.1 ± 6.0 ; 6.0 | -0.9 ± 5.4 ; 5.4 | 0.3 ± 6.8 ; 6.8 | 6.0 ± 4.9 ; 5.0 |
| Fe-59 | 1.1 ± 10.1 ; 10.1 | 2.2 ± 8.5 ; 8.5 | 1.1 ± 10.3 ; 10.3 | -16.8 ± 13.2 ; 13.6 |
| Co-58 | -0.6 ± 5.0 ; 5.0 | 3.5 ± 4.0 ; 4.0 | -9.6 ± 4.7 ; 5.0 | 0.9 ± 5.2 ; 5.2 |
| Co-60 | -9.0 ± 7.3 ; 7.4 | -4.8 ± 5.8 ; 5.9 | 7.3 ± 6.5 ; 6.6 | 2.6 ± 3.0 ; 3.0 |
| Zn-65 | -4.8 ± 11.9 ; 11.9 | 4.0 ± 13.6 ; 13.6 | 3.3 ± 10.2 ; 10.2 | -3.2 ± 12.2 ; 12.2 |
| Nb/Zr-95 | 3.3 ± 5.2 ; 5.2 | -5.5 ± 6.0 ; 6.0 | -2.8 ± 4.0 ; 4.0 | 6.3 ± 5.8 ; 5.9 |
| Cs-134 | -6.3 ± 7.3 ; 7.4 | 4.3 ± 4.8 ; 4.9 | 1.3 ± 6.7 ; 6.7 | 0.1 ± 5.8 ; 5.8 |
| Cs-137 | 5.6 ± 5.1 ; 5.2 | -7.0 ± 6.8 ; 7.0 | 4.6 ± 5.0 ; 5.0 | 2.2 ± 5.3 ; 5.4 |
| Ba/La-140 | -24.7 ± 6.6 ; 7.9 | -7.8 ± 4.9 ; 5.1 | 5.0 ± 8.0 ; 8.1 | 91.8 ± 7.2 ; 17.9 |

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Table 2. Airborne Particulates

Collection: Quarterly composites of weekly collections
ODCM-
Required LLDs: Cs-134 = 0.05, Cs-137 = 0.06 pCi/m³
Other LLDs: Mn-54 = 0.01; Fe-59 = 0.015; Co-58, Co-60 = 0.01; Zn-65 = 0.04; Zr/Nb-95 = 0.01; Ba/La-140 = 0.025 pCi/m³

Units: $10^{-4}$ pCi/m³

Sample Description and Concentration

D-07 Clay Products

| 2003 Collection Period | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. |
|---|---|---|---|---|
| Lab Code | CDAP-2127 | CDAP-4164 | CDAP-6469 | CDAP-8026 |
| Volume | 3,708 | 3,537 | 3,673 | 3,430 |
| Mn-54 | -2.4 ± 6.7 ; 6.7 | 1.9 ± 5.6 ; 5.6 | -3.7 ± 5.5 ; 5.5 | -9.5 ± 6.7 ; 6.9 |
| Fe-59 | -15.6 ± 12.2 ; 12.5 | -12.5 ± 11.8 ; 12.0 | -3.4 ± 9.5 ; 9.5 | 3.6 ± 7.0 ; 7.1 |
| Co-58 | 3.6 ± 4.0 ; 4.0 | 5.4 ± 3.8 ; 3.9 | 3.2 ± 5.6 ; 5.6 | 2.9 ± 4.8 ; 4.8 |
| Co-60 | 3.8 ± 6.8 ; 6.9 | 3.8 ± 5.7 ; 5.7 | -0.6 ± 5.7 ; 5.7 | 2.2 ± 6.9 ; 6.9 |
| Zn-65 | -2.4 ± 10.6 ; 10.6 | 2.5 ± 12.3 ; 12.3 | 6.4 ± 10.8 ; 10.9 | 3.5 ± 14.6 ; 14.6 |
| Nb/Zr-95 | 0.3 ± 4.3 ; 4.3 | -7.3 ± 5.6 ; 5.8 | 9.1 ± 4.3 ; 4.6 | -3.8 ± 6.2 ; 6.3 |
| Cs-134 | -2.9 ± 7.3 ; 7.3 | 2.8 ± 6.6 ; 6.6 | -4.1 ± 6.7 ; 6.8 | -0.6 ± 6.2 ; 6.2 |
| Cs-137 | 3.8 ± 5.6 ; 5.7 | 3.7 ± 7.1 ; 7.2 | 2.3 ± 5.0 ; 5.0 | -5.1 ± 7.1 ; 7.2 |
| Ba/La-140 | 7.4 ± 2.2 ; 2.5 | 35.2 ± 5.0 ; 8.0 | -24.7 ± 6.6 ; 8.0 | -44.4 ± 6.2 ; 10.1 |

D-12 (C) Lisbon

| 2003 Collection Period | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. |
|---|---|---|---|---|
| Lab Code | CDAP-2128,9 | CDAP-4165 | CDAP-6470 | CDAP-8027 |
| Volume | 3,699 | 3,704 | 3,690 | 3,716 |
| Mn-54 | 3.8 ± 3.9 ; 3.9 | 0.6 ± 6.2 ; 6.2 | 8.5 ± 5.3 ; 5.6 | 0.9 ± 5.7 ; 5.7 |
| Fe-59 | -2.8 ± 7.3 ; 7.3 | 5.4 ± 10.7 ; 10.8 | 5.6 ± 10.8 ; 10.8 | -11.2 ± 9.9 ; 10.1 |
| Co-58 | -1.6 ± 3.9 ; 4.0 | -7.0 ± 5.0 ; 5.2 | -1.4 ± 4.9 ; 4.9 | -6.6 ± 5.9 ; 6.1 |
| Co-60 | 2.1 ± 4.5 ; 4.5 | -2.2 ± 6.6 ; 6.6 | 7.2 ± 6.4 ; 6.5 | -3.9 ± 6.1 ; 6.1 |
| Zn-65 | -4.4 ± 7.8 ; 7.9 | 19.1 ± 11.0 ; 11.5 | 4.0 ± 7.9 ; 7.9 | -6.4 ± 11.5 ; 11.6 |
| Nb/Zr-95 | -11.8 ± 4.0 ; 4.5 | 2.5 ± 4.1 ; 4.1 | 5.4 ± 5.4 ; 5.5 | 4.4 ± 5.2 ; 5.3 |
| Cs-134 | -0.2 ± 4.1 ; 4.1 | -3.9 ± 5.6 ; 5.6 | -1.1 ± 5.0 ; 5.0 | -1.1 ± 4.9 ; 4.9 |
| Cs-137 | 0.1 ± 4.4 ; 4.4 | 1.6 ± 5.7 ; 5.7 | -3.8 ± 5.1 ; 5.2 | 3.8 ± 5.6 ; 5.7 |
| Ba/La-140 | -21.9 ± 5.5 ; 6.7 | -23.6 ± 8.5 ; 9.5 | -63.0 ± 7.0 ; 13.2 | 38.5 ± 4.7 ; 8.3 |

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Table 2. Airborne Particulates

Collection: Quarterly composites of weekly collections

ODCM-Required LLDs: Cs-134 = 0.05, Cs-137 = 0.06 pCi/m³

Other LLDs: Mn-54 = 0.01; Fe-59 = 0.015; Co-58, Co-60 = 0.01; Zn-65 = 0.04; Zr/Nb-95 = 0.01; Ba/La-140 = 0.025 pCi/m³

Units: $10^{-4}$ pCi/m³

Sample Description and Concentration

D-45 McKinley Woods Road

| 2003 Collection Period | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. |
|---|---|---|---|---|
| Lab Code | CDAP-2130 | CDAP-4166 | CDAP-6471 | CDAP-8028 |
| Volume | 3,707 | 3,715 | 3,706 | 3,734 |
| Mn-54 | -12.4 ± 6.4 ; 6.8 | -2.1 ± 5.2 ; 5.2 | 0.3 ± 5.6 ; 5.6 | -0.3 ± 4.2 ; 4.2 |
| Fe-59 | 4.5 ± 12.0 ; 12.0 | 7.6 ± 7.4 ; 7.6 | -20.0 ± 11.6 ; 12.1 | -5.6 ± 9.0 ; 9.0 |
| Co-58 | 6.6 ± 5.0 ; 5.2 | -0.3 ± 3.2 ; 3.2 | 6.8 ± 4.0 ; 4.1 | -3.2 ± 5.5 ; 5.6 |
| Co-60 | 6.1 ± 4.5 ; 4.6 | 1.0 ± 4.5 ; 4.5 | 1.9 ± 4.8 ; 4.9 | 2.2 ± 7.6 ; 7.6 |
| Zn-65 | -12.8 ± 13.4 ; 13.6 | 0.8 ± 6.8 ; 6.8 | 4.8 ± 10.4 ; 10.4 | -1.6 ± 12.5 ; 12.5 |
| Nb/Zr-95 | -12.2 ± 5.8 ; 6.2 | 9.2 ± 5.7 ; 5.9 | -5.4 ± 5.2 ; 5.3 | -7.9 ± 5.7 ; 5.9 |
| Cs-134 | 3.2 ± 6.9 ; 7.0 | -4.1 ± 6.6 ; 6.7 | 5.0 ± 5.0 ; 5.1 | 2.6 ± 6.8 ; 6.8 |
| Cs-137 | 2.7 ± 5.5 ; 5.5 | -1.0 ± 4.7 ; 4.7 | -0.5 ± 5.3 ; 5.3 | -0.4 ± 4.8 ; 4.8 |
| Ba/La-140 | -65.9 ± 10.3 ; 15.6 | 5.6 ± 5.8 ; 5.9 | 21.0 ± 6.5 ; 7.5 | 15.4 ± 3.0 ; 4.1 |

D-53 Grundy County Road

| 2003 Collection Period | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. |
|---|---|---|---|---|
| Lab Code | CDAP-2131 | CDAP-4167 | CDAP-6472 | CDAP-8029 |
| Volume | 3,704 | 3,720 | 3,714 | 3,712 |
| Mn-54 | -5.1 ± 5.7 ; 5.8 | -0.3 ± 5.5 ; 5.5 | 3.3 ± 5.0 ; 5.1 | 9.4 ± 5.0 ; 5.3 |
| Fe-59 | -15.6 ± 12.2 ; 12.5 | 18.5 ± 9.3 ; 9.9 | -1.1 ± 9.7 ; 9.7 | -12.4 ± 11.3 ; 11.5 |
| Co-58 | -2.1 ± 4.2 ; 4.2 | -0.5 ± 4.4 ; 4.4 | -8.1 ± 5.7 ; 5.9 | -5.6 ± 5.2 ; 5.3 |
| Co-60 | 1.3 ± 7.4 ; 7.4 | 2.9 ± 6.6 ; 6.6 | -2.2 ± 6.6 ; 6.6 | 8.0 ± 6.7 ; 6.8 |
| Zn-65 | -3.2 ± 12.3 ; 12.3 | 12.7 ± 8.1 ; 8.4 | -12.8 ± 13.4 ; 13.6 | -12.0 ± 14.9 ; 15.1 |
| Nb/Zr-95 | 2.3 ± 5.0 ; 5.1 | -16.2 ± 6.1 ; 6.7 | -9.0 ± 6.0 ; 6.2 | 0.9 ± 5.8 ; 5.8 |
| Cs-134 | 0.9 ± 5.4 ; 5.4 | -2.6 ± 5.8 ; 5.9 | 0.6 ± 6.5 ; 6.5 | 0.1 ± 5.8 ; 5.8 |
| Cs-137 | -1.6 ± 5.1 ; 5.1 | -1.1 ± 5.6 ; 5.6 | -7.7 ± 5.2 ; 5.4 | 1.2 ± 7.1 ; 7.2 |
| Ba/La-140 | -32.5 ± 6.2 ; 8.5 | -16.0 ± 6.9 ; 7.5 | -32.1 ± 6.2 ; 8.4 | -9.1 ± 4.9 ; 5.1 |

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Table 3. Milk

| | |
|---|---|
| Collection: | Biweekly (May - October)<br>Monthly (November - April) |
| ODCM-Required LLDs: | I-131 = 1, Cs-134 = 15; Cs-137 = 18, Ba-140 = 60, La-140 = 15 pCi/L |
| Other LLDs: | Mn-54 = 10; Fe-59 = 15; Co-58, Co-60 = 10; Zn-65 = 15; Zr/Nb-95 = 10 pCi/L |
| Units: | pCi/L |

Sample Description and Concentration

D-25 (C) Vince Biros Farm

| Date Collected | 01-02-03 | 02-06-03 | 03-06-03 | 04-03-03 |
|---|---|---|---|---|
| Lab Code | CDMI-30 | CDMI-538 | CDMI-967 | CDMI-1514 |
| I-131 | -0.10 ± 0.21 ; 0.21 | -0.03 ± 0.16 ; 0.16 | 0.04 ± 0.17 ; 0.17 | -0.10 ± 0.19 ; 0.19 |
| Mn-54 | 0.1 ± 2.9 ; 2.9 | -3.0 ± 4.2 ; 4.3 | 0.8 ± 2.4 ; 2.4 | 0.6 ± 1.8 ; 1.8 |
| Fe-59 | -3.6 ± 6.1 ; 6.2 | -1.3 ± 9.3 ; 9.3 | -2.5 ± 5.3 ; 5.3 | -0.4 ± 4.3 ; 4.3 |
| Co-58 | 1.0 ± 3.1 ; 3.1 | 0.5 ± 4.6 ; 4.6 | 2.9 ± 2.6 ; 2.6 | 0.5 ± 2.0 ; 2.0 |
| Co-60 | 2.0 ± 3.1 ; 3.1 | 3.1 ± 4.3 ; 4.3 | 1.1 ± 2.4 ; 2.4 | 1.2 ± 2.3 ; 2.3 |
| Zn-65 | -1.9 ± 6.5 ; 6.5 | 1.6 ± 10.5 ; 10.5 | 2.4 ± 5.1 ; 5.1 | 0.4 ± 5.6 ; 5.6 |
| Zr/Nb-95 | 1.6 ± 2.4 ; 2.4 | 4.4 ± 3.9 ; 4.0 | -0.2 ± 2.5 ; 2.5 | 0.7 ± 1.9 ; 1.9 |
| Cs-134 | 1.2 ± 3.2 ; 3.2 | -4.2 ± 5.1 ; 5.1 | 1.2 ± 2.9 ; 2.9 | 0.1 ± 2.1 ; 2.1 |
| Cs-137 | 3.7 ± 3.1 ; 3.1 | -1.5 ± 4.2 ; 4.2 | -3.1 ± 2.9 ; 2.9 | -0.8 ± 2.1 ; 2.1 |
| Ba-140 | 1.9 ± 9.0 ; 9.0 | -10.0 ± 13.7 ; 13.8 | 11.3 ± 8.8 ; 9.0 | -7.9 ± 7.3 ; 7.4 |
| La-140 | -4.6 ± 3.8 ; 3.9 | 2.6 ± 3.6 ; 3.6 | -1.0 ± 2.0 ; 2.0 | -1.5 ± 2.0 ; 2.0 |

| Date Collected | 05-01-03 | 05-15-03 | 05-29-03 | 06-11-03 |
|---|---|---|---|---|
| Lab Code | CDMI-2178 | CDMI-2622,3 | CDMI-2830 | CDMI-3187 |
| I-131 | 0.00 ± 0.16 ; 0.16 | 0.11 ± 0.14 ; 0.14 | 0.08 ± 0.18 ; 0.18 | 0.10 ± 0.19 ; 0.19 |
| Mn-54 | 1.5 ± 3.5 ; 3.5 | 0.7 ± 2.3 ; 2.3 | -1.0 ± 3.9 ; 3.9 | 2.1 ± 2.3 ; 2.3 |
| Fe-59 | 0.5 ± 7.1 ; 7.1 | 0.0 ± 4.6 ; 4.6 | 0.6 ± 7.4 ; 7.4 | 1.9 ± 3.7 ; 3.7 |
| Co-58 | 1.7 ± 3.4 ; 3.4 | 2.7 ± 2.2 ; 2.2 | -1.4 ± 3.9 ; 3.9 | -0.4 ± 2.0 ; 2.0 |
| Co-60 | 0.4 ± 3.5 ; 3.5 | 1.5 ± 3.1 ; 3.1 | -0.4 ± 3.7 ; 3.7 | 0.2 ± 2.3 ; 2.3 |
| Zn-65 | 3.1 ± 8.9 ; 8.9 | 0.2 ± 5.1 ; 5.1 | -1.0 ± 10.0 ; 10.0 | -2.4 ± 5.7 ; 5.7 |
| Nb/Zr-95 | 1.5 ± 3.7 ; 3.7 | 0.1 ± 1.9 ; 1.9 | 0.1 ± 3.9 ; 3.9 | 0.3 ± 2.1 ; 2.1 |
| Cs-134 | -0.1 ± 4.1 ; 4.1 | 0.7 ± 2.2 ; 2.2 | 2.6 ± 4.0 ; 4.1 | 1.5 ± 2.4 ; 2.4 |
| Cs-137 | 3.2 ± 3.9 ; 3.9 | 1.7 ± 2.2 ; 2.2 | 3.3 ± 3.8 ; 3.8 | 0.2 ± 2.3 ; 2.3 |
| Ba-140 | -8.7 ± 12.0 ; 12.1 | -9.1 ± 7.6 ; 7.7 | -0.8 ± 11.0 ; 11.0 | 3.2 ± 7.2 ; 7.2 |
| La-140 | -6.2 ± 4.3 ; 4.4 | -2.5 ± 2.1 ; 2.1 | 0.8 ± 4.7 ; 4.7 | 0.7 ± 2.5 ; 2.5 |

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Table 3. Milk

| | |
|---|---|
| Collection: | Biweekly (May - October)<br>Monthly (November - April) |
| ODCM-Required LLDs: | I-131 = 1, Cs-134 = 15; Cs-137 = 18, Ba-140 = 60, La-140 = 15 pCi/L |
| Other LLDs: | Mn-54 = 10; Fe-59 = 15; Co-58, Co-60 = 10; Zn-65 = 15; Zr/Nb-95 = 10 pCi/L |
| Units: | pCi/L |

Sample Description and Concentration

D-25 (C) Vince Biros Farm

| Date Collected | 06-26-03 | 07-10-03 | 07-24-03 | 08-06-03 |
|---|---|---|---|---|
| Lab Code | CDMI-3452 | CDMI-3815 | CDMI-4178 | CDMI-4569 |
| I-131 | -0.08 ± 0.15 ; 0.15 | 0.04 ± 0.22 ; 0.22 | -0.01 ± 0.16 ; 0.16 | -0.06 ± 0.21 ; 0.21 |
| Mn-54 | -0.7 ± 2.1 ; 2.1 | 2.5 ± 2.2 ; 2.2 | -0.6 ± 4.1 ; 4.1 | -0.2 ± 1.7 ; 1.7 |
| Fe-59 | -4.7 ± 5.1 ; 5.2 | -1.1 ± 5.1 ; 5.1 | 3.8 ± 9.3 ; 9.3 | -0.4 ± 5.1 ; 5.1 |
| Co-58 | -2.2 ± 1.9 ; 2.0 | -1.4 ± 2.1 ; 2.1 | -1.9 ± 3.7 ; 3.7 | -0.4 ± 2.0 ; 2.0 |
| Co-60 | -0.5 ± 1.8 ; 1.8 | 1.3 ± 2.3 ; 2.3 | -0.2 ± 5.0 ; 5.0 | 1.6 ± 2.3 ; 2.3 |
| Zn-65 | 1.8 ± 5.5 ; 5.5 | -5.7 ± 6.2 ; 6.3 | 4.1 ± 8.3 ; 8.3 | 4.0 ± 5.2 ; 5.3 |
| Nb/Zr-95 | -2.0 ± 1.8 ; 1.8 | -3.0 ± 2.3 ; 2.4 | -0.3 ± 3.5 ; 3.5 | -1.5 ± 2.2 ; 2.2 |
| Cs-134 | 2.1 ± 2.4 ; 2.4 | 0.9 ± 2.8 ; 2.8 | -4.6 ± 5.2 ; 5.2 | 0.4 ± 2.3 ; 2.3 |
| Cs-137 | -1.9 ± 2.7 ; 2.7 | -0.4 ± 2.1 ; 2.1 | -1.4 ± 4.0 ; 4.0 | 1.1 ± 2.2 ; 2.2 |
| Ba-140 | -2.3 ± 7.2 ; 7.2 | -2.8 ± 7.4 ; 7.4 | 0.2 ± 11.6 ; 11.6 | -0.1 ± 7.8 ; 7.8 |
| La-140 | -3.2 ± 2.4 ; 2.5 | 0.9 ± 1.9 ; 1.9 | -2.3 ± 3.7 ; 3.7 | -3.5 ± 2.3 ; 2.3 |

| Date Collected | 08-21-03 | 09-04-03 | 09-18-03 | 10-02-03 |
|---|---|---|---|---|
| Lab Code | CDMI-4789 | CDMI-5044 | CDMI-5346 | CDMI-5655 |
| I-131 | 0.05 ± 0.20 ; 0.20 | 0.00 ± 0.13 ; 0.13 | 0.03 ± 0.15 ; 0.15 | -0.00 ± 0.17 ; 0.17 |
| Mn-54 | -3.1 ± 3.4 ; 3.4 | -0.1 ± 2.8 ; 2.8 | -0.9 ± 2.2 ; 2.2 | -0.6 ± 1.9 ; 1.9 |
| Fe-59 | -4.3 ± 6.7 ; 6.8 | -11.6 ± 6.3 ; 6.5 | -4.1 ± 4.8 ; 4.8 | 2.7 ± 3.8 ; 3.8 |
| Co-58 | -1.4 ± 3.3 ; 3.3 | -1.0 ± 2.9 ; 2.9 | -0.1 ± 2.1 ; 2.1 | 0.2 ± 1.8 ; 1.8 |
| Co-60 | -0.2 ± 4.4 ; 4.4 | 2.0 ± 3.5 ; 3.5 | 1.0 ± 2.5 ; 2.5 | -2.5 ± 2.3 ; 2.3 |
| Zn-65 | -0.7 ± 8.3 ; 8.3 | -5.1 ± 7.4 ; 7.5 | -4.7 ± 6.8 ; 6.9 | 4.0 ± 5.9 ; 5.9 |
| Zr/Nb-95 | 3.6 ± 3.2 ; 3.2 | -0.0 ± 2.7 ; 2.7 | 0.9 ± 2.1 ; 2.1 | 1.2 ± 1.9 ; 2.0 |
| Cs-134 | 2.5 ± 3.5 ; 3.6 | -0.8 ± 3.4 ; 3.4 | -0.9 ± 2.5 ; 2.5 | -0.7 ± 2.4 ; 2.4 |
| Cs-137 | 1.4 ± 3.6 ; 3.6 | 0.8 ± 2.8 ; 2.8 | 0.1 ± 2.2 ; 2.2 | -1.8 ± 2.2 ; 2.3 |
| Ba-140 | 14.4 ± 10.0 ; 10.2 | 0.1 ± 9.8 ; 9.8 | 5.8 ± 8.1 ; 8.1 | 2.0 ± 7.1 ; 7.1 |
| La-140 | 2.2 ± 4.0 ; 4.1 | -2.8 ± 3.0 ; 3.1 | 1.8 ± 1.9 ; 1.9 | -0.2 ± 1.6 ; 1.6 |

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Table 3. Milk

| | |
|---|---|
| Collection: | Biweekly (May - October)<br>Monthly (November - April) |
| ODCM-Required LLDs: | I-131 = 1, Cs-134 = 15; Cs-137 = 18, Ba-140 = 60, La-140 = 15 pCi/L |
| Other LLDs: | Mn-54 = 10; Fe-59 = 15; Co-58, Co-60 = 10; Zn-65 = 15; Zr/Nb-95 = 10 pCi/L |
| Units: | pCi/L |

Sample Description and Concentration

D-25 (C) Vince Biros Farm

| Date Collected | 10-16-03 | 10-30-03 | 11-13-03 | 12-04-03 |
|---|---|---|---|---|
| Lab Code | CDMI-6127 | CDMI-6532 | CDMI-6887 | CDMI-7260 |
| I-131 | 0.16 ± 0.16 ; 0.16 | -0.10 ± 0.22 ; 0.22 | 0.18 ± 0.22 ; 0.22 | -0.04 ± 0.16 ; 0.16 |
| Mn-54 | -1.7 ± 3.2 ; 3.2 | -2.6 ± 3.5 ; 3.5 | -1.8 ± 2.5 ; 2.5 | -0.4 ± 3.7 ; 3.7 |
| Fe-59 | -1.9 ± 7.4 ; 7.5 | 1.3 ± 7.3 ; 7.3 | 0.4 ± 5.0 ; 5.0 | -7.0 ± 7.7 ; 7.8 |
| Co-58 | -2.1 ± 3.0 ; 3.0 | 0.6 ± 3.1 ; 3.1 | 0.8 ± 2.3 ; 2.3 | -1.7 ± 2.6 ; 2.6 |
| Co-60 | 1.4 ± 3.5 ; 3.5 | 1.3 ± 4.2 ; 4.2 | 1.6 ± 1.5 ; 1.5 | 3.1 ± 4.9 ; 5.0 |
| Zn-65 | 0.7 ± 8.5 ; 8.5 | 1.0 ± 9.0 ; 9.0 | 1.5 ± 6.0 ; 6.0 | -7.2 ± 7.6 ; 7.7 |
| Zr-Nb-95 | -0.9 ± 3.2 ; 3.2 | -0.3 ± 3.2 ; 3.2 | -0.6 ± 2.2 ; 2.2 | 1.3 ± 3.6 ; 3.6 |
| Cs-134 | -1.4 ± 3.4 ; 3.4 | -2.5 ± 4.0 ; 4.0 | -0.3 ± 2.3 ; 2.3 | 4.2 ± 3.0 ; 3.0 |
| Cs-137 | 1.4 ± 3.4 ; 3.4 | -0.7 ± 3.4 ; 3.4 | 0.4 ± 2.2 ; 2.2 | 1.7 ± 3.8 ; 3.8 |
| Ba-140 | 4.1 ± 9.1 ; 9.2 | -2.5 ± 11.6 ; 11.6 | -5.6 ± 7.9 ; 8.0 | 2.1 ± 12.7 ; 12.7 |
| La-140 | -1.5 ± 4.1 ; 4.1 | 2.3 ± 2.8 ; 2.9 | -0.5 ± 2.5 ; 2.5 | 3.9 ± 3.7 ; 3.7 |

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Table 4. Fish, Edible Portions

Collection: Semiannually

Required LLDs: Mn = 0.13; Fe -59 = 0.26; Co-58,60 = 0.13; Zn-65 = 0.26; Cs-134 = 0.13; Cs-137 = 0.15 pCi/g wet weight

Units: $10^{-2}$ pCi/g wet weight

Sample Description and Concentration

D-28 Dresden Pool of Illinois River

| Date Collected | 05-07-03 | 05-07-03 | 10-07-03 | 10-07-03 |
|---|---|---|---|---|
| Lab Code | CDF-2357 | CDF-2358 | CDF-5808 | CDF-5809 |
| Type | Freshwater Drum | Largemouth Bass | Largemouth Bass | Channel Catfish |
| Mn-54 | 0.1 ± 0.7 ; 0.7 | 0.2 ± 0.5 ; 0.5 | 0.3 ± 0.9 ; 0.9 | -0.2 ± 0.9 ; 0.9 |
| Fe-59 | 1.3 ± 1.7 ; 1.7 | -0.3 ± 1.4 ; 1.4 | 0.2 ± 1.8 ; 1.8 | -0.6 ± 2.2 ; 2.2 |
| Co-58 | 0.3 ± 0.8 ; 0.8 | -0.3 ± 0.5 ; 0.5 | 0.3 ± 0.8 ; 0.8 | -0.2 ± 0.8 ; 0.8 |
| Co-60 | -0.2 ± 0.8 ; 0.8 | 0.4 ± 0.6 ; 0.6 | 0.3 ± 1.0 ; 1.0 | -1.0 ± 1.5 ; 1.5 |
| Zn-65 | -1.7 ± 1.6 ; 1.6 | -1.1 ± 1.5 ; 1.5 | -0.4 ± 2.2 ; 2.2 | -0.4 ± 2.4 ; 2.4 |
| Nb/Zr-95 | -0.4 ± 0.5 ; 0.5 | -0.1 ± 0.6 ; 0.6 | -0.3 ± 0.7 ; 0.7 | 0.7 ± 0.8 ; 0.8 |
| Cs-134 | 0.4 ± 0.6 ; 0.6 | -0.1 ± 0.7 ; 0.7 | 0.5 ± 0.8 ; 0.8 | 0.4 ± 0.9 ; 0.9 |
| Cs-137 | 0.1 ± 0.9 ; 0.9 | 0.2 ± 0.6 ; 0.6 | 0.6 ± 0.9 ; 0.9 | -0.2 ± 0.9 ; 0.9 |
| Ba/La-140 | -0.5 ± 1.0 ; 1.0 | 0.0 ± 0.3 ; 0.3 | -0.3 ± 0.9 ; 0.9 | -2.8 ± 1.1 ; 1.2 |

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Table 4. Fish, Edible Portions
Collection: Semiannually

Required LLDs: Mn = 0.13; Fe -59 = 0.26; Co-58,60 = 0.13; Zn-65 = 0.26; Cs-134 = 0.13; Cs-137 = 0.15 pCi/g wet weight

Units: $10^{-2}$ pCi/g wet weight

| Sample Description and Concentration | | | | |
|---|---|---|---|---|
| | D-46 (C) Des Plaines River, Upstream | | | |
| Date Collected | 05-07-03 | 05-07-03 | 10-07-03 | 10-07-03 |
| Lab Code | CDF-2355 | CDF-2356 | CDF-5806 | CDF-5807 |
| Type | Channel Catfish | Largemouth Bass | Largemouth Bass | Common Carp |
| Mn-54 | -0.2 ± 0.7 ; 0.7 | -0.0 ± 1.2 ; 1.2 | 0.2 ± 0.9 ; 0.9 | 0.6 ± 0.8 ; 0.8 |
| Fe-59 | -0.5 ± 2.0 ; 2.0 | 0.1 ± 2.8 ; 2.8 | 0.3 ± 2.1 ; 2.1 | 0.4 ± 2.0 ; 2.0 |
| Co-58 | -0.6 ± 0.7 ; 0.7 | 0.8 ± 0.8 ; 0.8 | 0.4 ± 0.7 ; 0.7 | -0.2 ± 0.7 ; 0.7 |
| Co-60 | 0.2 ± 0.9 ; 0.9 | 0.7 ± 1.7 ; 1.7 | 0.7 ± 1.0 ; 1.0 | -0.6 ± 1.2 ; 1.2 |
| Zn-65 | -0.4 ± 2.0 ; 2.0 | -1.1 ± 2.8 ; 2.8 | -0.9 ± 2.2 ; 2.2 | -0.3 ± 2.1 ; 2.1 |
| Nb/Zr-95 | 0.2 ± 0.7 ; 0.7 | 0.5 ± 1.0 ; 1.0 | 0.5 ± 0.8 ; 0.8 | -0.4 ± 0.7 ; 0.7 |
| Cs-134 | 0.1 ± 0.7 ; 0.7 | 0.4 ± 1.3 ; 1.3 | 0.0 ± 1.0 ; 1.0 | 0.1 ± 0.9 ; 0.9 |
| Cs-137 | 0.2 ± 0.9 ; 0.9 | -0.6 ± 1.2 ; 1.2 | -0.4 ± 0.8 ; 0.8 | 0.2 ± 1.0 ; 1.0 |
| Ba/La-140 | 0.1 ± 0.8 ; 0.8 | 0.7 ± 1.3 ; 1.3 | 0.7 ± 0.9 ; 0.9 | 1.6 ± 0.7 ; 0.7 |

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Table 5. Bottom Sediments

Collection: Semiannually

ODCM-Required LLDs: Cs-134 = 0.15, Cs-137 = 0.18 pCi/g dry weight

Other LLDs: Mn-54 = 0.15; Fe-59 = 0.60; Co-58, Co-60 = 0.10; Zn-65 = 0.60; Zr/Nb-95 = 0.20; Ba/La = 0.60 g dry weight

Units: $10^{-2}$ pCi/g dry weight

| Sample Description and Concentration | | |
|---|---|---|
| | D-27 Dresden Lock & Dam | |
| Date Collected | 05-16-03 | 10-03-03 |
| Lab Code | CDBS-2615 | CDBS-5700 |
| Mn-54 | 0.3 ± 1.5 ; 1.5 | 0.9 ± 1.6 ; 1.6 |
| Fe-59 | -1.3 ± 2.9 ; 2.9 | -11.3 ± 3.7 ; 4.0 |
| Co-58 | 0.4 ± 1.3 ; 1.3 | 2.1 ± 1.3 ; 1.4 |
| Co-60 | 1.3 ± 1.5 ; 1.5 | -0.1 ± 1.8 ; 1.8 |
| Zn-65 | -2.0 ± 3.4 ; 3.4 | -4.4 ± 4.5 ; 4.5 |
| Nb/Zr-95 | -1.2 ± 1.5 ; 1.5 | -14.6 ± 2.2 ; 2.9 |
| Cs-134 | 1.1 ± 1.5 ; 1.5 | 3.7 ± 2.3 ; 2.3 |
| Cs-137 | 3.2 ± 1.7 ; 1.8 | 44.3 ± 4.8 ; 7.7 |
| Ba/La-140 | -0.9 ± 1.4 ; 1.4 | -70.7 ± 1.6 ; 9.8 |

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Table 6. Vegetation

Collection: Annually

ODCM-Required LLDs: I-131=0.06, Cs-134=0.06, Cs-137=0.08 pCi/g wet weight

Other LLDs: Mn-54 = 0.05; Fe-59 = 0.10; Co-58, Co-60, Zn-65 = 0.05; Zr/Nb-95 = 0.01; Ba/La-140 = 0.02 pCi/g wet weight

Units: $10^{-2}$ pCi/g wet weight

| Sample Description and Concentration | | |
|---|---|---|
| | D-Control Glasscock Farm | |
| Date Collected | 09-06-03 | 09-06-03 |
| Lab Code | CDVE-5130 | CDVE-5131 |
| Type | Lettuce | Onions |
| Mn-54 | 0.1 ± 0.6 ; 0.6 | -0.3 ± 0.5 ; 0.5 |
| Fe-59 | -0.9 ± 1.6 ; 1.6 | -0.8 ± 1.5 ; 1.5 |
| Co-58 | -0.0 ± 0.6 ; 0.6 | 0.3 ± 0.7 ; 0.7 |
| Co-60 | -0.5 ± 0.9 ; 0.9 | -0.1 ± 1.0 ; 1.0 |
| Zn-65 | -1.6 ± 1.6 ;1.6 | 0.5 ± 1.8 ;1.8 |
| Nb/Zr-95 | -0.2 ± 0.7 ;0.7 | -0.2 ± 0.6 ;0.6 |
| I-131 | 0.9 ± 0.6 ;0.6 | 0.0 ± 0.5 ;0.5 |
| Cs-134 | 0.3 ± 0.8 ; 0.8 | -0.9 ± 0.8 ; 0.9 |
| Cs-137 | 1.0 ± 0.9 ; 0.9 | -0.2 ± 0.7 ; 0.7 |
| Ba/La-140 | -0.2 ± 0.6 ;0.6 | 0.4 ± 0.7 ;0.7 |
| | D-Quad 1 Chris Locknar | |
| Date Collected | 09-06-03 | 09-06-03 |
| Lab Code | CDVE-5122 | CDVE-5248 |
| Type | Potates | Cabbage |
| Mn-54 | 0.4 ± 0.5 ; 0.5 | 0.3 ± 0.6 ; 0.6 |
| Fe-59 | 0.3 ± 1.2 ; 1.2 | -1.7 ± 1.3 ; 1.4 |
| Co-58 | 0.4 ± 0.4 ; 0.4 | 0.1 ± 0.7 ; 0.7 |
| Co-60 | 0.2 ± 0.7 ; 0.7 | 0.8 ± 0.7 ; 0.7 |
| Zn-65 | 0.7 ± 1.5 ;1.5 | 0.1 ± 1.9 ;1.9 |
| Nb/Zr-95 | 0.1 ± 0.4 ;0.4 | -0.6 ± 0.7 ;0.7 |
| I-131 | -0.2 ± 0.5 ;0.5 | -0.8 ± 0.5 ;0.6 |
| Cs-134 | 0.2 ± 0.6 ; 0.6 | 0.2 ± 0.6 ; 0.6 |
| Cs-137 | 0.2 ± 0.5 ; 0.5 | 0.3 ± 0.6 ; 0.6 |
| Ba/La-140 | 0.1 ± 0.5 ;0.5 | -0.1 ± 0.8 ;0.8 |

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Table 6. Vegetation

| | |
|---|---|
| Collection: | Annually |
| ODCM-Required LLDs: | I-131=0.06, Cs-134=0.06, Cs-137=0.08 pCi/g wet weight |
| Other LLDs: | Mn-54 = 0.05; Fe-59 = 0.10; Co-58, Co-60, Zn-65 = 0.05; Zr/Nb-95 = 0.01; Ba/La-140 = 0.02 pCi/g wet weight |
| Units: | $10^{-2}$ pCi/g wet weight |

Sample Description and Concentration

D-Quad 2 Robert Pagliano

| | | |
|---|---|---|
| Date Collected | 09-05-03 | 09-05-03 |
| Lab Code | CDVE-5123 | CDVE-5124 |
| Type | Carrots | Carrots tops |
| Mn-54 | -0.4 ± 0.6 ; 0.6 | -0.5 ± 0.8 ; 0.8 |
| Fe-59 | -0.6 ± 1.4 ; 1.4 | -0.4 ± 2.0 ; 2.0 |
| Co-58 | 0.2 ± 0.5 ; 0.5 | 0.2 ± 0.8 ; 0.8 |
| Co-60 | 0.0 ± 0.6 ; 0.6 | 0.4 ± 0.9 ; 0.9 |
| Zn-65 | -0.2 ± 1.6 ;1.6 | -0.2 ± 2.2 ;2.2 |
| Nb/Zr-95 | 0.2 ± 0.6 ;0.6 | -0.9 ± 0.7 ;0.7 |
| I-131 | 0.4 ± 0.5 ;0.5 | 0.2 ± 0.9 ;0.9 |
| Cs-134 | -0.6 ± 0.6 ; 0.6 | 0.2 ± 0.9 ; 0.9 |
| Cs-137 | -0.1 ± 0.6 ; 0.6 | 1.2 ± 0.9 ; 0.9 |
| Ba/La-140 | 0.1 ± 0.7 ;0.7 | -0.1 ± 0.8 ;0.8 |
| Date Collected | 09-05-03 | |
| Lab Code | CDVE-5125 | |
| Type | Greens | |
| Mn-54 | 0.2 ± 1.2 ; 1.2 | |
| Fe-59 | -3.8 ± 2.7 ; 2.8 | |
| Co-58 | 0.6 ± 1.2 ; 1.2 | |
| Co-60 | 0.3 ± 0.6 ; 0.6 | |
| Zn-65 | 1.9 ± 2.5 ;2.6 | |
| Nb/Zr-95 | 0.4 ± 1.0 ;1.0 | |
| I-131 | -1.0 ± 1.1 ;1.2 | |
| Cs-134 | -0.7 ± 1.3 ; 1.3 | |
| Cs-137 | 0.3 ± 1.1 ; 1.1 | |
| Ba/La-140 | -0.3 ± 1.3 ;1.3 | |

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Table 6. Vegetation

Collection: Annually

ODCM-Required LLDs: I-131=0.06, Cs-134=0.06, Cs-137=0.08 pCi/g wet weight

Other LLDs: Mn-54 = 0.05; Fe-59 = 0.10; Co-58, Co-60, Zn-65 = 0.05; Zr/Nb-95 = 0.01; Ba/La-140 = 0.02 pCi/g wet weight

Units: $10^{-2}$ pCi/g wet weight

| | Sample Description and Concentration | |
|---|---|---|
| | D-Quad 3 Jim Bloom | |
| Date Collected | 09-06-03 | 09-06-03 |
| Lab Code | CDVE-5126 | CDVE-5127 |
| Type | Cabbage | Onions |
| Mn-54 | 0.1 ± 0.9 ; 0.9 | 0.1 ± 0.5 ; 0.5 |
| Fe-59 | -0.1 ± 1.9 ; 1.9 | 0.4 ± 1.1 ; 1.1 |
| Co-58 | 0.2 ± 0.8 ; 0.8 | 0.5 ± 0.4 ; 0.4 |
| Co-60 | -0.3 ± 1.1 ; 1.1 | -0.6 ± 0.6 ; 0.7 |
| Zn-65 | 0.2 ± 1.9 ;1.9 | -0.9 ± 1.2 ;1.3 |
| Nb/Zr-95 | 0.2 ± 0.7 ;0.7 | 0.0 ± 0.5 ;0.5 |
| I-131 | -1.1 ± 0.8 ;0.8 | -0.7 ± 0.5 ;0.6 |
| Cs-134 | -0.5 ± 0.9 ; 0.9 | 0.7 ± 0.6 ; 0.6 |
| Cs-137 | -0.2 ± 0.7 ; 0.7 | 0.1 ± 0.6 ; 0.6 |
| Ba/La-140 | -0.7 ± 0.6 ;0.6 | -0.9 ± 0.7 ;0.7 |
| | D-Quad 4 J.D. Carmichael | |
| Date Collected | 09-06-03 | 09-06-03 |
| Lab Code | CDVE-5128 | CDVE-5129 |
| Type | Beet tops | Beets |
| Mn-54 | 0.5 ± 0.9 ; 0.9 | 0.3 ± 0.6 ; 0.6 |
| Fe-59 | -1.2 ± 1.8 ; 1.8 | 0.6 ± 1.0 ; 1.0 |
| Co-58 | -0.1 ± 0.7 ; 0.7 | -0.3 ± 0.5 ; 0.5 |
| Co-60 | -1.1 ± 1.0 ; 1.0 | -0.0 ± 0.6 ; 0.6 |
| Zn-65 | -0.2 ± 2.1 ;2.1 | 1.1 ± 1.3 ;1.3 |
| Nb/Zr-95 | -0.3 ± 0.8 ;0.8 | 0.3 ± 0.6 ;0.6 |
| I-131 | -0.2 ± 0.7 ;0.7 | 0.2 ± 0.6 ;0.6 |
| Cs-134 | -0.2 ± 1.0 ; 1.0 | -0.0 ± 0.7 ; 0.7 |
| Cs-137 | 1.1 ± 1.1 ; 1.1 | -0.3 ± 0.7 ; 0.7 |
| Ba/La-140 | 0.4 ± 0.7 ;0.7 | -0.9 ± 0.8 ;0.8 |

Table 7. Surface Water

Collection: Monthly composites of weekly collections

ODCM-Required LLDs: Gross Beta = 4, Mn-54 = 15, Fe-59 = 30, Co-58 = 15, Co-60 = 15, Zn-65 = 30, Zr-95 = 30, Nb-95 = 15, Cs-134 = 15, Cs-137 = 18, Ba-140 = 60, La-140 = 15 pCi/L

Units: pCi/L

Sample Description and Concentration

D-51 Dresden Lock & Dam

| 2003 Collection Period | January | February | March |
|---|---|---|---|
| Lab Code | CDSW-505 | CDSW-987 | CDSW-1482 |
| Gross Beta | 6.2 ± 1.4 ; 1.7 | 6.0 ± 1.2 ; 1.5 | 6.9 ± 1.5 ; 1.8 |
| Mn-54 | -2.1 ± 3.2 ; 3.2 | 0.9 ± 3.3 ; 3.3 | -0.9 ± 1.8 ; 1.8 |
| Fe-59 | 4.1 ± 5.2 ; 5.3 | 3.4 ± 4.7 ; 4.7 | 1.2 ± 3.2 ; 3.2 |
| Co-58 | 1.5 ± 2.8 ; 2.9 | 4.8 ± 3.8 ; 3.9 | 1.1 ± 1.6 ; 1.6 |
| Co-60 | -1.9 ± 2.4 ; 2.4 | -0.9 ± 3.8 ; 3.8 | 0.2 ± 1.6 ; 1.6 |
| Zn-65 | 1.2 ± 5.7 ; 5.7 | -5.6 ± 8.0 ; 8.1 | -1.0 ± 3.8 ; 3.8 |
| Zr-95 | -2.6 ± 5.4 ; 5.4 | 5.5 ± 8.0 ; 8.0 | -3.7 ± 4.0 ; 4.0 |
| Nb-95 | -1.1 ± 3.0 ; 3.0 | -0.8 ± 3.5 ; 3.5 | 0.8 ± 1.7 ; 1.7 |
| Cs-134 | 1.7 ± 2.8 ; 2.8 | -0.8 ± 3.9 ; 3.9 | 1.0 ± 2.1 ; 2.1 |
| Cs-137 | 1.1 ± 3.4 ; 3.4 | -3.4 ± 3.8 ; 3.9 | 0.9 ± 1.9 ; 1.9 |
| Ba-140 | 6.9 ± 9.7 ; 9.8 | 7.9 ± 11.7 ; 11.8 | -4.6 ± 6.3 ; 6.3 |
| La-140 | -2.2 ± 4.0 ; 4.0 | -4.1 ± 3.4 ; 3.4 | -1.7 ± 1.8 ; 1.8 |

| 2003 Collection Period | April | May | June |
|---|---|---|---|
| Lab Code | CDSW-2495 | CDSW-3030 | CDSW-3513 |
| Gross Beta | 5.7 ± 1.2 ; 1.4 | 4.0 ± 1.0 ; 1.2 | 5.9 ± 1.1 ; 1.4 |
| Mn-54 | -0.2 ± 2.3 ; 2.3 | 1.0 ± 2.1 ; 2.1 | -1.4 ± 1.2 ; 1.2 |
| Fe-59 | 1.3 ± 4.6 ; 4.6 | -0.7 ± 4.5 ; 4.5 | 1.1 ± 3.4 ; 3.4 |
| Co-58 | 1.2 ± 2.6 ; 2.6 | -1.8 ± 2.2 ; 2.2 | -0.1 ± 1.9 ; 1.9 |
| Co-60 | 1.2 ± 2.6 ; 2.6 | -3.2 ± 2.4 ; 2.4 | -0.3 ± 1.6 ; 1.6 |
| Zn-65 | -1.5 ± 4.9 ; 4.9 | -0.7 ± 5.0 ; 5.0 | -0.4 ± 4.0 ; 4.0 |
| Zr-95 | 3.5 ± 4.5 ; 4.6 | 2.6 ± 5.5 ; 5.5 | 0.6 ± 4.3 ; 4.3 |
| Nb-95 | -0.9 ± 2.1 ; 2.1 | 1.1 ± 2.2 ; 2.2 | -2.7 ± 1.9 ; 1.9 |
| Cs-134 | -1.1 ± 2.7 ; 2.7 | -0.2 ± 3.1 ; 3.1 | -1.5 ± 2.2 ; 2.2 |
| Cs-137 | -0.8 ± 3.0 ; 3.0 | 0.0 ± 3.0 ; 3.0 | 2.0 ± 2.2 ; 2.2 |
| Ba-140 | -1.6 ± 7.5 ; 7.5 | -9.8 ± 7.7 ; 7.8 | -0.9 ± 7.3 ; 7.3 |
| La-140 | -3.7 ± 2.7 ; 2.7 | -6.1 ± 2.7 ; 2.8 | -1.1 ± 2.2 ; 2.2 |

Table 7. Surface Water

Collection: Monthly composites of weekly collections

ODCM-Required LLDs: Gross Beta = 4, Mn-54 = 15, Fe-59 = 30, Co-58 = 15, Co-60 = 15, Zn-65 = 30, Zr-95 = 30, Nb-95 = 15, Cs-134 = 15, Cs-137 = 18, Ba-140 = 60, La-140 = 15 pCi/L

Units: pCi/L

Sample Description and Concentration

D-51 Dresden Lock & Dam

| 2003 Collection Period | July | August | September |
|---|---|---|---|
| Lab Code | CDSW-4353 | CDSW-5076 | CDSW-5764 |
| Gross Beta | 4.8 ± 1.5 ; 1.6 | 4.5 ± 1.1 ; 1.3 | 5.6 ± 1.2 ; 1.5 |
| Mn-54 | 1.3 ± 1.9 ; 1.9 | 1.2 ± 1.4 ; 1.4 | 1.9 ± 2.7 ; 2.7 |
| Fe-59 | 1.1 ± 3.2 ; 3.2 | 0.8 ± 3.3 ; 3.3 | 1.0 ± 4.9 ; 4.9 |
| Co-58 | -0.4 ± 1.7 ; 1.7 | -0.8 ± 1.2 ; 1.2 | 0.5 ± 1.7 ; 1.7 |
| Co-60 | 0.6 ± 1.7 ; 1.7 | -1.9 ± 1.6 ; 1.6 | -0.4 ± 3.0 ; 3.0 |
| Zn-65 | -2.2 ± 4.3 ; 4.3 | 2.2 ± 3.2 ; 3.2 | -2.0 ± 6.6 ; 6.6 |
| Zr-95 | -1.2 ± 4.5 ; 4.5 | 0.2 ± 3.3 ; 3.3 | -3.7 ± 6.4 ; 6.4 |
| Nb-95 | -1.1 ± 1.8 ; 1.8 | 0.5 ± 1.6 ; 1.6 | -1.2 ± 3.0 ; 3.0 |
| Cs-134 | -0.3 ± 1.7 ; 1.7 | 1.0 ± 1.7 ; 1.7 | 0.7 ± 3.7 ; 3.7 |
| Cs-137 | -0.3 ± 2.2 ; 2.2 | 0.7 ± 1.6 ; 1.6 | -2.0 ± 2.5 ; 2.5 |
| Ba-140 | -1.5 ± 7.2 ; 7.2 | 9.0 ± 6.3 ; 6.4 | 3.8 ± 8.6 ; 8.7 |
| La-140 | -3.8 ± 2.3 ; 2.4 | 0.3 ± 1.8 ; 1.8 | -1.6 ± 3.1 ; 3.1 |

| 2003 Collection Period | October | November | December |
|---|---|---|---|
| Lab Code | CDSW-6694 | CDSW-7355 | CDSW-7786 |
| Gross Beta | 6.2 ± 1.4 ; 1.7 | 5.0 ± 1.1 ; 1.3 | 2.6 ± 1.3 ; 1.4 |
| Mn-54 | 2.3 ± 2.7 ; 2.7 | 0.7 ± 1.8 ; 1.8 | 1.1 ± 1.7 ; 1.7 |
| Fe-59 | -3.8 ± 6.0 ; 6.0 | 1.8 ± 3.1 ; 3.1 | -1.2 ± 3.5 ; 3.5 |
| Co-58 | 2.0 ± 2.7 ; 2.7 | 1.9 ± 1.7 ; 1.7 | -0.9 ± 1.6 ; 1.6 |
| Co-60 | -0.9 ± 2.9 ; 2.9 | 1.1 ± 1.8 ; 1.8 | -0.3 ± 2.1 ; 2.1 |
| Zn-65 | -2.1 ± 4.0 ; 4.0 | -2.2 ± 3.7 ; 3.7 | -2.6 ± 4.8 ; 4.8 |
| Zr-95 | -0.1 ± 5.1 ; 5.1 | -0.3 ± 4.6 ; 4.6 | -1.8 ± 4.5 ; 4.5 |
| Nb-95 | 0.3 ± 2.4 ; 2.4 | -0.8 ± 1.8 ; 1.8 | 2.8 ± 2.0 ; 2.1 |
| Cs-134 | 3.5 ± 2.4 ; 2.5 | 1.1 ± 2.2 ; 2.2 | -0.1 ± 2.2 ; 2.2 |
| Cs-137 | 2.6 ± 3.1 ; 3.1 | 1.1 ± 2.2 ; 2.2 | 1.2 ± 2.1 ; 2.1 |
| Ba-140 | 1.5 ± 9.2 ; 9.2 | 6.8 ± 6.8 ; 6.8 | 5.1 ± 7.4 ; 7.5 |
| La-140 | -7.6 ± 3.4 ; 3.6 | -3.1 ± 2.3 ; 2.4 | 3.1 ± 2.2 ; 2.3 |

Table 7. Surface Water

Collection: Monthly composites of weekly collections

ODCM-Required LLDs: Gross Beta = 4, Mn-54 = 15, Fe-59 = 30, Co-58 = 15, Co-60 = 15, Zn-65 = 30, Zr-95 = 30, Nb-95 = 15, Cs-134 = 15, Cs-137 = 18, Ba-140 = 60, La-140 = 15 pCi/L

Units: pCi/L

Sample Description and Concentration

D-52 (C) DesPlaines River

| 2003 Collection Period | January | February | March |
|---|---|---|---|
| Lab Code | CDSW-506 | CDSW-988 | CDSW-1483 |
| Gross Beta | 13.6 ± 1.6 ; 2.7 [a] | 9.0 ± 1.3 ; 1.9 | 9.6 ± 1.4 ; 2.0 |
| Mn-54 | -0.1 ± 2.1 ; 2.1 | -1.9 ± 2.4 ; 2.4 | 1.0 ± 3.1 ; 3.1 |
| Fe-59 | 1.2 ± 3.8 ; 3.8 | -1.1 ± 2.8 ; 2.8 | 0.8 ± 5.1 ; 5.1 |
| Co-58 | 0.1 ± 2.1 ; 2.1 | 1.1 ± 2.3 ; 2.3 | -0.5 ± 2.7 ; 2.7 |
| Co-60 | 1.2 ± 1.9 ; 1.9 | 1.6 ± 2.5 ; 2.5 | -0.2 ± 1.9 ; 1.9 |
| Zn-65 | 1.8 ± 2.8 ; 2.8 | 1.8 ± 3.6 ; 3.6 | 3.4 ± 5.6 ; 5.6 |
| Zr-95 | -4.1 ± 4.0 ; 4.0 | -3.5 ± 4.7 ; 4.7 | -1.9 ± 5.8 ; 5.8 |
| Nb-95 | 0.2 ± 1.8 ; 1.8 | 0.4 ± 2.5 ; 2.5 | -0.6 ± 2.8 ; 2.8 |
| Cs-134 | 3.4 ± 2.1 ; 2.1 | 1.9 ± 3.2 ; 3.2 | 2.4 ± 3.1 ; 3.1 |
| Cs-137 | -0.5 ± 2.2 ; 2.2 | 0.1 ± 2.4 ; 2.4 | -1.5 ± 2.1 ; 2.1 |
| Ba-140 | -3.3 ± 7.3 ; 7.3 | -13.2 ± 9.7 ; 9.9 | -9.9 ± 7.8 ; 8.0 |
| La-140 | 0.3 ± 2.1 ; 2.1 | 4.9 ± 2.8 ; 2.9 | 4.1 ± 2.5 ; 2.5 |
| 2003 Collection Period | April | May | June |
| Lab Code | CDSW-2496 | CDSW-3031 | CDSW-3514 |
| Gross Beta | 8.1 ± 1.3 ; 1.8 | 5.2 ± 1.1 ; 1.4 | 7.4 ± 1.2 ; 1.7 |
| Mn-54 | -0.1 ± 1.0 ; 1.0 | -0.4 ± 1.9 ; 1.9 | -1.0 ± 1.7 ; 1.7 |
| Fe-59 | 1.7 ± 1.8 ; 1.8 | 1.3 ± 3.7 ; 3.7 | 1.8 ± 2.7 ; 2.8 |
| Co-58 | -0.1 ± 0.8 ; 0.8 | 0.6 ± 1.5 ; 1.5 | 0.3 ± 1.3 ; 1.3 |
| Co-60 | 0.4 ± 1.0 ; 1.0 | 0.8 ± 1.6 ; 1.6 | -0.4 ± 1.8 ; 1.8 |
| Zn-65 | 0.8 ± 2.2 ; 2.2 | -1.2 ± 4.1 ; 4.1 | 1.0 ± 4.1 ; 4.1 |
| Zr-95 | 1.4 ± 2.1 ; 2.1 | 0.6 ± 4.0 ; 4.0 | -0.8 ± 4.3 ; 4.3 |
| Nb-95 | 0.3 ± 1.0 ; 1.0 | 0.6 ± 1.7 ; 1.7 | -2.3 ± 1.7 ; 1.7 |
| Cs-134 | -0.1 ± 1.1 ; 1.1 | 1.9 ± 2.1 ; 2.2 | 0.7 ± 1.9 ; 1.9 |
| Cs-137 | -0.4 ± 1.1 ; 1.1 | -1.2 ± 2.1 ; 2.1 | 1.9 ± 1.8 ; 1.8 |
| Ba-140 | -2.1 ± 3.9 ; 3.9 | -6.9 ± 6.6 ; 6.7 | -1.9 ± 5.9 ; 5.9 |
| La-140 | 1.1 ± 1.1 ; 1.1 | 0.3 ± 2.2 ; 2.2 | -0.3 ± 1.8 ; 1.8 |

[a] Repeat result; original gross beta = 13.6±1.6; recount = 13.5±2.3 pCi/L.

Table 7. Surface Water

Collection: Monthly composites of weekly collections

ODCM-Required LLDs: Gross Beta = 4, Mn-54 = 15, Fe-59 = 30, Co-58 = 15, Co-60 = 15, Zn-65 = 30, Zr-95 = 30, Nb-95 = 15, Cs-134 = 15, Cs-137 = 18, Ba-140 = 60, La-140 = 15 pCi/L

Units: pCi/L

Sample Description and Concentration

D-52 (C) DesPlaines River

| 2003 Collection Period | July | August | September |
|---|---|---|---|
| Lab Code | CDSW-4354 | CDSW-5077 | CDSW-5765 |
| Gross Beta | 5.8 ± 1.5 ; 1.8 | 5.9 ± 1.1 ; 1.4 | 6.7 ± 1.3 ; 1.6 |
| Mn-54 | 0.1 ± 1.9 ; 1.9 | -2.1 ± 2.7 ; 2.7 | 1.1 ± 1.5 ; 1.5 |
| Fe-59 | -1.8 ± 3.5 ; 3.5 | 3.1 ± 4.8 ; 4.8 | -1.1 ± 3.5 ; 3.5 |
| Co-58 | 0.7 ± 1.7 ; 1.7 | -0.2 ± 3.1 ; 3.1 | -0.2 ± 2.1 ; 2.1 |
| Co-60 | -0.2 ± 1.8 ; 1.8 | -2.8 ± 2.6 ; 2.6 | 0.5 ± 1.7 ; 1.7 |
| Zn-65 | 0.4 ± 4.5 ; 4.5 | -6.8 ± 6.5 ; 6.6 | -2.3 ± 4.6 ; 4.6 |
| Zr-95 | -2.1 ± 4.4 ; 4.4 | 4.2 ± 5.0 ; 5.0 | -0.4 ± 4.2 ; 4.2 |
| Nb-95 | 0.4 ± 2.1 ; 2.1 | -2.3 ± 2.5 ; 2.5 | -1.3 ± 2.1 ; 2.1 |
| Cs-134 | 0.8 ± 2.1 ; 2.1 | 1.6 ± 3.4 ; 3.4 | -0.8 ± 2.0 ; 2.0 |
| Cs-137 | 0.8 ± 2.1 ; 2.1 | -0.8 ± 2.8 ; 2.8 | -1.3 ± 2.2 ; 2.2 |
| Ba-140 | -8.3 ± 7.1 ; 7.2 | 12.2 ± 8.5 ; 8.7 | -1.3 ± 7.4 ; 7.4 |
| La-140 | -4.9 ± 2.1 ; 2.2 | -1.6 ± 3.2 ; 3.2 | 1.0 ± 2.5 ; 2.5 |

| 2003 Collection Period | October | November | December |
|---|---|---|---|
| Lab Code | CDSW-6696 | CDSW-7356 | CDSW-7787 |
| Gross Beta | 5.6 ± 1.3 ; 1.5 | 4.8 ± 1.1 ; 1.3 | 3.3 ± 0.6 ; 0.8 |
| Mn-54 | 0.6 ± 1.9 ; 1.9 | -0.1 ± 1.8 ; 1.8 | 0.5 ± 1.6 ; 1.6 |
| Fe-59 | 2.0 ± 3.3 ; 3.3 | 1.1 ± 3.3 ; 3.3 | -3.7 ± 3.5 ; 3.5 |
| Co-58 | 1.5 ± 1.6 ; 1.6 | 0.8 ± 1.7 ; 1.7 | 0.7 ± 1.5 ; 1.6 |
| Co-60 | 0.7 ± 1.3 ; 1.4 | 0.2 ± 1.4 ; 1.4 | 0.9 ± 2.0 ; 2.0 |
| Zn-65 | -0.2 ± 4.4 ; 4.4 | 5.3 ± 3.4 ; 3.5 | 0.2 ± 3.6 ; 3.6 |
| Zr-95 | 0.8 ± 4.1 ; 4.1 | -1.2 ± 3.8 ; 3.8 | -3.1 ± 4.5 ; 4.5 |
| Nb-95 | 1.8 ± 1.9 ; 1.9 | 0.1 ± 1.6 ; 1.6 | 0.2 ± 1.9 ; 1.9 |
| Cs-134 | 0.2 ± 1.9 ; 1.9 | 1.3 ± 1.8 ; 1.8 | -2.1 ± 2.3 ; 2.3 |
| Cs-137 | 1.2 ± 2.2 ; 2.2 | 1.9 ± 1.8 ; 1.8 | -1.2 ± 2.0 ; 2.0 |
| Ba-140 | -2.0 ± 7.2 ; 7.2 | -1.2 ± 6.8 ; 6.8 | 4.7 ± 5.7 ; 5.7 |
| La-140 | 0.7 ± 1.9 ; 1.9 | -1.8 ± 2.3 ; 2.3 | 0.5 ± 2.3 ; 2.3 |

Table 7. Surface Water

Collection: Monthly composites of weekly collections

ODCM-Required LLDs: Gross Beta = 4, Mn-54 = 15, Fe-59 = 30, Co-58 = 15, Co-60 = 15, Zn-65 = 30, Zr-95 = 30, Nb-95 = 15, Cs-134 = 15, Cs-137 = 18, Ba-140 = 60, La-140 = 15 pCi/L

Units: pCi/L

Sample Description and Concentration

D-54 (C) Kankakee River

| 2003 Collection Period | January | February | March |
|---|---|---|---|
| Lab Code | CDSW-503 | CDSW-908 | CDSW-1478 |
| Gross Beta | 2.4 ± 1.0 ; 1.0 | 4.0 ± 1.1 ; 1.3 | 4.6 ± 1.3 ; 1.5 |
| Mn-54 | -0.1 ± 1.9 ; 1.9 | 1.8 ± 1.8 ; 1.8 | -3.4 ± 3.3 ; 3.3 |
| Fe-59 | 0.2 ± 3.3 ; 3.3 | 3.2 ± 4.0 ; 4.0 | -2.7 ± 6.6 ; 6.6 |
| Co-58 | -0.6 ± 2.1 ; 2.1 | -0.4 ± 2.1 ; 2.1 | -2.7 ± 3.1 ; 3.1 |
| Co-60 | -2.6 ± 2.6 ; 2.6 | -1.5 ± 2.5 ; 2.5 | -0.4 ± 3.6 ; 3.6 |
| Zn-65 | 2.0 ± 4.4 ; 4.4 | -6.4 ± 4.4 ; 4.5 | 2.0 ± 7.6 ; 7.6 |
| Zr-95 | -1.5 ± 4.4 ; 4.4 | -0.8 ± 4.7 ; 4.7 | 3.0 ± 5.5 ; 5.5 |
| Nb-95 | -1.7 ± 2.1 ; 2.2 | 0.8 ± 2.0 ; 2.0 | 1.5 ± 3.0 ; 3.0 |
| Cs-134 | -2.1 ± 2.5 ; 2.5 | -1.5 ± 2.1 ; 2.1 | 0.9 ± 3.8 ; 3.8 |
| Cs-137 | -1.8 ± 2.3 ; 2.3 | 0.6 ± 2.2 ; 2.2 | -0.5 ± 3.2 ; 3.2 |
| Ba-140 | 1.7 ± 8.9 ; 8.9 | -1.7 ± 8.0 ; 8.0 | -15.7 ± 11.0 ; 11.2 |
| La-140 | 2.6 ± 2.0 ; 2.0 | -2.2 ± 2.4 ; 2.4 | -4.5 ± 4.4 ; 4.4 |

| 2003 Collection Period | April | May | June |
|---|---|---|---|
| Lab Code | CDSW-2491 | CDSW-2874 | CDSW-3860 |
| Gross Beta | 3.6 ± 1.0 ; 1.2 | 2.5 ± 1.1 ; 1.1 | 2.8 ± 1.1 ; 1.2 |
| Mn-54 | -0.2 ± 1.1 ; 1.1 | 0.1 ± 1.6 ; 1.6 | 0.4 ± 0.6 ; 0.6 |
| Fe-59 | -0.6 ± 2.2 ; 2.2 | 0.7 ± 2.6 ; 2.6 | 0.5 ± 1.2 ; 1.2 |
| Co-58 | 0.0 ± 1.0 ; 1.0 | 0.9 ± 1.6 ; 1.6 | 0.9 ± 0.6 ; 0.6 |
| Co-60 | 1.0 ± 1.1 ; 1.2 | 1.4 ± 2.0 ; 2.0 | 0.7 ± 0.7 ; 0.7 |
| Zn-65 | -0.1 ± 2.0 ; 2.0 | -0.2 ± 4.1 ; 4.1 | -0.9 ± 1.5 ; 1.5 |
| Zr-95 | -2.7 ± 2.2 ; 2.3 | -0.6 ± 3.7 ; 3.7 | -0.8 ± 1.4 ; 1.4 |
| Nb-95 | -0.2 ± 1.1 ; 1.1 | -1.0 ± 1.8 ; 1.8 | 0.4 ± 0.6 ; 0.6 |
| Cs-134 | -0.6 ± 1.4 ; 1.4 | 1.2 ± 1.3 ; 1.3 | 0.3 ± 0.7 ; 0.7 |
| Cs-137 | -0.9 ± 1.2 ; 1.2 | -0.2 ± 2.0 ; 2.0 | 0.0 ± 0.7 ; 0.7 |
| Ba-140 | -2.4 ± 4.2 ; 4.3 | 2.0 ± 7.1 ; 7.1 | 5.9 ± 2.5 ; 2.6 |
| La-140 | -1.3 ± 1.2 ; 1.3 | -1.4 ± 1.9 ; 1.9 | -1.8 ± 0.9 ; 0.9 |

* Location added by station request; data shared with Braidwood Station, location 10.

Table 7. Surface Water

Collection: Monthly composites of weekly collections

ODCM-Required LLDs: Gross Beta = 4, Mn-54 = 15, Fe-59 = 30, Co-58 = 15, Co-60 = 15, Zn-65 = 30, Zr-95 = 30, Nb-95 = 15, Cs-134 = 15, Cs-137 = 18, Ba-140 = 60, La-140 = 15 pCi/L

Units: pCi/L

Sample Description and Concentration

D-54 (C) Kankakee River

| 2003 Collection Period | July | August | September |
|---|---|---|---|
| Lab Code | CDSW-4364 | CDSW-5066 | CDSW-5566 |
| Gross Beta | 4.0 ± 1.4 ; 1.6 | 2.9 ± 1.1 ; 1.2 | 4.0 ± 1.2 ; 1.3 |
| Mn-54 | 0.6 ± 3.5 ; 3.5 | 0.3 ± 2.3 ; 2.3 | -1.0 ± 1.7 ; 1.7 |
| Fe-59 | 4.9 ± 6.5 ; 6.5 | 1.9 ± 4.6 ; 4.6 | 0.2 ± 3.2 ; 3.2 |
| Co-58 | 2.5 ± 3.6 ; 3.6 | -0.4 ± 2.4 ; 2.4 | -0.1 ± 1.4 ; 1.4 |
| Co-60 | 1.7 ± 4.1 ; 4.1 | -1.1 ± 1.9 ; 1.9 | -0.3 ± 1.7 ; 1.7 |
| Zn-65 | -6.7 ± 7.5 ; 7.6 | 2.1 ± 4.1 ; 4.1 | 2.2 ± 4.0 ; 4.0 |
| Zr-95 | -2.4 ± 7.1 ; 7.1 | 3.0 ± 6.3 ; 6.3 | -1.9 ± 4.1 ; 4.1 |
| Nb-95 | 3.9 ± 3.1 ; 3.1 | 1.0 ± 2.4 ; 2.4 | -3.5 ± 1.8 ; 1.9 |
| Cs-134 | -2.4 ± 3.9 ; 3.9 | -1.2 ± 2.9 ; 3.0 | -0.6 ± 1.9 ; 1.9 |
| Cs-137 | 2.7 ± 2.8 ; 2.8 | 1.0 ± 2.9 ; 3.0 | 0.4 ± 2.2 ; 2.2 |
| Ba-140 | -4.0 ± 11.2 ; 11.2 | -3.8 ± 8.3 ; 8.3 | -7.1 ± 7.1 ; 7.2 |
| La-140 | -0.1 ± 4.7 ; 4.7 | -0.5 ± 3.2 ; 3.2 | -1.3 ± 2.4 ; 2.4 |

| 2003 Collection Period | October | November | December |
|---|---|---|---|
| Lab Code | CDSW-6707 | CDSW-7305 | CDSW-7767 |
| Gross Beta | 3.4 ± 1.0 ; 1.1 | 5.5 ± 1.1 ; 1.4 | 2.0 ± 0.9 ; 1.0 |
| Mn-54 | -1.6 ± 2.0 ; 2.0 | -0.7 ± 3.4 ; 3.4 | -0.5 ± 1.6 ; 1.6 |
| Fe-59 | -6.1 ± 3.7 ; 3.8 | -0.4 ± 5.3 ; 5.3 | -3.5 ± 3.7 ; 3.7 |
| Co-58 | 1.5 ± 1.8 ; 1.9 | 2.2 ± 3.6 ; 3.7 | 0.3 ± 1.8 ; 1.8 |
| Co-60 | 0.7 ± 1.8 ; 1.8 | -3.0 ± 4.0 ; 4.0 | -0.9 ± 2.0 ; 2.0 |
| Zn-65 | -1.6 ± 4.3 ; 4.3 | -3.4 ± 7.4 ; 7.4 | -1.8 ± 4.5 ; 4.5 |
| Zr-95 | 2.0 ± 3.9 ; 3.9 | -6.0 ± 8.1 ; 8.2 | -6.7 ± 4.7 ; 4.8 |
| Nb-95 | 2.1 ± 1.9 ; 1.9 | -1.5 ± 3.7 ; 3.7 | 0.3 ± 1.5 ; 1.5 |
| Cs-134 | -1.3 ± 2.1 ; 2.1 | -1.5 ± 3.5 ; 3.5 | 0.4 ± 2.0 ; 2.0 |
| Cs-137 | 0.6 ± 2.0 ; 2.0 | 1.1 ± 3.0 ; 3.0 | -0.8 ± 2.0 ; 2.0 |
| Ba-140 | 1.5 ± 8.2 ; 8.2 | 1.4 ± 10.6 ; 10.6 | -1.8 ± 7.2 ; 7.2 |
| La-140 | 1.9 ± 2.6 ; 2.6 | -5.6 ± 4.7 ; 4.8 | -0.3 ± 1.7 ; 1.7 |

[a] Location added by station request; data shared with Braidwood Station, location 10.

Table 7. Surface Water
Collection: Quarterly composites of weekly collections

Required LLD: H-3 = 200 pCi/L
Units: pCi/L

| 2003 Collection Period | Sample Description and Concentration<br>Lab Code | Tritium |
|---|---|---|
| | D-51 Dresden Lock & Dam | |
| 1st Quarter | CDSW - 1468 | 1,626 ± 125 ; 254 |
| 2nd Quarter | CDSW - 3516 | 294 ± 93 ; 102 |
| 3rd Quarter | CDSW - 5591 | 662 ± 112 ; 144 |
| 4th Quarter | CDSW - 7783 | 277 ± 92 ; 100 |
| | D-52 (C) DesPlaines River | |
| 1st Quarter | CDSW - 1469 | 230 ± 75 ; 81 |
| 2nd Quarter | CDSW - 3517 | 12 ± 81 ; 81 |
| 3rd Quarter | CDSW - 5592 | 102 ± 90 ; 91 |
| 4th Quarter | CDSW - 7784,5 | 53 ± 58 ; 58 |
| | D-54 (C) Kankakee River* | |
| 1st Quarter | CDSW - 1465 | 134 ± 70 ; 72 |
| 2nd Quarter | CDSW - 3642 | 18 ± 84 ; 84 |
| 3rd Quarter | CDSW - 5589 | 61 ± 94 ; 94 |
| 4th Quarter | CDSW - 7770 | 10 ± 80 ; 80 |

* Location added by station request; data shared with Braidwood Station, location 10.

Table 8. Well Water

Collection: Quarterly

ODCM-Required LLDs: H-3 = 200, Mn-54 = 15, Fe-59 = 30, Co-58 = 15, Co-60 = 15, Zn-65 = 30, Zr-95 = 30, Nb-95 = 15, Cs-134 = 15, Cs-137 = 18, Ba-140 = 60, La-140 = 15 pCi/L

Units: pCi/L

Sample Description and Concentration

D-23 Thorsen Well

| Date Collected | 01-10-03 | 04-11-03 | 07-11-03 | 10-10-03 |
|---|---|---|---|---|
| Lab Code | CDWW-159 | CDWW-1787 | CDWW-3881 | CDWW-5896 |
| H-3 | 609 ± 93 ; 124 | 729 ± 96 ; 138 | 839 ± 115 ; 162 | 711 ± 110 ; 147 |
| Mn-54 | -1.0 ± 3.1 ; 3.1 | -2.4 ± 2.0 ; 2.0 | 1.5 ± 1.6 ; 1.6 | 2.0 ± 3.1 ; 3.1 |
| Fe-59 | -5.6 ± 5.0 ; 5.1 | -5.8 ± 4.5 ; 4.6 | 0.7 ± 2.9 ; 2.9 | -1.8 ± 5.6 ; 5.6 |
| Co-58 | -0.8 ± 3.1 ; 3.5 | 0.4 ± 2.3 ; 3.0 | 0.2 ± 1.6 ; 1.2 | -3.3 ± 2.4 ; 2.6 |
| Co-60 | -1.0 ± 3.5 ; 3.1 | -0.3 ± 3.0 ; 2.3 | 0.4 ± 1.2 ; 1.6 | -2.4 ± 2.6 ; 2.4 |
| Zn-65 | -3.6 ± 4.5 ; 4.6 | 1.4 ± 4.2 ; 4.2 | -0.6 ± 3.8 ; 3.8 | -0.7 ± 5.6 ; 5.6 |
| Zr-95 | -2.1 ± 6.1 ; 6.1 | 0.6 ± 5.6 ; 5.6 | -2.5 ± 3.4 ; 3.4 | 4.3 ± 6.0 ; 6.0 |
| Nb-95 | -0.5 ± 2.9 ; 2.9 | -1.0 ± 2.9 ; 2.9 | 0.6 ± 1.8 ; 1.8 | -1.8 ± 3.1 ; 3.1 |
| Cs-134 | -3.1 ± 4.1 ; 4.1 | -1.2 ± 3.9 ; 3.9 | 0.1 ± 1.7 ; 1.7 | -0.5 ± 3.1 ; 3.1 |
| Cs-137 | -1.4 ± 3.4 ; 3.4 | -0.7 ± 3.5 ; 3.5 | 0.9 ± 1.8 ; 1.8 | 2.8 ± 3.3 ; 3.4 |
| Ba-140 | 17.1 ± 9.7 ; 10.0 | 7.8 ± 8.3 ; 8.4 | -3.2 ± 6.7 ; 6.7 | 1.5 ± 9.0 ; 9.0 |
| La-140 | -1.7 ± 3.2 ; 3.2 | 1.2 ± 2.6 ; 2.6 | -3.0 ± 2.3 ; 2.3 | 0.9 ± 3.0 ; 3.0 |

D-35 Dresden Lock & Dam

| Date Collected | 01-10-03 | 04-11-03 | 07-11-03 | 10-10-03 |
|---|---|---|---|---|
| Lab Code | CDWW-160 | CDWW-1788 | CDWW-3882 | CDWW-5897 |
| H-3 | -61 ± 62 ; 62 | 16 ± 64 ; 64 | 12 ± 74 ; 74 | 0 ± 81 ; 81 |
| Mn-54 | 1.3 ± 1.4 ; 1.4 | 1.2 ± 3.3 ; 3.3 | 0.7 ± 3.4 ; 3.4 | 0.5 ± 1.4 ; 1.4 |
| Fe-59 | -2.1 ± 3.2 ; 3.2 | -2.2 ± 4.8 ; 4.8 | -2.5 ± 6.3 ; 6.3 | 0.4 ± 3.2 ; 3.2 |
| Co-58 | 0.6 ± 1.6 ; 1.5 | 2.6 ± 3.0 ; 4.3 | 1.5 ± 2.7 ; 4.2 | 1.1 ± 1.6 ; 1.7 |
| Co-60 | -0.1 ± 1.5 ; 1.6 | 0.4 ± 4.3 ; 3.0 | -1.3 ± 4.2 ; 2.7 | -1.1 ± 1.6 ; 1.6 |
| Zn-65 | -2.3 ± 4.3 ; 4.3 | 1.8 ± 7.6 ; 7.6 | -0.4 ± 6.6 ; 6.6 | -1.1 ± 3.3 ; 3.3 |
| Zr-95 | -0.8 ± 3.8 ; 3.8 | -2.9 ± 8.1 ; 8.2 | 3.0 ± 5.0 ; 5.0 | 0.8 ± 4.0 ; 4.0 |
| Nb-95 | 0.2 ± 1.4 ; 1.4 | 2.0 ± 3.4 ; 3.4 | -0.6 ± 2.8 ; 2.8 | -0.7 ± 1.8 ; 1.8 |
| Cs-134 | 3.0 ± 1.8 ; 1.9 | -0.1 ± 3.8 ; 3.8 | -0.6 ± 3.4 ; 3.4 | -0.5 ± 1.7 ; 1.7 |
| Cs-137 | -0.5 ± 1.6 ; 1.6 | 0.6 ± 3.8 ; 3.8 | 1.0 ± 3.3 ; 3.3 | -0.6 ± 1.7 ; 1.7 |
| Ba-140 | 0.3 ± 6.6 ; 6.6 | 2.1 ± 9.5 ; 9.5 | 4.8 ± 11.3 ; 11.3 | -1.4 ± 7.4 ; 7.4 |
| La-140 | -1.1 ± 2.0 ; 2.0 | 0.3 ± 4.3 ; 4.3 | -4.9 ± 4.7 ; 4.8 | -0.6 ± 1.8 ; 1.8 |

## 5.0 MILCH ANIMALS, NEAREST LIVESTOCK AND NEAREST RESIDENCES CENSUS

DRESDEN

MILCH ANIMALS CENSUS, 2003

| | | Cows Being Milked |
|---|---|---|
| | Halpin's Dairy Farm | |
| | 16.0 miles, Sector J | 55 |
| | 10% or less for pasture<br>25% ground grain<br>65% green chop, hay or silage | |
| D-25 | V. Biros Dairy Farm | |
| | 11.4 miles, Sector L | 94 |
| | 25% pasture<br>25% ground grain<br>50% green chop | |

Census conducted by A.D. Lewis on August 27, 2003

DRESDEN

NEAREST LIVESTOCK CENSUS, 2003

Nearest livestock of the Dresden Station within a 6.2 mile radius.

| Sector | Direction | Distance |
|---|---|---|
| A | N | 1.4 miles |
| B | NNE | 6.0 miles |
| C | NE | 2.5 miles |
| D | ENE | 4.7 miles |
| E | E | None |
| F | ESE | None |
| G | SE | None |
| H | SSE | None |
| J | S | None |
| K | SSW | None |
| L | SW | None |
| M | WSW | None |
| N | W | 0.5 miles |
| P | WNW | 0.5 miles |
| Q | NW | 0.5 miles |
| R | NNW | 1.0 miles |

Census conducted by A.D. Lewis on August 27, 2003

DRESDEN

NEAREST RESIDENCE CENSUS, 2003

Nearest resident of the Dresden Station within a 6.2 mile radius.

| Sector | Direction | Distance |
|---|---|---|
| A | N | 2.3 miles |
| B | NNE | 0.8 miles |
| C | NE | 0.8 miles |
| D | ENE | 0.7 miles |
| E | E | 1.1 miles |
| F | ESE | 1.0 miles |
| G | SE | 0.6 miles |
| H | SSE | 0.5 miles |
| J | S | 0.5 miles |
| K | SSW | 3.3 miles |
| L | SW | 3.6 miles |
| M | WSW | 5.8 miles |
| N | W | 3.5 miles |
| P | WNW | 3.7 miles |
| Q | NW | 2.6 miles |
| R | NNW | 0.8 miles |

Census conducted by A.D. Lewis on August 27, 2003

# 6.0 TLD DATA*

* TLD Data provided by Exelon Generation Company.

Exelon Nuclear
Environmental Site Report for Dresden

Gamma Radiation Measured in mR by TLDs

| Site | Description | Quarter 1 2003 | Quarter 2 2003 | Quarter 3 2003 | Quarter 4 2003 |
|---|---|---|---|---|---|
| I. INDICATOR LOCATIONS | | | | | |
| a. Air Samplers | | | | | |
| D-01-1 | ONSITE STATION 1 | 27.0 | 25.0 | 24.0 | 28.0 |
| D-01-2 | ONSITE STATION 1 | 24.0 | 20.0 | 20.0 | 25.0 |
| D-02-1 | ONSITE STATION 2 | 25.0 | 22.0 | 20.0 | 25.0 |
| D-02-2 | ONSITE STATION 2 | 26.0 | 22.0 | 20.0 | 26.0 |
| D-03-1 | ONSITE STATION 3 | 24.0 | 21.0 | 19.0 | 22.0 |
| D-03-2 | ONSITE STATION 3 | 25.0 | 21.0 | 21.0 | 22.0 |
| D-04-1 | COLLINS ROAD | 27.0 | 25.0 | 25.0 | 30.0 |
| D-04-2 | COLLINS ROAD | 28.0 | 24.0 | 24.0 | 26.0 |
| D-07-1 | CLAY PRODUCTS | 26.0 | 23.0 | 22.0 | 28.0 |
| D-07-2 | CLAY PRODUCTS | 24.0 | 22.0 | 19.0 | 27.0 |
| D-08-1 | PRAIRIE PARK | 24.0 | 23.0 | 24.0 | 26.0 |
| D-08-2 | PRAIRIE PARK | 29.0 | 23.0 | 24.0 | 27.0 |
| D-10-1 | GOOSE LAKE VILLAGE | 28.0 | 22.0 | 24.0 | 29.0 |
| D-10-2 | GOOSE LAKE VILLAGE | 28.0 | 23.0 | 23.0 | 28.0 |
| D-13-1 | MINOOKA | 25.0 | 19.0 | 20.0 | 26.0 |
| D-13-2 | MINOOKA | 24.0 | 21.0 | 20.0 | 26.0 |
| D-14-1 | CHANNAHON | 24.0 | 21.0 | 19.0 | 25.0 |
| D-14-2 | CHANNAHON | 21.0 | 23.0 | 21.0 | 23.0 |
| D-45-1 | MCKINLEY WOODS ROAD | 27.0 | 24.0 | 25.0 | 28.0 |
| D-45-2 | MCKINLEY WOODS ROAD | 30.0 | 25.0 | 24.0 | 30.0 |
| D-53-1 | GRUNDY COUNTY LINE ROAD | 21.0 | 19.0 | 18.0 | 21.0 |
| D-53-2 | GRUNDY COUNTY LINE ROAD | 23.0 | 19.0 | 19.0 | 21.0 |
| | Air Sampler Mean ± S. D. | 25.5 ±2.4 | 22.1 ±1.9 | 21.6 ±2.3 | 25.9 ±2.7 |
| | Annual Air Sampler Mean ± S.D. | | | | 23.8 ±2.8 |
| b. Inner Ring (100 Series) | | | | | |
| D-101-1 | | 28.0 | 25.0 | 24.0 | 30.0 |
| D-101-2 | | 25.0 | 22.0 | 22.0 | 24.0 |
| D-102-1 | | 29.0 | 25.0 | 23.0 | 31.0 |
| D-102-2 | | 28.0 | 25.0 | 24.0 | 29.0 |
| D-103-1 | | | 24.0 | 23.0 | 24.0 |
| D-103-2 | | 25.0 | 22.0 | 26.0 | 28.0 |
| D-104-1 | | 28.0 | 25.0 | 26.0 | 29.0 |
| D-104-2 | | 29.0 | 25.0 | 23.0 | 27.0 |
| D-105-1 | | 27.0 | 22.0 | 22.0 | 25.0 |
| D-105-2 | | 28.0 | 25.0 | 22.0 | 31.0 |
| D-106-1 | | 25.0 | 23.0 | 23.0 | 24.0 |
| D-106-2 | | 23.0 | 21.0 | 19.0 | 22.0 |
| D-107-1 | | 23.0 | 18.0 | 20.0 | 26.0 |
| D-107-2 | | 23.0 | 21.0 | 20.0 | 21.0 |
| D-108-1 | | 28.0 | 25.0 | 27.0 | 26.0 |
| D-108-2 | | 26.0 | 20.0 | 22.0 | 28.0 |

Exelon Nuclear
Environmental Site Report for Dresden

Gamma Radiation Measured in mR by TLDs

| Site | Description | Quarter 1 2003 | Quarter 2 2003 | Quarter 3 2003 | Quarter 4 2003 |
|---|---|---|---|---|---|
| b. Inner Ring (100 Series) | | | | | |
| D-109-1 | | 28.0 | 26.0 | 25.0 | 28.0 |
| D-109-2 | | 28.0 | 25.0 | 27.0 | 27.0 |
| D-110-3 | | 27.0 | 25.0 | 26.0 | 32.0 |
| D-110-4 | | 30.0 | 29.0 | 28.0 | 31.0 |
| D-111-1 | | 28.0 | 24.0 | 24.0 | 30.0 |
| D-111-2 | | 26.0 | 24.0 | 24.0 | 29.0 |
| D-112A-1 | | 22.0 | 24.0 | 22.0 | 28.0 |
| D-112A-2 | | 25.0 | 23.0 | 23.0 | 24.0 |
| D-113-1 | | 20.0 | 19.0 | 21.0 | 23.0 |
| D-113-2 | | 23.0 | 23.0 | 23.0 | 24.0 |
| D-114-1 | | 24.0 | 21.0 | 22.0 | 23.0 |
| D-114-2 | | 25.0 | 21.0 | 22.0 | 24.0 |
| D-115-1 | | 26.0 | 23.0 | 23.0 | 27.0 |
| D-115-2 | | 27.0 | 22.0 | 24.0 | 29.0 |
| D-116-1 | | 29.0 | 24.0 | 25.0 | 29.0 |
| D-116-2 | | 29.0 | 25.0 | 25.0 | 31.0 |
| | Inner Ring Mean ± S.D. | 26.2 ±2.5 | 23.3 ±2.2 | 23.4 ±2.1 | 27.0 ±3.0 |
| | Annual Inner Ring Mean ± S.D. | | | | 25.0 ±3.0 |
| c. Outer Ring (200 Series) | | | | | |
| D-201-1 | | 30.0 | 28.0 | 27.0 | 28.0 |
| D-201-2 | | 32.0 | 28.0 | 25.0 | 30.0 |
| D-202-1 | | 27.0 | 24.0 | 22.0 | 28.0 |
| D-202-2 | | 28.0 | 25.0 | 24.0 | 31.0 |
| D-203-1 | | 19.0 | 20.0 | 19.0 | 22.0 |
| D-203-2 | | 27.0 | 23.0 | 22.0 | 24.0 |
| D-204-1 | | 28.0 | 24.0 | 23.0 | 25.0 |
| D-204-2 | | 22.0 | 21.0 | 22.0 | 23.0 |
| D-205-1 | | 24.0 | 23.0 | 22.0 | 29.0 |
| D-205-2 | | 24.0 | 20.0 | 21.0 | 27.0 |
| D-206-1 | | 27.0 | 22.0 | 23.0 | 26.0 |
| D-206-2 | | 25.0 | 24.0 | 20.0 | 25.0 |
| D-207-1 | | 26.0 | 21.0 | 22.0 | 23.0 |
| D-207-2 | | 26.0 | 22.0 | 22.0 | 23.0 |
| D-208-1 | | 21.0 | 21.0 | 21.0 | 22.0 |
| D-208-2 | | 21.0 | 19.0 | 18.0 | 22.0 |
| D-209-1 | | 23.0 | 19.0 | 21.0 | 21.0 |
| D-209-2 | | 23.0 | 18.0 | 19.0 | 22.0 |
| D-210-1 | | 26.0 | 22.0 | 23.0 | 25.0 |
| D-210-2 | | 27.0 | 26.0 | 24.0 | 26.0 |
| D-211-1 | | 28.0 | 24.0 | 25.0 | 29.0 |
| D-211-2 | | 28.0 | 23.0 | 26.0 | 30.0 |

Exelon Nuclear
Environmental Site Report for Dresden

Gamma Radiation Measured in mR by TLDs

| Site | Description | Quarter 1 2003 | Quarter 2 2003 | Quarter 3 2003 | Quarter 4 2003 |
|---|---|---|---|---|---|
| Outer Ring (200 Series) | | | | | |
| D-212-3 | | 24.0 | 20.0 | 22.0 | 23.0 |
| D-212-4 | | 24.0 | 21.0 | 20.0 | 26.0 |
| D-213-1 | | 20.0 | 19.0 | 18.0 | 22.0 |
| D-213-2 | | 20.0 | 18.0 | 20.0 | 22.0 |
| D-214-1 | | 30.0 | 27.0 | 26.0 | 33.0 |
| D-214-2 | | 31.0 | 25.0 | 29.0 | 33.0 |
| D-215-1 | | 30.0 | 26.0 | 26.0 | 32.0 |
| D-215-2 | | 29.0 | 25.0 | 26.0 | 28.0 |
| D-216-1 | | 27.0 | 24.0 | 24.0 | 26.0 |
| D-216-2 | | 28.0 | 25.0 | 24.0 | 32.0 |
| | Outer Ring Mean ± S.D. | 25.8 ±3.4 | 22.7 ±2.8 | 22.7 ±2.7 | 26.2 ±3.7 |
| | Annual Outer Ring Mean ± S.D. | | | | 24.3 ±3.6 |
| | INDICATOR LOCATION MEAN ± S.D. | 25.8 ±2.8 | 22.8 ±2.4 | 22.7 ±2.5 | 26.4 ±3.2 |
| | Annual INDICATOR MEAN ± S.D. | | | | 24.4 ±3.2 |
| II. CONTROL LOCATIONS | | | | | |
| D-12-1 | LISBON | 26.0 | 19.0 | 22.0 | 23.0 |
| D-12-2 | LISBON | 21.0 | 19.0 | 21.0 | 24.0 |
| | CONTROL LOCATION MEAN ± S.D. | 23.5 ±3.5 | 19.0 ±0.0 | 21.5 ±0.7 | 23.5 ±0.7 |
| | Annual CONTROL LOCATION MEAN ± S.D. | | | | 21.9 ±2.4 |

## 7.0 GRAPHS OF DATA TRENDS

# Air Particulates - Gross Beta

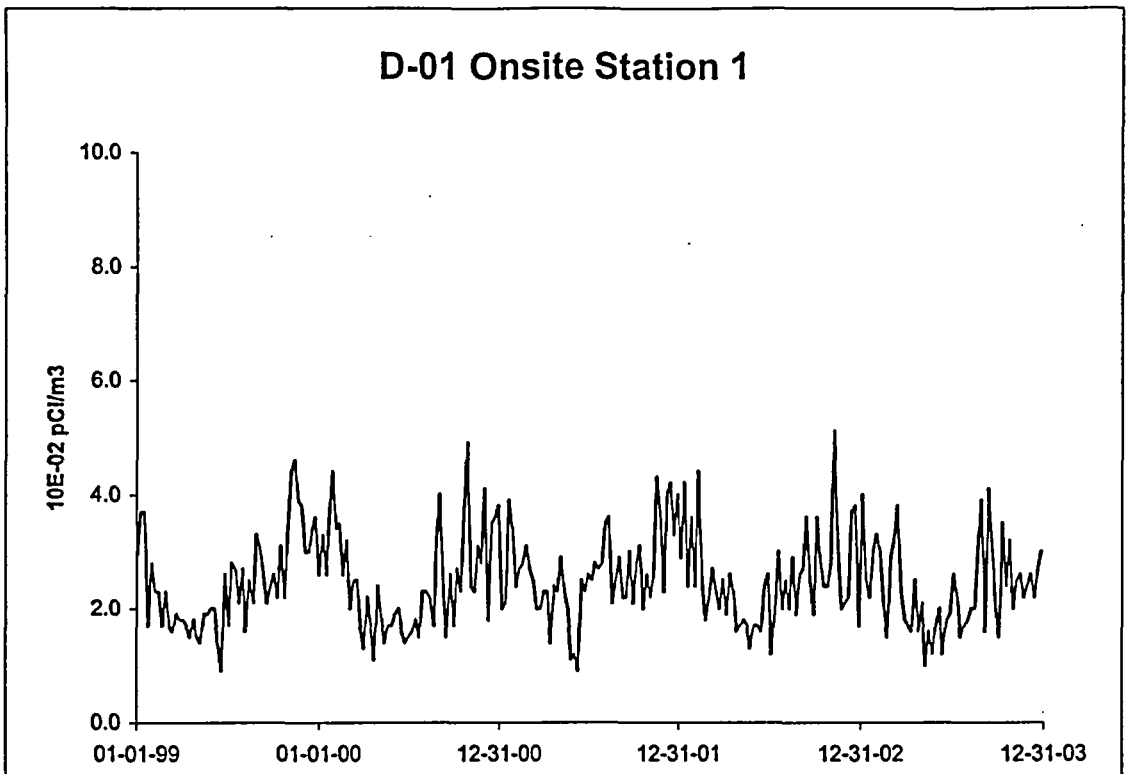


*Figure 1. Continuous collection with weekly exchange of particulate filter.*

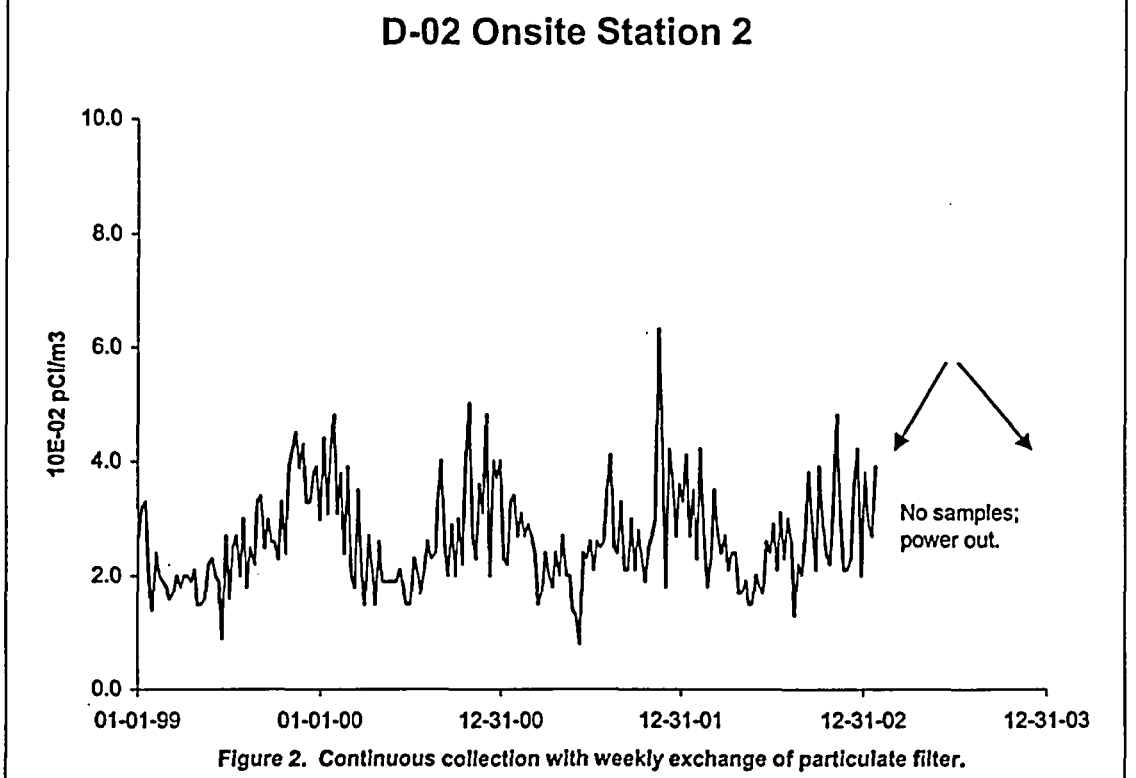


*Figure 2. Continuous collection with weekly exchange of particulate filter.*

# Air Particulates - Gross Beta

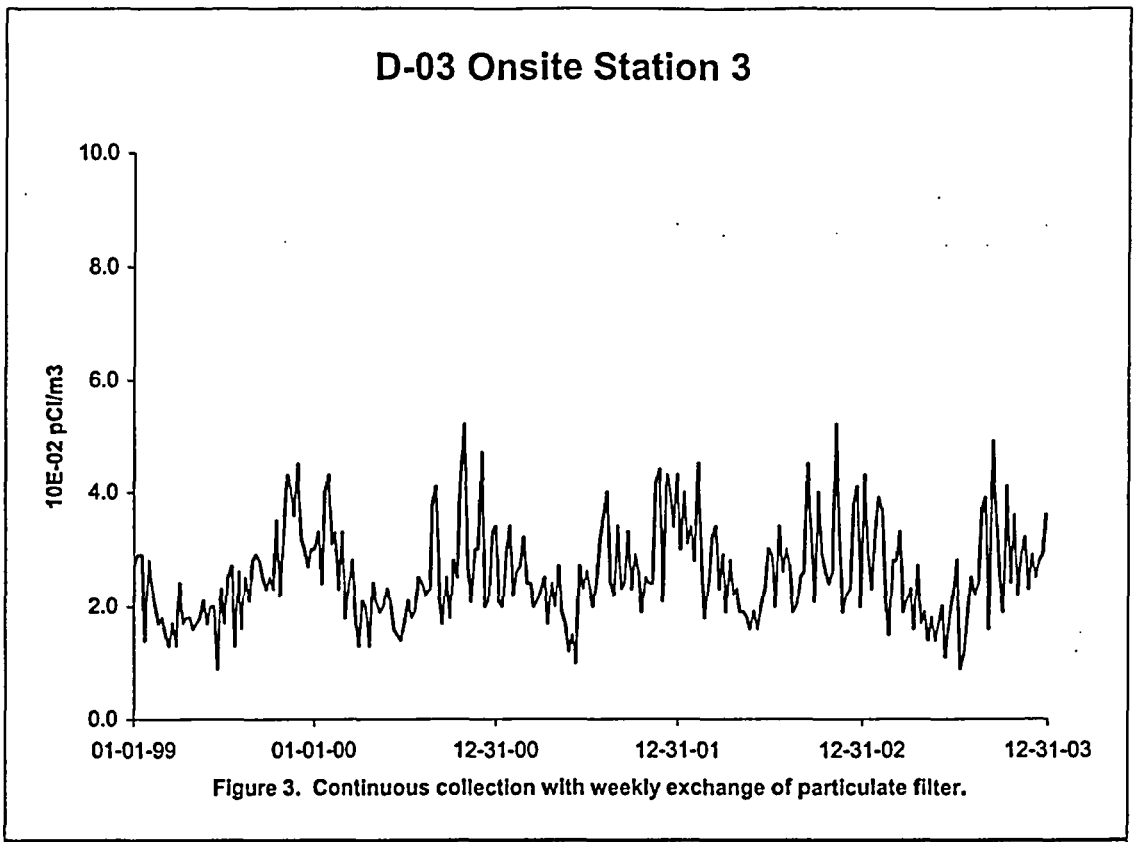


Figure 3. Continuous collection with weekly exchange of particulate filter.

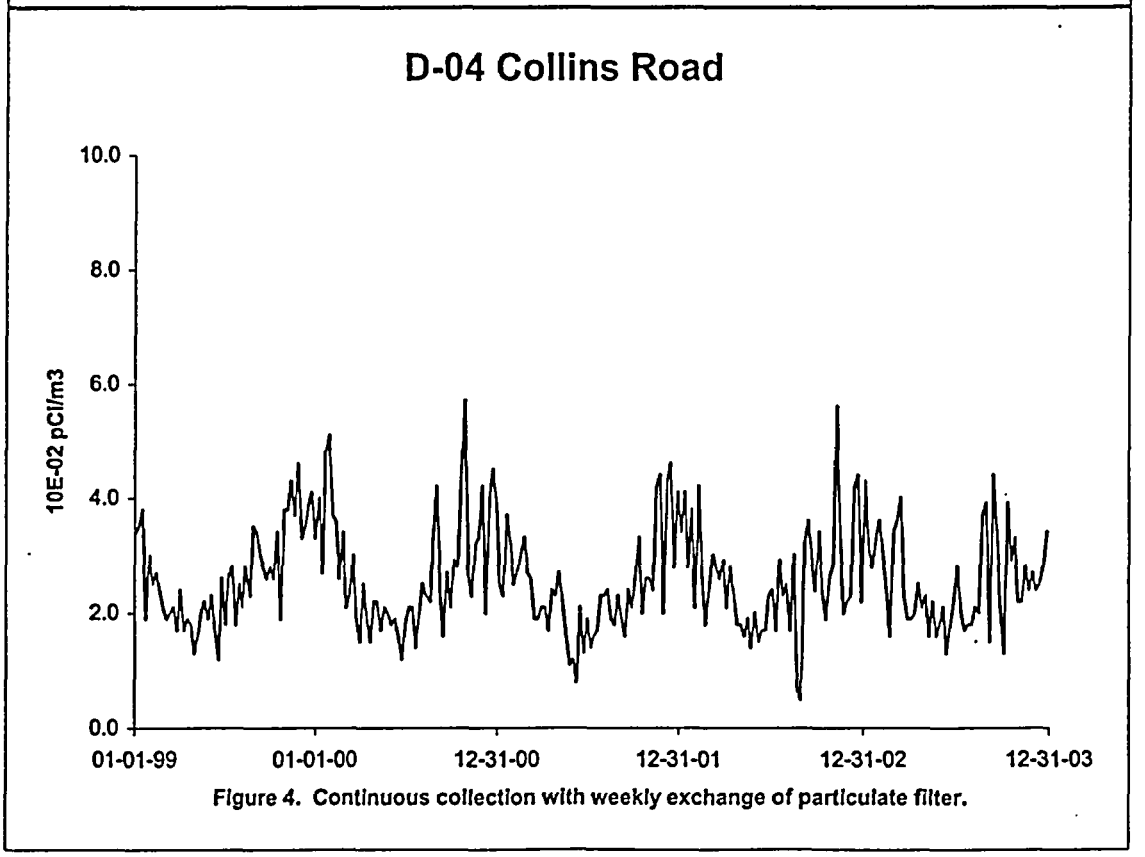


Figure 4. Continuous collection with weekly exchange of particulate filter.

# Air Particulates - Gross Beta

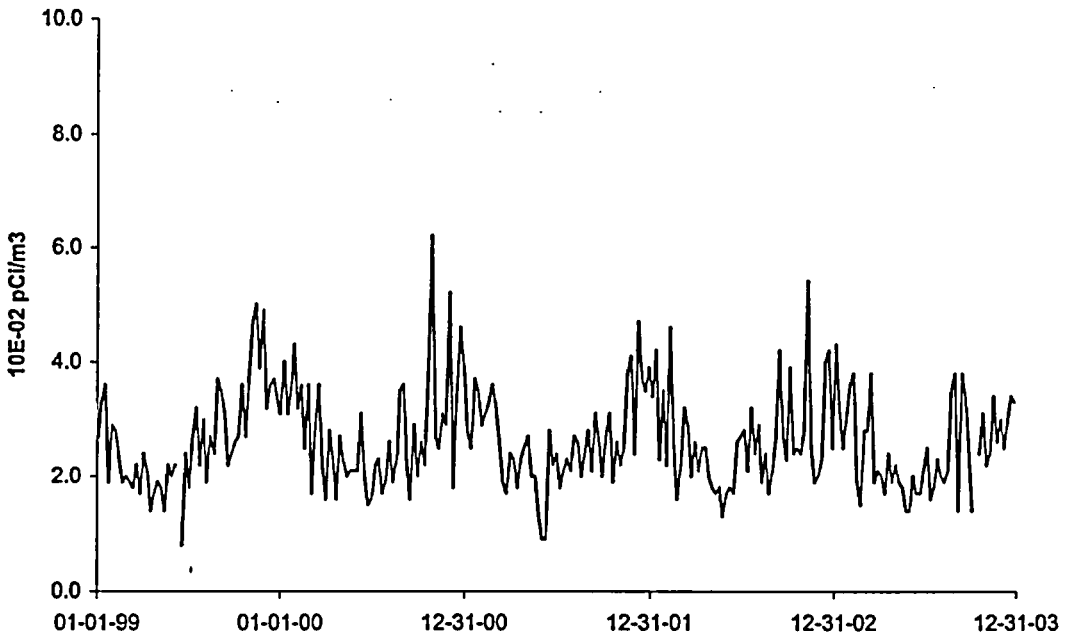


Figure 5. Continuous collection with weekly exchange of particulate filter.

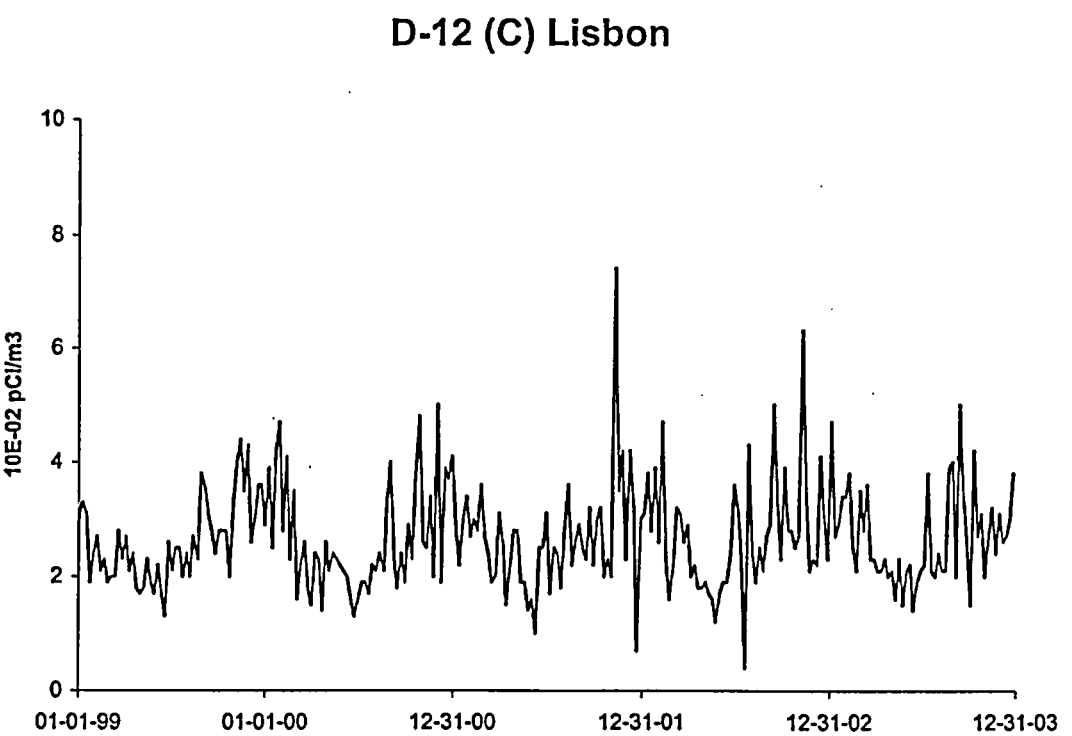


Figure 6. Continuous collection with weekly exchange of particulate filter.

# Air Particulates - Gross Beta

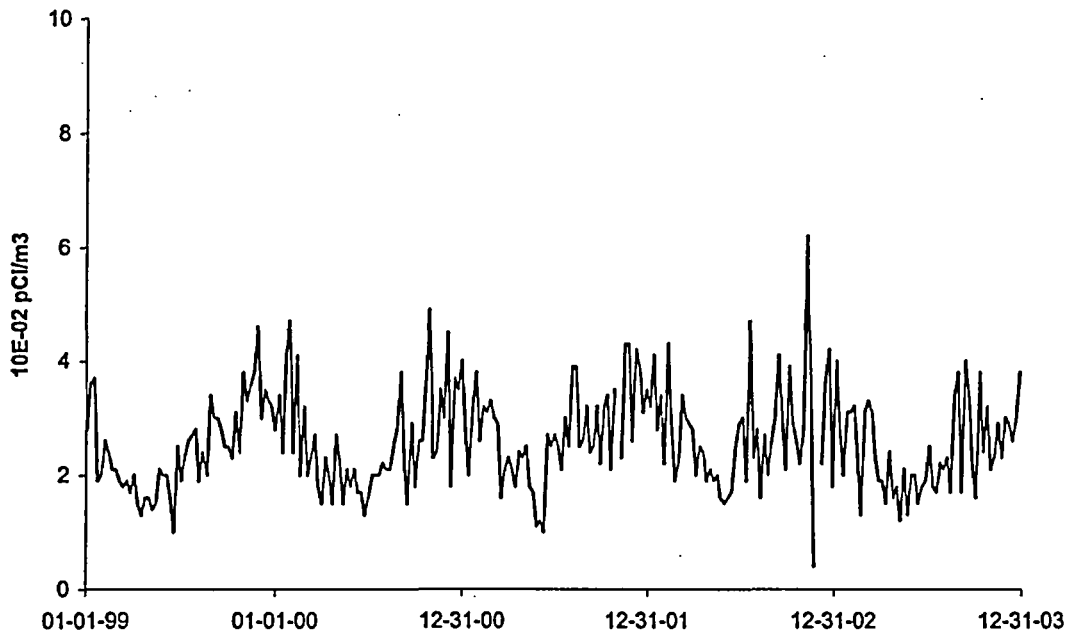


Figure 7. Continuous collection with weekly exchange of particulate filter.

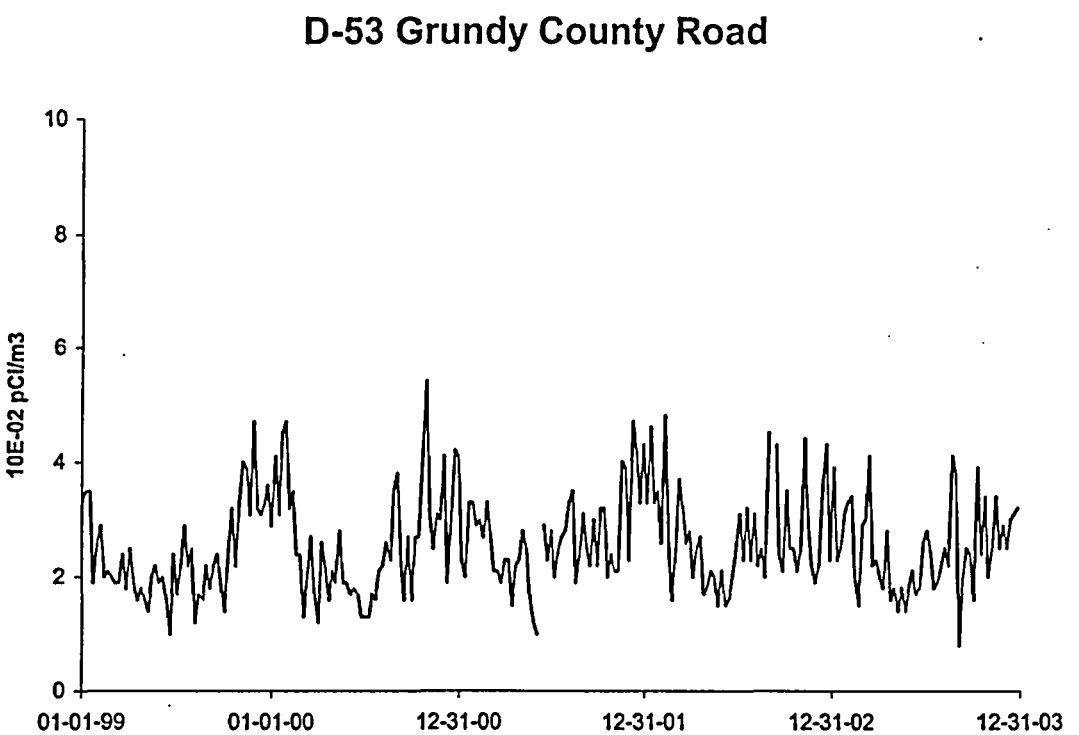


Figure 8. Continuous collection with weekly exchange of particulate filter.

# Surface Water-Gross Beta

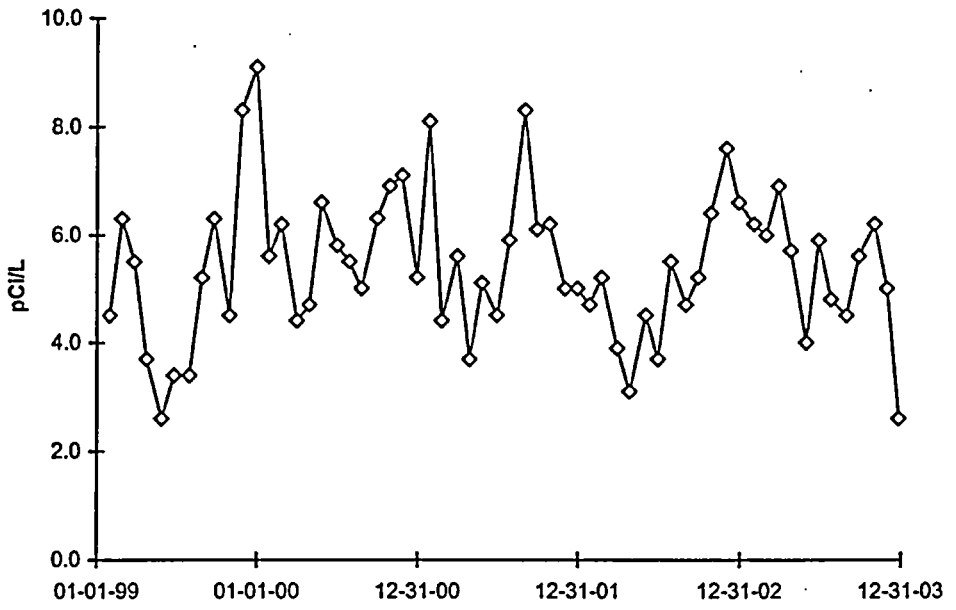


Figure 9. Monthly composite of weekly collections.

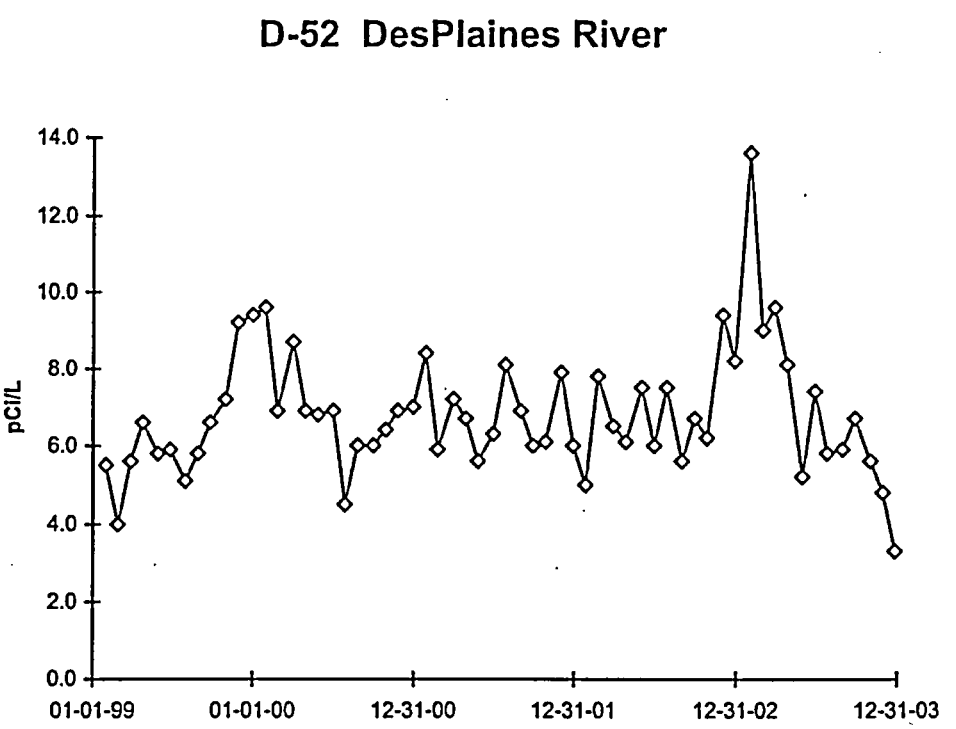


Figure 10. Monthly composite of weekly collection.

# Surface Water-Gross Beta

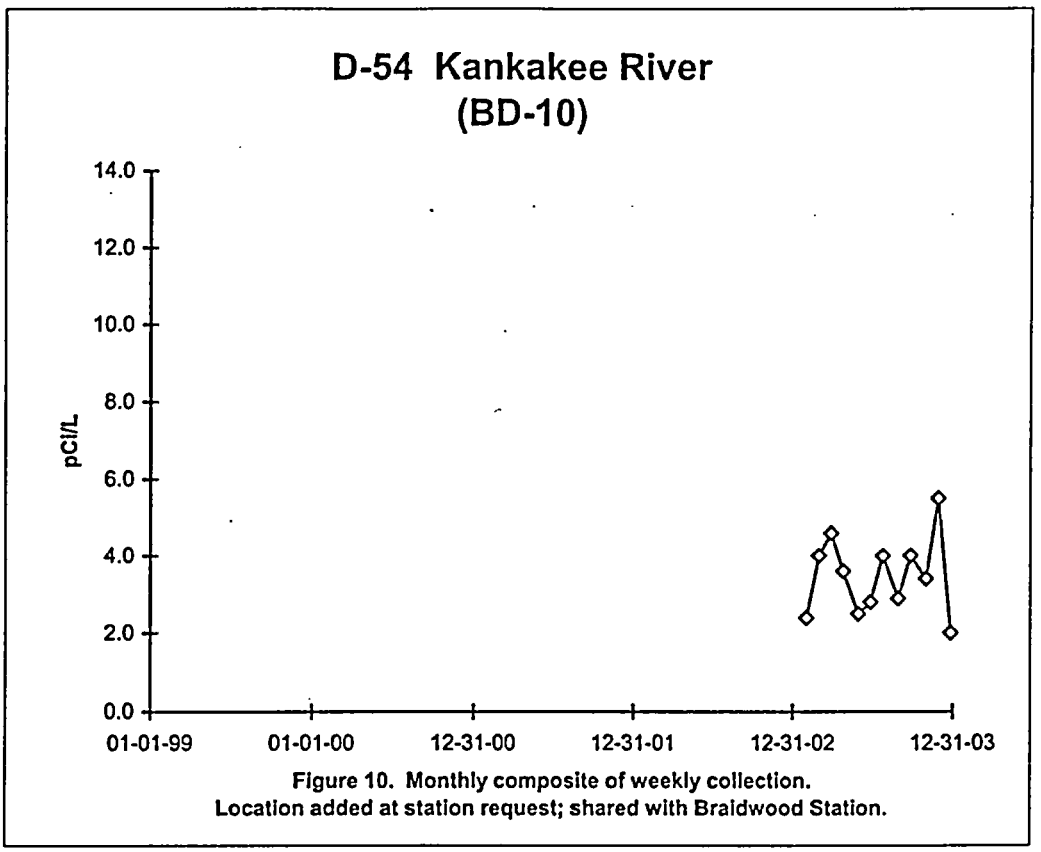


Figure 10. Monthly composite of weekly collection.
Location added at station request; shared with Braidwood Station.

# Surface Water-Tritium

## D-51 Dresden Lock & Dam

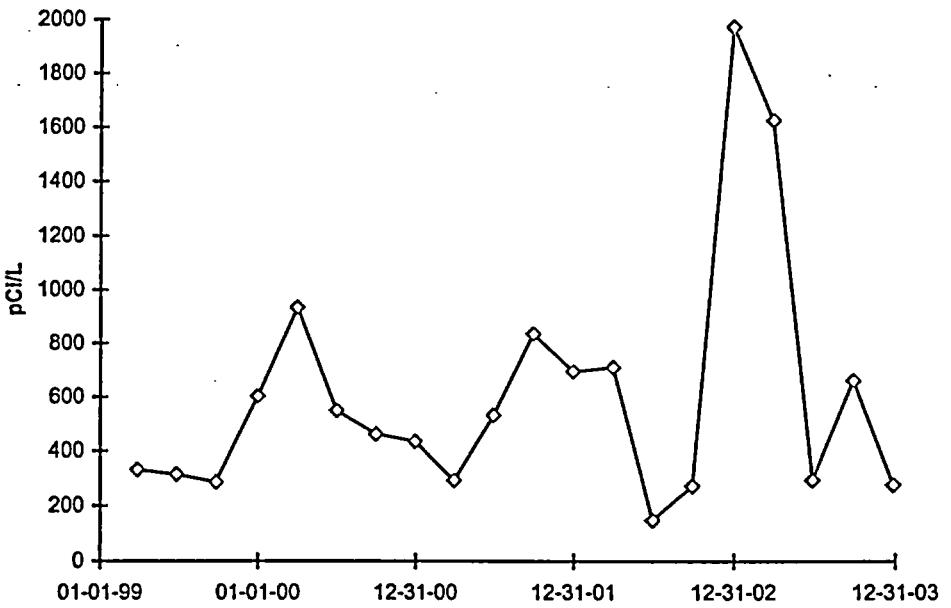


Figure 11. Quarterly composite of weekly collection.

## D-52 Des Plaines River

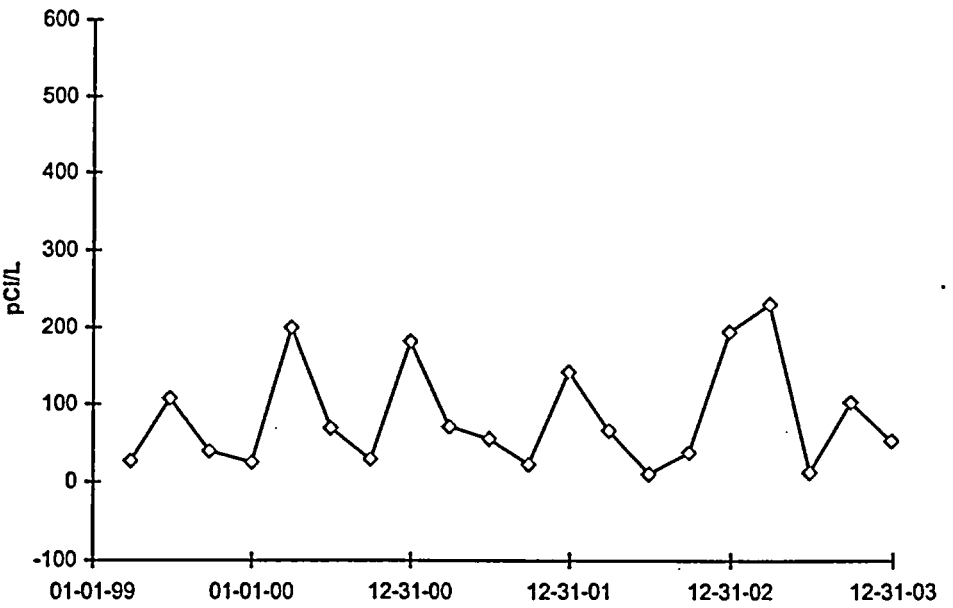


Figure 12. Quarterly composite of weekly collection.

# Surface Water-Tritium

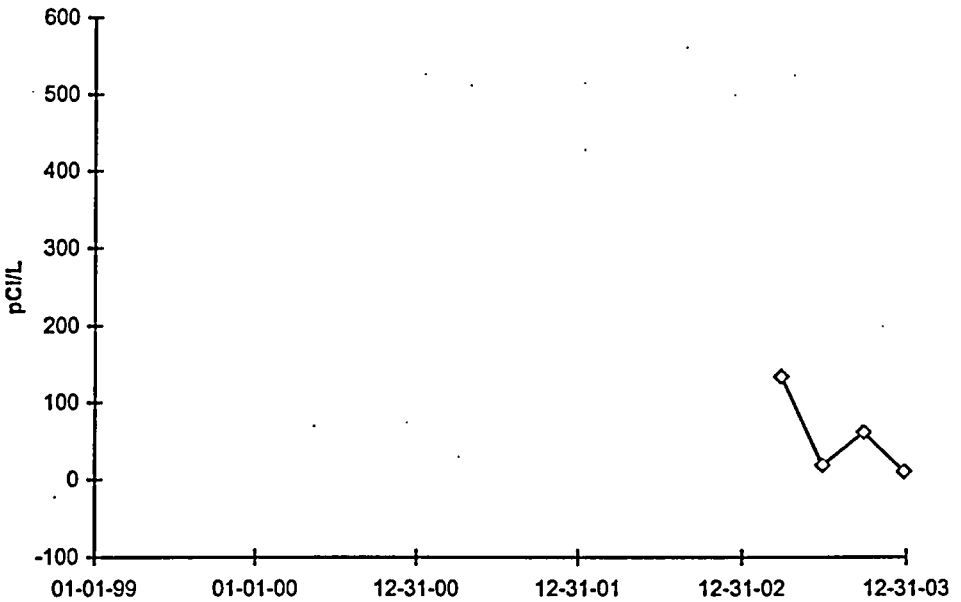


Figure 12. Quarterly composite of weekly collection.
Location added at station request; shared with Braidwood Station.

# Well Water-Tritium

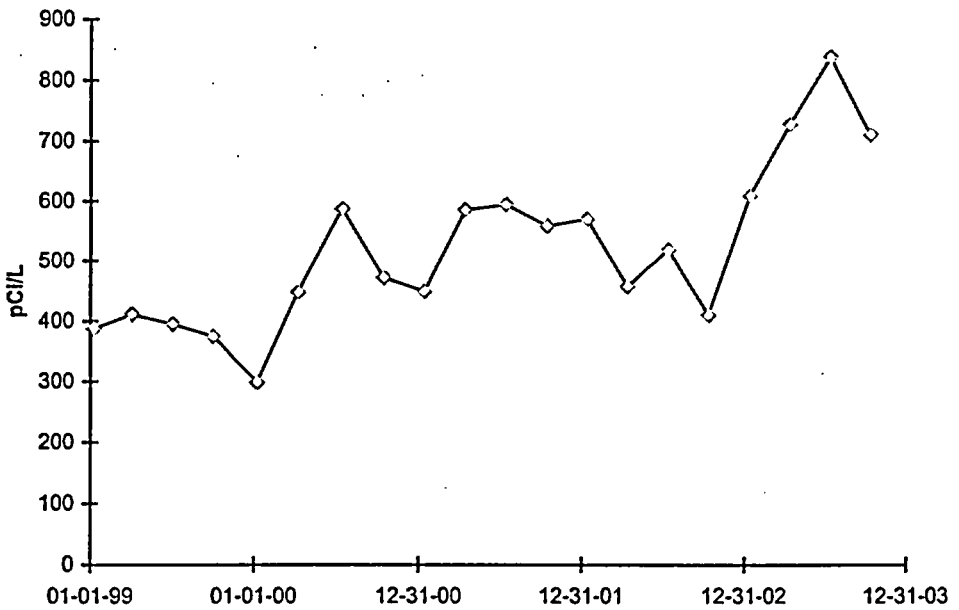


Figure 11. Quarterly collections.

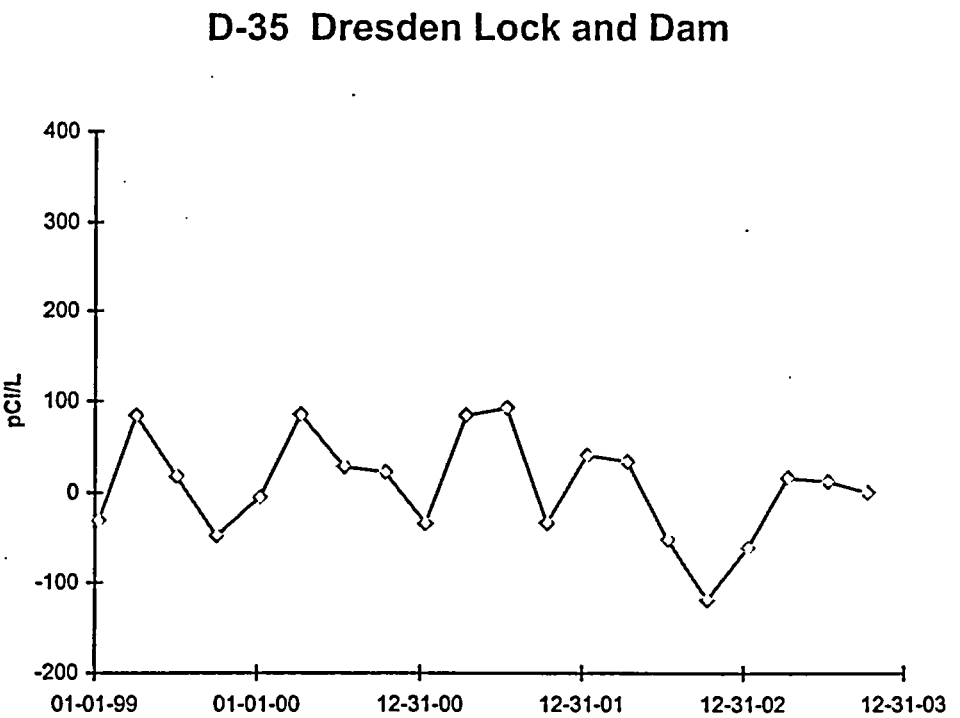


Figure 12. Quarterly collections.

## 8.0 2003 DREDGE SPOILS RESULTS

Dresden Station: Special Sampling Points
Dredge Spoils
Analysis: Gamma Isotopic
Units: $10^{-02}$ pCi/g dry

Required LLDs: Mn-54 = 0.15; Fe-59 = 0.60; Co-58, 60 =0.10; Zn-65 = 0.60; Zr/Nb-95 = 0.20; Cs-134 =0.15; Cs-137 = 0.18; Ba/La-140 = 0.60 pCi/g dry

| Location | D-T-01 Shallow | D-T-01 Deep | D-S-01 North Side Shallow | D-S-01 North Side Deep |
|---|---|---|---|---|
| Lab Code | CDSO-5375 | CDSO-5376 | CDSO-5377 | CDSO-5378 |
| Date Collected | 9/19/2003 | 9/19/2003 | 9/19/2003 | 9/19/2003 |
| Mn-54 | 2.2 ± 2.1 | -0.4 ± 1.7 | 0.7 ± 1.9 | 0.9 ± 1.3 |
| Fe-59 | 1.5 ± 4.2 | -6.6 ± 3.4 | -6.6 ± 3.9 | 0.1 ± 2.3 |
| Co-58 | -3.1 ± 1.9 | -0.8 ± 1.7 | 0.3 ± 1.6 | 2.0 ± 1.1 |
| Co-60 | 1.0 ± 2.4 | 3.0 ± 2.2 | -1.2 ± 2.4 | 1.5 ± 1.5 |
| Zn-65 | -14.3 ± 5.4 | -1.0 ± 4.4 | -9.6 ± 4.9 | -36.7 ± 4.6 |
| Nb/Zr-95 | -6.3 ± 2.0 | -29.8 ± 2.8 | -13.2 ± 2.3 | -10.7 ± 1.9 |
| Cs-134 | 4.5 ± 2.4 | 2.0 ± 2.3 | 6.1 ± 2.1 | 1.5 ± 1.7 |
| Cs-137 | 63.9 ± 4.6 | 44.1 ± 5.3 | 12.5 ± 5.5 | 21.5 ± 2.5 |
| Ba/La-140 | -17.2 ± 2.5 | -16.2 ± 1.9 | -20.3 ± 2.4 | -14.0 ± 1.7 |

| Location | D-S-02 East Side Shallow | D-S-02 East Side Deep | D-S-03 South Side Shallow | D-S-03 South Side Deep |
|---|---|---|---|---|
| Lab Code | CDSO-5379 | CDSO-5380 | CDSO-5381 | CDSO-5382 |
| Date Collected | 9/19/2003 | 9/19/2003 | 9/19/2003 | 9/19/2003 |
| Mn-54 | 1.3 ± 1.5 | -1.3 ± 1.7 | 1.6 ± 1.7 | 1.5 ± 1.9 |
| Fe-59 | -2.5 ± 2.9 | -1.2 ± 3.1 | -5.3 ± 3.2 | -10.4 ± 3.6 |
| Co-58 | -0.1 ± 1.4 | 1.4 ± 1.5 | 0.2 ± 1.5 | -1.2 ± 1.7 |
| Co-60 | 1.1 ± 1.7 | 1.6 ± 1.8 | -0.6 ± 2.0 | 1.4 ± 1.9 |
| Zn-65 | -4.9 ± 3.7 | -2.3 ± 3.6 | -39.2 ± 5.6 | -2.3 ± 4.1 |
| Nb/Zr-95 | -12.1 ± 1.8 | -17.1 ± 2.4 | -7.9 ± 2.2 | -11.9 ± 2.2 |
| Cs-134 | 4.1 ± 1.7 | 2.9 ± 1.9 | 1.9 ± 2.1 | 1.2 ± 2.5 |
| Cs-137 | 28.8 ± 2.8 | 24.6 ± 2.8 | 42.4 ± 6.2 | 30.9 ± 5.8 |
| Ba/La-140 | -7.4 ± 1.7 | -14.6 ± 2.1 | -2.1 ± 1.6 | -1.3 ± 2.5 |

| Location | D-S-04 West Side Shallow | D-S-04 West Side Deep | Duplicate of 5384 |
|---|---|---|---|
| Lab Code | CDSO-5383 | CDSO-5384 | CDSO-5385 |
| Date Collected | 9/19/2003 | 9/19/2003 | 9/19/2003 |
| Mn-54 | 0.9 ± 1.6 | -1.9 ± 2.1 | -0.6 ± 1.8 |
| Fe-59 | -1.5 ± 3.5 | 3.6 ± 3.6 | -10.6 ± 3.5 |
| Co-58 | -0.7 ± 1.4 | 2.7 ± 1.6 | -1.1 ± 1.5 |
| Co-60 | 2.2 ± 2.1 | 0.2 ± 2.3 | 0.5 ± 2.0 |
| Zn-65 | -28.1 ± 5.1 | -3.6 ± 4.0 | -2.2 ± 4.4 |
| Nb/Zr-95 | -14.2 ± 2.0 | -15.9 ± 2.3 | -12.9 ± 2.2 |
| Cs-134 | 3.4 ± 1.9 | 5.2 ± 2.4 | 4.9 ± 2.1 |
| Cs-137 | 32.7 ± 3.1 | 53.6 ± 6.2 | 54.3 ± 4.3 |
| Ba/La-140 | -1.5 ± 2.1 | -66.8 ± 2.2 | 2.5 ± 1.8 |

Dresden Station: Special Sampling Points
Dredge Spoils
Analysis: Gamma Isotopic
Units: $10^{-02}$ pCi/g dry

Required LLDs: Mn-54 = 0.15; Fe-59 = 0.60; Co-58, 60 = 0.10; Zn-65 =0.60; Zr/Nb-95 = 0.20; Cs-134 = 0.15; Cs-137 = 0.18; Ba/La-140 = 0.60 pCi/g dry

| Location | D-T-02 Shallow | D-T-02 Deep | D-S-05 North Side Shallow | D-S-05 North Side Deep |
|---|---|---|---|---|
| Lab Code | CDSO-5386 | CDSO-5387 | CDSO-5388 | CDSO-5389 |
| Date Collected | 9/19/2003 | 9/19/2003 | 9/19/2003 | 9/19/2003 |
| Mn-54 | 0.0 ± 1.2 | 1.1 ± 1.1 | 0.2 ± 1.7 | 0.2 ± 1.7 |
| Fe-59 | -4.2 ± 2.7 | -3.3 ± 2.3 | 3.0 ± 3.3 | 0.9 ± 3.6 |
| Co-58 | -1.9 ± 1.1 | -0.7 ± 1.0 | -0.3 ± 1.5 | -0.7 ± 1.5 |
| Co-60 | 2.1 ± 1.3 | 1.7 ± 1.3 | -0.2 ± 2.1 | 0.1 ± 2.0 |
| Zn-65 | -5.5 ± 3.2 | -11.2 ± 3.2 | -15.7 ± 4.6 | -0.3 ± 4.4 |
| Nb/Zr-95 | -6.7 ± 1.5 | -6.8 ± 1.4 | -7.4 ± 1.9 | -30.2 ± 2.8 |
| Cs-134 | 3.5 ± 1.5 | 2.2 ± 1.4 | 2.7 ± 2.0 | 0.9 ± 2.4 |
| Cs-137 | 55.9 ± 5.0 | 60.2 ± 3.2 | 41.6 ± 3.2 | 50.0 ± 5.6 |
| Ba/La-140 | -6.4 ± 1.4 | -9.2 ± 1.3 | -18.4 ± 2.0 | -4.4 ± 2.3 |

| Location | D-S-06 East Side Shallow | D-S-06 East Side Deep | D-S-07 South Side Shallow | D-S-07 South Side Deep |
|---|---|---|---|---|
| Lab Code | CDSO-5390 | CDSO-5391 | CDSO-5392 | CDSO-5393 |
| Date Collected | 9/19/2003 | 9/19/2003 | 9/19/2003 | 9/19/2003 |
| Mn-54 | 0.2 ± 1.7 | 1.1 ± 1.7 | 0.6 ± 1.7 | 0.9 ± 1.5 |
| Fe-59 | -1.0 ± 3.2 | 2.6 ± 3.6 | -4.0 ± 3.7 | -4.9 ± 3.7 |
| Co-58 | -3.9 ± 1.6 | -1.5 ± 1.5 | 1.1 ± 1.5 | -1.4 ± 1.5 |
| Co-60 | 0.1 ± 2.1 | -0.5 ± 2.0 | 1.1 ± 2.0 | -0.5 ± 2.0 |
| Zn-65 | -3.2 ± 4.2 | 3.4 ± 3.4 | -3.9 ± 4.4 | 0.5 ± 3.8 |
| Nb/Zr-95 | -3.8 ± 2.1 | -21.5 ± 2.3 | -2.3 ± 1.9 | -11.2 ± 2.2 |
| Cs-134 | 3.4 ± 2.0 | 3.6 ± 2.1 | 2.4 ± 2.1 | -0.5 ± 2.1 |
| Cs-137 | 56.0 ± 5.0 | 63.9 ± 6.1 | 51.9 ± 4.5 | 58.3 ± 5.6 |
| Ba/La-140 | -20.2 ± 2.2 | -3.3 ± 1.8 | -6.3 ± 1.9 | -7.9 ± 1.8 |

| Location | D-S-08 West Side Shallow | D-S-08 West Side Deep |
|---|---|---|
| Lab Code | CDSO-5394 | CDSO-5395 |
| Date Collected | 9/19/2003 | 9/19/2003 |
| Mn-54 | -0.4 ± 1.9 | 0.4 ± 2.0 |
| Fe-59 | 4.2 ± 3.4 | -4.2 ± 4.3 |
| Co-58 | -0.4 ± 1.5 | 0.0 ± 1.7 |
| Co-60 | 1.9 ± 1.9 | 0.6 ± 2.6 |
| Zn-65 | -4.3 ± 3.9 | -30.1 ± 6.5 |
| Nb/Zr-95 | -10.0 ± 2.0 | 0.1 ± 2.3 |
| Cs-134 | -1.2 ± 1.4 | -1.8 ± 2.3 |
| Cs-137 | 32.3 ± 3.4 | 47.0 ± 5.1 |
| Ba/La-140 | -42.6 ± 1.9 | -18.9 ± 2.5 |

DRESDEN

# APPENDIX IV

# IINTERLABORATORY COMPARISON PROGRAM RESULTS

Environmental, Inc.
Midwest Laboratory
an Allegheny Technologies Co.

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# APPENDIX IV

## INTERLABORATORY COMPARISON PROGRAM RESULTS

NOTE: Environmental Inc., Midwest Laboratory participates in intercomparison studies administered by Environmental Resources Associates, and serves as a replacement for studies conducted previously by the U.S. EPA Environmental Monitoring Systems Laboratory, Las Vegas, Nevada. Results are reported in Appendix A. TLD Intercomparison results, in-house spikes, blanks, duplicates and mixed analyte performance evaluation program results are also reported. Appendix A is updated four times a year; the complete Appendix is included in March, June, September and December monthly progress reports only.

January, 2003 through December, 2003

## Appendix A

## Interlaboratory Comparison Program Results

Environmental, Inc., Midwest Laboratory, formerly Teledyne Brown Engineering Environmental Services Midwest Laboratory has participated in interlaboratory comparison (crosscheck) programs since the formulation of it's quality control program in December 1971. These programs are operated by agencies which supply environmental type samples containing concentrations of radionuclides known to the issuing agency but not to participant laboratories. The purpose of such a program is to provide an independent check on a laboratory's analytical procedures and to alert it of any possible problems.

Participant laboratories measure the concentration of specified radionuclides and report them to the issuing agency. Several months later, the agency reports the known values to the participant laboratories and specifies control limits. Results consistently higher or lower than the known values or outside the control limits indicate a need to check the instruments or procedures used.

Results in Table IV-1 were obtained through participation in the environmental sample crosscheck program administered by Environmental Resources Associates, serving as a replacement for studies conducted previously by the U.S. EPA Environmental Monitoring Systems Laboratory, Las Vegas, Nevada.

The results in Table IV-2 were obtained for Thermoluminescent Dosimeters (TLDs), via International Intercomparison of Environmental Dosimeters under the sponsorships listed in Table A-2. Results of internal laboratory testing is also listed.

Table IV-3 lists results of the analyses on in-house "spiked" samples for the past twelve months. All samples are prepared using NIST traceable sources. Data for previous years available upon request.

Table IV-4 lists results of the analyses on in-house "blank" samples for the past twelve months. Data for previous years available upon request. request.

Table IV-5 list results of the in-house "duplicate" program for the past twelve months. Acceptance is based on the difference of the results being less than the sum of the errors. Data for previous years available upon request.

The results in Table IV-6 were obtained through participation in the Mixed Analyte Performance Evaluation Program.

The results in Table IV-7 were obtained through participation in the Environmental Measurement Laboratory Quality Assessment Program.

Attachment A lists acceptance criteria for "spiked" samples.

Out-of-limit results are explained directly below the result.

Attachment A

ACCEPTANCE CRITERIA FOR "SPIKED" SAMPLES

LABORATORY PRECISION: ONE STANDARD DEVIATION VALUES FOR VARIOUS ANALYSES[a]

| Analysis | Level | One standard deviation for single determination |
|---|---|---|
| Gamma Emitters | 5 to 100 pCi/liter or kg<br>> 100 pCi/liter or kg | 5.0 pCi/liter<br>5% of known value |
| Strontium-89[b] | 5 to 50 pCi/liter or kg<br>> 50 pCi/liter or kg | 5.0 pCi/liter<br>10% of known value |
| Strontium-90[b] | 2 to 30 pCi/liter or kg<br>> 30 pCi/liter or kg | 5.0 pCi/liter<br>10% of known value |
| Potassium-40 | > 0.1 g/liter or kg | 5% of known value |
| Gross alpha | 20 pCi/liter<br>> 20 pCi/liter | 5.0 pCi/liter<br>25% of known value |
| Gross beta | 100 pCi/liter<br>> 100 pCi/liter | 5.0 pCi/liter<br>5% of known value |
| Tritium | 4,000 pCi/liter<br><br>> 4,000 pCi/liter | 1s = (pCi/liter) = 169.85 x (known)$^{0.0933}$<br>10% of known value |
| Radium-226,-228 | 0.1 pCi/liter | 15% of known value |
| Plutonium | 0.1 pCi/liter, gram, or sample | 10% of known value |
| Iodine-131, Iodine-129[b] | 55 pCi/liter<br>> 55 pCi/liter | 6.0 pCi/liter<br>10% of known value |
| Uranium-238, Nickel-63[b] Technetium-99[b] | 35 pCi/liter<br>> 35 pCi/liter | 6.0 pCi/liter<br>15% of known value |
| Iron-55[b] | 50 to 100 pCi/liter<br>> 100 pCi/liter | 10 pCi/liter<br>10% of known value |
| Others[b] | --- | 20% of known value |

[a] From EPA publication, "Environmental Radioactivity Laboratory Intercomparison Studies Program, Fiscal Year, 1981-1982, EPA-600/4-81-004.

[b] Laboratory limit.

TABLE IV-1. Interlaboratory Comparison Crosscheck program, Environmental Resource Associates (ERA)[a].

| Lab Code | Date | Analysis | Concentration (pCi/L) Laboratory Result[b] | ERA Result[c] | Control Limits |
|---|---|---|---|---|---|
| STW-973 | 02/17/03 | Sr-89 | 17.0 ± 0.5 | 15.9 ± 5.0 | 7.2 - 24.6 |
| STW-973 | 02/17/03 | Sr-90 | 8.9 ± 0.3 | 9.0 ± 5.0 | 0.4 - 17.7 |
| STW-974 | 02/17/03 | Ba-133 | 14.5 ± 0.9 | 19.5 ± 5.0 | 10.8 - 28.2 |
| STW-974 | 02/17/03 | Co-60 | 37.5 ± 0.9 | 37.4 ± 5.0 | 28.7 - 46.1 |
| STW-974 | 02/17/03 | Cs-134 | 18.2 ± 0.6 | 17.8 ± 5.0 | 9.1 - 26.5 |
| STW-974 | 02/17/03 | Cs-137 | 42.7 ± 1.0 | 44.2 ± 5.0 | 35.5 - 52.9 |
| STW-974 | 02/17/03 | Zn-65 | 56.8 ± 2.2 | 60.3 ± 6.0 | 49.9 - 70.7 |
| STW-975[d] | 02/17/03 | Gr. Alpha | 18.4 ± 0.3 | 37.6 ± 9.4 | 21.3 - 53.9 |
| STW-975 | 02/17/03 | Gr. Beta | 11.7 ± 0.5 | 8.6 ± 5.0 | 0.0 - 17.2 |
| STW-976 | 02/17/03 | Ra-226 | 4.1 ± 0.1 | 4.7 ± 0.7 | 3.5 - 6.0 |
| STW-976 | 02/17/03 | Ra-228 | 7.6 ± 0.5 | 6.5 ± 1.6 | 3.7 - 9.3 |
| STW-976 | 02/17/03 | Uranium | 52.9 ± 1.9 | 53.7 ± 5.4 | 44.4 - 63.0 |
| STW-983 | 05/19/03 | H-3 | 1290.0 ± 25.0 | 1250.0 ± 331.0 | 678.0 - 1820.0 |
| STW-984 | 05/19/03 | I-131 | 19.7 ± 1.3 | 20.8 ± 3.0 | 15.6 - 26.0 |
| STW-985 | 05/19/03 | Gr. Alpha | 54.4 ± 3.0 | 70.3 ± 17.6 | 39.9 - 101.0 |
| STW-985 | 05/19/03 | Ra-226 | 14.9 ± 0.2 | 16.5 ± 2.5 | 12.2 - 20.8 |
| STW-985 | 05/19/03 | Ra-228 | 13.1 ± 0.6 | 10.3 ± 2.6 | 5.8 - 14.8 |
| STW-985 | 05/19/03 | Uranium | 14.5 ± 0.4 | 15.1 ± 3.0 | 9.9 - 20.3 |
| STW-986 | 05/19/03 | Co-60 | 56.9 ± 8.6 | 63.8 ± 5.0 | 55.1 - 72.5 |
| STW-986[e] | 05/19/03 | Cs-134 | 61.6 ± 6.6 | 75.7 ± 5.0 | 67.0 - 84.4 |
| STW-986 | 05/19/03 | Cs-137 | 143.0 ± 1.2 | 150.0 ± 7.5 | 137.0 - 163.0 |
| STW-986 | 05/19/03 | Gr. Beta | 309.0 ± 2.7 | 363.0 ± 54.5 | 269.0 - 457.0 |
| STW-986 | 05/19/03 | Sr-89 | 33.1 ± 0.2 | 31.3 ± 5.0 | 22.6 - 40.0 |
| STW-986 | 05/19/03 | Sr-90 | 28.8 ± 1.3 | 27.4 ± 5.0 | 18.7 - 36.1 |
| STW-988 | 08/18/03 | Ra-226 | 13.3 ± 1.1 | 13.4 ± 2.0 | 9.9 - 16.9 |
| STW-988 | 08/18/03 | Ra-228 | 11.5 ± 1.0 | 12.5 ± 3.1 | 7.1 - 17.9 |
| STW-988 | 08/18/03 | Uranium | 12.3 ± 0.4 | 11.4 ± 3.0 | 6.2 - 16.6 |
| STW-989 | 08/18/03 | Ba-133 | 18.1 ± 1.9 | 20.7 ± 5.0 | 12.0 - 29.4 |
| STW-989 | 08/18/03 | Co-60 | 35.9 ± 1.3 | 37.4 ± 5.0 | 28.7 - 46.1 |
| STW-989 | 08/18/03 | Cs-134 | 32.6 ± 1.8 | 32.6 ± 5.0 | 23.9 - 41.3 |
| STW-989 | 08/18/03 | Cs-137 | 48.3 ± 0.6 | 44.3 ± 5.0 | 35.6 - 53.0 |
| STW-989 | 08/18/03 | Zn-65 | 58.9 ± 2.1 | 60.2 ± 6.0 | 49.8 - 70.6 |
| STW-990 | 08/18/03 | Gr. Alpha | 41.8 ± 3.4 | 56.2 ± 16.3 | 36.9 - 93.3 |
| STW-990[f] | 08/18/03 | Gr. Beta | 51.3 ± 3.0 | 31.6 ± 5.0 | 22.9 - 40.3 |
| STW-991 | 08/18/03 | Sr-89 | 57.2 ± 4.3 | 58.8 ± 5.0 | 50.1 - 67.5 |
| STW-991 | 08/18/03 | Sr-90 | 21.2 ± 0.9 | 20.6 ± 5.0 | 11.9 - 29.3 |

TABLE IV-1. Interlaboratory Comparison Crosscheck program, Environmental Resource Associates (ERA)[a].

| Lab Code | Date | Analysis | Concentration (pCi/L) Laboratory Result[b] | ERA Result[c] | Control Limits |
|---|---|---|---|---|---|
| STW-997 | 11/18/03 | Gr. Alpha | 37.0 ± 2.0 | 29.5 ± 7.4 | 16.7 - 42.3 |
| STW-997 | 11/18/03 | Gr. Beta | 26.5 ± 0.8 | 26.3 ± 5.0 | 17.6 - 35.0 |
| STW-998 | 11/18/03 | I-131 | 14.8 ± 0.3 | 16.5 ± 3.0 | 11.3 - 21.7 |
| STW-999 | 11/18/03 | Ra-226 | 17.2 ± 1.1 | 17.8 ± 2.7 | 13.2 - 22.4 |
| STW-999 | 11/18/03 | Ra-228 | 6.6 ± 0.3 | 6.8 ± 1.7 | 3.8 - 9.7 |
| STW-999 | 11/18/03 | Uranium | 11.7 ± 0.3 | 11.7 ± 3.0 | 6.5 - 16.9 |
| STW-1000 | 11/18/03 | H-3 | 15900.0 ± 174.0 | 14300.0 ± 1430.0 | 11800.0 - 16800.0 |
| STW-1001 | 11/18/03 | Gr. Alpha | 32.9 ± 0.3 | 54.2 ± 3.0 | 30.7 - 77.7 |
| STW-1001 | 11/18/03 | Ra-226 | 16.5 ± 0.9 | 16.1 ± 2.4 | 11.9 - 20.3 |
| STW-1001 | 11/18/03 | Ra-228 | 6.2 ± 0.5 | 5.5 ± 1.4 | 3.1 - 7.9 |
| STW-1001 | 11/18/03 | Uranium | 9.7 ± 1.5 | 9.3 ± 13.6 | 4.1 - 14.5 |
| STW-1002 | 11/18/03 | Co-60 | 27.7 ± 1.9 | 27.7 ± 5.0 | 19.0 - 36.4 |
| STW-1002 | 11/18/03 | Cs-134 | 21.5 ± 1.1 | 23.4 ± 5.0 | 17.6 - 29.2 |
| STW-1002 | 11/18/03 | Cs-137 | 66.3 ± 2.8 | 64.2 ± 5.0 | 55.5 - 72.9 |
| STW-1002 | 11/18/03 | Gr. Beta | 159.0 ± 2.5 | 168.0 ± 5.0 | 124.0 - 212.0 |
| STW-1002 | 11/18/03 | Sr-89 | 48.5 ± 0.4 | 50.4 ± 5.0 | 41.7 - 59.1 |
| STW-1002 | 11/18/03 | Sr-90 | 10.1 ± 3.0 | 10.2 ± 25.2 | 1.5 - 18.9 |

[a] Results obtained by Environmental, Inc., Midwest Laboratory as a participant in the environmental samples crosscheck program operated by Environmental Resources Associates (ERA).

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

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

[d] Recount of the original sample still low. The ERA blank was spiked in the lab; known value of 20.1 pCi/L, measured 21.5 ± 1.1 pCi/L. No explanation for ERA test failure.

[e] Lower bias observed for gamma spectroscopic analysis. The undiluted sample was reanalyzed; Results of reanalysis, Co-60: 62.3 pCi/L., Cs-134: 69.2 pCi/L., Cs-137: 152.3 pCi/L.

[f] Reason for deviation unknown. A recount of the original planchets averaged 43.4 pCi/L. Cs-137activity by gamma spectroscopy; 28.3 pCi/L. Result of reanalysis; 29.3 pCi/L.

TABLE IV-2. Crosscheck program results; Thermoluminescent Dosimetry, (TLDs).

| Lab Code | TLD Type | Date | Description | mR Known Value | mR Lab Result ± 2 sigma | mR Control Limits |
|---|---|---|---|---|---|---|
| Environmental, Inc. | | | | | | |
| 2003-1 | CaSO4: Dy Cards | 8/8/2003 | Reader 1, 120 | 4.69 | 4.74 ± 0.54 | 3.28 - 6.10 |
| 2003-1 | CaSO4: Dy Cards | 8/8/2003 | Reader 1, 150 | 3.00 | 3.02 ± 0.20 | 2.10 - 3.90 |
| 2003-1 | CaSO4: Dy Cards | 8/8/2003 | Reader 1, 180 | 2.08 | 1.89 ± 0.45 | 1.46 - 2.70 |
| 2003-1 | CaSO4: Dy Cards | 8/8/2003 | Reader 1, 180 | 2.08 | 2.11 ± 0.22 | 1.46 - 2.70 |
| 2003-1 | CaSO4: Dy Cards | 8/8/2003 | Reader 1, 30 | 75.00 | 84.40 ± 4.87 | 52.50 - 97.50 |
| 2003-1 | CaSO4: Dy Cards | 8/8/2003 | Reader 1, 60 | 18.75 | 19.11 ± 1.86 | 13.13 - 24.38 |
| 2003-1 | CaSO4: Dy Cards | 8/8/2003 | Reader 1, 60 | 18.75 | 22.82 ± 5.41 | 13.13 - 24.38 |
| 2003-1 | CaSO4: Dy Cards | 8/8/2003 | Reader 1, 90 | 8.33 | 9.05 ± 1.17 | 5.83 - 10.83 |
| 2003-1 | CaSO4: Dy Cards | 8/8/2003 | Reader 1, 90 | 8.33 | 7.60 ± 1.08 | 5.83 - 10.83 |
| Environmental, Inc. | | | | | | |
| 2003-2 | CaSO4: Dy Cards | 1/12/2004 | Reader 1, 30 | 61.96 | 73.50 ± 2.58 | 43.37 - 80.55 |
| 2003-2 | CaSO4: Dy Cards | 1/12/2004 | Reader 1, 60 | 15.49 | 19.70 ± 0.51 | 10.84 - 20.14 |
| 2003-2 | CaSO4: Dy Cards | 1/12/2004 | Reader 1, 60 | 15.49 | 16.93 ± 1.37 | 10.84 - 20.14 |
| 2003-2 | CaSO4: Dy Cards | 1/12/2004 | Reader 1, 90 | 6.88 | 8.06 ± 0.60 | 4.82 - 8.94 |
| 2003-2 | CaSO4: Dy Cards | 1/12/2004 | Reader 1, 90 | 6.88 | 6.64 ± 0.58 | 4.82 - 8.94 |
| 2003-2 | CaSO4: Dy Cards | 1/12/2004 | Reader 1, 120 | 3.87 | 4.39 ± 0.17 | 2.71 - 5.03 |
| 2003-2 | CaSO4: Dy Cards | 1/12/2004 | Reader 1, 150 | 2.48 | 2.34 ± 0.18 | 1.74 - 3.22 |
| 2003-2 | CaSO4: Dy Cards | 1/12/2004 | Reader 1, 150 | 2.48 | 2.51 ± 0.16 | 1.74 - 3.22 |
| 2003-2 | CaSO4: Dy Cards | 1/12/2004 | Reader 1, 180 | 1.72 | 2.01 ± 0.13 | 1.20 - 2.24 |

TABLE IV-3. In-House "Spike" Samples

| Lab Code | Sample Type | Date | Analysis | Concentration (pCi/L)[a] Laboratory results 2s, n=1[b] | Known Activity | Control Limits[c] |
|---|---|---|---|---|---|---|
| SPW-356 | water | 1/2/2003 | Sr-90 | 34.04 ± 1.57 | 30.93 | 24.74 - 37.12 |
| W-10303 | water | 1/3/2003 | Gr. Beta | 63.24 ± 1.20 | 63.90 | 53.90 - 73.90 |
| W-11303 | water | 1/13/2003 | Gr. Beta | 59.75 ± 1.10 | 63.90 | 53.90 - 73.90 |
| W-12103 | water | 1/21/2003 | Gr. Beta | 61.56 ± 1.59 | 63.99 | 53.99 - 73.99 |
| SPAP-446 | Air Filter | 1/31/2003 | Gr. Beta | 1.49 ± 0.02 | 1.52 | -8.48 - 11.52 |
| SPW-468 | water | 1/31/2003 | H-3 | 95982.00 ± 865.00 | 89607.00 | 71685.60 - 107528.40 |
| W-20703 | water | 2/7/2003 | Fe-55 | 9095.00 ± 114.00 | 10587.00 | 8469.60 - 12704.40 |
| SPU-1347 | Urine | 3/1/2003 | H-3 | 1724.00 ± 412.00 | 1784.33 | 1101.27 - 2467.39 |
| DW-30303 | water | 3/3/2003 | Gr. Beta | 65.44 ± 0.59 | 63.90 | 53.90 - 73.90 |
| SPCH-964 | Charcoal | 3/8/2003 | I-131(G) | 73.37 ± 0.28 | 69.45 | 59.45 - 79.45 |
| SPMI-1086 | Milk | 3/13/2003 | Cs-137 | 57.18 ± 8.03 | 49.50 | 39.50 - 59.50 |
| SPMI-1086 | Milk | 3/13/2003 | I-131 | 75.13 ± 12.01 | 67.60 | 54.08 - 81.12 |
| SPMI-1086 | Milk | 3/13/2003 | I-131(G) | 65.81 ± 1.06 | 67.56 | 57.56 - 77.56 |
| SPW-1088 | water | 3/13/2003 | Co-60 | 27.16 ± 4.79 | 28.20 | 18.20 - 38.20 |
| SPW-1088 | water | 3/13/2003 | Cs-137 | 51.74 ± 9.15 | 49.50 | 39.50 - 59.50 |
| SPW-1088 | water | 3/13/2003 | I-131(G) | 68.14 ± 12.92 | 67.60 | 57.60 - 77.60 |
| SPW-1088 | water | 3/13/2003 | I-131 | 76.94 ± 1.13 | 67.56 | 54.05 - 81.07 |
| SPVE-1110 | Vegetation | 3/14/2003 | I-131(G) | 122.80 ± 16.80 | 124.00 | 111.60 - 136.40 |
| SPW-1194 | water | 3/21/2003 | Co-60 | 31.09 ± 6.28 | 28.15 | 18.15 - 38.15 |
| SPW-1194 | water | 3/21/2003 | Cs-137 | 55.11 ± 0.13 | 49.50 | 39.50 - 59.50 |
| SPW-1194 | water | 3/21/2003 | I-131(G) | 66.17 ± 9.15 | 67.60 | 57.60 - 77.60 |
| W-32103 | water | 3/21/2003 | C-14 | 5201.00 ± 16.60 | 4966.00 | 2979.60 - 6952.40 |
| SPCH-1429 | Charcoal | 4/1/2003 | I-131(G) | 8.83 ± 0.11 | 9.18 | -0.82 - 19.18 |
| W-40103 | water | 4/1/2003 | Gr. Beta | 67.74 ± 0.52 | 63.39 | 53.39 - 73.39 |
| SPF-1407 | Fish | 4/2/2003 | Cs-134 | 0.58 ± 0.03 | 0.59 | 0.35 - 0.83 |
| SPF-1407 | Fish | 4/2/2003 | Cs-137 | 1.29 ± 0.06 | 1.32 | 0.79 - 1.85 |
| SPAP-1409 | Air Filter | 4/2/2003 | Gr. Beta | 1.44 ± 0.02 | 1.51 | -8.49 - 11.51 |
| SPU-41203 | Urine | 4/12/2003 | H-3 | 1798.50 ± 409.30 | 1784.33 | 1101.27 - 2467.39 |
| SPU-41703 | Urine | 4/17/2003 | H-3 | 1625.10 ± 401.30 | 1784.33 | 1101.27 - 2467.39 |
| SPW-2022 | water | 4/25/2003 | H-3 | 89007.00 ± 798.00 | 88463.00 | 70770.40 - 106155.60 |
| SPW-2053 | water | 4/28/2003 | Cs-137 | 45.70 ± 9.44 | 49.35 | 39.35 - 59.35 |
| SPW-2053 | water | 4/28/2003 | Sr-90 | 47.51 ± 1.87 | 44.47 | 35.58 - 53.36 |
| SPMI-2055 | Milk | 4/28/2003 | Cs-137 | 61.65 ± 7.17 | 65.80 | 55.80 - 75.80 |
| SPMI-2055 | Milk | 4/28/2003 | Sr-90 | 38.45 ± 1.59 | 44.74 | 35.79 - 53.69 |
| W-50603 | water | 5/6/2003 | Gr. Beta | 70.95 ± 0.53 | 63.39 | 53.39 - 73.39 |
| W-60303 | water | 6/3/2003 | Gr. Beta | 63.00 ± 0.51 | 65.73 | 55.73 - 75.73 |
| SPW-3960 | water | 7/15/2003 | H-3 | 88700.00 ± 822.00 | 87369.00 | 69895.20 - 104842.80 |
| SPMI-4019 | Milk | 7/18/2003 | Cs-137 | 47.17 ± 7.22 | 49.11 | 39.11 - 59.11 |
| SPMI-4019 | Milk | 7/18/2003 | Sr-89 | 40.95 ± 4.88 | 49.49 | 39.49 - 59.49 |
| SPMI-4019 | Milk | 7/18/2003 | Sr-90 | 45.30 ± 1.73 | 44.24 | 35.39 - 53.09 |
| SPW-4023 | water | 7/18/2003 | Cs-137 | 51.92 ± 6.24 | 49.11 | 39.11 - 59.11 |
| SPW-4023 | water | 7/18/2003 | Sr-89 | 42.49 ± 10.23 | 49.49 | 39.49 - 59.49 |
| SPW-4023 | water | 7/18/2003 | Sr-90 | 49.69 ± 3.04 | 44.24 | 35.39 - 53.09 |
| SPW-4518 | water | 8/8/2003 | Fe-55 | 8176.00 ± 107.00 | 9330.00 | 7464.00 - 11196.00 |

TABLE IV-3. In-House "Spike" Samples

| Lab Code | Sample Type | Date | Analysis | Concentration (pCi/L) Laboratory results 2s, n=1[b] | Known Activity | Control Limits[c] |
|---|---|---|---|---|---|---|
| SPW-6197 | water | 10/16/2003 | Tc-99 | 540.14 ± 54.00 | 539.73 | 377.81 - 701.65 |
| SPAP-3958 | Air Filter | 10/28/2003 | Gr. Beta | 1.45 ± 0.02 | 1.50 | -8.50 - 11.50 |
| SPW-6401 | water | 10/28/2003 | H-3 | 84867.00 ± 826.00 | 85984.00 | 68787.20 - 103180.80 |
| SPAP-6403 | Air Filter | 10/28/2003 | Gr. Beta | 1.71 ± 0.02 | 1.49 | -8.51 - 11.49 |
| SPF-6418 | Fish | 10/28/2003 | Cs-134 | 0.50 ± 0.02 | 0.49 | 0.29 - 0.69 |
| SPF-6418 | Fish | 10/28/2003 | Cs-137 | 1.37 ± 0.05 | 1.30 | 0.78 - 1.82 |
| SPW-6421 | water | 10/28/2003 | Fe-55 | 104.18 ± 1.26 | 88.18 | 68.18 - 108.18 |
| SPMI-7459 | Milk | 12/12/2003 | Cs-134 | 41.06 ± 2.45 | 41.88 | 31.88 - 51.88 |
| SPMI-7459 | Milk | 12/12/2003 | Cs-137 | 48.48 ± 4.99 | 48.64 | 38.64 - 58.64 |
| SPMI-7459 | Milk | 12/12/2003 | Sr-89 | 55.94 ± 4.12 | 65.80 | 52.64 - 78.96 |
| SPMI-7459 | Milk | 12/12/2003 | Sr-90 | 41.86 ± 1.57 | 43.80 | 35.04 - 52.56 |
| SPW-7461 | water | 12/12/2003 | Cs-134 | 44.07 ± 1.49 | 41.88 | 31.88 - 51.88 |
| SPW-7461 | water | 12/12/2003 | Cs-137 | 50.26 ± 2.67 | 48.64 | 38.64 - 58.64 |
| SPW-7461 | water | 12/12/2003 | Sr-89 | 56.41 ± 4.87 | 65.80 | 52.64 - 78.96 |
| SPW-7461 | water | 12/12/2003 | Sr-90 | 48.44 ± 1.84 | 43.80 | 35.04 - 52.56 |

[c] Control limits are based on Attachment A, Page A2 of this report.

NOTE: For fish, Jello is used for the Spike matrix. For Vegetation, cabbage is used for the Spike matrix.

TABLE IV-4. In-House "Blank" Samples

| Lab Code | Sample Type | Date | Analysis | Concentration (pCi/L)[a] | | |
|---|---|---|---|---|---|---|
| | | | | Laboratory results (4.66σ) | | Acceptance |
| | | | | LLD | Activity[b] | Criteria (4.66 σ) |
| SPW-357 | water | 1/2/2003 | Sr-90 | 0.50 | 0.12 ± 0.25 | 1 |
| W-10303 | water | 1/3/2003 | Gr. Beta | 0.12 | 0.022 ± 0.10 | 3.2 |
| W-11303 | water | 1/13/2003 | Gr. Beta | 0.14 | 0.035 ± 0.10 | 3.2 |
| W-12103 | water | 1/21/2003 | Gr. Beta | 0.12 | 0.029 ± 0.09 | 3.2 |
| SPAP-447 | Air Filter | 1/31/2003 | Gr. Beta | 0.00 | -0.0034 ± 0.00 | 3.2 |
| SPW-469 | water | 1/31/2003 | H-3 | 160.20 | 19.3 ± 80.30 | 200 |
| W-20103 | water | 2/1/2003 | Gr. Beta | 0.17 | 0.0 ± 0.12 | 3.2 |
| W-20703 | water | 2/7/2003 | Fe-55 | 802.00 | 149 ± 498.00 | 1000 |
| DW-30303 | | 3/3/2003 | Gr. Beta | 0.15 | 0.007 ± 0.11 | 3.2 |
| SPCH-965 | Charcoal Cani | 3/8/2003 | I-131(G) | 0.01 | | 9.6 |
| SPMI-1087 | Milk | 3/13/2003 | Cs-134 | 7.49 | | 10 |
| SPMI-1087 | Milk | 3/13/2003 | Cs-137 | 7.90 | | 10 |
| SPMI-1087 | Milk | 3/13/2003 | I-131 | 0.33 | -0.013 ± 0.18 | 0.5 |
| SPMI-1087 | Milk | 3/13/2003 | I-131(G) | 7.76 | | 20 |
| SPW-1089 | water | 3/13/2003 | Co-60 | 4.48 | | 10 |
| SPW-1089 | water | 3/13/2003 | Cs-134 | 5.60 | | 10 |
| SPW-1089 | water | 3/13/2003 | Cs-137 | 4.32 | | 10 |
| SPW-1089 | water | 3/13/2003 | I-131 | 0.29 | -0.050 ± 0.16 | 0.5 |
| SPVE-1111 | Vegetation | 3/14/2003 | I-131(G) | 7.53 | | 20 |
| W-32103 | water | 3/21/2003 | C-14 | 17.50 | -0.4 ± 9.200 | 200 |
| SPCH-1430 | Charcoal Cani | 4/1/2003 | I-131(G) | 0.01 | | 9.6 |
| W-40103 | water | 4/1/2003 | Gr. Beta | 0.14 | -0.11 ± 0.100 | 3.2 |
| SPF-1408 | Fish | 4/2/2003 | Cs-134 | 0.01 | | 100 |
| SPF-1408 | Fish | 4/2/2003 | Cs-137 | 0.01 | | 100 |
| SPAP-1410 | Air Filter | 4/2/2003 | Gr. Beta | 0.00 | -0.0029 ± 0.002 | 3.2 |
| SPU-41203 | Urine | 4/12/2003 | H-3 | 653.99 | 542.28 ± 364.780 | 200 |
| SPU-41703 | Urine | 4/17/2003 | H-3 | 648.35 | 100.1 ± 344.800 | 200 |
| SPW-2054 | water | 4/28/2003 | Cs-137 | 3.16 | | 10 |
| SPW-2054 | water | 4/28/2003 | Sr-89 | 0.55 | 0.45 ± 0.50 | 5 |
| SPW-2054 | water | 4/28/2003 | Sr-90 | 0.55 | 0.072 ± 0.260 | 1 |
| SPMI-2056 [c] | Milk | 4/28/2003 | Sr-90 | 0.77 | 0.66 ± 0.430 | 1 |
| SPMI-2056 | Milk | 4/28/2003 | Cs-137 | 2.74 | | 10 |
| SPMI-2056 | Milk | 4/28/2003 | I-131(G) | 3.54 | | 20 |
| W-50603 | water | 5/6/2003 | Gr. Beta | 0.12 | 0 ± 0.090 | 3.2 |
| W-60303 | water | 6/3/2003 | Gr. Beta | 0.14 | -0.035 ± 0.095 | 3.2 |
| SPW-3960 | water | 7/15/2003 | H-3 | 156.60 | 53.4 ± 80.200 | 200 |
| SPMI-4018 | Milk | 7/18/2003 | Cs-137 | 4.10 | | 10 |
| SPMI-4018 | Milk | 7/18/2003 | Sr-89 | 0.73 | 0.39 ± 0.880 | 5 |
| SPMI-4018 [c] | Milk | 7/18/2003 | Sr-90 | 0.51 | 0.93 ± 0.340 | 1 |
| SPW-4024 | water | 7/18/2003 | Sr-89 | 0.83 | 0.21 ± 0.730 | 5 |
| SPW-4024 | water | 7/18/2003 | Sr-90 | 0.62 | 0.09 ± 0.300 | 1 |
| SPW-4519 | water | 8/8/2003 | Fe-55 | 527.00 | 87 ± 369.000 | 1000 |
| SPW-6401 | water | 10/28/2003 | H-3 | 163.80 | -23.8 ± 85.000 | 200 |

TABLE IV-4. In-House "Blank" Samples

| Lab Code | Sample Type | Date | Analysis | Concentration (pCi/L)[a] | | |
|---|---|---|---|---|---|---|
| | | | | Laboratory results (4.66σ) | | Acceptance |
| | | | | LLD | Activity[b] | Criteria (4.66 σ) |
| SPAP-6404 | Air Filter | 10/28/2003 | Gr. Beta | 0.87 | -0.99 ± 0.440 | 3.2 |
| SPF-6419 | Fish | 10/28/2003 | Cs-134 | 0.01 | | 100 |
| SPF-6419 | Fish | 10/28/2003 | Cs-137 | 0.01 | | 100 |
| SPMI-7460 | Milk | 12/12/2003 | Cs-134 | 4.52 | | 10 |
| SPMI-7460 | Milk | 12/12/2003 | Cs-137 | 5.77 | | 10 |
| SPMI-7460[c] | Milk | 12/12/2003 | Sr-90 | 0.50 | 1.26 ± 0.370 | 1 |

[a] Liquid sample results are reported in pCi/Liter, air filters( pCi/filter), charcoal (pCi/charcoal canister), and solid samples (pCi/kg).

[b] The activity reported is the net activity result.

[c] Low levels of Sr-90 are still detected in the environment. A concentration of (1-5 pCi/L) in milk is not unusual.

TABLE IV-5. In-House "Duplicate" Samples

| Lab Code | Date | Analysis | Concentration (pCi/L)[a] First Result | Second Result | Averaged Result |
|---|---|---|---|---|---|
| MI-24, 25 | 1/2/2003 | K-40 | 1362.00 ± 117.00 | 1377.00 ± 188.00 | 1369.50 ± 110.72 |
| MI-24, 25 | 1/2/2003 | Sr-90 | 1.45 ± 0.40 | 2.21 ± 0.50 | 1.83 ± 0.32 |
| CF-47, 48 | 1/2/2003 | Gr. Beta | 2.72 ± 0.10 | 2.84 ± 0.10 | 2.78 ± 0.07 |
| CF-47, 48 | 1/2/2003 | K-40 | 2.61 ± 0.31 | 2.32 ± 0.12 | 2.47 ± 0.17 |
| AP-8827, 8828 | 1/2/2003 | Be-7 | 0.06 ± 0.01 | 0.05 ± 0.02 | 0.05 ± 0.01 |
| AP-8869, 8870 | 1/2/2003 | Be-7 | 0.04 ± 0.02 | 0.05 ± 0.02 | 0.05 ± 0.01 |
| MI-119, 120 | 1/8/2003 | K-40 | 1351.90 ± 116.10 | 1234.70 ± 108.70 | 1293.30 ± 79.52 |
| MI-119, 120 | 1/8/2003 | Sr-90 | 2.22 ± 0.43 | 1.88 ± 0.40 | 2.05 ± 0.30 |
| MI-213, 214 | 1/14/2003 | K-40 | 1372.30 ± 104.80 | 1303.80 ± 109.10 | 1338.05 ± 75.64 |
| MI-213, 214 | 1/14/2003 | Sr-90 | 1.81 ± 0.41 | 2.29 ± 0.45 | 2.05 ± 0.31 |
| MI-262, 263 | 1/15/2003 | K-40 | 1399.20 ± 200.70 | 1347.70 ± 126.40 | 1373.45 ± 118.59 |
| S-696, 697 | 1/29/2003 | Gr. Alpha | 24.70 ± 4.89 | 23.23 ± 4.64 | 23.97 ± 3.37 |
| S-696, 697 | 1/29/2003 | Gr. Beta | 22.89 ± 2.67 | 22.71 ± 2.73 | 22.80 ± 1.91 |
| MI-448, 449 | 2/3/2003 | K-40 | 1159.70 ± 157.90 | 1396.40 ± 106.20 | 1278.05 ± 95.15 |
| SW-470, 471 | 2/3/2003 | Gr. Beta | 13.62 ± 1.23 | 15.21 ± 1.21 | 14.42 ± 0.86 |
| SW-470, 471 | 2/3/2003 | K-40 (ICP) | 5.10 ± 0.51 | 5.20 ± 0.52 | 5.15 ± 0.36 |
| SW-470, 471 | 2/3/2003 | K-40 | 5.80 ± 0.51 | 5.90 ± 0.52 | 5.85 ± 0.36 |
| MI-517, 518 | 2/4/2003 | K-40 | 1437.70 ± 125.50 | 1357.70 ± 188.00 | 1397.70 ± 113.02 |
| MI-541, 542 | 2/5/2003 | K-40 | 1443.00 ± 194.80 | 1385.20 ± 190.10 | 1414.10 ± 136.09 |
| MI-620, 621 | 2/11/2003 | K-40 | 1294.70 ± 115.10 | 1234.10 ± 165.10 | 1264.40 ± 100.63 |
| DW-922, 923 | 3/4/2003 | I-131 | 0.67 ± 0.16 | 0.79 ± 0.16 | 0.73 ± 0.11 |
| CF-1048, 1049[b] | 3/10/2003 | K-40 | 3.09 ± 0.12 | 2.67 ± 0.07 | 2.88 ± 0.07 |
| LW-1152, 1153 | 3/13/2003 | H-3 | 1147.26 ± 122.56 | 1094.42 ± 120.92 | 1120.84 ± 86.09 |
| F-1120, 1121 | 3/14/2003 | Cs-137 | 0.04 ± 0.02 | 0.05 ± 0.01 | 0.05 ± 0.01 |
| F-1120, 1121 | 3/14/2003 | Gr. Beta | 2.04 ± 0.06 | 2.11 ± 0.06 | 2.08 ± 0.04 |
| F-1120, 1121 | 3/14/2003 | K-40 | 1.93 ± 0.38 | 1.89 ± 0.25 | 1.91 ± 0.23 |
| DW-1278, 1279 | 3/25/2003 | I-131 | 0.37 ± 0.22 | 0.34 ± 0.29 | 0.36 ± 0.18 |
| SO-1380, 1381 | 3/25/2003 | Gr. Beta | 18.60 ± 2.68 | 20.53 ± 2.83 | 19.57 ± 1.95 |
| LW-1299, 1300 | 3/27/2003 | Gr. Beta | 2.35 ± 0.55 | 2.48 ± 0.56 | 2.42 ± 0.39 |
| LW-1320, 1321 | 3/27/2003 | H-3 | 487.12 ± 104.43 | 422.00 ± 102.00 | 454.56 ± 72.99 |
| W-1403, 1404 | 3/31/2003 | Sr-90 | 0.96 ± 0.32 | 1.10 ± 0.42 | 1.03 ± 0.26 |
| AP-2019, 2020 | 3/31/2003 | Be-7 | 0.07 ± 0.01 | 0.08 ± 0.01 | 0.07 ± 0.01 |
| MI-1422, 1423 | 4/1/2003 | K-40 | 1410.00 ± 176.00 | 1340.00 ± 114.00 | 1375.00 ± 104.85 |
| MI-2170, 2171 | 4/1/2003 | K-40 | 1452.30 ± 129.10 | 1472.50 ± 191.00 | 1462.40 ± 115.27 |
| MI-1422, 1423 | 4/2/2003 | Sr-90 | 1.84 ± 0.42 | 1.15 ± 0.39 | 1.50 ± 0.29 |
| AP-1633, 1634 | 4/2/2003 | Be-7 | 0.05 ± 0.01 | 0.06 ± 0.01 | 0.06 ± 0.01 |
| AP-1871, 1872 | 4/2/2003 | Be-7 | 0.07 ± 0.01 | 0.07 ± 0.01 | 0.07 ± 0.01 |
| AP-1974, 1975 | 4/2/2003 | Be-7 | 0.08 ± 0.02 | 0.07 ± 0.02 | 0.08 ± 0.01 |
| LW-1828, 1829 | 4/11/2003 | Gr. Beta | 2.49 ± 0.58 | 3.42 ± 0.63 | 2.96 ± 0.43 |
| S-1544, 1545 | 4/15/2003 | K-40 | 15.84 ± 2.36 | 15.41 ± 2.02 | 15.63 ± 1.55 |
| DW-1913, 1914 | 4/15/2003 | I-131 | 0.29 ± 0.21 | 0.42 ± 0.19 | 0.36 ± 0.14 |
| MI-1996, 1997 | 4/21/2003 | Sr-90 | 2.05 ± 0.74 | 3.25 ± 0.91 | 2.65 ± 0.58 |
| MI-1996, 1997 | 4/22/2003 | K-40 | 1580.20 ± 118.90 | 1602.10 ± 120.40 | 1591.15 ± 84.61 |

TABLE IV-5. In-House "Duplicate" Samples

| Lab Code | Date | Analysis | Concentration (pCi/L)[a] First Result | Second Result | Averaged Result |
|---|---|---|---|---|---|
| LW-2063, 2064 | 4/28/2003 | Gr. Beta | 2.33 ± 0.66 | 2.68 ± 0.60 | 2.51 ± 0.45 |
| SWU-2275, 2276 | 4/28/2003 | Gr. Beta | 3.62 ± 0.67 | 4.60 ± 0.71 | 4.11 ± 0.49 |
| G-2149, 2150 | 4/30/2003 | Be-7 | 0.71 ± 0.19 | 0.69 ± 0.20 | 0.70 ± 0.14 |
| TD-2339, 2340 | 5/1/2003 | H-3 | 221.00 ± 91.00 | 161.00 ± 88.00 | 191.00 ± 63.29 |
| SO-2381, 2382 | 5/1/2003 | Cs-137 | 0.11 ± 0.03 | 0.10 ± 0.02 | 0.10 ± 0.02 |
| SO-2381, 2382 | 5/1/2003 | Gr. Alpha | 11.14 ± 5.15 | 10.39 ± 5.60 | 10.77 ± 3.80 |
| SO-2381, 2382 | 5/1/2003 | Gr. Beta | 35.18 ± 4.69 | 39.66 ± 5.24 | 37.42 ± 3.52 |
| SO-2381, 2382 | 5/1/2003 | K-40 | 18.29 ± 0.84 | 17.83 ± 0.84 | 18.06 ± 0.59 |
| SO-2381, 2382 | 5/1/2003 | Sr-90 | 0.06 ± 0.02 | 0.10 ± 0.02 | 0.08 ± 0.01 |
| DW-2317, 2318 | 5/6/2003 | I-131 | 1.77 ± 0.27 | 1.47 ± 0.26 | 1.62 ± 0.19 |
| BS-2595, 2596 | 5/6/2003 | Cs-137 | 0.06 ± 0.02 | 0.06 ± 0.02 | 0.06 ± 0.02 |
| BS-2595, 2596 | 5/6/2003 | K-40 | 13.74 ± 0.62 | 14.10 ± 0.73 | 13.92 ± 0.48 |
| U-2484, 2485 | 5/9/2003 | H-3 | 512.00 ± 100.00 | 370.00 ± 95.00 | 441.00 ± 68.97 |
| SO-2645, 2646 | 5/14/2003 | Be-7 | 1.18 ± 0.42 | 1.21 ± 0.35 | 1.19 ± 0.27 |
| SO-2645, 2646 | 5/14/2003 | Cs-137 | 0.11 ± 0.04 | 0.09 ± 0.05 | 0.10 ± 0.03 |
| SO-2645, 2646 | 5/14/2003 | K-40 | 16.50 ± 1.13 | 15.33 ± 1.09 | 15.91 ± 0.79 |
| MI-2696, 2697 | 5/19/2003 | K-40 | 1320.40 ± 124.50 | 1394.10 ± 113.00 | 1357.25 ± 84.07 |
| MI-2696, 2697 | 5/19/2003 | Sr-90 | 1.49 ± 0.47 | 2.01 ± 0.45 | 1.75 ± 0.32 |
| SO-2787, 2788 | 5/28/2003 | Cs-137 | 0.27 ± 0.04 | 0.23 ± 0.04 | 0.25 ± 0.03 |
| SO-2787, 2788 | 5/28/2003 | Gr. Beta | 19.62 ± 1.73 | 20.81 ± 1.72 | 20.21 ± 1.22 |
| SO-2787, 2788 | 5/28/2003 | K-40 | 14.77 ± 1.02 | 14.41 ± 1.00 | 14.59 ± 0.71 |
| MI-2840, 2841 | 5/28/2003 | K-40 | 1179.50 ± 167.80 | 1401.70 ± 120.20 | 1290.60 ± 103.20 |
| SWU-2864, 2865 | 5/28/2003 | Gr. Beta | 3.39 ± 0.59 | 3.41 ± 0.64 | 3.40 ± 0.43 |
| BS-2888, 2889 | 5/29/2003 | Cs-137 | 0.05 ± 0.02 | 0.07 ± 0.04 | 0.06 ± 0.02 |
| BS-2888, 2889 | 5/29/2003 | K-40 | 9.70 ± 0.83 | 10.17 ± 0.87 | 9.93 ± 0.60 |
| W-3230, 3231 | 5/30/2003 | Gr. Beta | 4.33 ± 1.00 | 3.28 ± 1.22 | 3.81 ± 0.79 |
| TD-3036, 3037 | 6/2/2003 | H-3 | 529.50 ± 100.00 | 585.50 ± 102.00 | 557.50 ± 71.42 |
| SL-2909, 2910[b] | 6/3/2003 | Gr. Beta | 7.10 ± 0.15 | 7.60 ± 0.16 | 7.35 ± 0.11 |
| SL-2909, 2910 | 6/3/2003 | K-40 | 3.90 ± 0.67 | 3.49 ± 0.52 | 3.70 ± 0.42 |
| SW-3080, 3081 | 6/10/2003 | Gr. Alpha | 4.63 ± 1.90 | 4.47 ± 1.71 | 4.55 ± 1.28 |
| SW-3080, 3081 | 6/10/2003 | Gr. Beta | 9.07 ± 1.29 | 8.98 ± 1.28 | 9.02 ± 0.91 |
| VE-3172, 3173 | 6/11/2003 | K-40 | 2.62 ± 0.35 | 3.17 ± 0.58 | 2.90 ± 0.34 |
| F-3742, 3743 | 6/11/2003 | Gr. Beta | 3.47 ± 0.13 | 3.71 ± 0.14 | 3.59 ± 0.10 |
| F-3742, 3743 | 6/11/2003 | K-40 | 2.94 ± 0.39 | 2.70 ± 0.40 | 2.82 ± 0.28 |
| SO-3325, 3326 | 6/13/2003 | Gr. Beta | 20.95 ± 1.88 | 19.97 ± 2.01 | 20.46 ± 1.38 |
| MI-3253, 3254 | 6/17/2003 | K-40 | 1329.40 ± 121.80 | 1417.60 ± 130.90 | 1373.50 ± 89.40 |
| MI-3297, 3298 | 6/17/2003 | Sr-90 | 2.14 ± 0.57 | 2.27 ± 0.50 | 2.21 ± 0.38 |
| WW-3380, 3381 | 6/23/2003 | Gr. Beta | 5.58 ± 0.69 | 5.03 ± 0.69 | 5.31 ± 0.49 |
| SWT-3403, 3404 | 6/24/2003 | Gr. Beta | 2.80 ± 0.56 | 2.63 ± 0.55 | 2.72 ± 0.39 |
| MI-3424, 3425 | 6/24/2003 | K-40 | 1422.80 ± 185.40 | 1216.20 ± 170.10 | 1319.50 ± 125.80 |
| SW-3862, 3863 | 6/24/2003 | Gr. Beta | 3.66 ± 1.18 | 3.70 ± 1.22 | 3.68 ± 0.85 |
| G-3479, 3480 | 6/25/2003 | Be-7 | 1.52 ± 0.25 | 1.43 ± 0.28 | 1.47 ± 0.19 |
| G-3479, 3480 | 6/25/2003 | K-40 | 5.02 ± 0.45 | 5.10 ± 0.48 | 5.06 ± 0.33 |
| LW-3809, 3810 | 6/30/2003 | Gr. Beta | 2.12 ± 0.76 | 2.39 ± 0.72 | 2.25 ± 0.52 |

TABLE IV-5. In-House "Duplicate" Samples

| Lab Code | Date | Analysis | Concentration (pCi/L)[a] First Result | Second Result | Averaged Result |
|---|---|---|---|---|---|
| LW-3809, 3810 | 6/30/2003 | H-3 | 2814.09 ± 167.99 | 2812.17 ± 167.94 | 2813.13 ± 118.77 |
| AP-4105, 4106 | 6/30/2003 | Be-7 | 0.07 ± 0.01 | 0.07 ± 0.01 | 0.07 ± 0.01 |
| G-3572, 3573 | 7/1/2003 | Be-7 | 0.91 ± 0.24 | 0.81 ± 0.28 | 0.86 ± 0.18 |
| G-3572, 3573 | 7/1/2003 | Gr. Beta | 6.35 ± 0.15 | 6.35 ± 0.15 | 6.35 ± 0.11 |
| G-3572, 3573 | 7/1/2003 | K-40 | 5.44 ± 0.55 | 5.68 ± 0.28 | 5.56 ± 0.31 |
| G-3572, 3573 | 7/1/2003 | Sr-90 | 0.01 ± 0.00 | 0.02 ± 0.00 | 0.01 ± 0.00 |
| MI-3601, 3602 | 7/1/2003 | K-40 | 1318.60 ± 117.40 | 1435.10 ± 117.80 | 1376.85 ± 83.16 |
| MI-3601, 3602 | 7/1/2003 | Sr-90 | 0.86 ± 0.51 | 1.74 ± 0.60 | 1.30 ± 0.39 |
| AP-3933, 3934 | 7/1/2003 | Be-7 | 0.07 ± 0.01 | 0.07 ± 0.01 | 0.07 ± 0.01 |
| AP-4061, 4062 | 7/2/2003 | Be-7 | 0.07 ± 0.01 | 0.08 ± 0.01 | 0.08 ± 0.01 |
| AP-4147, 4148 | 7/2/2003 | Be-7 | 0.08 ± 0.01 | 0.07 ± 0.01 | 0.07 ± 0.01 |
| AP-4084, 4085 | 7/3/2003 | Be-7 | 0.09 ± 0.02 | 0.08 ± 0.02 | 0.08 ± 0.01 |
| LW-3786, 3787 | 7/9/2003 | Gr. Beta | 2.13 ± 0.56 | 2.93 ± 0.62 | 2.53 ± 0.42 |
| WW-4168, 4169 | 7/11/2003 | Gr. Beta | 3.79 ± 1.87 | 4.48 ± 1.98 | 4.14 ± 1.36 |
| CF-3975, 3976 | 7/14/2003 | Be-7 | 1.64 ± 0.81 | 1.66 ± 0.57 | 1.65 ± 0.50 |
| CF-3975, 3976 | 7/14/2003 | K-40 | 6.54 ± 0.75 | 6.19 ± 0.50 | 6.36 ± 0.45 |
| MI-4020, 4021 | 7/16/2003 | K-40 | 1350.90 ± 174.90 | 1199.80 ± 153.20 | 1275.35 ± 116.25 |
| DW-4272, 4273 | 7/29/2003 | Gr. Beta | 2.35 ± 0.92 | 2.29 ± 0.89 | 2.32 ± 0.64 |
| SWU-4461, 4462 | 7/30/2003 | Gr. Beta | 2.28 ± 0.44 | 1.93 ± 0.43 | 2.10 ± 0.31 |
| SL-4398, 4399 | 8/4/2003 | Be-7 | 4.55 ± 1.05 | 4.50 ± 1.10 | 4.53 ± 0.76 |
| SL-4398, 4399 b | 8/4/2003 | Gr. Beta | 3.41 ± 0.12 | 3.12 ± 0.11 | 3.27 ± 0.08 |
| SL-4398, 4399 | 8/4/2003 | K-40 | 2.47 ± 0.67 | 2.44 ± 0.87 | 2.46 ± 0.55 |
| G-4419, 4420 | 8/4/2003 | Be-7 | 3.98 ± 0.63 | 3.93 ± 0.57 | 3.96 ± 0.42 |
| G-4419, 4420 | 8/4/2003 | Gr. Beta | 5.38 ± 0.14 | 5.35 ± 0.16 | 5.37 ± 0.11 |
| G-4419, 4420 | 8/4/2003 | K-40 | 4.42 ± 0.66 | 4.32 ± 0.74 | 4.37 ± 0.50 |
| TD-4550, 4551 | 8/4/2003 | H-3 | 327.30 ± 95.10 | 390.20 ± 92.10 | 358.75 ± 66.19 |
| MI-4482, 4483 | 8/6/2003 | K-40 | 1301.40 ± 115.20 | 1370.30 ± 116.80 | 1335.85 ± 82.03 |
| MI-4482, 4483 | 8/6/2003 | Sr-90 | 0.81 ± 0.30 | 0.85 ± 0.31 | 0.83 ± 0.21 |
| G-4526, 4527 | 8/6/2003 | Be-7 | 1.47 ± 0.29 | 1.42 ± 0.28 | 1.45 ± 0.20 |
| G-4526, 4527 | 8/6/2003 | K-40 | 5.42 ± 0.56 | 5.21 ± 0.63 | 5.31 ± 0.42 |
| SWU-4609, 4610 | 8/6/2003 | Gr. Beta | 3.22 ± 0.63 | 2.67 ± 0.64 | 2.95 ± 0.45 |
| CW-4694, 4695 | 8/6/2003 | Gr. Beta | 1.48 ± 0.34 | 1.09 ± 0.34 | 1.29 ± 0.24 |
| CW-4694, 4695 | 8/6/2003 | H-3 | 22776.41 ± 428.73 | 21831.75 ± 420.10 | 22304.08 ± 300.12 |
| LW-4673, 4674 | 8/13/2003 | Gr. Beta | 2.86 ± 0.65 | 3.75 ± 0.71 | 3.30 ± 0.48 |
| MI-4735, 4736 | 8/19/2003 | K-40 | 1396.30 ± 127.90 | 1410.10 ± 120.20 | 1403.20 ± 87.76 |
| MI-4756, 4757 | 8/19/2003 | Sr-90 | 1.66 ± 0.47 | 1.53 ± 0.44 | 1.60 ± 0.32 |
| VE-4832, 4833 | 8/20/2003 | K-40 | 1.96 ± 0.50 | 1.43 ± 0.47 | 1.70 ± 0.34 |
| MI-4860, 4861 | 8/26/2003 | K-40 | 1312.10 ± 191.80 | 1307.80 ± 109.30 | 1309.95 ± 110.38 |
| SO-5082, 5083 | 8/28/2003 | Cs-137 | 0.01 ± 0.00 | 0.01 ± 0.00 | 0.01 ± 0.00 |
| SO-5082, 5083 | 8/28/2003 | Gr. Beta | 20.02 ± 1.84 | 20.92 ± 2.03 | 20.47 ± 1.37 |
| CW-5349, 5350 | 8/31/2003 | Gr. Beta | 1.45 ± 0.39 | 1.55 ± 0.45 | 1.50 ± 0.30 |
| CW-5349, 5350 | 8/31/2003 | H-3 | 24429.50 ± 444.42 | 24744.25 ± 447.18 | 24586.88 ± 315.23 |
| ME-4968, 4969 | 9/2/2003 | Gr. Beta | 4.90 ± 0.23 | 5.18 ± 0.24 | 5.04 ± 0.17 |
| ME-4968, 4969 | 9/2/2003 | K-40 | 2.46 ± 0.41 | 2.68 ± 0.37 | 2.57 ± 0.28 |

TABLE IV-5. In-House "Duplicate" Samples

| Lab Code | Date | Analysis | Concentration (pCi/L)[a] First Result | Second Result | Averaged Result |
|---|---|---|---|---|---|
| DW-4989, 4990 | 9/2/2003 | Gr. Beta | 2.20 ± 1.04 | 3.19 ± 1.14 | 2.70 ± 0.77 |
| MI-5154, 5155 | 9/8/2003 | K-40 | 1365.50 ± 116.70 | 1456.70 ± 119.10 | 1411.10 ± 83.37 |
| MI-5154, 5155 | 9/8/2003 | Sr-90 | 1.19 ± 0.39 | 1.39 ± 0.39 | 1.29 ± 0.28 |
| AP-6177, 6178 | 9/29/2003 | Be-7 | 0.07 ± 0.01 | 0.06 ± 0.01 | 0.06 ± 0.01 |
| SWU-5773, 5774 | 9/30/2003 | Gr. Beta | 2.55 ± 0.63 | 2.83 ± 0.60 | 2.69 ± 0.44 |
| AP-6102, 6103 | 9/30/2003 | Be-7 | 0.07 ± 0.01 | 0.05 ± 0.01 | 0.06 ± 0.01 |
| G-5631, 5632 | 10/1/2003 | Be-7 | 1.88 ± 0.48 | 2.21 ± 0.40 | 2.05 ± 0.31 |
| G-5631, 5632 | 10/1/2003 | Gr. Beta | 5.87 ± 0.09 | 5.85 ± 0.08 | 5.86 ± 0.06 |
| G-5631, 5632 | 10/1/2003 | K-40 | 5.24 ± 0.77 | 5.26 ± 0.58 | 5.25 ± 0.48 |
| SO-5660, 5661 | 10/1/2003 | Cs-137 | 0.15 ± 0.04 | 0.16 ± 0.05 | 0.16 ± 0.03 |
| SO-5660, 5661 | 10/1/2003 | Gr. Alpha | 12.72 ± 3.72 | 14.86 ± 3.88 | 13.79 ± 2.69 |
| SO-5660, 5661 | 10/1/2003 | Gr. Beta | 32.42 ± 3.09 | 33.60 ± 3.04 | 33.01 ± 2.17 |
| SO-5660, 5661 | 10/1/2003 | K-40 | 18.93 ± 0.87 | 18.25 ± 1.19 | 18.59 ± 0.74 |
| SO-5660, 5661 | 10/1/2003 | Sr-90 | 0.03 ± 0.01 | 0.03 ± 0.01 | 0.03 ± 0.01 |
| AP-6334, 6335 | 10/1/2003 | Be-7 | 0.06 ± 0.01 | 0.06 ± 0.01 | 0.06 ± 0.01 |
| AP-6363, 6364 | 10/2/2003 | Be-7 | 0.07 ± 0.02 | 0.07 ± 0.02 | 0.07 ± 0.01 |
| MI-5794, 5795 | 10/6/2003 | Sr-90 | 1.37 ± 0.37 | 1.02 ± 0.37 | 1.19 ± 0.26 |
| MI-5838, 5839 | 10/8/2003 | K-40 | 1364.30 ± 124.10 | 1414.40 ± 110.40 | 1389.35 ± 83.05 |
| MI-5838, 5839 | 10/8/2003 | Sr-90 | 0.76 ± 0.30 | 1.00 ± 0.34 | 0.88 ± 0.23 |
| BS-5938, 5939 | 10/8/2003 | Cs-137 | 0.18 ± 0.03 | 0.20 ± 0.05 | 0.19 ± 0.03 |
| BS-5938, 5939 | 10/8/2003 | K-40 | 15.59 ± 0.70 | 16.69 ± 0.80 | 16.14 ± 0.53 |
| SS-5959, 5960 | 10/13/2003 | K-40 | 7.49 ± 0.42 | 7.29 ± 0.63 | 7.39 ± 0.38 |
| MI-6011, 6012 | 10/13/2003 | K-40 | 1165.20 ± 118.70 | 1191.20 ± 99.50 | 1178.20 ± 77.44 |
| MI-6034, 6035 | 10/14/2003 | Sr-90 | 0.86 ± 0.33 | 0.90 ± 0.34 | 0.88 ± 0.24 |
| VE-6055, 6056 | 10/15/2003 | Gr. Beta | 5.18 ± 0.18 | 5.33 ± 0.18 | 5.25 ± 0.13 |
| VE-6055, 6056 | 10/15/2003 | K-40 | 5.31 ± 0.57 | 4.52 ± 0.51 | 4.92 ± 0.38 |
| MI-6291, 6292 | 10/21/2003 | K-40 | 1935.60 ± 147.70 | 1936.10 ± 116.50 | 1935.85 ± 94.06 |
| MI-6291, 6292 | 10/21/2003 | Sr-90 | 1.22 ± 0.39 | 1.41 ± 0.37 | 1.31 ± 0.27 |
| SS-6435, 6436 | 10/21/2003 | Cs-137 | 0.05 ± 0.02 | 0.05 ± 0.03 | 0.05 ± 0.02 |
| SS-6435, 6436 | 10/21/2003 | K-40 | 14.08 ± 0.54 | 14.28 ± 0.80 | 14.18 ± 0.48 |
| CF-6313, 6314 | 10/22/2003 | K-40 | 14.56 ± 0.45 | 14.70 ± 0.95 | 14.63 ± 0.53 |
| SO-6528, 6529 | 10/22/2003 | Cs-137 | 0.15 ± 0.03 | 0.16 ± 0.05 | 0.16 ± 0.03 |
| SO-6528, 6529 | 10/22/2003 | K-40 | 17.46 ± 0.69 | 17.90 ± 1.05 | 17.68 ± 0.63 |
| SO-6393, 6394 | 10/25/2003 | Cs-137 | 0.09 ± 0.03 | 0.10 ± 0.04 | 0.10 ± 0.03 |
| SO-6393, 6394 | 10/25/2003 | Gr. Beta | 23.21 ± 1.98 | 21.76 ± 1.91 | 22.48 ± 1.38 |
| SO-6393, 6394 | 10/25/2003 | K-40 | 13.98 ± 0.80 | 14.57 ± 0.86 | 14.27 ± 0.59 |
| SWT-6507, 6508 | 10/28/2003 | Gr. Beta | 2.64 ± 0.52 | 2.63 ± 0.53 | 2.63 ± 0.37 |
| DW-6647, 6648 | 10/31/2003 | I-131 | 0.46 ± 0.27 | 0.61 ± 0.31 | 0.53 ± 0.21 |
| BS-6603, 6604 | 11/3/2003 | Cs-137 | 9.03 ± 0.82 | 8.60 ± 1.13 | 8.82 ± 0.70 |
| BS-6603, 6604 | 11/3/2003 | Gr. Beta | 26.83 ± 1.94 | 27.18 ± 1.95 | 27.01 ± 1.38 |
| SO-6670, 6671 | 11/5/2003 | Cs-137 | 0.15 ± 0.04 | 0.13 ± 0.04 | 0.14 ± 0.03 |
| SO-6670, 6671 | 11/5/2003 | K-40 | 12.96 ± 0.66 | 12.95 ± 0.72 | 12.96 ± 0.49 |
| S-7067, 7068 | 11/10/2003 | Cs-137 | 0.21 ± 0.05 | 0.19 ± 0.08 | 0.20 ± 0.05 |
| MI-6818, 6819 | 11/11/2003 | K-40 | 1695.50 ± 129.80 | 1709.40 ± 143.00 | 1702.45 ± 96.56 |

TABLE IV-5. In-House "Duplicate" Samples

| Lab Code | Date | Analysis | Concentration (pCi/L)[a] First Result | Second Result | Averaged Result |
|---|---|---|---|---|---|
| MI-6818, 6819 | 11/11/2003 | Sr-90 | 2.01 ± 0.41 | 1.59 ± 0.39 | 1.80 ± 0.28 |
| WL-6987, 6988 | 11/17/2003 | Fe-55 | 603.49 ± 53.32 | 619.65 ± 53.97 | 611.57 ± 37.93 |
| SO-7156, 7157 | 11/21/2003 | Cs-137 | 0.74 ± 0.08 | 0.77 ± 0.07 | 0.76 ± 0.06 |
| SO-7156, 7157 | 11/21/2003 | Gr. Alpha | 14.90 ± 4.24 | 19.25 ± 4.45 | 17.07 ± 3.07 |
| SO-7156, 7157 | 11/21/2003 | Gr. Beta | 22.97 ± 3.12 | 25.51 ± 2.98 | 24.24 ± 2.16 |
| SO-7156, 7157 | 11/21/2003 | K-40 | 12.51 ± 1.06 | 12.94 ± 1.07 | 12.73 ± 0.75 |
| S-7281, 7282 | 11/24/2003 | Cs-137 | 0.82 ± 0.15 | 1.16 ± 0.20 | 0.99 ± 0.12 |
| SWU-7198, 7199 | 11/25/2003 | Gr. Beta | 2.60 ± 0.53 | 2.54 ± 0.55 | 2.57 ± 0.38 |
| DW-7221, 7222 | 11/25/2003 | Gr. Beta | 12.32 ± 1.40 | 12.38 ± 1.43 | 12.35 ± 1.00 |
| SW-7133, 7134 | 12/1/2003 | Gr. Beta | 2.10 ± 0.23 | 2.46 ± 0.23 | 2.28 ± 0.16 |
| SW-7133, 7134 | 12/1/2003 | K-40 | 1.50 ± 0.15 | 1.40 ± 0.14 | 1.45 ± 0.10 |
| W-7519, 7520 | 12/1/2003 | Fe-55 | 3.03 ± 0.65 | 3.12 ± 0.64 | 3.08 ± 0.46 |
| SW-7805, 7806 | 12/1/2003 | Sr-90 | 0.59 ± 0.32 | 0.56 ± 0.33 | 0.58 ± 0.23 |
| VE-7399, 7400 | 12/9/2003 | Gr. Beta | 4.99 ± 0.15 | 5.24 ± 0.15 | 5.11 ± 0.11 |
| VE-7399, 7400 | 12/9/2003 | K-40 | 5.04 ± 0.46 | 5.34 ± 0.74 | 5.19 ± 0.43 |
| SW-7540, 7541 | 12/9/2003 | Gr. Alpha | 2.64 ± 1.36 | 2.10 ± 1.19 | 2.37 ± 0.91 |
| SW-7540, 7541 | 12/9/2003 | Gr. Beta | 6.62 ± 1.22 | 5.89 ± 1.35 | 6.25 ± 0.91 |
| LW-7736, 7737 | 12/26/2003 | Gr. Beta | 2.62 ± 0.54 | 2.83 ± 0.56 | 2.73 ± 0.39 |
| AP-7868, 7869 | 12/30/2003 | Be-7 | 0.05 ± 0.01 | 0.04 ± 0.01 | 0.04 ± 0.01 |
| AP-7952, 7953 | 12/30/2003 | Be-7 | 0.04 ± 0.01 | 0.04 ± 0.01 | 0.04 ± 0.01 |
| AP-7994, 7995 | 12/31/2003 | Be-7 | 0.05 ± 0.02 | 0.05 ± 0.01 | 0.05 ± 0.01 |

Note: Duplicate analyses are performed on every twentieth sample received in-house. Results are not listed for those analyses with activities that measure below the LLD.

[a] Results are reported in units of pCi/L, except for air filters (pCi/Filter), food products, vegetation, soil, sediment (pCi/g).

[b] 200 minute count time or longer, resulting in lower error.

TABLE IV-6. Department of Energy's Mixed Analyte Performance Evaluation Program (MAPEP)[a].

| | | | Concentration[b] | | | |
|---|---|---|---|---|---|---|
| Lab Code | Type | Date | Analysis | Laboratory result | Known Activity | Control Limits[c] |
| STW-972 | water | 12/01/02 | Am-241 | 0.56 ± 0.06 | 0.58 ± 0.09 | 0.40 - 0.75 |
| STW-972 | water | 12/01/02 | Co-57 | 57.10 ± 1.90 | 57.00 ± 5.70 | 39.90 - 74.10 |
| STW-972 | water | 12/01/02 | Co-60 | 38.30 ± 0.60 | 38.20 ± 3.82 | 26.74 - 49.66 |
| STW-972 | water | 12/01/02 | Cs-134 | 395.30 ± 10.10 | 421.00 ± 42.10 | 294.70 - 547.30 |
| STW-972 | water | 12/01/02 | Cs-137 | 316.40 ± 5.30 | 329.00 ± 32.90 | 230.30 - 427.70 |
| STW-972 | water | 12/01/02 | Fe-55 | 94.90 ± 24.50 | 96.00 ± 9.60 | 67.20 - 124.80 |
| STW-972 | water | 12/01/02 | Mn-54 | 33.40 ± 0.10 | 32.90 ± 3.29 | 23.03 - 42.77 |
| STW-972 | water | 12/01/02 | Ni-63 | 123.80 ± 5.50 | 136.50 ± 13.70 | 95.55 - 177.45 |
| STW-972 | water | 12/01/02 | Pu-238 | 0.66 ± 0.06 | 0.83 ± 0.08 | 0.58 - 1.08 |
| STW-972 | water | 12/01/02 | Pu-239/40 | 0.001 ± 0.001 | 0.000 ± 0.000 | 0.000 - 0.005 |
| STW-972 | water | 12/01/02 | Sr-90 | 13.80 ± 1.00 | 12.31 ± 1.23 | 8.62 - 16.00 |
| STW-972 | water | 12/01/02 | Tc-99 | 128.10 ± 3.80 | 132.00 ± 13.20 | 92.40 - 171.60 |
| STW-972 | water | 12/01/02 | U-233/4 | 1.60 ± 0.09 | 1.54 ± 0.15 | 1.08 - 2.00 |
| STW-972 | water | 12/01/02 | U-238 | 1.64 ± 0.09 | 1.60 ± 0.16 | 1.12 - 2.08 |
| STW-972 | water | 12/01/02 | Zn-65 | 540.40 ± 9.90 | 516.00 ± 51.60 | 361.20 - 670.80 |
| STSO-987 | soil | 01/01/03 | Co-57 | 534.36 ± 2.61 | 530.00 ± 53.00 | 371.00 - 689.00 |
| STSO-987 | soil | 01/01/03 | Co-60 | 442.16 ± 2.31 | 420.00 ± 42.00 | 294.00 - 546.00 |
| STSO-987 | soil | 01/01/03 | Cs-134 | 211.00 ± 2.30 | 238.00 ± 23.80 | 166.60 - 309.40 |
| STSO-987 | soil | 01/01/03 | Cs-137 | 849.50 ± 3.30 | 832.00 ± 83.20 | 582.40 - 1081.60 |
| STSO-987 | soil | 01/01/03 | K-40 | 716.50 ± 12.80 | 652.00 ± 65.20 | 456.40 - 847.60 |
| STSO-987 | soil | 01/01/03 | Mn-54 | 148.76 ± 2.84 | 137.00 ± 13.70 | 95.90 - 178.10 |
| STSO-987 | soil | 01/01/03 | Ni-63 | 597.10 ± 23.50 | 770.00 ± 77.00 | 539.00 - 1001.00 |
| STSO-987 | soil | 01/01/03 | Pu-238 | 67.05 ± 3.10 | 66.90 ± 6.70 | 46.83 - 86.97 |
| STSO-987 | soil | 01/01/03 | Pu-239/40 | 52.80 ± 3.60 | 52.70 ± 5.30 | 36.90 - 68.50 |
| STSO-987 | soil | 01/01/03 | Sr-90 | 609.50 ± 9.80 | 714.00 ± 71.40 | 499.80 - 928.20 |
| STSO-987 | soil | 01/01/03 | U-233/4 | 99.50 ± 7.60 | 89.00 ± 8.90 | 62.30 - 115.70 |
| STSO-987 | soil | 01/01/03 | U-238 | 508.60 ± 42.20 | 421.00 ± 42.10 | 294.70 - 547.30 |
| STSO-987 | soil | 01/01/03 | Zn-65 | 492.70 ± 28.10 | 490.00 ± 49.00 | 343.00 - 637.00 |

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

[b] All results are in Bq/kg or Bq/L as requested by the Department of Energy.

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

TABLE IV-7. Environmental Measurements Laboratory Quality Assessment Program (EML)

| Lab Code | Type | Date | Concentration[a] Analysis | Laboratory results | EML Result[b] | Control Limits[c] |
|---|---|---|---|---|---|---|
| STW-977 | water | 03/01/03 | Gr. Alpha | 304.30 ± 53.10 | 377.50 | 0.58 - 1.29 |
| STW-977 | water | 03/01/03 | Gr. Beta | 615.80 ± 14.70 | 627.50 | 0.61 - 1.43 |
| STW-978 | water | 03/01/03 | Am-241 | 2.00 ± 0.10 | 2.13 | 0.79 - 1.41 |
| STW-978 | water | 03/01/03 | Co-60 | 221.30 ± 1.20 | 234.00 | 0.80 - 1.20 |
| STW-978 [d] | water | 03/01/03 | Cs-134 | 23.30 ± 1.10 | 30.50 | 0.80 - 1.30 |
| STW-978 | water | 03/01/03 | Cs-137 | 61.40 ± 0.60 | 63.80 | 0.80 - 1.22 |
| STW-978 [e] | water | 03/01/03 | H-3 | 341.90 ± 22.70 | 390.00 | 0.78 - 2.45 |
| STW-978 | water | 03/01/03 | Pu-238 | 3.70 ± 0.20 | 3.33 | 0.74 - 1.20 |
| STW-978 | water | 03/01/03 | Pu-239/40 | 4.40 ± 0.10 | 3.92 | 0.79 - 1.20 |
| STW-978 | water | 03/01/03 | Sr-90 | 4.60 ± 0.30 | 4.34 | 0.69 - 1.34 |
| STW-978 | water | 03/01/03 | Uranium | 5.10 ± 0.60 | 4.29 | 0.75 - 1.33 |
| STSO-979 | soil | 03/01/03 | Ac-228 | 55.60 ± 2.50 | 57.60 | 0.80 - 1.38 |
| STSO-979 | soil | 03/01/03 | Am-241 | 12.42 ± 0.90 | 15.60 | 0.65 - 2.28 |
| STSO-979 | soil | 03/01/03 | Bi-212 | 57.70 ± 3.20 | 60.60 | 0.50 - 1.34 |
| STSO-979 | soil | 03/01/03 | Bi-214 | 60.40 ± 3.20 | 67.00 | 0.78 - 1.42 |
| STSO-979 | soil | 03/01/03 | Cs-137 | 1416.80 ± 70.00 | 1450.00 | 0.80 - 1.25 |
| STSO-979 | soil | 03/01/03 | K-40 | 653.80 ± 11.90 | 636.00 | 0.80 - 1.32 |
| STSO-979 | soil | 03/01/03 | Pb-212 | 51.10 ± 5.20 | 57.90 | 0.78 - 1.32 |
| STSO-979 | soil | 03/01/03 | Pb-214 | 64.70 ± 5.10 | 71.10 | 0.76 - 1.46 |
| STSO-979 | soil | 03/01/03 | Pu-239/40 | 24.40 ± 0.30 | 23.40 | 0.71 - 1.30 |
| STSO-979 | soil | 03/01/03 | Sr-90 | 54.50 ± 2.60 | 64.40 | 0.67 - 2.90 |
| STSO-979 | soil | 03/01/03 | Uranium | 245.00 ± 1.50 | 249.00 | 0.71 - 1.32 |
| STVE-980 | Vegetation | 03/01/03 | Am-241 | 3.10 ± 0.20 | 3.51 | 0.73 - 2.02 |
| STVE-980 | Vegetation | 03/01/03 | Cm-244 | 1.40 ± 0.50 | 2.01 | 0.61 - 1.59 |
| STVE-980 | Vegetation | 03/01/03 | Co-60 | 12.60 ± 0.40 | 12.10 | 0.80 - 1.44 |
| STVE-980 | Vegetation | 03/01/03 | Cs-137 | 449.70 ± 6.20 | 444.00 | 0.80 - 1.31 |
| STVE-980 | Vegetation | 03/01/03 | K-40 | 1159.00 ± 38.60 | 1120.00 | 0.79 - 1.39 |
| STVE-980 | Vegetation | 03/01/03 | Pu-239/40 | 4.80 ± 0.40 | 5.17 | 0.69 - 1.31 |
| STVE-980 | Vegetation | 03/01/03 | Sr-90 | 659.70 ± 50.40 | 650.00 | 0.55 - 1.21 |
| STAP-981 | Air Filter | 03/01/03 | Am-241 | 0.27 ± 0.10 | 0.34 | 0.70 - 2.34 |
| STAP-981 | Air Filter | 03/01/03 | Co-60 | 30.20 ± 0.30 | 33.50 | 0.80 - 1.26 |
| STAP-981 | Air Filter | 03/01/03 | Cs-137 | 90.30 ± 1.30 | 99.70 | 0.80 - 1.32 |
| STAP-981 | Air Filter | 03/01/03 | Mn-54 | 41.80 ± 0.60 | 43.80 | 0.80 - 1.35 |
| STAP-981 | Air Filter | 03/01/03 | Pu-238 | 0.52 ± 0.10 | 0.52 | 0.67 - 1.33 |
| STAP-981 | Air Filter | 03/01/03 | Pu-239/40 | 0.35 ± 0.10 | 0.33 | 0.73 - 1.26 |
| STAP-981 | Air Filter | 03/01/03 | Sr-90 | 2.50 ± 0.10 | 2.80 | 0.53 - 1.84 |
| STAP-981 | Air Filter | 03/01/03 | Uranium | 0.51 ± 0.10 | 0.50 | 0.79 - 2.10 |
| STAP-982 | Air Filter | 03/01/03 | Gr. Alpha | 0.90 ± 0.10 | 1.17 | 0.73 - 1.43 |
| STAP-982 | Air Filter | 03/01/03 | Gr. Beta | 1.50 ± 0.10 | 1.50 | 0.76 - 1.36 |

TABLE IV-7. Environmental Measurements Laboratory Quality Assessment Program (EML)

| Lab Code | Type | Date | Concentration[a] Analysis | Laboratory results | EML Result[b] | Control Limits[c] |
|---|---|---|---|---|---|---|
| STW-992 | water | 09/02/03 | Am-241 | 9.78 ± 0.32 | 8.76 | 0.79 - 1.41 |
| The September, 2003 results are preliminary. Control limits used were taken from the March, 2003 data. Control limits may vary slightly when the final study is published. | | | | | | |
| STW-992 | water | 09/02/03 | Co-60 | 468.30 ± 4.10 | 513.00 | 0.80 - 1.20 |
| STW-992 | water | 09/02/03 | Cs-134 | 53.90 ± 0.80 | 63.00 | 0.80 - 1.30 |
| STW-992 | water | 09/02/03 | Cs-137 | 76.10 ± 1.40 | 80.30 | 0.80 - 1.22 |
| STW-992 | water | 09/02/03 | H-3 | 355.20 ± 12.80 | 446.30 | 0.78 - 2.45 |
| STW-992 | water | 09/02/03 | Pu-238 | 1.71 ± 0.07 | 2.07 | 0.74 - 1.20 |
| STW-992 | water | 09/02/03 | Pu-239/40 | 4.24 ± 0.01 | 4.99 | 0.79 - 1.20 |
| STW-992 | water | 09/02/03 | Sr-90 | 6.70 ± 0.50 | 7.04 | 0.69 - 1.34 |
| STW-992 | water | 09/02/03 | Uranium | 6.03 ± 0.14 | 5.69 | 0.75 - 1.33 |
| STW-993 | water | 09/02/03 | Gr. Alpha | 688.00 ± 7.60 | 622.00 | 0.58 - 1.29 |
| STW-993 | water | 09/02/03 | Gr. Beta | 1985.00 ± 111.00 | 1948.00 | 0.61 - 1.43 |
| STSO-994 | soil | 09/02/03 | Am-241 | 19.70 ± 1.50 | 18.40 | 0.65 - 2.28 |
| STSO-994 | soil | 09/02/03 | Cs-137 | 1928.00 ± 19.00 | 1973.00 | 0.80 - 1.25 |
| STSO-994 | soil | 09/02/03 | K-40 | 533.00 ± 79.00 | 488.00 | 0.80 - 1.32 |
| STSO-994 | soil | 09/02/03 | Pu-238 | 15.30 ± 0.80 | 14.60 | 0.59 - 2.88 |
| STSO-994 | soil | 09/02/03 | Pu-239/40 | 32.50 ± 2.30 | 30.40 | 0.71 - 1.30 |
| STSO-994 | soil | 09/02/03 | Sr-90 | 69.80 ± 2.30 | 80.30 | 0.67 - 2.90 |
| STSO-994 | soil | 09/02/03 | Uranium | 228.30 ± 17.10 | 259.30 | 0.71 - 1.32 |
| STAP-995 | Air Filter | 09/02/03 | Am-241 | 0.64 ± 0.05 | 0.44 | 0.70 - 2.34 |
| STAP-995 | Air Filter | 09/02/03 | Co-60 | 48.50 ± 0.40 | 55.10 | 0.80 - 1.26 |
| STAP-995 | Air Filter | 09/02/03 | Cs-137 | 51.20 ± 1.10 | 54.80 | 0.80 - 1.32 |
| STAP-995 | Air Filter | 09/02/03 | Mn-54 | 53.70 ± 1.10 | 58.00 | 0.80 - 1.35 |
| STAP-995 | Air Filter | 09/02/03 | Pu-238 | 0.24 ± 0.05 | 0.23 | 0.67 - 1.33 |
| STAP-995 | Air Filter | 09/02/03 | Pu-239/40 | 0.41 ± 0.10 | 0.40 | 0.73 - 1.26 |
| STAP-995 | Air Filter | 09/02/03 | Sr-90 | 1.90 ± 0.10 | 2.06 | 0.53 - 1.84 |
| STAP-995 | Air Filter | 09/02/03 | Uranium | 0.80 ± 0.06 | 0.82 | 0.79 - 2.10 |
| STAP-996 | Air Filter | 09/02/03 | Gr. Alpha | 3.23 ± 0.07 | 3.11 | 0.73 - 1.43 |
| STAP-996 | Air Filter | 09/02/03 | Gr. Beta | 4.18 ± 0.03 | 3.89 | 0.76 - 1.36 |

[a] Results are reported in Bq/L with the following exceptions: Air Filters (Bq/Filter), Soil and Vegetation (Bq/kg).

[b] The EML result listed is the mean of replicate determinations for each nuclide ± the standard error of the mean.

[c] Control limits are reported by EML as the ratio of Reported Value / EML value.

[d] A low bias for Cs-134 activity has been observed in the past. No errors have been found in the library or efficiency. Additional spike analyses will be performed and a correction factored into the calculation.

[e] Reporting error.