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10 CFR 50
Appendix I



April 28, 2000

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

Dresden Nuclear Power Station Units 1, 2, and 3
Facility Operating Licenses DPR-02, DPR-19, and DPR-25
Docket Numbers 50-010, 50-237, and 50-249

Subject: Dresden Nuclear Power Station Annual Radiological Environmental
Operating Report for 1999

The purpose of this letter is submit the Commonwealth Edison (ComEd) Company Dresden Nuclear Power Station Annual Radiological Environmental Operating Report. This report provides the results of the radiological environmental and meteorological monitoring programs for the 1999 calendar year, and is submitted in accordance with Section 6.9.A.3 of the Dresden Nuclear Power Station Technical Specifications.

If you have any questions concerning this report, please refer them to Mr. Dale Ambler, Dresden Station Regulatory Assurance Manager, at (815) 942-2920, extension 3800.

Respectfully,

A handwritten signature in cursive script that reads "Preston Swafford".

Preston Swafford
Site Vice President
Dresden Nuclear Power Station

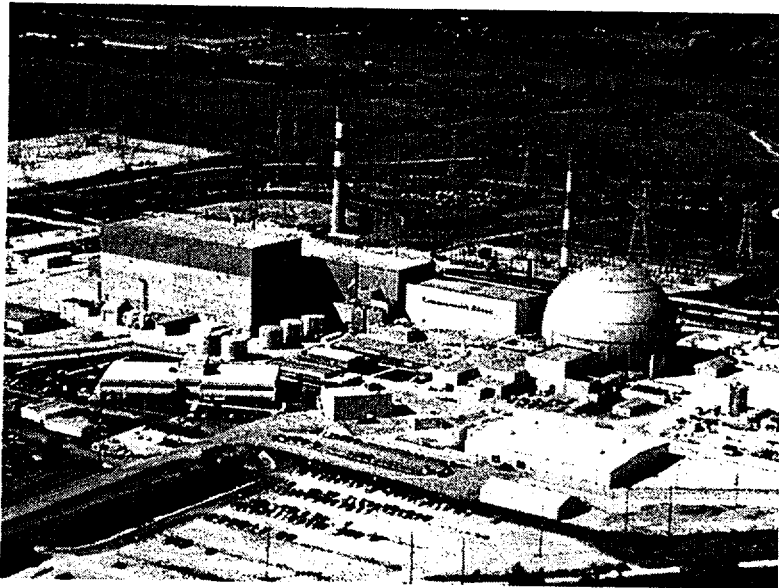
Enclosure

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

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DRESDEN STATION
ANNUAL RADIOLOGICAL
ENVIRONMENTAL OPERATING
REPORT

1999



APRIL 2000

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
SUMMARY	2
1.0 EFFLUENTS	
1.1 Gaseous Effluents to the Atmosphere	3
1.2 Liquids Released to Illinois River	3
2.0 SOLID RADIOACTIVE WASTE	3
3.0 DOSE TO MAN	
3.1 Gaseous Effluent Pathways	3
3.1.1 Noble Gases.....	3
3.1.1.1 Gamma Dose Rates.....	4
3.1.1.2 Beta Air and Skin Dose Rates.....	4
3.1.2 Radioactive Iodine.....	4
3.1.2.1 Iodine Concentrations in Air	5
3.1.2.2 Dose to Thyroid.....	5
3.1.3 Concentrations of Particulates in Air.....	5
3.2 Liquid Effluent Pathways.....	5
3.3 Assessment of Dose to Member of Public	5
4.0 SITE METEOROLOGY.....	6
5.0 ENVIRONMENTAL MONITORING.....	6
5.1 Gamma Radiation.....	6
5.2 Airborne I-131 and Particulate Radioactivity.....	7
5.3 Terrestrial Activity.....	7
5.4 Aquatic Radioactivity.....	7
5.5 Milk.....	8
5.6 Special Collections.....	8
5.7 Listing of Missed Samples	8
5.8 Program Modifications.....	8
6.0 ANALYTICAL PROCEDURES	8
7.0 MILCH ANIMALS AND NEAREST CATTLE CENSUSES	9
8.0 NEAREST RESIDENCE CENSUS.....	9
9.0 DREDGE SPOILS CENSUS.....	9
10.0 INTERLABORATORY COMPARISON PROGRAM RESULTS	9
11.0 ERRATA DATA.....	9

TABLE OF CONTENTS (continued)

	<u>Page</u>
APPENDIX I - DATA TABLES AND FIGURES.....	I-1
Station Releases	
Table 1.1-1 Gaseous Effluents.....	I-2
Table 1.2-1 Liquid Effluents	I-3
Figure 3.0-1 - Figure 3.0-4	
Isodose and Concentration Contours.....	I-4
Table 3.1-1 Maximum Doses Resulting from Airborne Releases	I-8
Table 3.2-1 Maximum Doses Resulting from Liquid Effluents	I-20
Table 3.3-1 10CFR20 Compliance Assessment	I-32
Table 3.4-1 Maximum Doses Resulting from Airborne Releases Based on Concurrent Meteorological Data.....	I-38
Environmental Monitoring	
Figure 5.0-1 Fixed Air Sampling and TLD Sites, Milk and Outer Ring TLD Locations	I-41
Figure 5.0-2 Inner Ring TLD Sites, Near Station Water, Sediment and Fish Sampling Locations.....	I-42
Table 5.0-1 Radiological Environmental Monitoring Locations.....	I-43
Table 5.0-2 Radiological Environmental Monitoring Program Sampling Locations and Sample Collection and Analyses	I-44
Table 5.0-3 - Table 5.0-6 Radiological Environmental Monitoring Program Quarterly Summary	I-50
APPENDIX II - METEOROLOGICAL DATA.....	II-1
APPENDIX III - 1999 REMP SAMPLE RESULTS.....	III-1
APPENDIX IV - INTERLABORATORY COMPARISON PROGRAM RESULTS.....	IV-1
APPENDIX V - ERRATA DATA (If applicable).....	V-1

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 on August 31, 1984 and is currently being decommissioned. Units 2 and 3 began operating in 1970 and 1971, respectively, each with a net rated power output of 809 MWe. 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) due to licensed activities at Dresden Station calculated for the maximally-exposed individual for the period is 6.27 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 (6.24 mrem). The balance of the calculated maximum dose (0.03 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 10CFR190.

1.0 EFFLUENTS

1.1 Gaseous Effluents to the Atmosphere

Measured concentrations and isotopic composition 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 $1.26\text{E}+02$ curies of noble gases with a maximum quarterly average release rate of $4.91\text{E}+00$ $\mu\text{Ci}/\text{sec}$ was released from Dresden Units 1, 2 and 3.

A total of $5.20\text{E}-03$ curies of I-131 was released during the year with a maximum quarterly average release rate of $1.86\text{E}-04$ $\mu\text{Ci}/\text{sec}$.

A total of $1.21\text{E}-02$ curies of beta-gamma emitters was released as airborne particulate matter with a maximum quarterly average release rate of $7.91\text{E}-04$ $\mu\text{Ci}/\text{sec}$. Alpha emitting radionuclides totaled $2.42\text{E}-05$ curies. Also, $3.41\text{E}+01$ curies of tritium were released with a maximum quarterly average release rate of $2.13\text{E}+00$ $\mu\text{Ci}/\text{sec}$.

1.2 Liquids Released to Illinois River

A total of $1.64\text{E}+07$ liters of radioactive liquid wastes containing $3.77\text{E}-01$ curies of fission and activation products (excluding tritium, noble gases and gross alpha) was discharged from the station. These wastes were released at a maximum quarterly average diluted concentration of $4.50\text{E}-07$ $\mu\text{Ci}/\text{ml}$ from all units. During the same period, $7.71\text{E}+01$ curies of tritium were released with a maximum quarterly average diluted concentration of $3.71\text{E}-05$ $\mu\text{Ci}/\text{ml}$. Alpha emitting radionuclides were below detectable levels for normal releases. Quarterly release values are given in Table 1.2-1.

2.0 SOLID RADIOACTIVE WASTE

Solid radioactive wastes were shipped to CNSI, Barnwell, South Carolina; AERC, ATG and GTS, Oak Ridge, Tennessee; GTS, Memphis, Tennessee and ATG, Richland, Washington. For more detail, refer to the Dresden Station 1999 Effluent 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. These data use a ten-year average (1/1/1978-12/31/1987) for Dresden Station. Actual "concurrent meteorological data" correlate quarterly release information with actual meteorological data for the period.

3.1.1.1 Gamma 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 dose are shown in Figure 3.1-1. Based on measured effluents and average meteorological data, the maximum total body dose to an individual is calculated to be $1.78\text{E-}03$ mrem (Table 3.1-1) for the year, with an occupancy or shielding factor of 0.7 included. The maximum total body dose based on measured effluents and concurrent meteorological data would be $1.14\text{E-}02$ mrem (Table 3.4-1). The maximum gamma air dose based on measured effluents and average meteorological data was $2.35\text{E-}03$ mrad (Table 3.1-1) and $4.18\text{E-}03$ mrad based on concurrent meteorological data (Table 3.4-1).

3.1.1.2 Beta Air and Skin Dose Rates

The range of beta particles in air is relatively small (on the order of a few meters or less); consequently, plumes of gaseous effluents may be considered "infinite" for 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 $1.96\text{E-}03$ mrem (Table 3.1-1) and $1.39\text{E-}03$ 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 3.1-2. The maximum offsite beta air dose based on measured effluents and average meteorological data for the year was $1.66\text{E-}04$ mrad (Table 3.1-1) and $7.11\text{E-}04$ 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 3.1-3. 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 $1.08 \cdot 10^{-3}$ pCi/m³ 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 $4.46 \cdot 10^{-2}$ 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 3.1-4. The maximum offsite average concentration is estimated to be $4.05 \cdot 10^{-4}$ pCi/m³ (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 ComEd Offsite Dose Calculation Manual. The maximum whole body dose and organ dose for the year was $4.66 \cdot 10^{-3}$ mrem (child) and $1.64 \cdot 10^{-2}$ mrem (adult), respectively (Table 3.2-1).

3.3 Assessment of Dose to Member of Public

During the period January to December, 1999, 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 Figure 3.1-1 (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 (3 mrem to the whole body or 10 mrem to any organ during any calendar quarter; 6 mrem to the whole body or 20 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 300' level and wind speed class by atmospheric stability class determined from the temperature difference between the 300' and 35' levels. Data recovery for all measurements on the tower was 99.9% during 1999 (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 CaSO₄:Dy thermoluminescent dosimeters (TLDs). Each location consists of 2 TLD sets. Quarterly average external radiation dose for the year was 16.9 +/- 2.1 mR at indicator locations and 14.5 +/- 1.0 mR at control locations. TLD results are listed in Table 4.0 in Appendix III and locations are shown in Figures 5.0-1 and 5.0-2.

Quarterly external radiation dose at indicator air sampling locations averaged 16.3 +/- 1.6 mR and was similar to that measured in 1985 (13.5 mR), 1986 (14.4 mR), 1987

(15.8 mR), 1988 (14.9 mR), 1989 (15.7 mR), 1990 (14.9 mR), 1991 (14.0 mR), 1992 (15.6 mR), 1993 (15.5 mR), 1994 (14.7 mR), 1995 (14.1 mR), 1996 (13.0 mR) and 1997 (15.7 mR) and 1998 (17.2 mR). The differences are not statistically significant.

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 $0.9\text{E-}02$ to $5.0\text{E-}02 \text{ pCi/m}^3$ and averaged $2.5\text{E-}02 \text{ pCi/m}^3$, and were similar to those in 1983 ($2.0\text{E-}02 \text{ pCi/m}^3$), 1984 ($2.0\text{E-}02 \text{ pCi/m}^3$), 1985 ($2.0\text{E-}02 \text{ pCi/m}^3$), 1986 ($2.5\text{E-}02 \text{ pCi/m}^3$), (except for the period from May 17 through June 7 when it was influenced by the nuclear reactor accident at Chernobyl), 1987 ($2.4\text{E-}02 \text{ pCi/m}^3$), 1988 ($2.7\text{E-}02 \text{ pCi/m}^3$), 1989 ($2.4\text{E-}02 \text{ pCi/m}^3$), 1990 ($2.0\text{E-}02 \text{ pCi/m}^3$), 1991 ($2.0\text{E-}02 \text{ pCi/m}^3$), 1992 ($2.2\text{E-}02 \text{ pCi/m}^3$), 1993 ($2.1\text{E-}02 \text{ pCi/m}^3$), 1994 ($2.0\text{E-}02 \text{ pCi/m}^3$), 1995 ($2.2\text{E-}02 \text{ pCi/m}^3$), 1996 ($2.2\text{E-}02 \text{ pCi/m}^3$) and 1997 ($2.3\text{E-}02 \text{ pCi/m}^3$) and 1998 ($2.4\text{E-}02 \text{ pCi/m}^3$). 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 September and analyzed for gamma-emitting nuclides. In addition, broad leaf vegetables were analyzed for I-131. 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 two 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 5.2 pCi/L with a range of 2.6 to 9.1 pCi/L; D-52 (DesPlaines River) gross beta averaged 6.4 pCi/L with a range of 4.0 to 9.4 pCi/L.

Tritium concentration was below the LLD of 200 pCi/L in all samples collected from D-52 (DesPlaines River); D-51 (Dresden Lock & Dam) averaged 382 pCi/L with a range of 282 to 602 pCi/L.

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 392 pCi/L with a second quarter high of 411 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 1998.

Sediment samples were collected twice and analyzed by gamma spectroscopy. The levels of Cs-134 and Cs-137 were below the LLD levels of 0.15 and 0.18 pCi/g dry weight, respectively. 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 5.0 pCi/L during the non-grazing period (November through April) and 0.5 pCi/L during the grazing period (May through October). The results were similar to those obtained during the 1983 - 1998 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 Special Collections

In June, 1994, elevated tritium levels were discovered in the onsite storm sewers. A special program was initiated to identify, locate, and correct the source or sources of radioactivity. Numerous wells have been drilled, and sampling and analysis from those wells and the storm sewers continues. Results of the 1999 sampling program are available for inspection at the Station.

5.7 Listing of Missed Samples

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

5.8 Program Modifications

There were no modifications to the program in 1999.

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 31, 1999. Results of the milch animal and nearest cattle census are presented on pages 35 and 36 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 31, 1999. Results of the nearest resident census are presented page 37 of Appendix III.

9.0 DREDGE SPOILS CENSUS

According to the Army Corp. of Engineers in August 1999, there was no dredging done in the past year. The nearest location to the station for dredge spoils can be found on page 38 of Appendix III.

10.0 INTERLABORATORY COMPARISON PROGRAM RESULTS

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

11.0 ERRATA DATA

There are no errata data for 1999.

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 June 1999
 DOCKET NUMBERS: 50-010/50-237/50-249
 SUMMATION OF ALL GASEOUS RELEASES

	UNITS	1 ST Quarter	2 ND Quarter	Est. Total Error. %
A. FISSION & ACTIVATION GASES				
1. Total Release	Ci	2.56E+01	3.02E+01	7.31%
2. Average Release Rate for the Period	μCi/sec	3.29E+00	3.84E+00	
3. Percent of Technical Specification Limit	%	*	*	
B. IODINES				
1. Total Iodine-131	Ci	1.25E-03	1.08E-03	21.6%
2. Average Release Rate of I-131 for the Period	μCi/sec	1.61E-04	1.37E-04	
3. Percent of Technical Specification Limit	%	*	*	
4. Total Iodine-131, Iodine-133 and Iodine-135	Ci	1.85E-02	1.20E-02	
C. PARTICULATES				
1. Particulates with half-lives > 8 days	Ci	6.15E-03	1.14E-03	34.1%
2. Average Release Rate for the Period	μCi/sec	7.91E-04	1.45E-04	
3. Percent of Technical Specification Limit	%	*	*	
4. Gross Alpha Radioactivity	Ci	5.23E-06	4.78E-06	
D. TRITIUM				
1. Total Release	Ci	3.97E+00	7.37E+00	7.89%
2. Average Release Rate for the Period	μCi/sec	5.11E-01	9.37E-01	
3. Percent of Technical Specification Limit	%	*	*	

July Through December 1999

	UNITS	3 RD Quarter	4 TH Quarter	Est. Total Error. %
A. FISSION & ACTIVATION GASES				
1. Total Release	Ci	3.11E+01	3.90E+01	7.31%
2. Average Release Rate for the Period	μCi/sec	3.91E+00	4.91E+00	
3. Percent of Technical Specification Limit	%	*	*	
B. IODINES				
1. Total Iodine-131	Ci	1.39E-03	1.48E-03	21.6%
2. Average Release Rate of I-131 for the Period	μCi/sec	1.74E-04	1.86E-04	
3. Percent of Technical Specification Limit	%	*	*	
4. Total Iodine-131, Iodine-133 and Iodine-135	Ci	4.55E-02	5.24E-02	
C. PARTICULATES				
1. Particulates with half-lives > 8 days	Ci	2.12E-03	2.70E-03	34.1%
2. Average Release Rate for the Period	μCi/sec	2.67E-04	3.40E-04	
3. Percent of Technical Specification Limit	%	*	*	
4. Gross Alpha Radioactivity	Ci	6.28E-06	7.93E-06	
D. TRITIUM				
1. Total Release	Ci	5.85E+00	1.69E+01	7.89%
2. Average Release Rate for the Period	μCi/sec	7.36E-01	2.13E+00	
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, tritium.

Table 1.2-1

**DRESDEN NUCLEAR POWER STATION
UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT
January Through June 1999
DOCKET NUMBERS: 50-010/50-237/50-249
SUMMATION OF ALL LIQUID RELEASES**

	UNITS	1 ST Quarter	2 ND Quarter	Est. Total Error. %
A. FISSION & ACTIVATION PRODUCTS				
1. Total Release (not including H-3, gases, alpha)	Ci	7.86E-03	3.43E-01	10.6%
2. Average Diluted Conc. During Period	µCi/ml	7.88E-09	4.50E-07	
3. Percent of Technical Specification Limit	%	*	*	
B. TRITIUM				
1. Total Release	Ci	1.48E+01	1.48E+01	11.4%
2. Average Diluted Conc. During Release	µCi/ml	1.49E-05	1.93E-05	
3. Percent of Technical Specification Limit	%	*	*	
C. DISSOLVED AND ENTRAINED GASES				
1. Total Release	Ci	1.49E-04	<LLD	5.58%
2. Average Diluted Conc. During Period	µCi/ml	1.50E-10	<LLD	
3. Percent of Technical Specification Limit	%	*	*	
D. GROSS ALPHA ACTIVITY				
1. Total Release	Ci	<LLD	<LLD	15.1%
E. VOLUME OF WASTE RELEASED (prior to dilution)				
	Liters	5.23E+06	3.97E+06	5.00%
F. VOLUME OF DILUTION WATER USED DURING PERIOD				
	Liters	9.92E+08	7.60E+08	5.00%

July Through December 1999

	UNITS	3 RD Quarter	4 TH Quarter	Est. Total Error. %
A. FISSION & ACTIVATION PRODUCTS				
1. Total Release (not including H-3, gases, alpha)	Ci	1.74E-02	8.50E-03	10.6%
2. Average Diluted Conc. During Period	µCi/ml	3.16E-08	9.45E-09	
3. Percent of Technical Specification Limit	%	*	*	
B. TRITIUM				
1. Total Release	Ci	1.41E+01	3.34E+01	11.4%
2. Average Diluted Conc. During Release	µCi/ml	2.57E-05	3.71E-05	
3. Percent of Technical Specification Limit	%	*	*	
C. DISSOLVED AND ENTRAINED GASES				
1. Total Release	Ci	2.88E-06	7.08E-05	5.58%
2. Average Diluted Conc. During Period	µCi/ml	5.23E-12	7.87E-11	
3. Percent of Technical Specification Limit	%	*	*	
D. GROSS ALPHA ACTIVITY				
1. Total Release	Ci	<LLD	<LLD	15.1%
E. VOLUME OF WASTE RELEASED (prior to dilution)				
	Liters	2.66E+06	4.58E+06	5.00%
F. VOLUME OF DILUTION WATER USED DURING PERIOD				
	Liters	5.48E+08	8.95E+08	5.00%

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

Figure 3.0-2

Estimated Total Concentrations (in pCi/m³)
of Noble Gases from the Dresden Station
for the period January-December 1999

Isopleth Labels

Small figure - multiply by 10⁻³
Large figure - multiply by 10⁻³

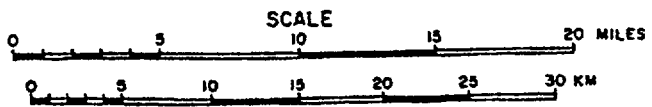
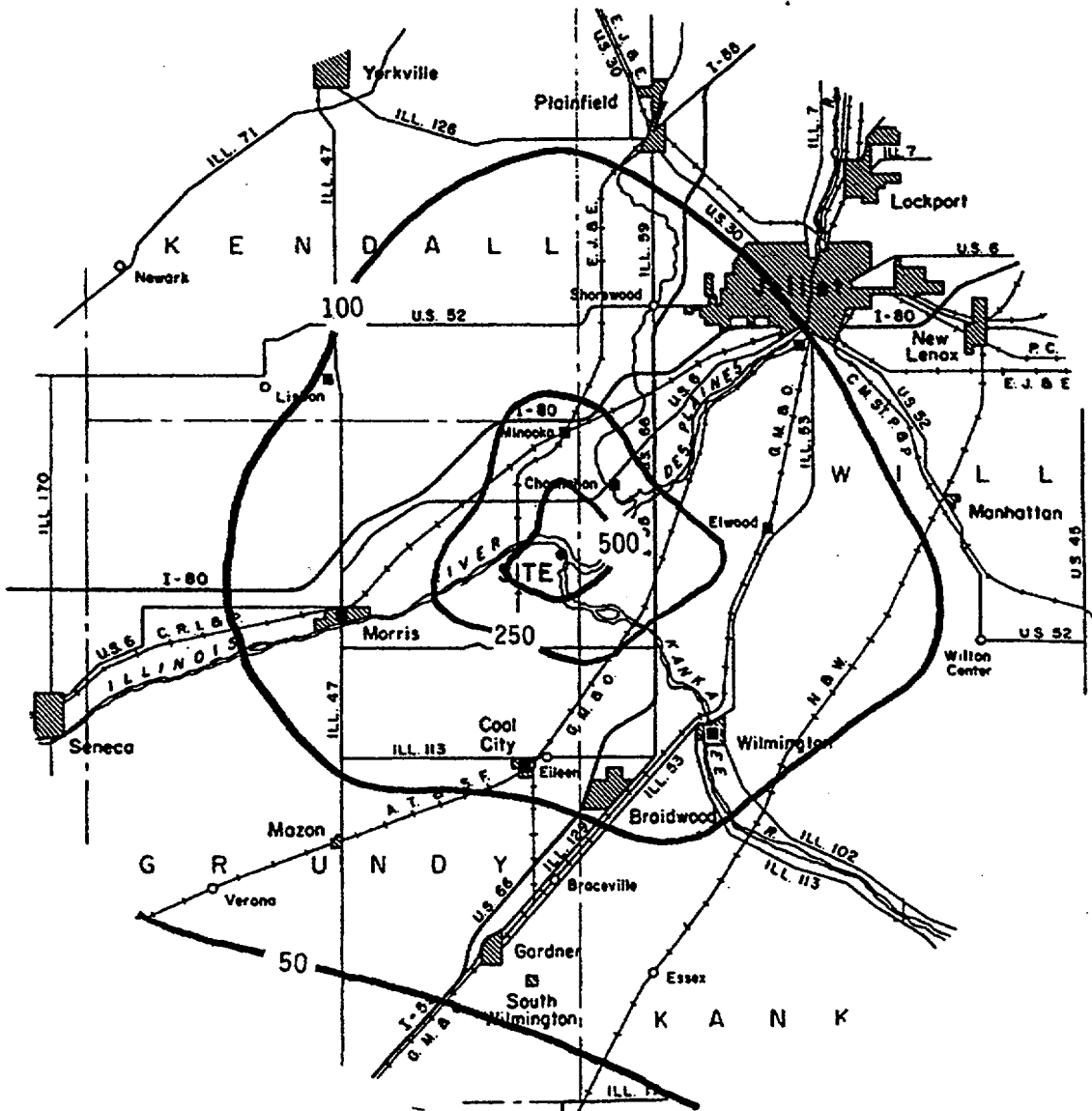
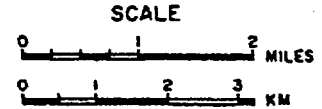
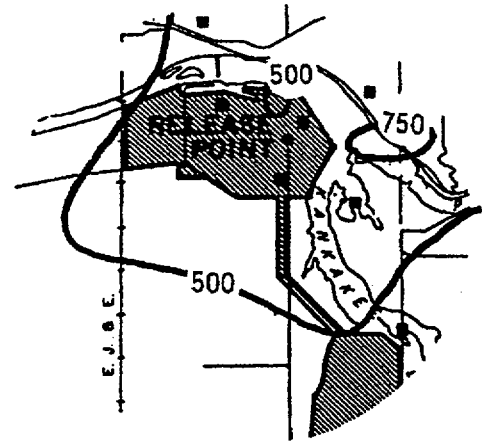


Figure 3.0-3

Estimated Total Concentrations (in pCi/m³)
of Iodines from the Dresden Station for
the period January-December 1999

Isopleth Labels

Small figure - multiply by 10⁻⁵

Large figure - multiply by 10⁻⁶

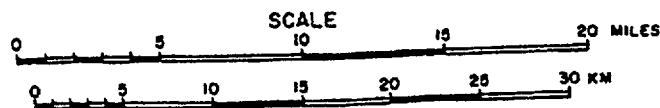
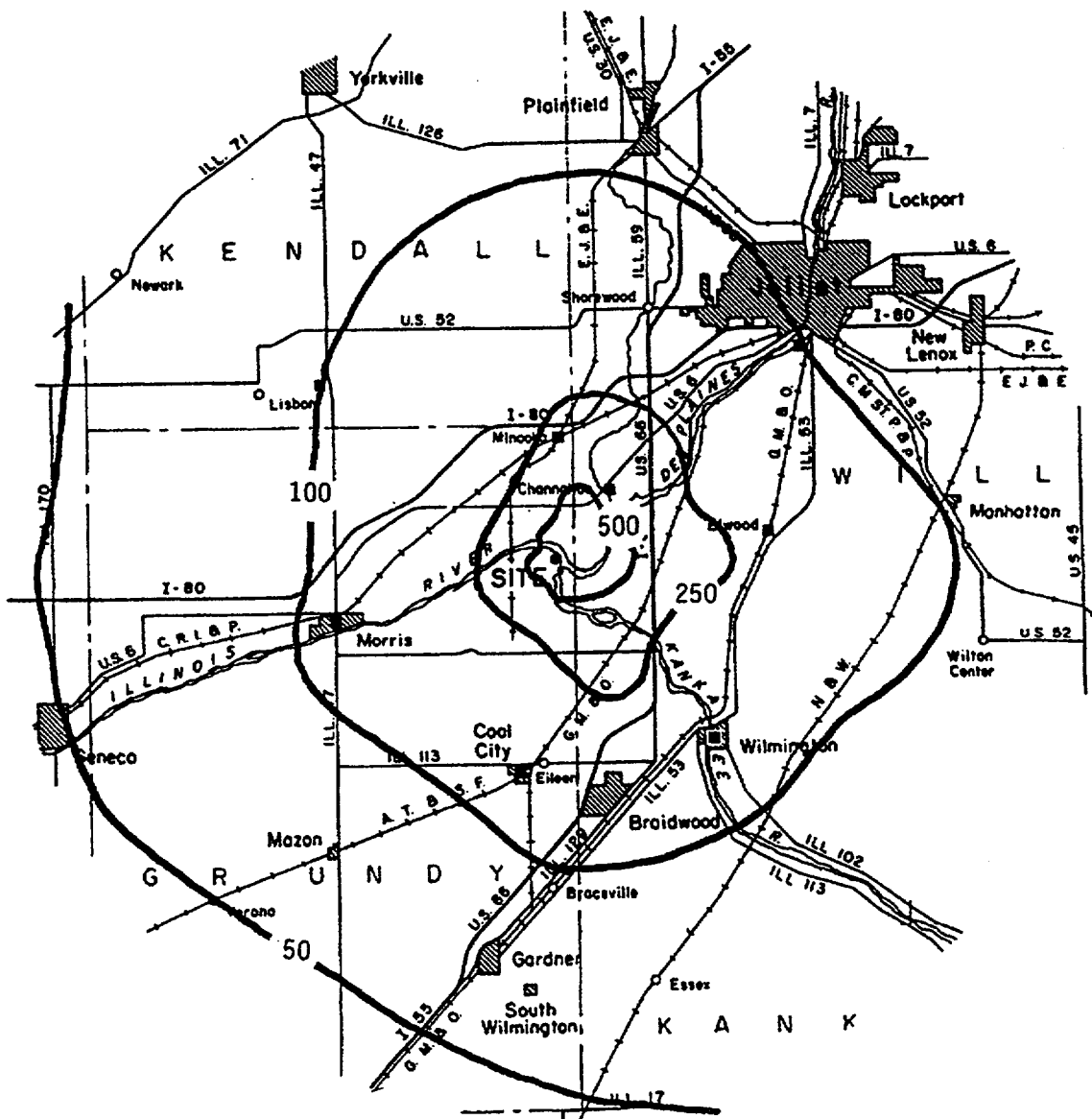
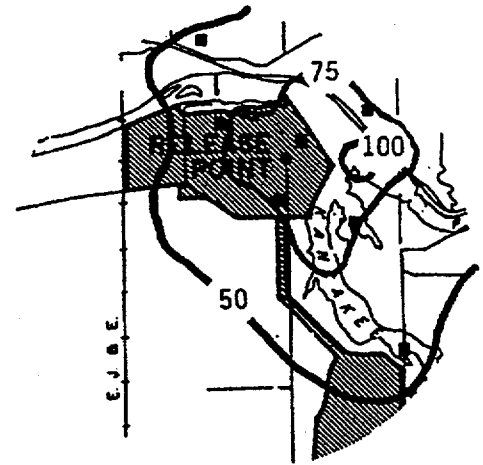


Figure 3.0-4

Estimated Total Concentrations (in pCi/m³)
of Particulates from the Dresden Station
for the period January-December 1999

Isopleth Labels

Small figure - multiply by 10⁻⁶
Large figure - multiply by 10⁻⁷

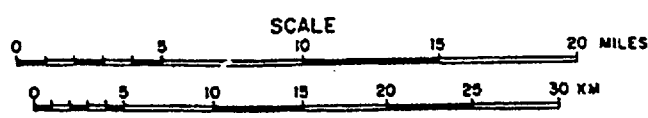
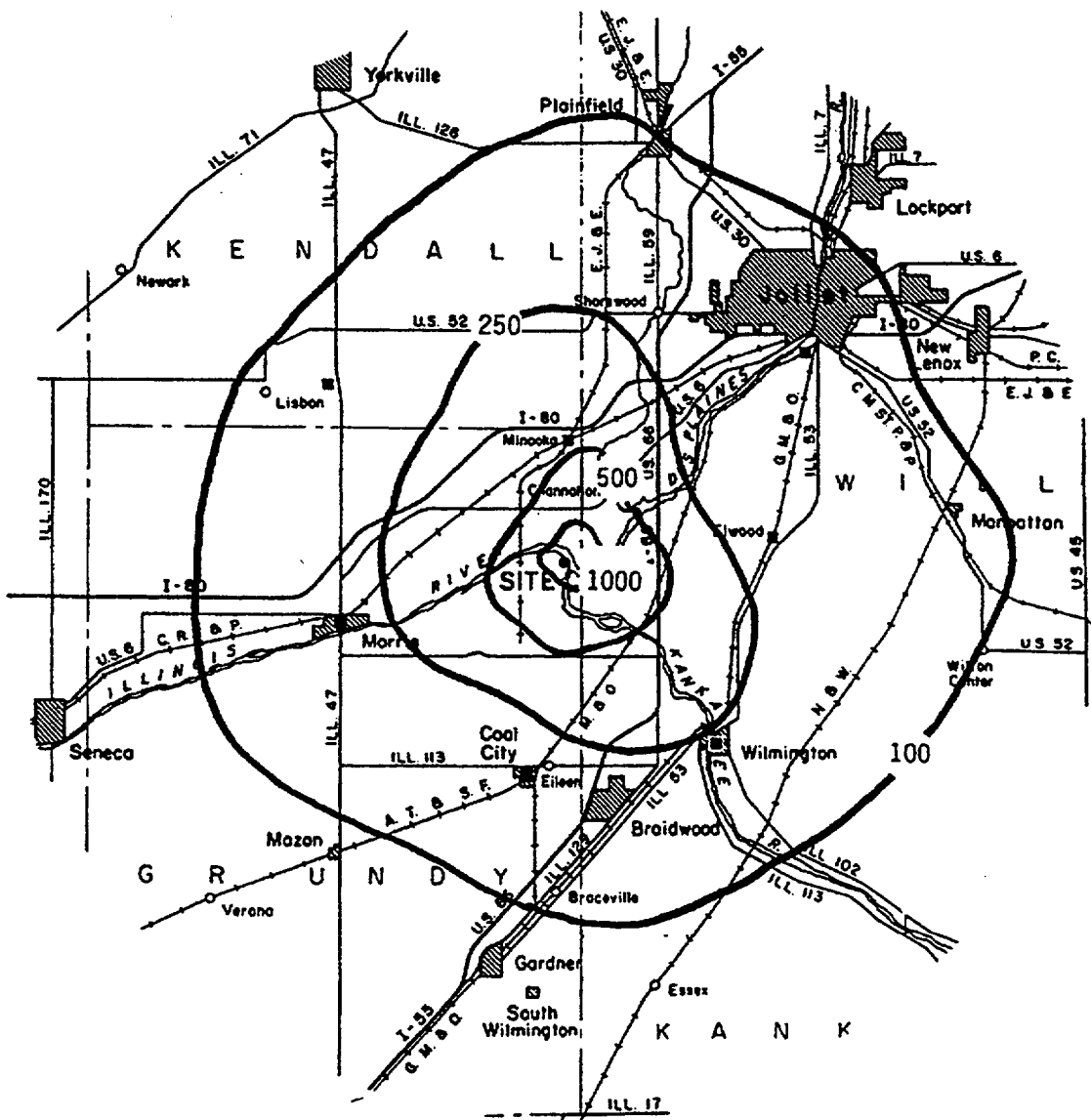
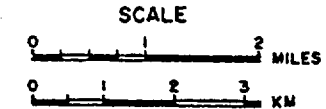
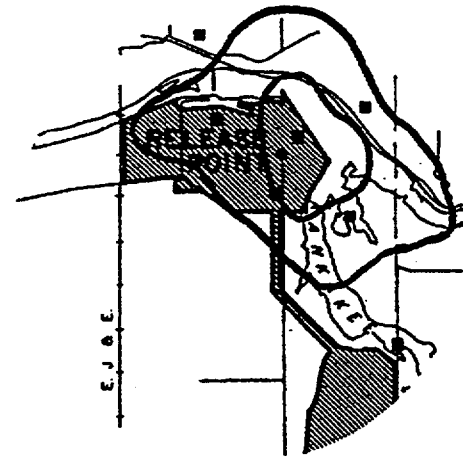


Table 3.1-1

DRESDEN SUBECON UNIT ONE

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CIRCULATED 03/28/00
 INVENT RECEPIER

TYPE	1ST QUARTER		2ND QUARTER		3RD QUARTER		4TH QUARTER		ANNUAL
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
GAMMA AIR (MFD)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BETA AIR (MFD)	()	()	()	()	()	()	()	()	()
BETA AIR (MFD)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOT. BODY (MREM)	()	()	()	()	()	()	()	()	()
SKIN (MREM)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SKIN (MREM)	()	()	()	()	()	()	()	()	()
OCEN (MREM)	1.44E-05	9.33E-06	4.02E-06	1.31E-05	1.31E-05	1.31E-05	1.31E-05	1.31E-05	4.01E-05
(MREM)	(SEE)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)

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 THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE SUMMARY - 10CFR 50 APP. I
 INVENT RECEPIER

----- % OF APP I. -----

QTRLY	1ST QTR		2ND QTR		3RD QTR		4TH QTR		YRLY	% OF
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC		
GAMMA AIR (MFD)	5.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.00
BETA AIR (MFD)	10.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.0	0.00
TOT. BODY (MREM)	2.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.00
SKIN (MREM)	7.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.0	0.00
OCEN (MREM)	7.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.0	0.00

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RESULTS BASED UPON:
 ODM ANEX REVISION 1.1 JULY 1994
 ODM SOFTWARE VERSION 1.1 January 1995
 ODM DATABASE VERSION 1.1 January 1995

Table 3.1-1 (continued)

DRESDEN STATION UNIT ONE

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 TEENAGER RECEPTOR

TIME	1ST QTR		2ND QTR		3RD QTR		4TH QTR		ANNUAL
	QTR	JAN-FEB	QTR	MAR-JUN	QTR	JUL-SEP	QTR	OCT-DEC	
GRANA AIR (MFD)	0.00E+00	()	0.00E+00	()	0.00E+00	()	0.00E+00	()	0.00E+00
BETA AIR (MFD)	0.00E+00	()	0.00E+00	()	0.00E+00	()	0.00E+00	()	0.00E+00
TOT. BODY (MFD)	0.00E+00	()	0.00E+00	()	0.00E+00	()	0.00E+00	()	0.00E+00
SKIN (MFD)	0.00E+00	()	0.00E+00	()	0.00E+00	()	0.00E+00	()	0.00E+00
OCGN (MFD)	1.23E-05	()	1.30E-05	()	9.45E-06	()	1.59E-05	()	5.06E-05
	(N)	(N)	(N)	(SSE)	(SSE)	(N)	(N)	(N)	(N)
	IING	GI_III	GI_III	GI_III	IING	IING	GI_III	GI_III	GI_III

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE SUMMARY - 10CFR 50 REP. I
 TEENAGER RECEPTOR

----- % OF REP I. -----

TIME	1ST QTR		2ND QTR		3RD QTR		4TH QTR		YRLY % OF REP. I
	QTR	JAN-FEB	QTR	MAR-JUN	QTR	JUL-SEP	QTR	OCT-DEC	
GRANA AIR (MFD)	5.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0
BETA AIR (MFD)	10.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.0
TOT. BODY (MFD)	2.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0
SKIN (MFD)	7.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.0
OCGN (MFD)	7.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.0

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RESULTS BASED UPON:
 CIM ANEX REVISION 1.1 JULY 1994
 CIM SOFTWARE VERSION 1.1 January 1995
 CIM DUFFPSE VERSION 1.1 January 1995

Table 3.1-1 (continued)

DRESDEN SIMULON UNIT ONE

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 ADULT RECEPTOR

TYPE	1999				ANNUAL
	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	
GAMA AIR (MFD)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BETA AIR (MFD)	()	()	()	()	()
BETA AIR (MFD)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOT. BODY (MREM)	()	()	()	()	()
TOT. BODY (MREM)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SKIN (MREM)	()	()	()	()	()
SKIN (MREM)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ORGAN (MREM)	()	()	()	()	()
ORGAN (MREM)	1.35E-05 (N)	1.28E-05 (N)	8.58E-06 (SSE)	1.58E-05 (N)	5.05E-05 (N)

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 THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE SIMULS - 10CFR 50 APP. I
 ADULT RECEPTOR

----- % OF APP I. -----

TYPE	1999				2000				% OF APP. I
	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	
GAMA AIR (MFD)	5.0	0.00	0.00	0.00	10.0	0.00	0.00	0.00	0.00
BETA AIR (MFD)	10.0	0.00	0.00	0.00	20.0	0.00	0.00	0.00	0.00
TOT. BODY (MREM)	2.5	0.00	0.00	0.00	5.0	0.00	0.00	0.00	0.00
SKIN (MREM)	7.5	0.00	0.00	0.00	15.0	0.00	0.00	0.00	0.00
ORGAN (MREM)	7.5	0.00	0.00	0.00	15.0	0.00	0.00	0.00	0.00

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RESULTS BASED UPON:
 CDM ANEX REVISION 1.1 JULY 1994
 CDM SOFTWARE VERSION 1.1 JANUARY 1995
 CDM DRUPESE VERSION 1.1 JANUARY 1995

Table 3.1-1 (continued)

DRESDEN SIMULON UNIT TWO

ACTUAL 1999

MAXIMUM LOSSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 INVENT RECEIPTS

TYPE	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	ANNUAL
GWMA AIR (MFD)	1.59E-04 (N)	6.30E-05 (N)	6.58E-05 (N)	3.63E-05 (N)	3.24E-04 (N)
BEHA AIR (MFD)	1.17E-05 (E)	4.22E-06 (E)	6.15E-06 (E)	2.64E-06 (E)	2.47E-05 (E)
TOT. BDX (MFB)	1.20E-04 (N)	4.92E-05 (NW)	4.97E-05 (N)	2.95E-05 (NW)	2.45E-04 (N)
SKIN (MFB)	1.33E-04 (N)	5.22E-05 (N)	5.63E-05 (N)	3.02E-05 (N)	2.72E-04 (N)
ORGN (MFB)	8.52E-03 (N)	6.19E-04 (SSW)	7.87E-04 (SSW)	1.73E-03 (N)	1.15E-02 (N)

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 THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE SIMULS - 10CFR 50 APP. I
 INVENT RECEIPTS

----- % OF APP I. -----

QTRLY CEI	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY CEI	% OF APP. I
GWMA AIR (MFD)	5.0	0.00	0.00	0.00	10.0	0.00
BEHA AIR (MFD)	10.0	0.00	0.00	0.00	20.0	0.00
TOT. BDX (MFB)	2.5	0.00	0.00	0.00	5.0	0.00
SKIN (MFB)	7.5	0.00	0.00	0.00	15.0	0.00
ORGN (MFB)	7.5	0.11	0.01	0.02	15.0	0.08

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RESULTS BASED UPON:
 OIM ANEX REVISION 1.1 JULY 1994
 OIM SOFTWARE VERSION 1.1 January 1995
 OIM DIVERSE VERSION 1.1 January 1995

Table 3.1-1 (continued)

DRESDEN STATION UNIT TWO

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
CHILD RECEIVER

TYPE	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	ANNUAL
GMMA AIR (MFD)	1.59E-04 (N)	6.30E-05 (N)	6.59E-05 (N)	3.63E-05 (N)	3.24E-04 (N)
HEPA AIR (MFD)	1.17E-05 (E)	4.22E-06 (E)	6.15E-06 (E)	2.64E-06 (E)	2.47E-05 (E)
TOT. HCL (MREM)	1.20E-04 (N)	4.92E-05 (NW)	4.97E-05 (N)	2.95E-05 (NW)	2.45E-04 (N)
SKIN (MREM)	1.33E-04 (N)	5.22E-05 (N)	5.63E-05 (N)	3.02E-05 (N)	2.72E-04 (N)
CRGN (MREM)	8.62E-03 (N)	2.32E-03 (N)	2.92E-03 (N)	4.79E-03 (N)	1.86E-02 (N)

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THIS IS A REPORT FOR THE CYCLES YEAR 1999

COMPLIANCE STATUS - 100% 50 REP. I
CHILD RECEIVER

----- % OF REP I. -----

TYPE	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY CEU	% OF REP. I
GMMA AIR (MFD)	5.0	0.00	0.00	0.00	10.0	0.00
HEPA AIR (MFD)	10.0	0.00	0.00	0.00	20.0	0.00
TOT. HCL (MREM)	2.5	0.00	0.00	0.00	5.0	0.00
SKIN (MREM)	7.5	0.00	0.00	0.00	15.0	0.00
CRGN (MREM)	7.5	0.11	0.04	0.06	15.0	0.12

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RESULTS BASED UPON:
COM ANEX REVISION 1.1 JULY 1994
COM SOFTWARE VERSION 1.1 January 1995
COM DATABASE VERSION 1.1 January 1995

Table 3.1-1 (continued)

DRESDEN STATION UNIT TWO

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 TEENAGER RECEIVER

TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
GWFA AIR (MFD)	1.58E-04 (N)	6.30E-05 (N)	6.58E-05 (N)	3.63E-05 (N)	3.24E-04 (N)
HEFA AIR (MFD)	1.17E-05 (E)	4.22E-06 (E)	6.15E-06 (E)	2.64E-06 (E)	2.47E-05 (E)
TEL. HDY (MFM)	1.20E-04 (N)	4.92E-05 (MFW)	4.97E-05 (N)	2.98E-05 (MFW)	2.45E-04 (N)
SKIN (MFM)	1.33E-04 (N)	5.22E-05 (N)	5.63E-05 (N)	3.02E-05 (N)	2.72E-04 (N)
ORGN (MFM)	8.64E-03 (N)	1.62E-03 (N)	2.02E-03 (N)	3.69E-03 (N)	1.58E-02 (N)

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THIS IS A REPORT FOR THE CYCLES YEAR 1999

COMPLIANCE STATUS - 100% 50 APR. I
 TEENAGER RECEIVER

----- % OF APR I. -----

	Q199 CHJ	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY CHJ	% OF APR. I
GWFA AIR (MFD)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
HEFA AIR (MFD)	10.0	0.00	0.00	0.00	0.00	20.0	0.00
TEL. HDY (MFM)	2.5	0.00	0.00	0.00	0.00	5.0	0.00
SKIN (MFM)	7.5	0.00	0.00	0.00	0.00	15.0	0.00
ORGN (MFM)	7.5	0.12	0.02	0.03	0.05	15.0	0.11

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RESULTS BASED UPON:
 ODM ANEX REVISION 1.1 JULY 1994
 ODM SOFTWARE VERSION 1.1 January 1995
 ODM DATABASE VERSION 1.1 January 1995

Table 3.1-1 (continued)

DRESEN SIMULON UNIT TWO

APRIL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CHICAGO CD 28/00
 ADULT RECEPTOR

TYPE	1ST	2ND	3RD	4TH	ANNUAL
	Q1-99 JAN-MAR	Q2-99 APR-JUN	Q3-99 JUL-SEP	Q4-99 OCT-DEC	
GMVA AIR (MFD)	1.58E-04 (N)	6.30E-05 (N)	6.58E-05 (N)	3.63E-05 (N)	3.24E-04 (N)
BETA AIR (MFD)	1.17E-05 (E)	4.22E-06 (E)	6.15E-06 (E)	2.64E-06 (E)	2.47E-05 (E)
TOT. BODY (MFM)	1.20E-04 (N)	4.92E-05 (NW)	4.97E-05 (N)	2.98E-05 (NW)	2.45E-04 (N)
SKIN (MFM)	1.33E-04 (N)	5.22E-05 (N)	5.63E-05 (N)	3.02E-05 (N)	2.72E-04 (N)
OCGN (MFM)	8.58E-03 (N)	1.50E-03 (N)	1.90E-03 (N)	3.49E-03 (N)	1.54E-02 (N)

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 THIS IS A REPORT FOR THE CYCLES YEAR 1999

CONFIDENCE SIMULS - 10CFR 50 APP. I
 ADULT RECEPTOR

----- % OF APP I. -----

	Q1-99	1ST QTR	2ND QTR	3RD QTR	4TH QTR	YRLY	% OF
	CHU	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	CHU	APP. I
GMVA AIR (MFD)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
BETA AIR (MFD)	10.0	0.00	0.00	0.00	0.00	20.0	0.00
TOT. BODY (MFM)	2.5	0.00	0.00	0.00	0.00	5.0	0.00
SKIN (MFM)	7.5	0.00	0.00	0.00	0.00	15.0	0.00
OCGN (MFM)	7.5	0.11	0.02	0.03	0.05	15.0	0.10

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RESULTS BASED UPON:
 ODM ANEX REVISION 1.1 JULY 1994
 ODM SOFTWARE VERSION 1.1 JANUARY 1995
 ODM DHPHSE VERSION 1.1 JANUARY 1995

Table 3.1-1 (continued)

DRESDEN SHIPRON UNIT THREE

ACUTE, 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

PERIOD OF RELEASE - 01/01/99 TO 12/31/99 ON/CLAIMED 03/28/00

INWENT RECEPTOR

TYPE	1ST		2ND		3RD		4TH		ANNUAL
	QTR	QTR	QTR	QTR	QTR	QTR	QTR		
GMAA AIR (MFD)	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
(MFD)	3.64E-04	5.06E-04	4.93E-04	6.68E-04	2.03E-03	(N)	(N)	(N)	
BIDA AIR (MFD)	2.57E-05	3.48E-05	3.36E-05	4.69E-05	1.41E-04	(E)	(E)	(E)	
TER. BODY (MFM)	2.75E-04	4.26E-04	3.72E-04	5.04E-04	1.53E-03	(N)	(N)	(N)	
(MFM)	(N)	(MFM)	(N)	(N)	(N)	(N)	(N)	(N)	
SKIN (MFM)	3.03E-04	4.20E-04	4.09E-04	5.55E-04	1.69E-03	(N)	(N)	(N)	
(MFM)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	
ORGAN (MFM)	9.54E-04	2.36E-03	3.60E-03	2.78E-03	9.49E-03	(E)	(E)	(E)	
(MFM)	(N)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10CFR 50 APP. I
INWENT RECEPTOR

_____ % OF APP I. _____

	1ST QTR		2ND QTR		3RD QTR		4TH QTR		YRLY	% OF
	QTR	QTR	QTR	QTR	QTR	QTR	QTR			
GMAA AIR (MFD)	5.0	0.01	0.01	0.01	0.01	0.01	0.01	10.0	0.02	
BIDA AIR (MFD)	10.0	0.00	0.00	0.00	0.00	0.00	0.00	20.0	0.00	
TER. BODY (MFM)	2.5	0.01	0.02	0.01	0.01	0.02	0.02	5.0	0.03	
SKIN (MFM)	7.5	0.00	0.01	0.01	0.01	0.01	0.01	15.0	0.01	
ORGAN (MFM)	7.5	0.01	0.03	0.05	0.05	0.04	0.04	15.0	0.06	

RESULTS BASED UPON:

ODM ANNEX REVISION 1.1 JULY 1994
ODM SOFTWARE VERSION 1.1 JANUARY 1995
ODM DATABASE VERSION 1.1 JANUARY 1995

Table 3.1-1 (continued)

DRESDEN SUBSTON UNIT THREE

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00

CHILD RECEIVER

TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
GWFA AIR (MFD)	3.64E-04 (N)	5.06E-04 (N)	4.93E-04 (N)	6.68E-04 (N)	2.03E-03 (N)
HEPA AIR (MFD)	2.57E-05 (E)	3.48E-05 (E)	3.36E-05 (E)	4.69E-05 (E)	1.41E-04 (E)
TOT. BODY (MEM)	2.75E-04 (N)	4.28E-04 (NW)	3.72E-04 (N)	5.04E-04 (N)	1.53E-03 (N)
SKIN (MEM)	3.03E-04 (N)	4.20E-04 (N)	4.09E-04 (N)	5.55E-04 (N)	1.68E-03 (N)
ORGN (MEM)	1.00E-03 (N)	6.07E-03 (SSE)	8.96E-03 (N)	1.02E-02 (N)	2.60E-02 (N)

THROID THROID THROID THROID THROID THROID

THIS IS A REPORT FOR THE CYCLES YEAR 1999

COMPLIANCE STATUS - 100% 50 SEP. 1

CHILD RECEIVER

----- % OF REP I. -----

	1ST QTR		2ND QTR		3RD QTR		4TH QTR		YRLY % OF		
	OBJ	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	OBJ	REP. I	OBJ	REP. I	OBJ	REP. I
GWFA AIR (MFD)	5.0	0.01	0.01	0.01	0.01	0.01	0.01	10.0	0.02	10.0	0.02
HEPA AIR (MFD)	10.0	0.00	0.00	0.00	0.00	0.00	0.00	20.0	0.00	20.0	0.00
TOT. BODY (MEM)	2.5	0.01	0.02	0.01	0.01	0.01	0.02	5.0	0.03	5.0	0.03
SKIN (MEM)	7.5	0.00	0.01	0.01	0.01	0.01	0.01	15.0	0.01	15.0	0.01
ORGN (MEM)	7.5	0.01	0.08	0.12	0.12	0.12	0.14	15.0	0.17	15.0	0.17

THROID THROID THROID THROID THROID THROID THROID

RESULTS BASED UPON:

CCDM ANEX REVISION 1.1 JULY 1994
 CCDD SOFTWARE VERSION 1.1 January 1995
 CCDD DRIFFUSE VERSION 1.1 January 1995

Table 3.1-1 (continued)

DRESDEN SUBSTATION UNIT THREE

ACTUAL 1999

MAXIMUM Doses RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00

TEENAGER RECEPTOR

TYPE	1999				ANNUAL
	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	
GMMA AIR (MFD)	3.64E-04 (N)	5.08E-04 (N)	4.93E-04 (N)	6.68E-04 (N)	2.03E-03 (N)
HEPA AIR (MFD)	2.57E-05 (E)	3.48E-05 (E)	3.36E-05 (E)	4.68E-05 (E)	1.41E-04 (E)
TOT. HLY (MREM)	2.75E-04 (N)	4.28E-04 (NW)	3.72E-04 (N)	5.04E-04 (N)	1.53E-03 (N)
SKIN (MREM)	3.03E-04 (N)	4.20E-04 (N)	4.09E-04 (N)	5.55E-04 (N)	1.69E-03 (N)
OCGN (MREM)	9.18E-04 (N)	3.97E-03 (SSE)	5.88E-03 (N)	6.88E-03 (N)	1.75E-02 (N)

THROID THROID THROID THROID THROID THROID

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 100% 50 APR. I

TEENAGER RECEPTOR

----- % OF APR I. -----

TYPE	1999								% OF APR. I
	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	YRLY CBU	YRLY CBU	YRLY CBU	YRLY CBU	
GMMA AIR (MFD)	5.0	0.01	0.01	0.01	0.01	0.01	0.01	10.0	0.02
HEPA AIR (MFD)	10.0	0.00	0.00	0.00	0.00	0.00	0.00	20.0	0.00
TOT. HLY (MREM)	2.5	0.01	0.02	0.01	0.01	0.02	0.02	5.0	0.03
SKIN (MREM)	7.5	0.00	0.01	0.01	0.01	0.01	0.01	15.0	0.01
OCGN (MREM)	7.5	0.01	0.05	0.08	0.08	0.09	0.09	15.0	0.12

THROID THROID THROID THROID THROID THROID THROID THROID THROID THROID

RESULTS BASED UPON:

ODM ANEX REVISION 1.1 JULY 1994

ODM SOFTWARE VERSION 1.1 January 1995

ODM DATABASE VERSION 1.1 January 1995

Table 3.1-1 (continued)

IRISHEN SUPERION UNIT THREE

ACTOBY, 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

PERIOD OF RELEASE - 01/01/99 TO 12/31/99 OBTAINED 03/28/00

ADULT RECEPTOR

TYPE	1ST	2ND	3RD	4TH	ANNUAL
	QTR	QTR	QTR	QTR	
	JAN-VAR	MAR-JUN	JUL-SEP	OCT-DEC	
GWMA AIR (MFD)	3.6E-04 (N)	5.0E-04 (N)	4.9E-04 (N)	6.6E-04 (N)	2.0E-03 (N)
BDA AIR (MFD)	2.57E-05 (E)	3.4E-05 (E)	3.3E-05 (E)	4.6E-05 (E)	1.41E-04 (E)
TOT. HDX (MFM)	2.7E-04 (N)	4.2E-04 (NW)	3.7E-04 (N)	5.0E-04 (N)	1.5E-03 (N)
SKIN (MFM)	3.0E-04 (N)	4.2E-04 (N)	4.0E-04 (N)	5.5E-04 (N)	1.6E-03 (N)
OCRN (MFM)	9.3E-04 (N)	3.7E-03 (SSE)	5.6E-03 (N)	6.5E-03 (N)	1.6E-02 (N)
	THROID	THROID	THROID	THROID	THROID

THIS IS A REPORT FOR THE CYCINDER YEAR 1999

COMPLIANCE STATUS - JOCR 50 REP. I
ADULT RECEPTOR

	% OF REP I.					YRLY	% OF REP. I
	1ST QTR	2ND QTR	3RD QTR	4TH QTR	YRLY		
	JAN-VAR	MAR-JUN	JUL-SEP	OCT-DEC	CBY	CBY	REP. I
GWMA AIR (MFD)	5.0	0.01	0.01	0.01	10.0	10.0	0.02
BDA AIR (MFD)	10.0	0.00	0.00	0.00	20.0	20.0	0.00
TOT. HDX (MFM)	2.5	0.01	0.01	0.02	5.0	5.0	0.03
SKIN (MFM)	7.5	0.00	0.01	0.01	15.0	15.0	0.01
OCRN (MFM)	7.5	0.01	0.05	0.08	15.0	15.0	0.11
	THROID	THROID	THROID	THROID			THROID

RESULTS BASED UPON

CIM/ANEX REVISION 1.1 JULY 1994

CIM SOFTWARE VERSION 1.1 January 1995

CIM DATABASE VERSION 1.1 January 1995

Table 3.2-1

DRESDEN STATION UNIT ONE

ACTUAL 1999

MAXIMUM IDESS (MREM) RESULTING FROM FOLIOIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 INTERIM REPORT

IDESS TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	0.00EH00	0.00EH00	0.00EH00	1.84EF-11	1.84EF-11
INTERNAL ORGAN	0.00EH00	0.00EH00	0.00EH00	8.36E-11	8.36E-11
				LIMB	LIMB

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

----- % OF APP I. -----

	QTRLY OBJ	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY OBJ	% OF APP. I
TOTAL BODY (MREM)	1.5	0.00	0.00	0.00	0.00	3.0	0.00
CRIT. ORGAN(MREM)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
					LIMB	LIMB	LIMB

RESULTS BASED UPON:

- CIDM ANEX REVISION 1.1 JULY 1994
- CIDM SOFTWARE VERSION 1.1 January 1995
- CIDM DRUPESE VERSION 1.1 January 1995

Table 3.2-1 (continued)

DRESDEN STATION UNIT ONE

ACTUAL 1999

MAXIMUM DOSES (MEM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 CHILD RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	0.00E+00	0.00E+00	0.00E+00	4.73E-10	4.73E-10
INTERNAL ORGAN	0.00E+00	0.00E+00	0.00E+00	3.16E-09	3.16E-09
				HONE	HONE

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

———— % OF APP I. —————

	QIRY CEU	1ST QIR JAN-MAR	2ND QIR APR-JUN	3RD QIR JUL-SEP	4TH QIR OCT-DEC	YRKY CEU	% OF APP. I
TOTAL BODY (MEM)	1.5	0.00	0.00	0.00	0.00	3.0	0.00
CRIT. ORGAN(MEM)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
						HONE	HONE

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

Table 3.2-1 (continued)

DRESDEN SIMPLION UNIT ONE

ACTUAL 1999

MAXIMUM DISES (MFBM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 TERNAGER RECEIVED

DISEE TYPE	1999				ANNUAL
	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	
TOTAL	0.00E+00	0.00E+00	0.00E+00	1.15E-09	1.15E-09
BODY	0.00E+00	0.00E+00	0.00E+00	3.25E-09	3.25E-09
INTERNAL ORGAN				LIVER	LIVER

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 OCT 50 SEP. 1

----- % OF SEP 1. -----

	1999				% OF SEP. 1
	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	
TOTAL BODY (MFBM)	1.5	0.00	0.00	0.00	3.0
CRIT. ORGAN(MFBM)	5.0	0.00	0.00	0.00	10.0
				LIVER	LIVER

RESULTS BASED UPON:
 ODM ANNEX REVISION 1.1 JULY 1994
 ODM SOFTWARE VERSION 1.1 JANUARY 1995
 ODM DTPBASE VERSION 1.1 JANUARY 1995

Table 3.2-1 (continued)

DRESDEN STATION UNIT ONE

ACTUAL 1999
 MAXIMUM DOSES (MEM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 ADULT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	0.00E+00	0.00E+00	0.00E+00	2.09E-09	2.09E-09
INTERNAL ORGAN	0.00E+00	0.00E+00	0.00E+00	3.17E-09	3.17E-09
				LIVER	LIVER

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

----- % OF APP. I. -----

	QUARTLY CEU	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YEARLY CEU	% OF APP. I
TOTAL BODY (MEM)	1.5	0.00	0.00	0.00	0.00	3.0	0.00
CRIT. ORGAN(MEM)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
					LIVER	LIVER	

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

Table 3.2-1 (continued)

DRESDEN STATION UNIT TWO

ACTUAL 1999
 MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 INFANT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	4.60E-05	4.53E-05	1.60E-03	1.02E-04	1.79E-03
INTERNAL ORGAN	4.81E-05	4.63E-05	6.11E-03	1.03E-04	6.12E-03
	LIVER	LIVER	BONE	LIVER	BONE

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

———— % OF APP. I. —————

	QUARTLY CBU	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YEARLY CBU	% OF APP. I
TOTAL BODY (MREM)	1.5	0.00	0.00	0.11	0.01	3.0	0.06
CRET. ORGAN (MREM)	5.0	0.00	0.00	0.12	0.00	10.0	0.06
	LIVER	LIVER	BONE	LIVER		BONE	

RESULTS BASED UPON: CDM ANEX REVISION 1.1 JULY 1994
 CDM SOFTWARE VERSION 1.1 January 1995
 CDM DATABASE VERSION 1.1 January 1995

Table 3.2-1 (continued)

DRESDEN STATION UNIT TWO

ACTUAL 1999
 MAXIMUM DOSES (MRM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 CHILD RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	6.26E-05	5.32E-05	3.80E-03	1.13E-04	4.03E-03
INTERNAL ORGAN	1.32E-04	8.87E-05	1.48E-02	1.43E-04	1.50E-02
	LIVER	LIVER	BONE	LIVER	BONE

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

————— % OF APP. I. —————

	QTRLY CEU	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY CEU	% OF APP. I
TOTAL BODY (MRM)	1.5	0.00	0.00	0.25	0.01	3.0	0.13
CRIT. ORGAN(MRM)	5.0	0.00	0.00	0.30	0.00	10.0	0.15
		LIVER	LIVER	BONE	LIVER		BONE

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

Table 3.2-1 (continued)

DRESDEN SIMON UNIT TWO
 ACUTE, 1999
 MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC RESILIENS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CATALOGED 03/28/00
 TENNER REPORT

DOSE TYPE	1ST QUARTER				2ND QUARTER				3RD QUARTER				4TH QUARTER				ANNUAL
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	
TOTAL BODY	5.79E-05	4.08E-05	2.78E-03	7.13E-05	2.95E-03												
INURINE ORGAN	1.18E-04	7.08E-05	1.11E-02	9.83E-05	1.13E-02												
	INNER	INNER	BONE	INNER	BONE	INNER	BONE	INNER	BONE	INNER	BONE	INNER	BONE	INNER	BONE	INNER	

THIS IS A REPORT FOR THE QUARTER YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

----- % OF APP I. -----

TOTAL BODY (MREM)	1ST QUARTER				2ND QUARTER				3RD QUARTER				4TH QUARTER				YEARLY	% OF APP. I
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR		
1.5	0.00	0.00	0.19	0.00	3.0	0.10												
CRIT. ORGAN(MREM)	5.0	0.00	0.00	0.22	0.00	10.0	0.11											
	INNER	INNER	BONE	INNER	BONE	INNER	BONE	INNER	BONE	INNER	BONE	INNER	BONE	INNER	BONE	INNER		

RESULTS BASED UPON: ODM ANEX REVISION 1.1 JULY 1994
 ODM SOFTWARE VERSION 1.1 JANUARY 1995
 ODM DATABASE VERSION 1.1 JANUARY 1995

Table 3.2-1 (continued)

DRESDEN SIMION UNIT TWO

ACTUAL 1999
 MAXIMUM DOSES (MEM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 ADULT RECEPTOR

DOSE TIME	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	9.23E-05	6.38E-05	3.46E-03	1.04E-04	3.72E-03
INTERNAL ORGAN	1.26E-04	7.96E-05	1.39E-02	1.21E-04	1.40E-02
	LIVER	LIVER	BONE	LIVER	BONE

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE SIMILS - 10 CFR 50 APP. I

———— % OF APP I. —————

	QIRLY CEU	1ST QIR JAN-MAR	2ND QIR APR-JUN	3RD QIR JUL-SEP	4TH QIR OCT-DEC	YRLY CEU	% OF APP. I
TOTAL BODY (MEM)	1.5	0.01	0.00	0.23	0.01	3.0	0.12
CRIT. ORGAN(MEM)	5.0	0.00	0.00	0.28	0.00	10.0	0.14
	LIVER	LIVER	BONE	LIVER		BONE	

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

Table 3.2-1 (continued)

DRESDEN SUBSTION UNIT THREE

ACTUAL 1999
 MAXIMUM DOSES (MRM) RESULTING FROM AQUATIC BENTHOS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 INFANT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	4.63E-05	2.17E-04	4.34E-05	1.03E-04	4.09E-04
INTERNAL ORGAN	4.87E-05	2.18E-04	4.38E-05	1.04E-04	4.11E-04
	THYROID	GI_ILI	LIVER	LIVER	GI_ILI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

————— % OF APP. I. —————

	QTRLY CEU	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY CEU	% OF APP. I
TOTAL BODY (MRM)	1.5	0.00	0.01	0.00	0.01	3.0	0.01
CRIT. ORGAN(MRM)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
	THYROID	GI_ILI	LIVER	LIVER		GI_ILI	

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

Table 3.2-1 (continued)

DRESEN SIMON UNIT THREE

ACIUL 1999

MAXIMUM IDEES (MEM) RESULTING FROM AQHFC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 CHIID KEEPER

DOSE TYPE	1999				ANNUAL
	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	
TOTAL HDX	6.22E-05	4.03E-04	4.74E-05	1.14E-04	6.32E-04
INTERNAL ORGAN	1.32E-04	7.14E-04	6.30E-05	1.44E-04	9.24E-04
	LIVER	GI_III	LIVER	LIVER	GI_III

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE SIMULS - 10 CSR 50 APP. I

----- % OF APP I. -----

	1999				% OF APP. I
	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	
TOTAL HDX (MEM)	1.5	0.00	0.03	0.00	3.0
CRET. ORGAN(MEM)	5.0	0.00	0.01	0.00	10.0

LIVER GI_III LIVER LIVER GI_III

RESULTS BASED UPON:
 ODM ANEX REVISION 1.1 JULY 1994
 ODM SOFTWARE VERSION 1.1 January 1996
 ODM DATABASE VERSION 1.1 January 1996

Table 3.2-1 (continued)

DRESDEN SURVEY UNIT THREE

ACUTE 1999

MAXIMUM DOSES (ARBM) RESULTING FROM ACUTE PATIENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 COLLECTED 03/29/00
 TRINICOR HOSPITAL

	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	ANNUAL
TOTAL BODY INTERNAL ORGAN	5.7E-05	2.8E-04	3.0E-05	7.1E-05	4.4E-04
	1.1E-04	1.4E-03	4.3E-05	9.8E-05	1.5E-03
	LIVER	GI III	LIVER	LIVER	GI III

THIS IS A REPORT FOR THE QUINOR YEAR 1999

COMPLIANCE SUMMIS - 10 CFR 50 APP. I

----- % OF REP I -----

	QTR 1ST QTR OBT JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YEAR OBT	% OF REP. I
TOTAL BODY (ARBM)	1.5	0.00	0.02	0.00	3.0	0.01
ORGL. ORGAN (ARBM)	5.0	0.00	0.03	0.00	10.0	0.02
	LIVER	GI III	LIVER	LIVER	GI III	

RESULTS BASED UON:

COM ANEX REVISION 1.1 JULY 1994
 COM SOFTWARE VERSION 1.1 January 1995
 COM DIVERSE VERSION 1.1 January 1995

Table 3.2-1 (continued)

DRESDEN SITUATION UNIT THREE

ACTUAL 1999
 MAXIMUM DOSES (MEM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 03/28/00
 ADULT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	9.19E-05	3.12E-04	4.63E-05	1.04E-04	5.54E-04
INTERNAL ORGAN	1.26E-04	2.15E-03	5.31E-05	1.21E-04	2.36E-03
	LIVER	GI_III	LIVER	LIVER	GI_III

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

————— % OF APP. I. —————

	QUARTER CBU	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YEAR CBU	% OF APP. I
TOTAL BODY (MEM)	1.5	0.01	0.02	0.00	0.01	3.0	0.02
CRIT. ORGAN (MEM)	5.0	0.00	0.04	0.00	0.00	10.0	0.02
	LIVER	GI_III	LIVER	LIVER		GI_III	

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

Table 3.3-1

DRESDEN SIMILION UNIT ONE

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/99 TO 12/31/99

CALCULATED 04/07/00

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

Total Effective Dose Equivalent, mrem/yr 4.69E-05

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	1.31E-05	1.19E-05	7.34E-05	1.50E-05	0.00

RESULTS BASED UPON: CDM ANNEX REVISION 1.1 JULY 1994
 CDM SOFTWARE VERSION 1.1 January 1995
 CDM DISPENSE VERSION 1.1 January 1995

Table 3.3-1 (continued)

DRESDEN SIBIRION UNIT ONE

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/99 TO 12/31/99

CALCULATED 04/07/00

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

		Dose (mrem)	Limit (mrem)	% of Limit
Whole Body (DE)	Plume	<u>0.00E+00</u>		
	Syshine	<u>0.00E+00</u>		
	Ground	<u>3.19E-05</u>		
	Total	<u>3.19E-05</u>	<u>25.0</u>	<u>0.00</u>
Organ Dose (DE)	Thyroid	<u>1.46E-05</u>	<u>75.0</u>	<u>0.00</u>
	Gonads	<u>1.46E-05</u>	<u>25.0</u>	<u>0.00</u>
	Breast	<u>1.46E-05</u>	<u>25.0</u>	<u>0.00</u>
	Lung	<u>1.54E-05</u>	<u>25.0</u>	<u>0.00</u>
	Marrow	<u>1.47E-05</u>	<u>25.0</u>	<u>0.00</u>
	Bone	<u>1.46E-05</u>	<u>25.0</u>	<u>0.00</u>
	Remainder	<u>1.53E-05</u>	<u>25.0</u>	<u>0.00</u>
	CEDE	<u>1.50E-05</u>		
TEDE	<u>4.69E-05</u>	<u>100.0</u>	<u>0.00</u>	

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

Table 3.3-1 (continued)

DRESDEN SOUTHERN UNIT TWO

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/99 TO 12/31/99

CALCULATED 04/07/00

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

Total Effective Dose Equivalent, mrem/yr 3.41E+00

10 CFR 20.1301 (a)(1) limit mrem/yr 100.0

% of limit 3.41

Compliance Summary - 10CFR20

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	% of Limit
TEDE	7.38E-01	1.01E+00	9.89E-01	6.81E-01	3.41

RESULTS BASED UPON: ODOM ANNEX REVISION 1.1 JULY 1994
 ODOM SOFTWARE VERSION 1.1 January 1995
 ODOM DISPENSE VERSION 1.1 January 1995

Table 3.3-1 (continued)

DRESDEN STATION UNIT TWO

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/99 TO 12/31/99

CALCULATED 04/07/00

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

		Dose (mrem)	Limit (mrem)	% of Limit
Whole Body (DE)	Plute	2.45E-04		
	Syshire	3.40E+00		
	Ground	1.06E-02		
	Total	3.41E+00	25.0	13.64
Organ Dose (DE)	Thyroid	4.09E-03	75.0	0.01
	Genads	3.70E-03	25.0	0.01
	Breast	3.63E-03	25.0	0.01
	Lung	3.95E-03	25.0	0.02
	Marrow	4.96E-03	25.0	0.02
	Bone	6.47E-03	25.0	0.03
	Remainder	3.88E-03	25.0	0.02
	CEDE	4.02E-03		
TEDE	3.41E+00	100.0	3.41	

RESULTS BASED UPON: CDM ANEX REVISION 1.1 JULY 1994
 CDM SOFTWARE VERSION 1.1 January 1995
 CDM DATABASE VERSION 1.1 January 1995

Table 3.3-1 (continued)

DRESDEN STATION UNIT THREE

10 CER 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/99 TO 12/31/99

CALCULATED 04/07/00

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

Total Effective Dose Equivalent, man/yr 2.86E+00
 10 CER 20.1301 (a)(1) Limit man/yr 100.0
 % of limit 2.86

Compliance Summary - 10CER20

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	% of Limit
TEDE	1.30E-01	7.39E-01	9.87E-01	1.00E+00	2.86

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

Table 3.3-1 (continued)

DRESDEN SATION UNIT THREE

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/99 TO 12/31/99

CALCULATED 04/07/00

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

		Dose (mrem)	Limit (mrem)	% of Limit
Whole Body (LDE)	Plane	1.53E-03		
	Skyshine	2.84E-03		
	Ground	2.09E-03		
	Total	2.85E-03	25.0	11.39
Organ Dose (OIE)	Thyroid	1.28E-02	75.0	0.02
	Gonads	9.32E-03	25.0	0.04
	Breast	8.86E-03	25.0	0.04
	Lung	8.88E-03	25.0	0.04
	Marrow	8.96E-03	25.0	0.04
	Bone	8.81E-03	25.0	0.04
	Remainder	1.01E-02	25.0	0.04
	OIDE	9.45E-03		
TEDE	2.86E+00	100.0	2.86	

RESULTS BASED UPON: CDM ANEX REVISION 1.1 JULY 1994
 CDM SOFTWARE VERSION 1.1 January 1995
 CDM DATABASE VERSION 1.1 January 1995

Table 3.4-1

DRESDEN STATION - UNIT 1

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

CURRENT PERIOD OF RELEASE: October 1 - December 31 YEAR: 1999

TYPE OF DOSE	CURRENT PERIOD	CURRENT QUARTER	THIRD QUARTER	SECOND QUARTER	FIRST 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)	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)	0.000E+00(N)
WHOLE BODY (mrem)	6.230E-07(SSE)	6.230E-07(SSE)	1.890E-07(SSE)	8.980E-07(ESE)	3.730E-06(SE)	5.264E-06(SE)
SKIN (mrem)	7.330E-07(SSE)	7.330E-07(SSE)	2.220E-07(SSE)	1.060E-06(ESE)	4.380E-06(SE)	6.184E-06(SE)
ORGAN (mrem)	1.090E-08(E)	1.090E-08(E)	2.820E-09(E)	3.210E-08(NW)	4.350E-08(E)	7.660E-08(WSW)
CRITICAL PERS-ORG	TA-LN	TA-LN	TA-LN	TA-LN	TA-LN	TA-LN

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	.00	10.0	.00
BETA AIR (mrad)	10.0	.00	20.0	.00
WHOLE BODY (mrem)	2.5	.00	5.0	.00
SKIN (mrem)	7.5	.00	15.0	.00
ORGAN (mrem)	7.5	.00	15.0	.00
CRITICAL PERSON-ORGAN		(TA-LN)		(TA-LN)

CRITICAL ORGANS: BN=BOKE, LV=LIVER, TB=TOTAL BODY, TH=THYROID, KD=KIDNEY, LN=LUNG, GI=GI-LLI
 CRITICAL PERSON: AD=ADULT, TA=TEENAGER, CH=CHILD, IN=INFANT

Date of calculation: 4/17/2000

Table 3.4-1 (continued)

DRESDEN STATION - UNIT 2

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

CURRENT PERIOD OF RELEASE: October 1 - December 31 YEAR: 1999

TYPE OF DOSE	CURRENT PERIOD	CURRENT QUARTER	THIRD QUARTER	SECOND QUARTER	FIRST QUARTER	ANNUAL
GAMMA AIR (mrad)	7.150E-04(N)	7.150E-04(N)	5.700E-04(SSE)	7.500E-04(NNW)	4.195E-04(E)	2.091E-03(NNW)
BETA AIR (mrad)	1.145E-04(E)	1.145E-04(E)	1.310E-04(E)	1.205E-04(NW)	8.150E-05(E)	3.553E-04(E)
WHOLE BODY (mrem)	1.370E-03(SSE)	1.370E-03(SSE)	8.145E-04(SSE)	4.015E-04(NNW)	3.292E-03(SSE)	5.714E-03(SSE)
SKIN (mrem)	1.675E-03(SSE)	1.675E-03(SSE)	1.058E-03(SSE)	5.415E-04(NNW)	3.904E-03(SSE)	6.934E-03(SSE)
ORGAN (mrem)	8.617E-05(E)	8.617E-05(E)	1.139E-04(SSE)	6.990E-05(NW)	1.468E-04(N)	3.157E-04(E)
CRITICAL PERS-ORG	CH-TH	CH-TH	CH-TH	CH-TH	TA-LN	CH-TH

COMPLIANCE STATUS

TYPE OF DOSE	10 CFR 50 APP. I		10 CFR 50 APP. I	
	QUARTERLY OBJECTIVE	% OF APP. I	YEARLY OBJECTIVE	% OF APP. I
GAMMA AIR (mrad)	5.0	.01	10.0	.02
BETA AIR (mrad)	10.0	.00	20.0	.00
WHOLE BODY (mrem)	2.5	.05	5.0	.11
SKIN (mrem)	7.5	.02	15.0	.05
ORGAN (mrem)	7.5	.00	15.0	.00
CRITICAL PERSON-ORGAN		(CH-TH)		(CH-TH)

CRITICAL ORGANS: BK=BONE, LV=LIVER, TB=TOTAL BODY, TH=THYROID, KD=KIDNEY, LN=LUNG, GI=GI-LLI
 CRITICAL PERSON: AD=ADULT, TA=TEENAGER, CH=CHILD, IN=INFANT

Date of calculation: 4/17/2000

Table 3.4-1 (continued)

DRESDEN STATION - UNIT 3

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

CURRENT PERIOD OF RELEASE: October 1 - December 31 YEAR: 1999

TYPE OF DOSE	CURRENT PERIOD	CURRENT QUARTER	THIRD QUARTER	SECOND QUARTER	FIRST QUARTER	ANNUAL
GAMMA AIR (mrad)	7.150E-04(N)	7.150E-04(N)	5.700E-04(SSE)	7.500E-04(NNW)	4.195E-04(E)	2.091E-03(NNW)
BETA AIR (mrad)	1.145E-04(E)	1.145E-04(E)	1.310E-04(E)	1.205E-04(NW)	8.150E-05(E)	3.553E-04(E)
WHOLE BODY (mrem)	1.370E-03(SSE)	1.370E-03(SSE)	8.145E-04(SSE)	4.015E-04(NNW)	3.292E-03(SSE)	5.714E-03(SSE)
SKIN (mrem)	1.675E-03(SSE)	1.675E-03(SSE)	1.058E-03(SSE)	5.415E-04(NNW)	3.904E-03(SSE)	6.934E-03(SSE)
ORGAN (mrem)	8.617E-05(E)	8.617E-05(E)	1.139E-04(SSE)	6.990E-05(NW)	1.468E-04(N)	3.157E-04(E)
CRITICAL PERS-ORG	CH-TH	CH-TH	CH-TH	CH-TH	TA-LN	CH-TH

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	.01	10.0	.02
BETA AIR (mrad)	10.0	.00	20.0	.00
WHOLE BODY (mrem)	2.5	.05	5.0	.11
SKIN (mrem)	7.5	.02	15.0	.05
ORGAN (mrem)	7.5	.00	15.0	.00
CRITICAL PERSON-ORGAN		(CH-TH)		(CH-TH)

CRITICAL ORGANS: BN=BONE, LV=LIVER, TB=TOTAL BODY, TH=THYROID, KD=KIDNEY, LN=LUNG, GI=GI-LLI
 CRITICAL PERSON: AD=ADULT, TA=TEENAGER, CH=CHILD, IN=INFANT

Maximum Offsite
Values (pCi/m3)

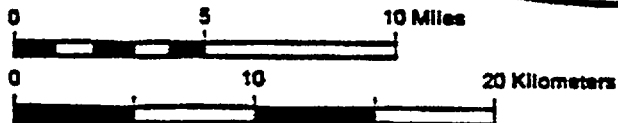
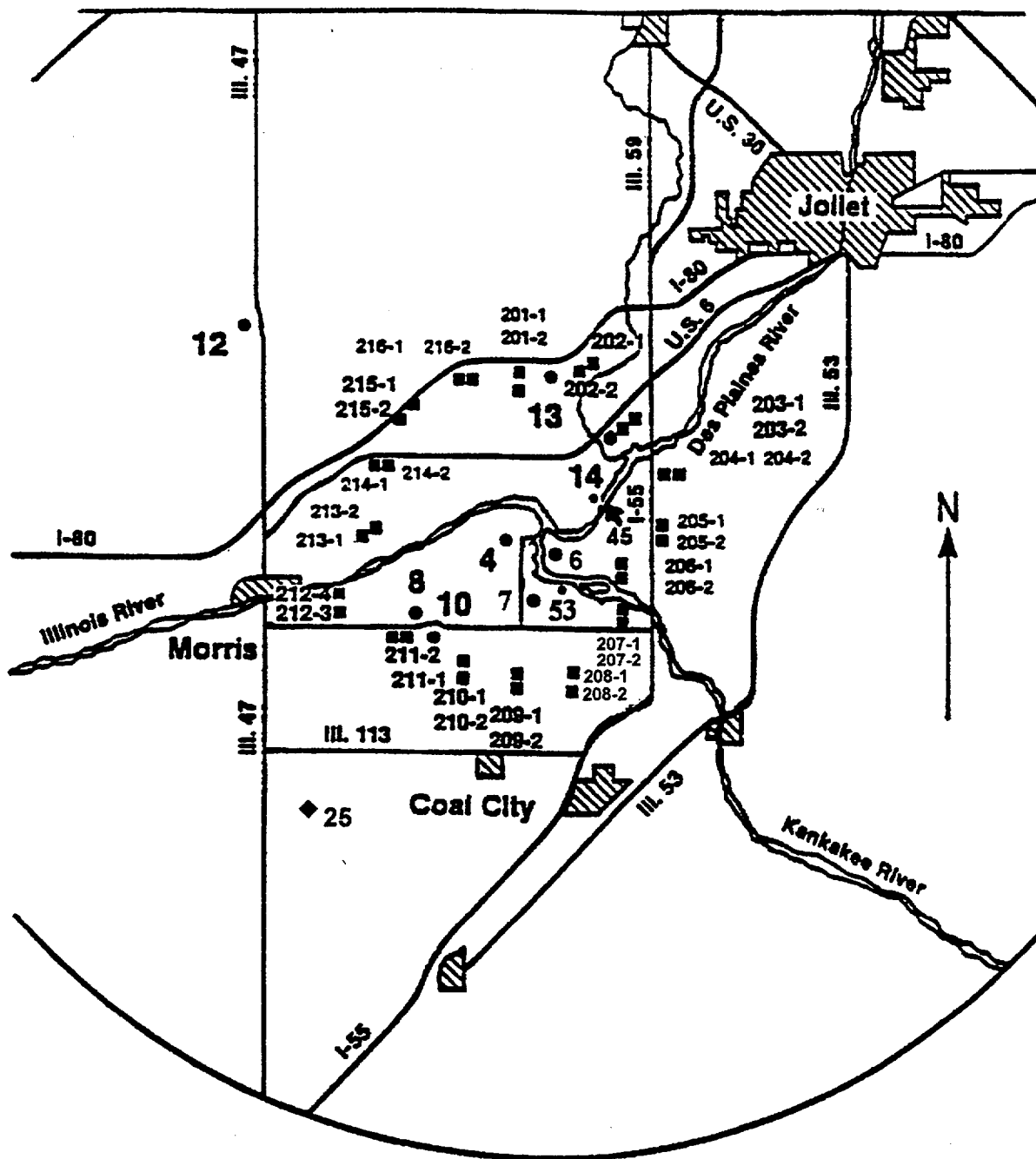
Date of calculation: 4/17/2000

Iodine 1.08E-03 pCi/m3
 Particulate Matter 4.05E-04 pCi/m3

Data Recovery
 (priority parameters) 99.9%

Figure 5.0-1

DRESDEN

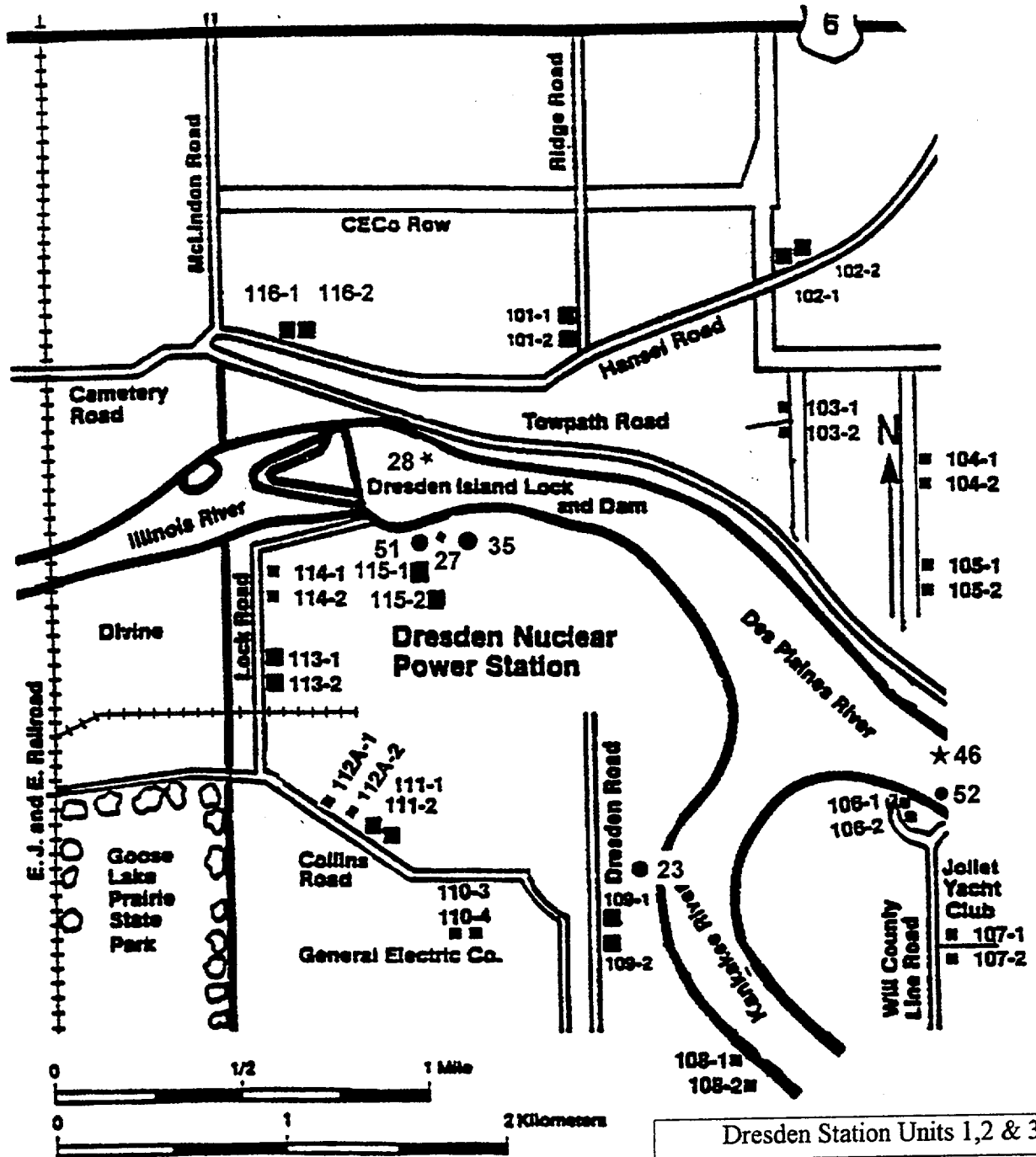


- Air Sampling Location
- TLD Location
- ◆ Milk

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



Dresden Station Units 1, 2 & 3	
Inner Ring TLD Locations	
Fish, Water and Sediment Locations	
D-23	Thorsen Well
D-27	Dresden Lock & Dam
D-28	Dresden Pool of Illinois River
D-35	Dresden Lock & Dam
D-46	DesPlaines River, Upstream
D-51	Dresden Lock & Dam
D-52	DesPlaines River

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-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

<u>Site Code</u> ^a	<u>Location</u>	<u>Distance</u> <u>(miles)</u>	<u>Direction</u>	<u>Sector</u>
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

<u>Site Code</u>	<u>Distance</u> <u>(miles)</u>	<u>Direction</u>	<u>Sector</u>
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

b. Special TLD Locations (continued)

<u>Site Code</u>	<u>Distance (miles)</u>	<u>Direction</u>	<u>Sector</u>
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

<u>Site Code^a</u>	<u>Location</u>	<u>Distance (miles)</u>	<u>Direction</u>	<u>Sector</u>
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

<u>Site Code</u> ^a	<u>Location</u>	<u>Distance</u> (miles)	<u>Direction</u>	<u>Sector</u>
D-23	Thorsen Well	0.7	S	J
D-35	Dresden Lock & Dam	0.5	NW	Q

5. SURFACE WATER

<u>Site Code</u>	<u>Location</u>	<u>Distance</u> (miles)	<u>Direction</u>	<u>Sector</u>
D-51	Dresden Lock & Dam	0.5	NW	Q
D-52 (C)	DesPlaines River	0.9	ESE	F

6. FISH

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

7. SEDIMENT

<u>Site Code</u>	<u>Location</u>	<u>Distance</u> (miles)	<u>Direction</u>	<u>Sector</u>
D-27	Dresden Lock & Dam	0.5	NW	Q

8. VEGETATION

<u>Site Code</u>	<u>Location</u>	<u>Distance</u> (miles)	<u>Direction</u>	<u>Sector</u>
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		Collection Frequency	Type of Analysis	Frequency of Analysis	
	Code ^a	Site				
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					
	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		Collection Frequency	Type of Analysis	Frequency of Analysis
	Code ^a	Site			
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.	Annually Annually, on broad leaf vegetation.
	Quad 2	Robert Pagliano		I-131	
	Quad 3	Jim Bloom			
	Quad 4	Robyn Willis			
	Control	Glasscock Farm			
7. Ground/Well Water	D-23	Thorsen Well	Quarterly	Gamma Isot.	Quarterly
	D-35	Dresden Lock & Dam		Tritium	
8. Surface Water	D-51	Dresden Lock & Dam	Weekly	Gross Beta Gamma Isot.	Monthly composite. Monthly composite.
	D-52 (C)	DesPlaines River, Upstream		Tritium	Quarterly composite.
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					
Mileh Animals					
	a.	Site Boundary to 2 miles	-	a. Enumeration by a door to door or equivalent counting technique.	Annually during grazing season.
	b.	2 miles to 6.2 miles	-	b. Using referenced information from county agricultural agents or other reliable sources.	

^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		Collection Frequency	Type of Analysis	Frequency of Analysis
	Code ^a	Site			
13. Land Use Census (continued)					
	c.	At dairies listed in Item 5.	-	c. Inquire as to feeding practices: 1. Pasture only. 2. Feed and chop only. 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 StationDocket No. 50-10, 50-237, 50-249Location of Facility: Grundy, IllinoisReporting Period: 1st Quarter 1999

(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	104	0.01	0.023 (91/91) (0.013-0.038)	D-04 ^b , Collins Road 0.9 mi. W, Sector N	0.025 (13/13) (0.017-0.038)	0.024 (13/13) (0.019-0.038)	0
	Gamma Spec.	8						
	Cs-134		0.01	<LLD	-	-	<LLD	0
	Cs-137		0.01	<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	3	5	<LLD	-	-	<LLD	0
	Gamma Spec.	3						
	Cs-134		15	<LLD	-	-	<LLD	0
	Cs-137		18	<LLD	-	-	<LLD	0
	Ba/La-140		15	<LLD	-	-	<LLD	0
	Other Gammas		15-30	<LLD	-	-	<LLD	0
Surface Water (pCi/L)	Gross Beta	6	4	5.4 (3/3) (4.5-6.3)	D-51, Dresden Lock & Dam 0.5 mi. NW, Sector Q	5.4 (3/3) (4.5-6.3)	5.0 (3/3) (4.0-5.6)	0
	Gamma Spec.	6						
	Cs-134		15	<LLD	-	-	<LLD	0
	Cs-137		18	<LLD	-	-	<LLD	0
	Other ODCM-Required Gammas		15-30	<LLD	-	-	<LLD	0
	Tritium	2	200	331 (1/1)	D-51, Dresden Lock & Dam 0.5 mi. NW, Sector Q	331 (1/1)	<LLD	0
Well Water (pCi/L)	Tritium	2	200	388 (1/2)	D-23, Thorsen Well 0.7 mi. S, Sector J	388 (1/2)	None	0
	Gamma Spec.	2						
	Cs-134		15	<LLD	-	-	None	0
	Cs-137		18	<LLD	-	-	None	0
	Other ODCM-Required Gammas		15-30	<LLD	-	-	None	0
Gamma Background (TLDs) (mR/Qt.)	Gamma Dose	88	9.7	16.1 (86/86) (12.8-20.8)	D-110-4 0.8 mi. SSW, Sector K	20.8 (1/1)	13.3 (2/2) (13.3-13.3)	0

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

^a Locations D-04 and D-53 had identical means of 0.025 pCi/m³. Only D-04 is detailed in this summary.

Table 5.0-4

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility: Dresden Nuclear Power StationDocket No. 50-10, 50-237, 50-249Location of Facility: Grundy, IllinoisReporting Period: 2nd Quarter 1999

(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	103	0.01	0.019 (86/90) (0.010-0.027)	D-12, Lisbon 10.0 mi. NW, Sector Q	0.020 (13/13) (0.013-0.027)	0.020 (13/13) (0.013-0.027)	0
	Gamma Spec.	8						
	Cs-134		0.01	<LLD	-	-	<LLD	0
	Cs-137		0.01	<LLD	-	-	<LLD	0
	Other Gammas		0.01-0.04	<LLD	-	-	<LLD	0
Airborne Iodine (pCi/m ³)	I-131	55	0.07	<LLD	-	-	<LLD	0
Milk (pCi/L)	I-131	5	0.5/5.0 ^b	<LLD	-	-	<LLD	0
	Gamma Spec.	5						
	Cs-134		15	<LLD	-	-	<LLD	0
	Cs-137		18	<LLD	-	-	<LLD	0
	Ba/La-140		15	<LLD	-	-	<LLD	0
	Other Gammas		15-30	<LLD	-	-	<LLD	0
Fish (pCi/g wet)	Gamma Spec.	8						
	Cs-134		0.10	<LLD	-	-	<LLD	0
	Cs-137		0.10	<LLD	-	-	<LLD	0
	Other ODCM-Required Gammas		0.13-0.26	<LLD	-	-	<LLD	0
	Other Gammas		0.20-0.30	<LLD	-	-	<LLD	0
Sediments (pCi/g wet)	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
Surface Water (pCi/L)	Gross Beta	6	4	<LLD	D-52, DesPlaines River 0.9 mi. ESE, Sector F	6.1 (3/3) (5.8-6.1)	6.1 (3/3) (5.8-6.1)	0
	Gamma Spec.	6						
	Cs-134		15	<LLD	-	-	<LLD	0
	Cs-137		18	<LLD	-	-	<LLD	0
	Other ODCM-Required Gammas		15-30	<LLD	-	-	<LLD	0
	Tritium	2	200	313 (1/1)	D-51, Dresden Lock & Dam 0.5 mi. NW, Sector Q	313 (1/1)	<LLD	0

^a Mean and range based on detectable measurements only. Fractions indicated in parentheses.^b 0.5 pCi/L (May-October); 5.0 pCi/L (November-April).

Table 5.0-4 (continued)

Name of Facility: Dresden Nuclear Power Station

Docket No. 50-10, 50-237, 50-249

Location of Facility: Grundy, Illinois

Reporting Period: 2nd Quarter 1999

(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	411 (1/2)	D-23, Thorsen Well 0.7 mi. S, Sector J	411 (1/1)	None	0	
	Gamma Spec.	2							
	Cs-134		15	<LLD		-	-	None	0
	Cs-137		18	<LLD		-	-	None	0
	Other ODCM- Required Gammas		15-30	<LLD		-	-	None	0
Gamma Background (TLDs) (mR/Qtr.)	Gamma Dose	88	9.7	17.7 (86/86) (14.2-26.3)	D-111-1 0.6 mi. SW, Sector L	26.3 (1/1)	15.5 (2/2) (14.7-16.3)	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 StationDocket No. 50-10, 50-237, 50-249Location of Facility: Grundy, IllinoisReporting Period: 3rd Quarter 1999

(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	104	0.01	0.025 (91/91) (0.012-0.037)	D-07, Clay Products 2.0 mi. S, Sector J	0.027 (13/13) (0.018-0.037)	0.026 (13/13) (0.020-0.038)	0	
	Gamma Spec.	8							
	Cs-134		0.01	<LLD		-	-	<LLD	0
	Cs-137		0.01	<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	0.5	None	-	-	<LLD	0	
	Gamma Spec.	6							
	Cs-134		15	None	-	-	<LLD	0	
	Cs-137		18	None	-	-	<LLD	0	
	Ba/La-140		15	None	-	-	<LLD	0	
	Other Gammas		15-30	None	-	-	<LLD	0	
Vegetation (pCi/g wet)	I-131	5	0.06	<LLD	-	-	<LLD	0	
	Gamma Spec.	10							
	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	5.7 (2/3) (5.2-6.3)	D-52, DesPlaines River, 0.9 mi. ESE, Sector F	5.8 (3/3) (5.1-6.6)	5.8 (3/3) (5.1-6.6)	0	
	Gamma Spec.	6							
	Cs-134		15	<LLD		-	-	<LLD	0
	Cs-137		18	<LLD		-	-	<LLD	0
	Other ODCM-Required Gammas		15-30	<LLD		-	-	<LLD	0
	Tritium	2	200	282 (1/1)	D-52, Dresden Lock & Dam 0.5 mi. NW, Sector Q	282 (1/1)	<LLD	0	
Well Water (pCi/L)	Tritium	2	200	395 (1/2)	D-23, Thorsen Well 0.7 mi. S, Sector J	395 (1/1)	None	0	
	Gamma Spec.	2							
	Cs-134		15	<LLD		-	-	None	0
	Cs-137		18	<LLD		-	-	None	0
	Other ODCM-Required Gammas		15-30	<LLD		-	-	None	0

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

Table 5.0-5 (continued)

Name of Facility: Dresden Nuclear Power Station

Docket No. 50-10, 50-237, 50-249

Location of Facility: Grundy, Illinois

Reporting Period: 3rd Quarter 1999

(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	
Gamma Background (TLDs) (mR/Qtr.)	Gamma Dose	88	9.7	17.0 (86/86) (13.5-22.1)	D-214-1 4.5 mi. WNW, Sector P	22.1 (1/1)	14.1 (2/2) (13.9-14.4)	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 StationDocket No. 50-10, 50-237, 50-249Location of Facility: Grundy, IllinoisReporting Period: 4th Quarter 1999

(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	104	0.01	0.034 (91/91) (0.014-0.050)	D-07, Clay Products 2.0 mi. S, Sector J	0.036 (13/13) (0.026-0.050)	0.033 (13/13) (0.020-0.044)	0	
	Gamma Spec.	8							
	Cs-134		0.01	<LLD		-	-	<LLD	0
	Cs-137		0.01	<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	4	0.5	<LLD	-	-	<LLD	0	
	Gamma Spec.	4							
	Cs-134		15	<LLD	-	-	<LLD	0	
	Cs-137		18	<LLD	-	-	<LLD	0	
	Ba/La-140		15	<LLD	-	-	<LLD	0	
	Other Gammas		15-30	<LLD	-	-	<LLD	0	
Fish (pCi/g wet)	Gamma Spec.	8							
	Cs-134		0.10	<LLD	-	-	<LLD	0	
	Cs-137		0.10	<LLD	-	-	<LLD	0	
	Other ODCM- Required Gammas		0.13-0.26	<LLD	-	-	<LLD	0	
	Other Gammas		0.20-0.30	<LLD	-	-	<LLD	0	
Sediments (pCi/g wet)	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	
Surface Water (pCi/L)	Gross Beta	6	4	7.3 (3/3) (4.5-9.1)	D-52, DesPlaines River 0.9 mi. ESE, Sector F	8.6 (3/3) (7.2-9.4)	8.6 (3/3) (7.2-9.4)	0	
	Gamma Spec.	6							
	Cs-134		15	<LLD		-	-	<LLD	0
	Cs-137		18	<LLD		-	-	<LLD	0
	Other ODCM- Required Gammas		15-30	<LLD		-	-	<LLD	0
	Tritium	2	200	602 (1/1)	D-51, Dresden Lock & Dam, 0.5 mi. NW, Sector Q	602 (1/1)	<LLD	1	

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

Table 5.0-6 (continued)

Name of Facility: Dresden Nuclear Power Station
 Location of Facility: Grundy, Illinois
 (County, State)

Docket No. 50-10, 50-237, 50-249
 Reporting Period: 4th Quarter 1999

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	5	200	375 (1/2) (482-632)	D-23, Thorsen Well 0.7 mi. S, Sector J	375 (1/1)	0
	Gamma Spec.	5					
	Cs-134		15	<LLD	-	-	0
	Cs-137		18	<LLD	-	-	0
	Other ODCM- Required Gammas		15-30	<LLD	-	-	0
Gamma Background (TLDs) (mR/Qtr.)	Gamma Dose	88	9.7	17.0 (86/86) (13.5-21.9)	D-215-1 5.1 mi. NW, Sector Q	21.9 (1/1) 15.0 (2/2) (14.6-15.3)	0

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

DRESDEN

APPENDIX II

METEOROLOGICAL DATA

DRESDEN NUCLEAR POWER STATION

PERIOD OF RECORD: JANUARY-MARCH 1999

STABILITY CLASS - EXTREMELY UNSTABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	3	1	0	0	4
NNE	0	2	0	3	0	0	5
NE	0	1	0	0	0	0	1
ENE	0	4	0	0	0	0	4
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	0	0	2	2
SW	0	0	2	0	3	0	5
WSW	0	0	1	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	0	3	3	3	0	9
NW	0	0	3	1	7	0	11
NNW	0	0	0	0	0	1	1
VARIABLE	0	0	0	0	0	0	0
TOTAL	0	8	13	8	13	3	45

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 POWER STATION

PERIOD OF RECORD: JANUARY-MARCH 1999

STABILITY CLASS - MODERATELY UNSTABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	2	4	0	0	7
NNE	0	1	1	5	0	0	7
NE	0	1	0	3	1	0	5
ENE	0	5	0	1	0	0	6
E	0	1	3	1	1	0	6
ESE	0	0	0	0	0	0	0
SE	0	0	2	0	0	0	2
SSE	0	0	2	0	0	0	2
S	0	0	0	0	0	0	0
SSW	0	0	1	0	3	2	6
SW	0	0	2	0	2	0	4
WSW	0	0	1	0	0	1	2
W	0	0	1	0	0	1	2
WNW	0	0	1	4	1	0	6
NW	0	1	2	7	3	0	13
NNW	0	0	2	2	1	0	5
VARIABLE	0	0	0	0	0	0	0
TOTAL	0	10	20	27	12	4	73

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 POWER STATION

PERIOD OF RECORD: JANUARY-MARCH 1999

STABILITY CLASS - SLIGHTLY UNSTABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	6	3	5	0	15
NNE	0	5	3	1	0	0	9
NE	0	3	0	2	1	0	6
ENE	0	0	1	0	0	0	1
E	0	2	3	2	0	0	7
ESE	0	1	3	2	0	0	6
SE	0	0	0	1	1	0	2
SSE	0	1	1	2	1	0	5
S	0	0	0	0	1	1	2
SSW	0	0	1	0	1	1	3
SW	0	0	0	3	1	1	5
WSW	0	4	0	1	0	0	5
W	0	1	0	0	3	2	6
WNW	0	0	1	2	0	2	5
NW	0	2	1	1	4	0	8
NNW	0	0	1	3	2	2	8
VARIABLE	0	0	0	0	0	0	0
TOTAL	0	20	21	23	20	9	93

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 POWER STATION

PERIOD OF RECORD: JANUARY-MARCH 1999

STABILITY CLASS - NEUTRAL (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	3	11	5	9	0	29
NNE	1	5	22	22	3	5	58
NE	1	17	33	25	9	0	85
ENE	0	24	26	23	4	1	78
E	1	12	10	31	15	18	87
ESE	2	6	3	32	18	6	67
SE	4	1	11	13	11	0	40
SSE	0	4	14	12	9	0	39
S	1	7	13	23	23	22	89
SSW	0	7	7	12	8	4	38
SW	4	6	13	13	7	4	47
WSW	4	4	4	12	8	12	44
W	2	5	22	30	55	38	152
WNW	0	10	19	46	33	25	133
NW	0	12	9	20	22	1	64
NNW	2	6	8	16	15	9	56
VARIABLE	0	0	0	0	0	0	0
TOTAL	23	129	225	335	249	145	1106

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 POWER STATION

PERIOD OF RECORD: JANUARY-MARCH 1999

STABILITY CLASS - SLIGHTLY STABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	5	13	5	0	25
NNE	1	4	13	13	3	0	34
NE	1	5	8	14	0	0	28
ENE	3	5	16	9	2	1	36
E	4	5	8	15	7	1	40
ESE	0	4	12	8	6	0	30
SE	1	6	3	16	8	3	37
SSE	0	8	10	18	1	8	45
S	1	4	12	15	22	17	71
SSW	0	0	5	19	18	7	49
SW	2	1	2	12	9	1	27
WSW	0	3	3	11	5	1	23
W	2	5	12	12	4	3	38
WNW	1	2	10	21	10	0	44
NW	1	2	5	14	5	0	27
NNW	1	2	4	16	5	0	28
VARIABLE	1	0	0	0	0	0	1
TOTAL	19	58	128	226	110	42	583

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 POWER STATION

PERIOD OF RECORD: JANUARY-MARCH 1999

STABILITY CLASS - MODERATELY STABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	1	3	7	2	0	14
NNE	0	0	6	17	1	0	24
NE	1	1	3	2	1	0	8
ENE	0	6	5	0	0	0	11
E	1	1	4	0	1	0	7
ESE	0	0	2	1	2	0	5
SE	0	3	13	8	0	0	24
SSE	0	2	4	5	1	0	12
S	2	1	3	3	4	2	15
SSW	0	0	0	1	0	2	3
SW	1	1	2	10	1	0	15
WSW	1	0	7	6	1	0	15
W	2	4	4	3	1	0	14
WNW	0	3	5	0	1	0	9
NW	2	1	3	3	0	0	9
NNW	0	4	1	2	1	0	8
VARIABLE	0	0	0	0	0	0	0
TOTAL	11	28	65	68	17	4	193

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: 01

DRESDEN NUCLEAR POWER STATION

PERIOD OF RECORD: JANUARY-MARCH 1999

STABILITY CLASS - EXTREMELY STABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	4	0	0	4
NNE	1	0	5	4	0	0	10
NE	1	1	0	0	0	0	2
ENE	0	2	2	0	0	0	4
E	0	0	1	1	0	0	2
ESE	0	0	2	0	0	0	2
SE	1	2	1	1	0	0	5
SSE	0	0	0	0	0	0	0
S	0	2	1	1	0	0	4
SSW	0	1	2	1	2	0	6
SW	0	2	1	1	1	0	5
WSW	0	2	2	3	2	0	9
W	0	1	2	5	0	0	8
WNW	1	1	1	3	0	0	6
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
VARIABLE	0	0	0	0	0	0	0
TOTAL	4	14	20	24	5	0	67

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

DRESDEN NUCLEAR POWER STATION

PERIOD OF RECORD: APRIL-JUNE 1999

STABILITY CLASS - EXTREMELY UNSTABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	6	2	0	0	9
NNE	0	1	7	0	1	1	10
NE	0	10	14	6	1	0	31
ENE	0	4	13	2	0	0	19
E	0	2	2	1	0	0	5
ESE	0	4	5	3	1	3	16
SE	0	7	6	1	0	0	14
SSE	0	0	2	0	0	0	2
S	0	2	1	0	0	0	3
SSW	0	1	3	0	0	0	4
SW	0	0	0	0	0	0	0
WSW	0	3	0	1	0	0	4
W	0	3	1	1	0	0	5
WNW	0	1	3	5	0	3	12
NW	0	4	1	3	1	1	10
NNW	0	1	0	3	0	0	4
VARIABLE	0	0	0	0	0	0	0
TOTAL	0	44	64	28	4	8	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: 3

DRESDEN NUCLEAR POWER STATION

PERIOD OF RECORD: APRIL-JUNE 1999

STABILITY CLASS - MODERATELY UNSTABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	1	1	0	0	3
NNE	0	1	3	1	0	0	5
NE	0	2	4	1	2	0	9
ENE	1	7	3	0	0	0	11
E	0	3	3	4	0	0	10
ESE	0	8	8	3	2	0	21
SE	0	5	4	1	0	0	10
SSE	0	1	5	1	1	0	8
S	1	1	3	3	1	1	10
SSW	1	3	2	3	0	2	11
SW	0	0	1	2	0	0	3
WSW	0	0	3	1	1	0	5
W	0	3	1	0	0	4	8
WNW	0	0	3	1	2	1	7
NW	0	0	0	3	2	0	5
NNW	0	0	0	1	0	0	1
VARIABLE	0	0	0	0	0	0	0
TOTAL	3	35	44	26	11	8	127

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 POWER STATION

PERIOD OF RECORD: APRIL-JUNE 1999

STABILITY CLASS - SLIGHTLY UNSTABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	4	1	0	0	0	6
NNE	2	3	0	0	0	0	5
NE	2	5	2	0	1	0	10
ENE	0	4	2	0	0	0	6
E	0	7	3	0	1	0	11
ESE	0	4	11	2	1	0	18
SE	2	4	4	3	1	1	15
SSE	0	0	6	2	1	0	9
S	0	4	6	2	2	1	15
SSW	0	2	1	3	2	2	10
SW	0	1	0	2	0	1	4
WSW	0	3	1	1	1	0	6
W	0	1	1	1	0	0	3
WNW	0	0	2	3	3	2	10
NW	0	0	0	2	5	0	7
NNW	0	1	1	2	0	0	4
VARIABLE	0	0	0	0	0	0	0
TOTAL	7	43	41	23	18	7	139

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 POWER STATION

PERIOD OF RECORD: APRIL-JUNE 1999

STABILITY CLASS - NEUTRAL (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	3	6	12	8	4	35
NNE	1	3	2	6	7	9	28
NE	1	2	19	24	9	4	59
ENE	2	5	47	22	6	0	82
E	4	9	14	23	17	7	74
ESE	1	9	10	11	11	2	44
SE	1	5	16	10	1	7	40
SSE	3	10	20	33	5	6	77
S	1	8	20	30	12	6	77
SSW	0	5	8	17	17	5	52
SW	1	2	2	16	11	12	44
WSW	0	7	4	9	5	3	28
W	0	3	2	26	10	10	51
WNW	2	2	7	25	14	2	52
NW	0	0	10	13	14	2	39
NNW	1	2	5	9	10	4	31
VARIABLE	0	0	0	0	0	0	0
TOTAL	20	75	192	286	157	83	813

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

DRESDEN NUCLEAR POWER STATION

PERIOD OF RECORD: APRIL-JUNE 1999

STABILITY CLASS - SLIGHTLY STABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	5	6	7	0	0	18
NNE	1	2	8	5	6	0	22
NE	1	5	18	16	4	0	44
ENE	2	14	29	10	1	0	56
E	0	11	29	28	6	2	76
ESE	0	7	26	21	12	3	69
SE	0	7	35	20	2	4	68
SSE	2	7	30	53	4	2	98
S	0	7	6	33	23	3	72
SSW	2	3	9	13	18	5	50
SW	1	4	6	6	5	1	23
WSW	1	5	9	6	2	0	23
W	1	5	6	16	4	0	32
WNW	0	3	3	6	1	0	13
NW	0	5	10	13	0	0	28
NNW	0	3	8	9	0	0	20
VARIABLE	0	0	0	0	0	0	0
TOTAL	11	93	238	262	88	20	712

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 POWER STATION

PERIOD OF RECORD: APRIL-JUNE 1999

STABILITY CLASS - MODERATELY STABLE (DIFF TEMP 300-35 FT)
 WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	5	1	0	0	8
NNE	1	1	0	1	0	0	3
NE	0	1	3	1	1	0	6
ENE	1	1	5	0	0	0	7
E	0	2	1	4	1	0	8
ESE	1	6	4	12	2	0	25
SE	0	7	9	16	1	0	33
SSE	1	3	4	11	1	0	20
S	0	4	5	3	3	0	15
SSW	0	5	0	6	0	0	11
SW	0	3	3	3	0	0	9
WSW	0	4	8	16	2	0	30
W	0	0	4	2	0	0	6
WNW	0	3	3	1	0	0	7
NW	0	1	4	6	0	0	11
NNW	2	1	2	3	0	0	8
VARIABLE	0	0	0	0	0	0	0
TOTAL	6	44	60	86	11	0	207

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 POWER STATION

PERIOD OF RECORD: APRIL-JUNE 1999

STABILITY CLASS - EXTREMELY STABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	1	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	2	1	0	0	0	3
E	0	0	1	0	0	0	1
ESE	1	0	1	1	1	0	4
SE	1	0	2	1	0	0	4
SSE	0	0	0	3	0	0	3
S	0	0	1	2	0	0	3
SSW	0	1	0	0	0	0	1
SW	0	1	0	0	0	0	1
WSW	0	0	1	2	0	0	3
W	0	1	6	2	0	0	9
WNW	0	0	1	1	0	0	2
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
VARIABLE	0	0	0	0	0	0	0
TOTAL	2	6	14	12	1	0	35

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 POWER STATION

PERIOD OF RECORD: JULY-SEPTEMBER 1999

STABILITY CLASS - EXTREMELY UNSTABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	9	2	0	0	13
NNE	0	4	9	16	1	0	30
NE	1	10	2	8	0	0	21
ENE	1	8	9	0	0	0	18
E	0	2	1	0	0	0	3
ESE	1	2	1	0	0	0	4
SE	0	7	10	0	0	0	17
SSE	0	2	0	0	0	0	2
S	0	0	1	0	0	0	1
SSW	0	6	9	17	1	3	36
SW	0	9	1	8	6	1	25
WSW	1	11	3	14	0	2	31
W	0	5	9	2	4	0	20
WNW	0	2	9	5	2	0	18
NW	0	2	6	5	0	0	13
NNW	1	2	15	12	5	0	35
VARIABLE	0	0	0	0	0	0	0
TOTAL	5	74	94	89	19	6	287

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 POWER STATION

PERIOD OF RECORD: JULY-SEPTEMBER 1999

STABILITY CLASS - MODERATELY UNSTABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	3	2	0	0	7
NNE	0	3	3	4	0	0	10
NE	0	1	2	2	2	0	7
ENE	0	1	3	0	0	0	4
E	1	0	0	0	0	0	1
ESE	0	3	2	0	0	0	5
SE	0	7	2	0	0	0	9
SSE	0	1	1	0	0	0	2
S	0	2	2	2	0	0	6
SSW	0	4	3	7	1	1	16
SW	1	2	2	7	3	0	15
WSW	1	7	8	7	2	1	26
W	0	6	8	3	0	0	17
WNW	0	1	4	3	1	0	9
NW	1	3	1	4	0	0	9
NNW	0	1	4	3	2	0	10
VARIABLE	0	0	0	0	0	0	0
TOTAL	4	44	48	44	11	2	153

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 POWER STATION

PERIOD OF RECORD: JULY-SEPTEMBER 1999

STABILITY CLASS - SLIGHTLY UNSTABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	5	3	2	0	0	11
NNE	0	4	2	5	0	0	11
NE	0	1	2	0	0	0	3
ENE	1	2	1	0	0	0	4
E	0	1	0	0	0	0	1
ESE	0	0	1	0	0	0	1
SE	0	10	2	0	0	0	12
SSE	1	2	2	1	0	0	6
S	0	3	2	2	0	0	7
SSW	0	5	3	2	3	0	13
SW	1	4	5	2	4	0	16
WSW	1	2	4	5	1	0	13
W	0	6	7	4	0	0	17
WNW	1	5	3	2	2	0	13
NW	0	4	5	1	1	0	11
NNW	0	4	2	3	1	0	10
VARIABLE	0	0	0	0	0	0	0
TOTAL	6	58	44	29	12	0	149

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 POWER STATION

PERIOD OF RECORD: JULY-SEPTEMBER 1999

STABILITY CLASS - NEUTRAL (DIFF TEMP 300-35 FT)
 WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	5	14	12	6	1	40
NNE	2	8	2	7	1	0	20
NE	2	4	10	6	0	0	22
ENE	1	18	8	0	0	0	27
E	1	1	11	2	0	0	15
ESE	1	6	3	2	0	0	12
SE	1	10	6	1	0	0	18
SSE	0	11	8	5	3	0	27
S	0	5	3	10	10	1	29
SSW	2	1	11	19	5	0	38
SW	1	5	11	20	4	0	41
WSW	3	6	9	10	2	1	31
W	2	9	17	16	2	0	46
WNW	3	5	16	6	2	0	32
NW	2	2	5	7	1	0	17
NNW	7	5	9	25	4	0	50
VARIABLE	0	0	0	0	0	0	0
TOTAL	30	101	143	148	40	3	465

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 POWER STATION

PERIOD OF RECORD: JULY-SEPTEMBER 1999

STABILITY CLASS - SLIGHTLY STABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	8	22	4	0	36
NNE	2	2	6	16	2	0	28
NE	0	4	5	12	0	0	21
ENE	0	7	11	1	0	0	19
E	1	6	23	11	0	0	41
ESE	1	4	12	13	2	0	32
SE	1	4	23	13	0	0	41
SSE	0	6	12	14	2	0	34
S	0	0	8	20	19	1	48
SSW	0	5	8	28	27	1	69
SW	0	4	5	39	12	0	60
WSW	0	6	13	17	0	0	36
W	0	11	18	18	1	0	48
WNW	0	4	9	14	0	0	27
NW	2	5	4	18	2	0	31
NNW	0	10	10	22	2	0	44
VARIABLE	0	0	0	0	0	0	0
TOTAL	7	80	175	278	73	2	615

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

DRESDEN NUCLEAR POWER STATION

PERIOD OF RECORD: JULY-SEPTEMBER 1999

STABILITY CLASS - MODERATELY STABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	0	8	12	5	0	27
NNE	0	2	7	12	0	0	21
NE	2	5	2	3	0	0	12
ENE	3	6	1	0	0	0	10
E	3	2	4	6	0	0	15
ESE	1	3	4	14	1	0	23
SE	2	3	9	15	1	0	30
SSE	2	12	10	5	2	0	31
S	2	3	3	7	5	1	21
SSW	2	2	4	10	10	0	28
SW	2	2	8	10	2	0	24
WSW	3	7	26	17	2	0	55
W	1	8	31	11	0	0	51
WNW	2	4	3	4	3	0	16
NW	0	3	9	11	1	0	24
NNW	0	0	6	14	2	0	22
VARIABLE	0	0	0	0	0	0	0
TOTAL	27	62	135	151	34	1	410

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 POWER STATION

PERIOD OF RECORD: JULY-SEPTEMBER 1999

STABILITY CLASS - EXTREMELY STABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	7	7	3	0	17
NNE	0	2	7	0	0	0	9
NE	1	2	2	0	0	0	5
ENE	1	1	0	0	0	0	2
E	0	0	0	0	0	0	0
ESE	0	0	1	0	1	0	2
SE	0	1	0	7	0	0	8
SSE	0	2	1	0	0	0	3
S	2	0	6	1	0	0	9
SSW	2	2	1	5	0	0	10
SW	0	2	4	0	0	0	6
WSW	1	0	5	8	0	0	14
W	0	2	8	2	0	0	12
WNW	4	2	5	1	0	0	12
NW	1	1	3	4	0	0	9
NNW	0	1	1	3	6	0	11
VARIABLE	0	0	0	0	0	0	0
TOTAL	12	18	51	38	10	0	129

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 POWER STATION

PERIOD OF RECORD: OCTOBER-DECEMBER 1999

STABILITY CLASS - EXTREMELY UNSTABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	1	2	4	1	0	9
NNE	0	2	5	0	0	0	7
NE	0	3	0	0	0	0	3
ENE	0	2	0	0	0	0	2
E	0	1	0	0	0	0	1
ESE	1	0	2	1	0	0	4
SE	0	0	3	2	0	0	5
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	1	1	4	0	6
SW	0	0	2	2	2	1	7
WSW	0	0	2	6	1	1	10
W	0	0	0	3	0	0	3
WNW	0	2	3	4	2	0	11
NW	1	1	5	1	4	0	12
NNW	0	0	0	1	5	0	6
VARIABLE	0	0	0	0	0	0	0
TOTAL	3	12	25	25	19	2	86

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 POWER STATION

PERIOD OF RECORD: OCTOBER-DECEMBER 1999

STABILITY CLASS - MODERATELY UNSTABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	1	1	0	0	2
NNE	0	0	2	0	0	0	2
NE	0	1	4	0	0	0	5
ENE	0	3	1	0	0	0	4
E	0	1	0	0	0	0	1
ESE	0	0	2	0	0	0	2
SE	0	0	1	1	0	0	2
SSE	1	0	5	0	1	0	7
S	1	0	2	2	3	0	8
SSW	0	0	3	0	10	0	13
SW	0	0	2	1	4	3	10
WSW	0	6	9	2	3	0	20
W	0	3	2	4	1	0	10
WNW	0	1	10	3	0	0	14
NW	0	2	4	2	1	2	11
NNW	0	2	0	2	5	0	9
VARIABLE	0	0	0	0	0	0	0
TOTAL	2	19	48	18	28	5	120

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 POWER STATION

PERIOD OF RECORD: OCTOBER-DECEMBER 1999

STABILITY CLASS - SLIGHTLY UNSTABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	0	2	0	0	3
NNE	0	2	0	0	0	0	2
NE	0	0	2	0	0	0	2
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	4	2	0	0	0	6
SE	1	1	1	1	0	0	4
SSE	0	1	2	3	1	0	7
S	0	0	1	2	2	2	7
SSW	0	1	2	5	3	0	11
SW	1	0	0	1	1	0	3
WSW	0	2	5	1	2	2	12
W	1	5	1	1	1	0	9
WNW	0	1	0	1	0	0	2
NW	0	2	4	1	0	3	10
NNW	0	1	2	1	5	2	11
VARIABLE	0	0	0	0	0	0	0
TOTAL	3	21	22	19	15	9	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 POWER STATION

PERIOD OF RECORD: OCTOBER-DECEMBER 1999

STABILITY CLASS - NEUTRAL (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	5	12	25	5	2	51
NNE	1	8	10	21	7	0	47
NE	3	4	8	8	3	0	26
ENE	1	7	6	1	0	0	15
E	1	2	12	0	0	0	15
ESE	1	5	13	4	0	0	23
SE	2	4	12	7	0	0	25
SSE	1	1	15	12	7	2	38
S	3	7	10	27	26	14	87
SSW	2	5	11	19	30	3	70
SW	2	5	14	12	16	3	52
WSW	1	6	3	7	6	2	25
W	1	9	18	22	29	14	93
WNW	1	7	15	16	9	3	51
NW	0	7	17	12	19	8	63
NNW	2	14	7	32	31	2	88
VARIABLE	0	0	0	0	0	0	0
TOTAL	24	96	183	225	188	53	769

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 POWER STATION

PERIOD OF RECORD: OCTOBER-DECEMBER 1999

STABILITY CLASS - SLIGHTLY STABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	3	9	17	7	0	37
NNE	1	2	7	6	2	0	18
NE	0	5	9	11	0	0	25
ENE	1	6	5	1	0	0	13
E	0	4	7	12	1	0	24
ESE	0	4	12	19	3	0	38
SE	1	4	19	17	2	0	43
SSE	1	4	15	35	17	2	74
S	0	2	11	42	45	30	130
SSW	1	2	10	37	28	2	80
SW	1	5	6	24	16	7	59
WSW	0	4	5	5	6	2	22
W	2	11	8	3	7	1	32
WNW	0	2	10	22	13	2	49
NW	0	6	12	22	15	1	56
NNW	0	4	7	17	8	0	36
VARIABLE	0	0	0	0	0	0	0
TOTAL	9	68	152	290	170	47	736

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 POWER STATION

PERIOD OF RECORD: OCTOBER-DECEMBER 1999

STABILITY CLASS - MODERATELY STABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	1	5	15	3	0	25
NNE	0	2	6	13	0	0	21
NE	0	2	1	1	0	0	4
ENE	1	2	0	0	0	0	3
E	0	1	2	2	0	0	5
ESE	1	5	2	4	6	0	18
SE	0	0	3	9	5	0	17
SSE	1	1	1	7	1	0	11
S	0	4	2	5	2	0	13
SSW	0	6	5	15	3	0	29
SW	1	1	7	28	15	0	52
WSW	0	3	13	7	6	0	29
W	0	2	4	8	0	0	14
WNW	0	3	6	10	2	0	21
NW	0	3	2	22	2	0	29
NNW	2	2	1	20	8	0	33
VARIABLE	0	0	0	0	0	0	0
TOTAL	7	38	60	166	53	0	324

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 POWER STATION

PERIOD OF RECORD: OCTOBER-DECEMBER 1999

STABILITY CLASS - EXTREMELY STABLE (DIFF TEMP 300-35 FT)
WINDS MEASURED AT 300 FEET

WIND DIRECTION	WIND SPEED (in mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	2	9	2	0	13
NNE	0	0	5	9	0	0	14
NE	0	0	4	1	0	0	5
ENE	0	1	0	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	1	0	1
SE	0	0	2	0	0	0	2
SSE	0	0	1	3	0	0	4
S	1	2	0	1	0	0	4
SSW	0	0	0	2	0	0	2
SW	1	0	2	7	3	0	13
WSW	0	0	2	3	0	0	5
W	1	0	2	0	0	0	3
WNW	1	2	2	0	0	0	5
NW	0	0	1	1	1	0	3
NNW	0	1	1	6	1	0	9
VARIABLE	0	0	0	0	0	0	0
TOTAL	4	6	24	42	8	0	84

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

APPENDIX III

1999 REMP SAMPLE RESULTS

DRESDEN

TABLE OF CONTENTS

	List of Tables	III-3
1.0	INTRODUCTION	III-4
2.0	LISTING OF MISSED SAMPLES	III-5
3.0	LISTING OF SAMPLE ANOMALIES	III-6
4.0	TLD DATA	III-39
5.0	GRAPHS OF DATA TRENDS	III-43

DRESDEN

LIST OF TABLES

<u>No.</u>	<u>Title</u>	<u>Page</u>
1	Airborne Particulates and Iodine-131	III-7
2	Airborne Particulates, Quarterly Composites	III-15
3	Milk	III-19
4	Fish, Edible Portions	III-22
5	Bottom Sediments	III-24
6	Vegetables	III-25
7	Surface Water	III-28
8	Well Water	III-33
12	Milch Animals, Nearest Residence, and Nearest Livestock Census	III-34

DRESDEN

1.0 INTRODUCTION

The following constitutes the current, 1999 Monthly 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. Missing entries indicate analyses that are not completed and the results will appear in subsequent reports.

Missing tables indicate sample media scheduled for collection at a future date. Tables will appear in subsequent reports.

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/Nb-95, I-131, Ba/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 $x \pm 2s; 2\text{TPU}$, 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 alpha and beta, are decay corrected to the time of collection.

TLD data is provided by Commonwealth Edison 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 1999.

2.0 LISTING OF MISSED SAMPLES

Sample Type	Location Code	Expected Collection Date	Reason
A/I	D-07	06-12-99	Air station found burned, possibly due to lightning strike during storms on 06-11-99. Pump and sampling train destroyed. Collector will rebuild unit.
MI	D-25	07-31-99	Collector inadvertently omitted milk collection due to misunderstanding of collection frequency (collection is biweekly, not bimonthly). Collector advised of his error by Teledyne ComEd Point of Contact; Corporate Point of Contact notified.
TLD	Other	09-04-99	TLDs D-53-1 and 2 found missing during monthly visual check. Collector placed Spare #E-0005512 at D-53-1 and Spare #E0003091 at D-53-2.

3.0 LISTING OF SAMPLE ANOMALIES

Sample Type	Location Code	Collection Date	Reason
A/I	D-12	01-09-99	No apparent reason for low reading of 161.1.
A/I	D-45	01-09-99	No apparent reason for low reading of 163.0.
A	D-12	02-13-99	Low reading of 159.7 possible due to work being done at substation.
A/I	D-12	04-03-99	Removed pump #451 for service; regulator not adjusting properly.
A/I	D-12	05-15-99	No apparent reason for low reading of 148.7.
A/I	D-53	05-15-99	Timer bad; installed new timer. Estimated reading of 167.7.
MI	D-25	05-21-99	Extra milk collection for May 1999 to resolve scheduling conflict with Braidwood Station (see below) and to satisfy biweekly requirements.
MI	D-25	06-04-99	Milk collection moved from 5/29/99 to 06/04/99 due to scheduling conflict; location shared with Braidwood and should be collected same week. Permission obtained from Corporate Point of Contact.
A	D-12	06-05-99	Low reading of 149.8 possibly due to construction at substation.
A/I	D-12	06-12-99	Timer bad; used estimated reading of 162.7. New timer installed.
A	D-07	06-19-99	Low reading of 28.3 due to recent restoration of air sampling site following fire.

DRESDEN

Table 1. Airborne Particulates and Iodine Cartridges
 Collection: Airborne Particulates - Continuous; weekly exchange
 Iodine cartridges - Continuous; biweekly exchange
 ODCM-
 Required LLDs: Gross Beta = 0.01, I-131 = 0.07 pCi/m³
 Units: 10⁻² pCi/m³

D-01 Onsite Station 1							
Date Collected	Volume (m ³)	Gross Beta	I-131 ^a	Date Collected	Volume (m ³)	Gross Beta	I-131 ^a
01-02-99	290	3.0 ± 0.4; 0.7	-	07-03-99	288	1.7 ± 0.3; 0.4	-
01-09-99	283	3.7 ± 0.4; 0.8	-0.1 ± 0.5; 0.5	07-09-99	242	2.8 ± 0.4; 0.6	0.1 ± 0.8; 0.8
01-16-99	283	3.7 ± 0.4; 0.8	-	07-17-99	325	2.7 ± 0.3; 0.6	-
01-23-99	278	1.7 ± 0.3; 0.4	0.1 ± 0.4; 0.4	07-24-99	279	2.1 ± 0.3; 0.5	-0.1 ± 0.6; 0.6
01-30-99	281	2.8 ± 0.4; 0.6	-	07-31-99	287	2.7 ± 0.4; 0.6	-
02-06-99	286	2.3 ± 0.3; 0.5	0.2 ± 0.6; 0.6	08-06-99	248	1.6 ± 0.4; 0.5	0.2 ± 0.5; 0.5
02-13-99	283	2.3 ± 0.3; 0.5	-	08-13-99	285	2.5 ± 0.4; 0.6	-
02-20-99	286	1.7 ± 0.3; 0.5	-0.5 ± 0.6; 0.7	08-22-99	363	2.1 ± 0.3; 0.5	-0.3 ± 0.4; 0.4
02-27-99	291	2.3 ± 0.3; 0.5	-	08-28-99	246	3.3 ± 0.4; 0.7	-
03-06-99	281	1.7 ± 0.3; 0.4	0.2 ± 0.5; 0.6	09-04-99	283	3.1 ± 0.4; 0.7	0.0 ± 0.7; 0.7
03-13-99	282	1.6 ± 0.3; 0.5	-	09-11-99	285	2.6 ± 0.4; 0.6	-
03-20-99	288	1.9 ± 0.3; 0.5	0.4 ± 0.5; 0.5	09-18-99	285	2.1 ± 0.3; 0.5	0.2 ± 0.7; 0.7
03-27-99	279	1.8 ± 0.4; 0.5	-	09-25-99	286	2.4 ± 0.4; 0.6	-
1st Qtr. Mean±s.d.		2.4±0.7	0.1±0.3	3rd Qtr. Mean±s.d.		2.4±0.5	0.0±0.2
04-03-99	295	1.8 ± 0.3; 0.5	0.1 ± 0.4; 0.4	10-02-99	285	2.6 ± 0.4; 0.6	-0.3 ± 0.8; 0.8
04-10-99	288	1.7 ± 0.3; 0.4	-	10-09-99	278	2.2 ± 0.4; 0.6	-
04-17-99	271	1.5 ± 0.4; 0.4	0.0 ± 0.9; 0.9	10-16-99	284	3.1 ± 0.4; 0.7	0.4 ± 0.6; 0.6
04-24-99	299	1.8 ± 0.3; 0.4	-	10-23-99	286	2.2 ± 0.3; 0.5	-
05-01-99	277	1.5 ± 0.4; 0.4	0.1 ± 0.7; 0.7	10-30-99	284	3.4 ± 0.4; 0.7	-0.6 ± 0.6; 0.6
05-08-99	281	1.4 ± 0.3; 0.4	-	11-06-99	285	4.4 ± 0.5; 0.9	-
05-15-99	285	1.9 ± 0.4; 0.5	-0.1 ± 0.7; 0.7	11-13-99	281	4.6 ± 0.4; 0.9	0.0 ± 0.6; 0.6
05-22-99	274	1.9 ± 0.3; 0.5	-	11-20-99	286	3.9 ± 0.4; 0.8	-
05-29-99	277	2.0 ± 0.3; 0.5	-0.1 ± 0.5; 0.5	11-27-99	282	3.8 ± 0.5; 0.8	0.0 ± 0.5; 0.5
06-05-99	301	2.0 ± 0.3; 0.5	-	12-04-99	287	3.0 ± 0.4; 0.7	-
06-12-99	276	1.4 ± 0.3; 0.4	-0.2 ± 0.5; 0.5	12-11-99	283	3.0 ± 0.4; 0.7	-0.2 ± 0.6; 0.6
06-19-99	283	0.9 ± 0.3; 0.3	-	12-18-99	287	3.4 ± 0.4; 0.7	-
06-26-99	288	2.6 ± 0.4; 0.6	-0.1 ± 0.9; 0.9	12-24-99	245	3.6 ± 0.5; 0.8	0.6 ± 0.5; 0.6
2nd Qtr. Mean±s.d.		1.7±0.4	-0.0±0.1	12-31-99	298	2.6 ± 0.4; 0.6	-
				4th Qtr. Mean±s.d.		3.3±0.7	-0.0±0.4

^a Volume based on a two week collection period.

DRESDEN

Table 1. Airborne Particulates and Iodine Cartridges
 Collection: Airborne Particulates - Continuous; weekly exchange
 Iodine cartridges - Continuous; biweekly exchange
 ODCM-
 Required LLDs: Gross Beta = 0.01, I-131 = 0.07 pCi/m³
 Units: 10⁻² pCi/m³

D-02 Onsite Station 2							
Date Collected	Volume (m ³)	Gross Beta	I-131 ^a	Date Collected	Volume (m ³)	Gross Beta	I-131 ^a
01-02-99	291	2.7 ± 0.4; 0.6	-	07-03-99	286	1.6 ± 0.3; 0.4	-
01-09-99	279	3.2 ± 0.4; 0.7	-0.5 ± 0.5; 0.5	07-09-99	245	2.5 ± 0.4; 0.6	0.3 ± 0.7; 0.7
01-16-99	285	3.3 ± 0.4; 0.7	-	07-17-99	325	2.7 ± 0.3; 0.6	-
01-23-99	288	1.9 ± 0.3; 0.5	-0.1 ± 0.4; 0.4	07-24-99	284	2.0 ± 0.3; 0.5	0.0 ± 0.6; 0.6
01-30-99	280	1.4 ± 0.3; 0.4	-	07-31-99	287	3.0 ± 0.4; 0.7	-
02-06-99	286	2.4 ± 0.3; 0.5	-0.2 ± 0.6; 0.6	08-06-99	247	1.8 ± 0.4; 0.5	0.5 ± 0.6; 0.7
02-13-99	284	2.0 ± 0.3; 0.5	-	08-13-99	285	2.5 ± 0.4; 0.6	-
02-20-99	285	1.9 ± 0.3; 0.5	-0.4 ± 0.7; 0.7	08-22-99	363	2.2 ± 0.3; 0.5	-0.1 ± 0.4; 0.4
02-27-99	292	1.8 ± 0.3; 0.5	-	08-28-99	246	3.3 ± 0.4; 0.7	-
03-06-99	281	1.6 ± 0.3; 0.4	0.1 ± 0.5; 0.5	09-04-99	283	3.4 ± 0.4; 0.7	0.2 ± 0.6; 0.6
03-13-99	282	1.7 ± 0.4; 0.5	-	09-11-99	285	2.5 ± 0.4; 0.6	-
03-20-99	290	2.0 ± 0.3; 0.5	0.4 ± 0.5; 0.5	09-18-99	286	3.0 ± 0.4; 0.6	-0.3 ± 0.8; 0.8
03-27-99	278	1.8 ± 0.4; 0.5	-	09-25-99	290	2.6 ± 0.4; 0.6	-
1st Qtr. Mean±s.d.		2.1±0.6	-0.1±0.3	3rd Qtr. Mean±s.d.		2.5±0.5	0.1±0.3
04-03-99	295	2.0 ± 0.3; 0.5	-0.1 ± 1.2; 1.2	10-02-99	284	2.6 ± 0.4; 0.6	0.4 ± 0.6; 0.6
04-10-99	289	2.0 ± 0.3; 0.5	-	10-09-99	279	2.3 ± 0.4; 0.6	-
04-17-99	271	1.9 ± 0.4; 0.5	-0.9 ± 0.9; 0.9	10-16-99	287	3.3 ± 0.4; 0.7	-0.0 ± 0.7; 0.7
04-24-99	308	2.1 ± 0.3; 0.5	-	10-23-99	283	2.4 ± 0.4; 0.6	-
05-01-99	277	1.5 ± 0.4; 0.5	-0.1 ± 1.3; 1.3	10-30-99	288	3.9 ± 0.4; 0.8	0.2 ± 0.5; 0.5
05-08-99	276	1.5 ± 0.4; 0.5	-	11-06-99	285	4.2 ± 0.5; 0.9	-
05-15-99	287	1.6 ± 0.3; 0.5	0.1 ± 0.7; 0.7	11-13-99	287	4.5 ± 0.4; 0.9	-0.2 ± 0.6; 0.6
05-22-99	287	2.2 ± 0.3; 0.5	-	11-20-99	286	3.9 ± 0.4; 0.8	-
05-29-99	279	2.3 ± 0.3; 0.5	-0.3 ± 0.6; 0.6	11-27-99	281	4.3 ± 0.5; 0.9	-0.2 ± 0.4; 0.4
06-05-99	301	2.0 ± 0.3; 0.5	-	12-04-99	286	3.3 ± 0.4; 0.7	-
06-12-99	274	1.9 ± 0.4; 0.5	-0.5 ± 1.2; 1.2	12-11-99	284	3.3 ± 0.4; 0.7	0.4 ± 0.6; 0.6
06-19-99	284	0.9 ± 0.3; 0.3	-	12-18-99	286	3.8 ± 0.4; 0.8	-
06-26-99	283	2.7 ± 0.4; 0.6	0.0 ± 1.1; 1.1	12-24-99	246	3.9 ± 0.5; 0.9	-0.1 ± 0.5; 0.5
2nd Qtr. Mean±s.d.		1.9±0.4	-0.2±0.4	12-31-99	286	3.0 ± 0.4; 0.7	-
				4th Qtr. Mean±s.d.		3.5±0.7	0.1±0.3

^a Volume based on a two week collection period.

DRESDEN

Table 1. Airborne Particulates and Iodine Cartridges
 Collection: Airborne Particulates - Continuous; weekly exchange
 Iodine cartridges - Continuous; biweekly exchange
 ODCM-
 Required LLDs: Gross Beta = 0.01, I-131 = 0.07 pCi/m³
 Units: 10⁻² pCi/m³

D-03 Onsite Station 3							
Date Collected	Volume (m ³)	Gross Beta	I-131 ^a	Date Collected	Volume (m ³)	Gross Beta	I-131 ^a
01-02-99	291	2.8 ± 0.4; 0.6	-	07-03-99	285	1.7 ± 0.3; 0.4	-
01-09-99	279	2.9 ± 0.4; 0.7	0.8 ± 0.5; 0.5	07-09-99	244	2.5 ± 0.4; 0.6	0.0 ± 0.7; 0.7
01-16-99	276	2.9 ± 0.4; 0.6	-	07-17-99	324	2.7 ± 0.3; 0.6	-
01-23-99	288	1.4 ± 0.3; 0.4	-0.4 ± 0.5; 0.5	07-24-99	280	1.3 ± 0.3; 0.4	-0.4 ± 0.6; 0.6
01-30-99	280	2.8 ± 0.4; 0.6	-	07-31-99	287	2.6 ± 0.4; 0.6	-
02-06-99	291	2.3 ± 0.3; 0.5	0.4 ± 0.6; 0.6	08-06-99	247	1.6 ± 0.4; 0.5	-0.2 ± 0.6; 0.6
02-13-99	284	2.0 ± 0.3; 0.5	-	08-13-99	285	2.5 ± 0.4; 0.6	-
02-20-99	285	1.7 ± 0.3; 0.5	0.1 ± 0.6; 0.6	08-22-99	363	2.1 ± 0.3; 0.5	0.2 ± 0.3; 0.3
02-27-99	291	1.8 ± 0.3; 0.5	-	08-28-99	246	2.8 ± 0.4; 0.6	-
03-06-99	282	1.5 ± 0.3; 0.4	-0.1 ± 0.6; 0.6	09-04-99	284	2.9 ± 0.4; 0.7	-0.1 ± 0.8; 0.8
03-13-99	281	1.3 ± 0.3; 0.4	-	09-11-99	284	2.8 ± 0.4; 0.6	-
03-20-99	290	1.7 ± 0.3; 0.4	-0.0 ± 0.6; 0.6	09-18-99	285	2.5 ± 0.3; 0.6	0.2 ± 0.7; 0.7
03-27-99	278	1.3 ± 0.3; 0.4	-	09-25-99	292	2.3 ± 0.4; 0.6	-
1st Qtr. Mean±s.d.		2.0±0.6	0.1±0.4	3rd Qtr. Mean±s.d.		2.3±0.5	-0.1±0.2
04-03-99	295	2.4 ± 0.3; 0.6	-0.3 ± 0.7; 0.7	10-02-99	282	2.5 ± 0.4; 0.6	-0.1 ± 0.8; 0.8
04-10-99	285	1.7 ± 0.3; 0.4	-	10-09-99	280	2.3 ± 0.4; 0.6	-
04-17-99	271	1.8 ± 0.4; 0.5	0.2 ± 0.8; 0.8	10-16-99	287	3.5 ± 0.4; 0.7	0.3 ± 0.8; 0.8
04-24-99	298	1.8 ± 0.3; 0.4	-	10-23-99	283	2.2 ± 0.4; 0.5	-
05-01-99	276	1.6 ± 0.4; 0.5	0.1 ± 0.7; 0.7	10-30-99	288	3.3 ± 0.4; 0.7	-0.4 ± 0.6; 0.6
05-08-99	280	1.7 ± 0.4; 0.5	-	11-06-99	284	4.3 ± 0.5; 0.9	-
05-15-99	287	1.8 ± 0.4; 0.5	0.0 ± 0.6; 0.6	11-13-99	287	4.1 ± 0.4; 0.8	-0.0 ± 0.5; 0.5
05-22-99	272	2.1 ± 0.3; 0.5	-	11-20-99	286	3.6 ± 0.4; 0.8	-
05-29-99	280	1.7 ± 0.3; 0.4	-0.4 ± 0.6; 0.6	11-27-99	282	4.5 ± 0.5; 1.0	0.3 ± 0.5; 0.5
06-05-99	299	2.0 ± 0.3; 0.5	-	12-04-99	286	3.2 ± 0.4; 0.7	-
06-12-99	265	2.0 ± 0.4; 0.5	0.5 ± 0.8; 0.8	12-11-99	284	3.0 ± 0.4; 0.7	-0.1 ± 0.7; 0.7
06-19-99	284	0.9 ± 0.3; 0.3	-	12-18-99	285	2.7 ± 0.4; 0.6	-
06-26-99	284	2.3 ± 0.4; 0.5	0.4 ± 1.2; 1.2	12-24-99	246	3.0 ± 0.5; 0.7	0.7 ± 0.5; 0.5
2nd Qtr. Mean±s.d.		1.8±0.4	0.1±0.3	12-31-99	286	3.0 ± 0.4; 0.7	-
				4th Qtr. Mean±s.d.		3.2±0.7	0.1±0.3

^a Volume based on a two week collection period.

DRESDEN

Table 1. Airborne Particulates and Iodine Cartridges
 Collection: Airborne Particulates - Continuous; weekly exchange
 Iodine cartridges - Continuous; biweekly exchange
 ODCM-
 Required LLDs: Gross Beta = 0.01, I-131 = 0.07 pCi/m³
 Units: 10⁻² pCi/m³

D-04 Collins Road							
Date Collected	Volume (m ³)	Gross Beta	I-131 ^a	Date Collected	Volume (m ³)	Gross Beta	I-131 ^a
01-02-99	290	3.4 ± 0.4; 0.7	-	07-03-99	285	1.8 ± 0.3; 0.5	-
01-09-99	282	3.5 ± 0.4; 0.7	0.0 ± 0.5; 0.5	07-09-99	243	2.6 ± 0.4; 0.6	-0.6 ± 0.9; 0.9
01-16-99	283	3.8 ± 0.4; 0.8	-	07-17-99	325	2.8 ± 0.3; 0.6	-
01-23-99	288	1.9 ± 0.3; 0.5	0.0 ± 0.6; 0.6	07-24-99	274	1.8 ± 0.3; 0.4	0.2 ± 0.6; 0.6
01-30-99	271	3.0 ± 0.4; 0.7	-	07-31-99	282	2.5 ± 0.4; 0.6	-
02-06-99	287	2.5 ± 0.3; 0.6	-0.0 ± 0.7; 0.7	08-06-99	248	2.1 ± 0.4; 0.6	-0.1 ± 0.6; 0.6
02-13-99	283	2.7 ± 0.3; 0.6	-	08-13-99	285	2.8 ± 0.4; 0.6	-
02-20-99	286	2.4 ± 0.4; 0.6	-0.0 ± 0.6; 0.6	08-22-99	363	2.3 ± 0.3; 0.5	0.3 ± 0.4; 0.4
02-27-99	291	2.1 ± 0.3; 0.5	-	08-28-99	246	3.5 ± 0.4; 0.8	-
03-06-99	281	1.9 ± 0.3; 0.5	-0.1 ± 0.5; 0.5	09-04-99	283	3.4 ± 0.4; 0.7	-0.1 ± 0.7; 0.7
03-13-99	282	2.0 ± 0.4; 0.5	-	09-11-99	285	3.0 ± 0.4; 0.7	-
03-20-99	288	2.1 ± 0.3; 0.5	-0.1 ± 0.5; 0.5	09-18-99	285	2.8 ± 0.4; 0.6	-0.3 ± 0.7; 0.7
03-27-99	279	1.7 ± 0.4; 0.5	-	09-25-99	291	2.6 ± 0.4; 0.6	-
1st Qtr. Mean±s.d.		2.5±0.7	-0.0±0.1	3rd Qtr. Mean±s.d.		2.6±0.5	-0.1±0.3
04-03-99	295	2.4 ± 0.3; 0.5	0.1 ± 1.4; 1.4	10-02-99	285	2.8 ± 0.4; 0.6	1.0 ± 0.8; 0.8
04-10-99	288	1.7 ± 0.3; 0.4	-	10-09-99	278	2.6 ± 0.4; 0.6	-
04-17-99	271	1.9 ± 0.4; 0.5	-0.7 ± 0.9; 0.9	10-16-99	288	3.4 ± 0.4; 0.7	-0.1 ± 0.7; 0.7
04-24-99	299	1.8 ± 0.3; 0.4	-	10-23-99	282	1.9 ± 0.3; 0.5	-
05-01-99	277	1.3 ± 0.3; 0.4	-1.1 ± 1.1; 1.1	10-30-99	288	3.8 ± 0.4; 0.8	-0.1 ± 0.5; 0.5
05-08-99	281	1.6 ± 0.4; 0.5	-	11-06-99	285	3.8 ± 0.4; 0.8	-
05-15-99	285	2.0 ± 0.4; 0.5	-0.3 ± 0.7; 0.7	11-13-99	285	4.3 ± 0.4; 0.9	0.0 ± 0.5; 0.5
05-22-99	288	2.2 ± 0.3; 0.5	-	11-20-99	286	3.7 ± 0.4; 0.8	-
05-29-99	277	1.9 ± 0.3; 0.5	-0.3 ± 0.7; 0.7	11-27-99	282	4.6 ± 0.5; 1.0	0.0 ± 0.5; 0.5
06-05-99	302	2.3 ± 0.3; 0.5	-	12-04-99	287	3.3 ± 0.4; 0.7	-
06-12-99	275	1.7 ± 0.3; 0.5	0.4 ± 0.9; 0.9	12-11-99	283	3.5 ± 0.4; 0.8	0.2 ± 0.5; 0.5
06-19-99	284	1.2 ± 0.3; 0.4	-	12-18-99	287	3.9 ± 0.4; 0.8	-
06-26-99	288	2.6 ± 0.4; 0.6	-0.0 ± 0.8; 0.8	12-24-99	245	4.1 ± 0.5; 0.9	-0.6 ± 0.5; 0.5
2nd Qtr. Mean±s.d.		1.9±0.4	-0.3±0.5	12-31-99	288	3.3 ± 0.4; 0.7	-
				4th Qtr. Mean±s.d.		3.5±0.7	0.0±0.5

^a Volume based on a two week collection period.

DRESDEN

Table 1. Airborne Particulates and Iodine Cartridges
 Collection: Airborne Particulates - Continuous; weekly exchange
 Iodine cartridges - Continuous; biweekly exchange
 ODCM-
 Required LLDs: Gross Beta = 0.01, I-131 = 0.07 pCi/m³
 Units: 10⁻² pCi/m³

D-07 Clay Products							
Date Collected	Volume (m ³)	Gross Beta	I-131 ^a	Date Collected	Volume (m ³)	Gross Beta	I-131 ^a
01-02-99	290	2.7 ± 0.4; 0.6	-	07-03-99	271	1.8 ± 0.3; 0.5	-
01-09-99	279	3.3 ± 0.4; 0.7	-0.2 ± 0.5; 0.5	07-09-99	254	2.6 ± 0.4; 0.6	0.0 ± 0.7; 0.7
01-16-99	282	3.6 ± 0.4; 0.8	-	07-17-99	319	3.2 ± 0.4; 0.7	-
01-23-99	287	1.9 ± 0.3; 0.5	-0.1 ± 0.5; 0.5	07-24-99	284	2.2 ± 0.3; 0.5	0.2 ± 0.5; 0.5
01-30-99	281	2.9 ± 0.4; 0.6	-	07-31-99	287	3.0 ± 0.4; 0.7	-
02-06-99	287	2.8 ± 0.4; 0.6	-0.5 ± 0.6; 0.6	08-06-99	247	1.9 ± 0.4; 0.5	0.1 ± 0.6; 0.6
02-13-99	289	2.3 ± 0.3; 0.5	-	08-13-99	286	2.7 ± 0.4; 0.6	-
02-20-99	290	1.9 ± 0.3; 0.5	-0.1 ± 0.6; 0.6	08-22-99	369	2.4 ± 0.3; 0.5	-0.2 ± 0.4; 0.4
02-27-99	291	2.0 ± 0.3; 0.5	-	08-28-99	246	3.7 ± 0.4; 0.8	-
03-06-99	282	1.9 ± 0.3; 0.5	0.0 ± 0.5; 0.5	09-04-99	284	3.5 ± 0.4; 0.8	-0.4 ± 0.6; 0.6
03-13-99	283	1.8 ± 0.4; 0.5	-	09-11-99	289	3.1 ± 0.4; 0.7	-
03-20-99	290	2.2 ± 0.3; 0.5	0.1 ± 0.6; 0.6	09-18-99	285	2.2 ± 0.3; 0.5	-0.0 ± 0.7; 0.7
03-27-99	278	1.7 ± 0.4; 0.5	-	09-25-99	292	2.4 ± 0.4; 0.6	-
1st Qtr. Mean±s.d.		2.4±0.6	-0.1±0.2	3rd Qtr. Mean±s.d.		2.7±0.6	-0.0±0.2
04-03-99	294	2.4 ± 0.3; 0.5	0.0 ± 0.7; 0.7	10-02-99	286	2.6 ± 0.4; 0.6	-0.0 ± 0.8; 0.8
04-10-99	291	2.1 ± 0.3; 0.5	-	10-09-99	276	2.7 ± 0.4; 0.6	-
04-17-99	277	1.4 ± 0.3; 0.4	0.4 ± 0.9; 0.9	10-16-99	286	3.6 ± 0.4; 0.8	0.4 ± 0.7; 0.7
04-24-99	292	1.7 ± 0.3; 0.4	-	10-23-99	283	2.7 ± 0.4; 0.6	-
05-01-99	276	1.9 ± 0.4; 0.5	-0.2 ± 0.6; 0.6	10-30-99	288	3.8 ± 0.4; 0.8	-0.1 ± 0.5; 0.5
05-08-99	280	1.8 ± 0.4; 0.5	-	11-06-99	284	4.7 ± 0.5; 1.0	-
05-15-99	287	1.4 ± 0.3; 0.4	-0.2 ± 0.7; 0.7	11-13-99	287	5.0 ± 0.4; 1.0	-0.2 ± 0.6; 0.6
05-22-99	281	2.2 ± 0.3; 0.5	-	11-20-99	283	3.9 ± 0.4; 0.8	-
05-29-99	280	2.0 ± 0.3; 0.5	0.2 ± 0.7; 0.7	11-27-99	282	4.9 ± 0.5; 1.0	-0.1 ± 0.5; 0.5
06-05-99	289	2.2 ± 0.3; 0.5	-	12-04-99	286	3.2 ± 0.4; 0.7	-
06-12-99	NS ^b	-	-	12-11-99	293	3.6 ± 0.4; 0.8	0.1 ± 0.6; 0.6
06-19-99	48. ^c	0.8 ± 1.4; 1.4	-	12-18-99	285	3.7 ± 0.4; 0.8	-
06-26-99	289	2.4 ± 0.4; 0.6	-0.5 ± 2.0; 2.0	12-24-99	246	3.4 ± 0.5; 0.8	-0.3 ± 0.6; 0.6
2nd Qtr. Mean±s.d.		1.9±0.5	-0.0±0.3	12-31-99	279	3.1 ± 0.4; 0.7	-
				4th Qtr. Mean±s.d.		3.6±0.8	-0.0±0.2

^a Volume based on a two week collection period.

^b "NS" = No sample; air station burned, possible due to lightning strike.

^c Volume low due to recent restoration of air sampling site.

DRESDEN

Table 1. Airborne Particulates and Iodine Cartridges
 Collection: Airborne Particulates - Continuous; weekly exchange
 Iodine cartridges - Continuous; biweekly exchange
 ODCM-
 Required LLDs: Gross Beta = 0.01, I-131 = 0.07 pCi/m³
 Units: 10⁻² pCi/m³

D-12 (C) Lisbon							
Date Collected	Volume (m ³)	Gross Beta	I-131 ^a	Date Collected	Volume (m ³)	Gross Beta	I-131 ^a
01-02-99	289	3.1 ± 0.4; 0.7	-	07-03-99	283	2.1 ± 0.3; 0.5	-
01-09-99	273 ^b	3.3 ± 0.4; 0.7	-0.3 ± 0.5; 0.5	07-09-99	257	2.5 ± 0.4; 0.6	0.0 ± 0.7; 0.7
01-16-99	287	3.1 ± 0.4; 0.7	-	07-17-99	314	2.5 ± 0.3; 0.6	-
01-23-99	278	1.9 ± 0.3; 0.5	0.1 ± 0.4; 0.4	07-24-99	284	2.0 ± 0.3; 0.5	0.1 ± 0.5; 0.5
01-30-99	276	2.4 ± 0.4; 0.6	-	07-31-99	287	2.4 ± 0.4; 0.6	-
02-06-99	287	2.7 ± 0.3; 0.6	0.7 ± 0.7; 0.7	08-06-99	244	2.0 ± 0.4; 0.6	0.5 ± 0.7; 0.7
02-13-99	271 ^c	2.1 ± 0.3; 0.5	-	08-13-99	290	2.7 ± 0.4; 0.6	-
02-20-99	285	2.3 ± 0.4; 0.5	-0.3 ± 0.7; 0.7	08-22-99	362	2.3 ± 0.3; 0.5	0.1 ± 0.4; 0.4
02-27-99	288	1.9 ± 0.3; 0.5	-	08-28-99	246	3.8 ± 0.4; 0.8	-
03-06-99	279	2.0 ± 0.3; 0.5	-0.0 ± 0.6; 0.6	09-04-99	284	3.6 ± 0.4; 0.8	-0.1 ± 0.7; 0.7
03-13-99	282	2.0 ± 0.4; 0.5	-	09-11-99	284	3.1 ± 0.4; 0.7	-
03-20-99	290	2.8 ± 0.4; 0.6	0.0 ± 0.6; 0.6	09-18-99	285	2.8 ± 0.4; 0.6	-0.6 ± 0.9; 0.9
03-27-99	292	2.3 ± 0.4; 0.5	-	09-25-99	292	2.4 ± 0.4; 0.6	-
1st Qtr. Mean±s.d.		2.4±0.5	0.0±0.4	3rd Qtr. Mean±s.d.		2.6±0.6	-0.0±0.3
04-03-99	312 ^d	2.7 ± 0.3; 0.6	0.2 ± 1.0; 1.0	10-02-99	279	2.8 ± 0.4; 0.6	-0.6 ± 0.6; 0.7
04-10-99	296	2.1 ± 0.3; 0.5	-	10-09-99	283	2.8 ± 0.4; 0.6	-
04-17-99	272	2.4 ± 0.4; 0.6	0.4 ± 0.9; 0.9	10-16-99	286	2.8 ± 0.4; 0.6	-0.4 ± 0.8; 0.8
04-24-99	280	1.8 ± 0.3; 0.5	-	10-23-99	288	2.0 ± 0.3; 0.5	-
05-01-99	293	1.7 ± 0.3; 0.5	-0.5 ± 1.0; 1.0	10-30-99	288	3.3 ± 0.4; 0.7	0.2 ± 0.5; 0.5
05-08-99	280	1.8 ± 0.4; 0.5	-	11-06-99	284	4.0 ± 0.5; 0.8	-
05-15-99	252 ^b	2.3 ± 0.4; 0.6	-0.3 ± 0.7; 0.7	11-13-99	287	4.4 ± 0.4; 0.9	-0.1 ± 0.6; 0.6
05-22-99	286	1.9 ± 0.3; 0.5	-	11-20-99	286	3.5 ± 0.4; 0.7	-
05-29-99	281	1.7 ± 0.3; 0.4	-0.3 ± 0.6; 0.6	11-27-99	282	4.3 ± 0.5; 0.9	-0.3 ± 0.5; 0.5
06-05-99	254 ^c	2.2 ± 0.3; 0.5	-	12-04-99	286	2.6 ± 0.4; 0.6	-
06-12-99	276 ^c	1.7 ± 0.3; 0.5	0.8 ± 1.1; 1.1	12-11-99	284	3.0 ± 0.4; 0.7	0.8 ± 0.6; 0.6
06-19-99	284	1.3 ± 0.3; 0.4	-	12-18-99	280	3.6 ± 0.4; 0.8	-
06-26-99	285	2.6 ± 0.4; 0.6	-0.3 ± 1.0; 1.0	12-24-99	248	3.6 ± 0.5; 0.8	-0.2 ± 0.5; 0.5
2nd Qtr. Mean±s.d.		2.0±0.4	-0.0±0.5	12-31-99	284	2.9 ± 0.4; 0.7	-
				4th Qtr. Mean±s.d.		3.3±0.7	-0.1±0.4

^a Volume based on a two week collection period.

^b Volume low; no apparent reason for low reading.

^c Volume low; low meter reading possibly due to work being done at substation.

^d Removed pump for repair; regulator not adjusting properly.

^e Timer bad; used estimated reading of 162.7 for volume calculation. Installed new timer.

DRESDEN

Table 1. Airborne Particulates and Iodine Cartridges
 Collection: Airborne Particulates - Continuous; weekly exchange
 Iodine cartridges - Continuous; biweekly exchange
 ODCM-
 Required LLDs: Gross Beta = 0.01, I-131 = 0.07 pCi/m³
 Units: 10⁻² pCi/m³

D-45 McKinley Woods Road							
Date Collected	Volume (m ³)	Gross Beta	I-131 ^a	Date Collected	Volume (m ³)	Gross Beta	I-131 ^a
01-02-99	286	2.8 ± 0.4; 0.6	-	07-03-99	283	1.9 ± 0.3; 0.5	-
01-09-99	276 ^b	3.6 ± 0.4; 0.8	0.4 ± 0.4; 0.4	07-09-99	260	2.3 ± 0.3; 0.5	0.2 ± 0.5; 0.5
01-16-99	282	3.7 ± 0.4; 0.8	-	07-17-99	311	2.6 ± 0.3; 0.6	-
01-23-99	278	1.9 ± 0.3; 0.5	0.0 ± 0.5; 0.5	07-24-99	294	2.7 ± 0.3; 0.6	0.1 ± 1.1; 1.1
01-30-99	286	2.0 ± 0.3; 0.5	-	07-31-99	287	2.8 ± 0.4; 0.7	-
02-06-99	282	2.6 ± 0.3; 0.6	-0.7 ± 0.7; 0.7	08-06-99	248	1.9 ± 0.4; 0.5	-0.2 ± 0.7; 0.7
02-13-99	284	2.4 ± 0.3; 0.5	-	08-13-99	290	2.4 ± 0.4; 0.6	-
02-20-99	285	2.1 ± 0.3; 0.5	-0.1 ± 0.6; 0.6	08-22-99	362	2.0 ± 0.3; 0.4	0.0 ± 0.4; 0.4
02-27-99	293	2.1 ± 0.3; 0.5	-	08-28-99	246	3.4 ± 0.4; 0.7	-
03-06-99	279	1.9 ± 0.3; 0.5	0.1 ± 0.6; 0.6	09-04-99	284	3.0 ± 0.4; 0.7	-0.0 ± 0.6; 0.6
03-13-99	282	1.8 ± 0.4; 0.5	-	09-11-99	284	3.0 ± 0.4; 0.7	-
03-20-99	285	1.9 ± 0.3; 0.5	-0.3 ± 0.6; 0.6	09-18-99	285	2.8 ± 0.4; 0.6	-0.2 ± 0.7; 0.7
03-27-99	283	1.7 ± 0.4; 0.5	-	09-25-99	292	2.5 ± 0.4; 0.6	-
1st Qtr. Mean±s.d.		2.3±0.7	-0.1±0.4	3rd Qtr. Mean±s.d.		2.6±0.5	-0.0±0.2
04-03-99	288	2.0 ± 0.3; 0.5	-0.2 ± 0.7; 0.7	10-02-99	279	2.5 ± 0.4; 0.6	0.2 ± 0.7; 0.7
04-10-99	296	1.5 ± 0.3; 0.4	-	10-09-99	283	2.3 ± 0.4; 0.6	-
04-17-99	271	1.3 ± 0.3; 0.4	-0.3 ± 0.5; 0.5	10-16-99	286	3.1 ± 0.4; 0.7	-0.0 ± 0.8; 0.8
04-24-99	280	1.6 ± 0.3; 0.4	-	10-23-99	283	2.4 ± 0.4; 0.6	-
05-01-99	294	1.6 ± 0.3; 0.5	-0.1 ± 0.5; 0.5	10-30-99	284	3.8 ± 0.4; 0.8	0.1 ± 0.6; 0.6
05-08-99	280	1.4 ± 0.3; 0.4	-	11-06-99	279	3.3 ± 0.4; 0.7	-
05-15-99	287	1.5 ± 0.3; 0.4	0.3 ± 0.6; 0.6	11-13-99	287	3.6 ± 0.4; 0.7	-0.1 ± 0.6; 0.6
05-22-99	281	2.1 ± 0.3; 0.5	-	11-20-99	286	3.8 ± 0.4; 0.8	-
05-29-99	280	2.0 ± 0.3; 0.5	-0.2 ± 0.7; 0.7	11-27-99	277	4.6 ± 0.5; 1.0	0.2 ± 0.4; 0.4
06-05-99	299	2.0 ± 0.3; 0.5	-	12-04-99	286	3.0 ± 0.4; 0.7	-
06-12-99	275	1.6 ± 0.3; 0.4	0.1 ± 0.8; 0.8	12-11-99	284	3.5 ± 0.4; 0.8	0.4 ± 0.5; 0.5
06-19-99	284	1.0 ± 0.3; 0.4	-	12-18-99	284	3.3 ± 0.4; 0.7	-
06-26-99	285	2.5 ± 0.4; 0.6	0.5 ± 1.4; 1.4	12-24-99	246	3.2 ± 0.5; 0.7	-0.3 ± 0.5; 0.5
2nd Qtr. Mean±s.d.		1.7±0.4	0.0±0.3	12-31-99	285	2.8 ± 0.4; 0.6	-
				4th Qtr. Mean±s.d.		3.2±0.6	0.1±0.2

^a Volume based on a two week collection period.

^b Volume low; no apparent reason for low reading.

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Table 1. Airborne Particulates and Iodine Cartridges
 Collection: Airborne Particulates - Continuous; weekly exchange
 Iodine cartridges - Continuous; biweekly exchange
 ODCM-
 Required LLDs: Gross Beta = 0.01, I-131 = 0.07 pCi/m³
 Units: 10⁻² pCi/m³

D-53 Grundy County Road							
Date Collected	Volume (m ³)	Gross Beta	I-131 ^a	Date Collected	Volume (m ³)	Gross Beta	I-131 ^a
01-02-99	291	3.4 ± 0.4; 0.7	-	07-03-99	292	1.7 ± 0.3; 0.4	-
01-09-99	283	3.5 ± 0.4; 0.7	0.6 ± 0.4; 0.4	07-09-99	246	2.1 ± 0.4; 0.5	-0.2 ± 0.8; 0.8
01-16-99	282	3.5 ± 0.4; 0.7	-	07-17-99	324	2.9 ± 0.3; 0.6	-
01-23-99	288	1.9 ± 0.3; 0.5	-0.3 ± 0.5; 0.5	07-24-99	284	2.2 ± 0.3; 0.5	-0.2 ± 0.6; 0.6
01-30-99	280	2.6 ± 0.4; 0.6	-	07-31-99	287	2.5 ± 0.4; 0.6	-
02-06-99	286	2.9 ± 0.4; 0.6	-0.4 ± 0.8; 0.8	08-06-99	248	1.2 ± 0.4; 0.4	0.4 ± 0.6; 0.6
02-13-99	283	2.0 ± 0.3; 0.5	-	08-13-99	289	1.7 ± 0.3; 0.4	-
02-20-99	286	2.1 ± 0.3; 0.5	0.1 ± 0.7; 0.7	08-22-99	363	1.6 ± 0.2; 0.4	-0.1 ± 0.4; 0.4
02-27-99	282	2.0 ± 0.3; 0.5	-	08-28-99	246	2.2 ± 0.4; 0.5	-
03-06-99	281	1.9 ± 0.3; 0.5	-0.2 ± 0.6; 0.6	09-04-99	283	1.8 ± 0.4; 0.5	-0.0 ± 0.6; 0.6
03-13-99	282	1.9 ± 0.4; 0.5	-	09-11-99	285	2.2 ± 0.4; 0.5	-
03-20-99	288	2.4 ± 0.3; 0.6	0.0 ± 0.5; 0.5	09-18-99	280	2.4 ± 0.3; 0.6	-0.1 ± 0.6; 0.6
03-27-99	279	1.8 ± 0.4; 0.5	-	09-25-99	291	1.9 ± 0.4; 0.5	-
1st Qtr. Mean±s.d.		2.5±0.7	-0.0±0.3	3rd Qtr. Mean±s.d.		2.0±0.4	-0.0±0.2
04-03-99	296	2.5 ± 0.3; 0.6	0.7 ± 1.4; 1.4	10-02-99	285	1.4 ± 0.3; 0.4	0.0 ± 0.7; 0.7
04-10-99	288	1.9 ± 0.3; 0.5	-	10-09-99	278	2.4 ± 0.4; 0.6	-
04-17-99	273	1.6 ± 0.4; 0.4	-0.1 ± 0.5; 0.5	10-16-99	287	3.2 ± 0.4; 0.7	-0.4 ± 0.8; 0.8
04-24-99	297	1.8 ± 0.3; 0.4	-	10-23-99	282	2.2 ± 0.4; 0.5	-
05-01-99	277	1.6 ± 0.4; 0.5	-0.2 ± 1.1; 1.1	10-30-99	288	3.3 ± 0.4; 0.7	0.1 ± 0.6; 0.6
05-08-99	281	1.4 ± 0.3; 0.4	-	11-06-99	281	4.0 ± 0.5; 0.9	-
05-15-99	283 ^b	2.0 ± 0.4; 0.5	0.8 ± 0.6; 0.6	11-13-99	285	3.9 ± 0.4; 0.8	-0.2 ± 0.6; 0.6
05-22-99	288	2.2 ± 0.3; 0.5	-	11-20-99	286	3.1 ± 0.4; 0.7	-
05-29-99	279	1.9 ± 0.3; 0.5	0.2 ± 0.7; 0.7	11-27-99	277	4.7 ± 0.5; 1.0	0.1 ± 0.5; 0.5
06-05-99	300	2.0 ± 0.3; 0.5	-	12-04-99	287	3.2 ± 0.4; 0.7	-
06-12-99	276	1.6 ± 0.3; 0.4	-0.2 ± 0.4; 0.4	12-11-99	283	3.1 ± 0.4; 0.7	0.3 ± 0.6; 0.6
06-19-99	283	1.0 ± 0.3; 0.4	-	12-18-99	282	3.3 ± 0.4; 0.7	-
06-26-99	287	2.4 ± 0.4; 0.6	0.2 ± 1.4; 1.4	12-24-99	246	3.6 ± 0.5; 0.8	-0.3 ± 0.5; 0.5
2nd Qtr. Mean±s.d.		1.8±0.4	0.2±0.4	12-31-99	288	2.9 ± 0.4; 0.7	-
				4th Qtr. Mean±s.d.		3.2±0.8	-0.0±0.2

^a Volume based on a two week collection period.

^b Timer bad; used estimated reading of 167.7; replaced timer.

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Table 2. Airborne Particulates

Collection: Quarterly composites of weekly collections
 ODCM-
 Required LLDs: Cs-134 = 0.01, Cs-137 = 0.01 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

1999 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	CDAP-2591,2	CDAP-5168	CDAP-8259	CDAP-10183
Volume	3,698	3,703	3,709	3,957
Mn-54	1.8 ± 6.2; 6.2	-0.2 ± 4.4; 4.4	2.7 ± 3.4; 3.5	0.7 ± 2.9; 2.9
Fe-59	-3.2 ± 13.2; 13.2	-7.1 ± 64.8; 64.8	6.0 ± 11.6; 11.6	1.6 ± 5.2; 5.2
Co-58	2.1 ± 6.8; 6.8	1.3 ± 5.3; 5.3	1.1 ± 5.0; 5.0	3.5 ± 2.6; 2.7
Co-60	5.8 ± 14.0; 14.0	0.4 ± 2.8; 2.8	1.3 ± 20.0; 20.0	2.0 ± 3.3; 3.4
Zn-65	-3.4 ± 12.2; 12.2	-2.0 ± 10.4; 10.4	-3.9 ± 9.3; 9.3	-7.9 ± 6.4; 6.6
Zr/Nb-95	-8.1 ± 9.1; 9.3	-3.8 ± 6.7; 6.7	-2.8 ± 7.6; 7.6	-7.8 ± 5.5; 5.7
Cs-134	-2.3 ± 222.3; 222.3	5.4 ± 11.9; 11.9	0.3 ± 0.2; 0.2	4.3 ± 2.9; 3.0
Cs-137	-1.7 ± 4.6; 4.6	0.1 ± 4.4; 4.4	1.5 ± 3.7; 3.7	0.2 ± 3.2; 3.2
Ba/La-140	-30.8 ± 27.8; 28.4	-23.9 ± 237.0; 237.0	3.3 ± 48.1; 48.1	-18.4 ± 3.5; 4.8

D-02 Onsite Station 2

1999 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	CDAP-2593	CDAP-5169	CDAP-8260,1	CDAP-10184
Volume	3,708	3,719	3,718	3,954
Mn-54	-3.6 ± 5.2; 5.2	3.7 ± 4.7; 4.7	-0.9 ± 3.2; 3.2	2.9 ± 3.6; 3.7
Fe-59	-22.1 ± 88.3; 88.4	8.3 ± 8.3; 8.5	0.1 ± 2.4; 2.4	1.8 ± 7.4; 7.5
Co-58	7.4 ± 8.2; 8.3	-3.2 ± 6.1; 6.1	-2.7 ± 3.8; 3.9	6.2 ± 3.5; 3.6
Co-60	0.4 ± 0.7; 0.7	3.2 ± 40.8; 40.8	-0.7 ± 1.3; 1.3	3.7 ± 4.7; 4.7
Zn-65	8.9 ± 10.6; 10.7	-1.0 ± 12.2; 12.2	-17.7 ± 9.5; 10.0	-1.7 ± 8.3; 8.3
Zr/Nb-95	-1.9 ± 12.7; 12.7	1.1 ± 6.7; 6.7	-2.3 ± 7.0; 7.0	4.1 ± 3.4; 3.4
Cs-134	2.7 ± 60.8; 60.8	-0.6 ± 2.4; 2.4	-0.4 ± 1.5; 1.5	1.5 ± 4.2; 4.2
Cs-137	-0.6 ± 6.2; 6.2	3.9 ± 4.2; 4.3	0.9 ± 3.0; 3.0	-3.1 ± 4.1; 4.1
Ba/La-140	-37.8 ± 110.0; 110.2	-20.4 ± 24.1; 24.4	-0.6 ± 204.2; 204.2	2.2 ± 5.0; 5.0

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Table 2. Airborne Particulates

Collection: Quarterly composites of weekly collections
 ODCM-
 Required LLDs: Cs-134 = 0.01, Cs-137 = 0.01 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

1999 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	CDAP-2594	CDAP-5170	CDAP-8262	CDAP-10185
Volume	3,703	3,683	3,714	3,953
Mn-54	2.8 ± 7.1; 7.1	4.3 ± 5.1; 5.2	-1.7 ± 4.0; 4.0	3.0 ± 3.1; 3.2
Fe-59	-6.3 ± 8.6; 8.7	-10.1 ± 54.3; 54.3	-10.4 ± 48.9; 48.9	-8.4 ± 7.4; 7.6
Co-58	3.3 ± 7.7; 7.7	-2.3 ± 4.2; 4.2	-1.5 ± 4.5; 4.5	-2.0 ± 3.4; 3.4
Co-60	-3.8 ± 9.7; 9.7	1.9 ± 3.5; 3.5	-1.5 ± 1.2; 1.2	0.8 ± 3.8; 3.8
Zn-65	-1.0 ± 13.5; 13.5	3.5 ± 8.5; 8.5	-4.7 ± 6.8; 6.8	-27.4 ± 9.1; 10.3
Zr/Nb-95	0.8 ± 15.0; 15.0	7.7 ± 7.4; 7.5	3.7 ± 8.2; 8.2	-3.1 ± 3.8; 3.8
Cs-134	-2.1 ± 5.4; 5.4	-1.7 ± 3.4; 3.4	-3.0 ± 5.0; 5.0	-1.5 ± 3.9; 3.9
Cs-137	1.7 ± 5.1; 5.1	-1.8 ± 3.9; 3.9	-1.5 ± 4.5; 4.5	0.7 ± 2.9; 2.9
Ba/La-140	-10.6 ± 128.0; 128.0	17.2 ± 198.0; 198.0	-7.4 ± 29.8; 29.8	-13.3 ± 3.9; 4.5

D-04 Collins Road

1999 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	CDAP-2595	CDAP-5171	CDAP-8263	CDAP-10186
Volume	3,699	3,718	3,702	3,956
Mn-54	4.3 ± 7.8; 7.8	-2.2 ± 4.3; 4.4	1.3 ± 5.6; 5.6	-2.3 ± 3.5; 3.5
Fe-59	-23.5 ± 41.3; 41.5	6.4 ± 26.9; 26.9	-4.9 ± 5.1; 5.1	-0.9 ± 6.6; 6.6
Co-58	3.3 ± 11.4; 11.4	-4.0 ± 5.3; 5.4	0.3 ± 6.7; 6.7	0.4 ± 2.9; 2.9
Co-60	-7.0 ± 8.1; 8.2	1.7 ± 1.2; 1.2	2.1 ± 27.8; 27.8	0.2 ± 3.4; 3.4
Zn-65	6.0 ± 20.2; 20.2	7.4 ± 9.3; 9.4	-4.0 ± 12.4; 12.4	-8.9 ± 8.5; 8.7
Zr/Nb-95	3.1 ± 14.6; 14.6	-14.0 ± 8.1; 8.5	-6.2 ± 10.7; 10.8	-4.4 ± 6.5; 6.6
Cs-134	2.7 ± 14.2; 14.2	1.9 ± 33.3; 33.3	1.3 ± 47.4; 47.4	0.6 ± 4.3; 4.3
Cs-137	2.1 ± 7.4; 7.4	-2.5 ± 5.2; 5.2	3.2 ± 5.4; 5.4	0.4 ± 3.0; 3.0
Ba/La-140	-124.0 ± 798.0; 798.3	6.5 ± 12.8; 12.9	12.2 ± 26.5; 26.6	17.3 ± 5.7; 6.5

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Table 2. Airborne Particulates

Collection: Quarterly composites of weekly collections
 ODCM-
 Required LLDs: Cs-134 = 0.01, Cs-137 = 0.01 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

1999 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	CDAP-2596	CDAP-5172	CDAP-8264	CDAP-10187
Volume	3,715	3,190	3,719	3,953
Mn-54	0.8 ± 6.7; 6.7	4.1 ± 5.0; 5.1	0.4 ± 3.8; 3.8	1.0 ± 3.4; 3.4
Fe-59	38.6 ± 99.7; 99.9	-2.6 ± 2.1; 2.1	2.9 ± 3.3; 3.4	0.9 ± 5.6; 5.6
Co-58	1.5 ± 8.3; 8.3	-7.0 ± 6.7; 6.8	0.3 ± 4.5; 4.5	1.2 ± 2.9; 3.0
Co-60	3.0 ± 47.3; 47.3	-6.1 ± 15.8; 15.8	3.0 ± 32.8; 32.8	0.9 ± 4.2; 4.2
Zn-65	3.2 ± 14.0; 14.0	2.3 ± 10.7; 10.7	-2.5 ± 10.9; 10.9	-1.7 ± 7.1; 7.1
Zr/Nb-95	-4.9 ± 13.5; 13.5	-1.8 ± 8.8; 8.8	-3.9 ± 10.2; 10.2	-5.0 ± 3.5; 3.6
Cs-134	-2.5 ± 7.3; 7.3	4.8 ± 9.4; 9.4	-0.5 ± 1.6; 1.6	2.9 ± 3.0; 3.0
Cs-137	1.3 ± 5.6; 5.6	2.3 ± 4.6; 4.7	-3.4 ± 4.5; 4.6	-2.5 ± 3.3; 3.4
Ba/La-140	25.4 ± 37.7; 38.0	15.2 ± 16.4; 16.6	-22.9 ± 25.2; 25.5	-24.7 ± 4.8; 6.5

D-12 (C) Lisbon

1999 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	CDAP-2597	CDAP-5173	CDAP-8265	CDAP-10188
Volume	3,684	3,659	3,718	3,952
Mn-54	0.9 ± 3.1; 3.1	-1.5 ± 5.1; 5.1	-0.2 ± 5.0; 5.0	0.5 ± 4.6; 4.6
Fe-59	5.5 ± 61.5; 61.5	-4.9 ± 7.9; 7.9	-2.0 ± 1.9; 1.9	-1.8 ± 8.5; 8.5
Co-58	2.7 ± 4.4; 4.4	2.3 ± 5.2; 5.2	-1.9 ± 6.7; 6.7	-0.4 ± 4.0; 4.0
Co-60	2.0 ± 2.8; 2.8	6.2 ± 2.7; 3.0	2.3 ± 9.4; 9.4	6.3 ± 5.7; 5.9
Zn-65	-8.5 ± 8.0; 8.1	-12.0 ± 13.6; 13.8	-9.4 ± 8.9; 9.0	1.1 ± 12.0; 12.0
Zr/Nb-95	-2.1 ± 7.5; 7.5	9.4 ± 8.5; 8.6	0.5 ± 9.5; 9.5	3.5 ± 4.9; 4.9
Cs-134	0.6 ± 0.2; 0.2	-4.3 ± 15.9; 15.9	-2.6 ± 7.2; 7.2	0.7 ± 4.7; 4.7
Cs-137	1.0 ± 3.4; 3.4	4.7 ± 5.6; 5.7	0.4 ± 5.0; 5.0	-1.4 ± 4.9; 4.9
Ba/La-140	6.1 ± 18.4; 18.4	32.7 ± 39.2; 39.6	-79.1 ± 63.3; 64.8	3.0 ± 5.9; 5.9

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Table 2. Airborne Particulates

Collection: Quarterly composites of weekly collections
 ODCM-
 Required LLDs: Cs-134 = 0.01, Cs-137 = 0.01 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

1999 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	CDAP-2598	CDAP-5174	CDAP-8266	CDAP-10189
Volume	3,689	3,709	3,733	3,954
Mn-54	0.8 ± 3.8; 3.8	3.0 ± 4.0; 4.0	-4.9 ± 4.9; 5.0	1.1 ± 4.5; 4.5
Fe-59	7.5 ± 134.0; 134.0	-25.3 ± 106.0; 106.1	-5.8 ± 10.7; 10.7	1.9 ± 8.8; 8.8
Co-58	-3.9 ± 5.9; 5.9	6.1 ± 5.4; 5.5	-6.9 ± 7.3; 7.4	2.1 ± 4.4; 4.4
Co-60	4.2 ± 16.9; 16.9	-7.9 ± 6.5; 6.7	-7.2 ± 17.6; 17.6	16.2 ± 5.7; 6.4
Zn-65	-1.0 ± 9.6; 9.6	-9.4 ± 13.3; 13.4	-8.5 ± 12.1; 12.2	-8.9 ± 11.6; 11.7
Zr/Nb-95	-0.4 ± 8.2; 8.2	8.4 ± 7.1; 7.2	2.3 ± 9.4; 9.4	-3.6 ± 9.7; 9.7
Cs-134	-0.5 ± 0.8; 0.9	1.3 ± 2.6; 2.6	0.8 ± 0.9; 0.9	-2.4 ± 4.6; 4.6
Cs-137	1.8 ± 4.2; 4.2	-0.9 ± 5.6; 5.6	1.8 ± 5.5; 5.5	-0.6 ± 4.9; 4.9
Ba/La-140	-24.6 ± 169.0; 169.1	-20.4 ± 40.8; 41.0	47.3 ± 253.0; 253.1	-11.0 ± 6.7; 7.0

D-53 Grundy County Road

1999 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	CDAP-2599	CDAP-5175	CDAP-8267	CDAP-10190
Volume	3,699	3,715	3,724	3,943
Mn-54	1.4 ± 4.7; 4.7	5.0 ± 3.9; 4.0	3.9 ± 4.7; 4.7	3.4 ± 6.0; 6.0
Fe-59	6.6 ± 41.7; 41.7	-6.2 ± 55.0; 55.0	-2.9 ± 13.5; 13.5	-11.6 ± 11.3; 11.5
Co-58	-2.9 ± 5.6; 5.6	9.2 ± 4.4; 4.7	-1.6 ± 5.5; 5.5	6.4 ± 6.3; 6.4
Co-60	5.1 ± 20.4; 20.4	-1.9 ± 2.0; 2.0	0.1 ± 0.1; 0.1	-3.6 ± 7.6; 7.6
Zn-65	-0.5 ± 9.8; 9.8	-8.4 ± 11.9; 12.0	-4.9 ± 11.5; 11.5	-6.8 ± 15.0; 15.1
Zr/Nb-95	-4.3 ± 8.4; 8.4	2.5 ± 8.5; 8.5	-4.3 ± 9.8; 9.8	-17.0 ± 6.8; 7.5
Cs-134	1.1 ± 2.4; 2.4	-0.5 ± 0.4; 0.4	5.2 ± 30.3; 30.3	-1.3 ± 6.1; 6.2
Cs-137	4.2 ± 3.9; 4.0	2.2 ± 4.2; 4.3	-3.5 ± 4.6; 4.6	-0.8 ± 4.6; 4.6
Ba/La-140	-31.9 ± 118.0; 118.1	-5.4 ± 56.2; 56.2	35.0 ± 234.0; 234.1	48.3 ± 7.0; 11.1

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Table 3.	Milk	
Collection:	Biweekly (May - October)	
	Monthly (November - April)	
ODCM-	I-131 = 0.5 pCi/L (May - October), I-131 = 5 pCi/L (November - April),	
Required LLDs:	Cs-134 = 15, Cs-137 = 18, Ba/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	01-01-99	02-05-99	03-05-99	04-02-99
Lab Code	CDMI-3	CDMI-686	CDMI-1362	CDMI-1947
I-131	0.18 ± 0.24; 0.24	-0.26 ± 0.32; 0.32	0.05 ± 0.13; 0.13	-0.01 ± 0.19; 0.19
Mn-54	2.1 ± 3.1; 3.1	1.1 ± 2.0; 2.0	-0.1 ± 2.1; 2.1	0.1 ± 2.1; 2.1
Fe-59	-7.8 ± 10.4; 10.5	-0.3 ± 1.6; 1.6	2.2 ± 13.8; 13.8	-3.9 ± 20.5; 20.5
Co-58	-4.4 ± 3.3; 3.4	0.6 ± 1.8; 1.8	-0.9 ± 2.0; 2.0	0.8 ± 2.3; 2.3
Co-60	-5.7 ± 4.6; 4.7	2.1 ± 5.8; 5.8	0.0 ± 0.0; 0.0	2.2 ± 2.8; 2.8
Zn-65	0.9 ± 9.5; 9.5	-3.4 ± 4.3; 4.3	-1.6 ± 5.4; 5.4	2.9 ± 6.3; 6.3
Zr/Nb-95	-0.9 ± 3.5; 3.5	-0.7 ± 2.1; 2.1	-1.0 ± 2.2; 2.2	-1.2 ± 2.4; 2.4
Cs-134	0.8 ± 1.1; 1.1	0.2 ± 0.8; 0.8	0.5 ± 0.9; 0.9	0.6 ± 0.7; 0.7
Cs-137	2.4 ± 3.3; 3.3	1.2 ± 1.9; 1.9	-0.8 ± 2.3; 2.3	0.8 ± 2.6; 2.6
Ba/La-140	0.9 ± 4.1; 4.1	-2.0 ± 4.1; 4.1	-0.7 ± 7.7; 7.7	2.1 ± 15.5; 15.5
Date Collected	05-01-99	05-15-99	05-21-99	06-04-99
Lab Code	CDMI-2893	CDMI-3327	CDMI-3431 ^a	CDMI-3868
I-131	0.08 ± 0.19; 0.19	0.11 ± 0.18; 0.18	-0.10 ± 0.17; 0.17	-0.04 ± 0.17; 0.17
Mn-54	1.0 ± 2.1; 2.1	1.2 ± 3.5; 3.5	2.9 ± 3.4; 3.4	0.6 ± 2.2; 2.2
Fe-59	-0.9 ± 4.3; 4.3	-2.4 ± 2.7; 2.7	4.0 ± 4.6; 4.6	4.7 ± 7.5; 7.5
Co-58	-0.9 ± 2.4; 2.4	1.8 ± 3.7; 3.7	-0.1 ± 3.5; 3.5	0.7 ± 2.3; 2.3
Co-60	-0.5 ± 1.5; 1.5	1.5 ± 4.8; 4.8	1.4 ± 2.4; 2.4	-0.2 ± 0.8; 0.8
Zn-65	-2.7 ± 6.2; 6.2	-0.9 ± 9.7; 9.7	-0.4 ± 9.4; 9.4	-4.2 ± 6.5; 6.5
Zr/Nb-95	-0.1 ± 2.4; 2.4	-0.9 ± 4.0; 4.0	-3.2 ± 5.5; 5.6	-0.3 ± 2.2; 2.2
Cs-134	-0.6 ± 0.6; 0.6	-1.5 ± 2.2; 2.2	-0.9 ± 4.0; 4.0	1.8 ± 3.8; 3.8
Cs-137	1.4 ± 2.3; 2.3	-1.3 ± 3.7; 3.7	0.3 ± 4.3; 4.3	1.3 ± 2.8; 2.8
Ba/La-140	-3.3 ± 6.8; 6.8	2.2 ± 2.9; 2.9	0.1 ± 0.4; 0.4	-1.1 ± 3.5; 3.5

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Table 3.	Milk	
Collection:	Biweekly (May - October)	
	Monthly (November - April)	
ODCM- Required LLDs:	I-131 = 0.5 pCi/L (May - October), I-131 = 5 pCi/L (November - April), Cs-134 = 15, Cs-137 = 18, Ba/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	06-18-99	07-02-99	07-16-99	07-31-99
Lab Code	CDMI-4272	CDMI-4635	CDMI-5241	NS ^b
I-131	-0.06 ± 0.25; 0.25	0.18 ± 0.21; 0.21	-0.08 ± 0.25; 0.25	-
Mn-54	-0.3 ± 2.1; 2.1	1.4 ± 2.8; 2.8	-0.2 ± 1.9; 1.9	-
Fe-59	2.0 ± 2.9; 2.9	-1.6 ± 1.8; 1.8	-0.4 ± 2.1; 2.1	-
Co-58	0.1 ± 1.9; 1.9	0.7 ± 2.4; 2.4	-1.3 ± 2.0; 2.0	-
Co-60	1.1 ± 12.1; 12.1	0.1 ± 0.4; 0.4	-1.0 ± 5.0; 5.0	-
Zn-65	-3.9 ± 4.7; 4.7	-0.1 ± 6.0; 6.0	1.1 ± 4.7; 4.7	-
Zr/Nb-95	1.3 ± 2.1; 2.1	0.1 ± 2.7; 2.7	-0.7 ± 3.0; 3.0	-
Cs-134	-0.1 ± 0.2; 0.2	-0.7 ± 1.1; 1.1	2.0 ± 7.5; 7.5	-
Cs-137	-0.4 ± 2.0; 2.0	1.0 ± 2.8; 2.8	-0.1 ± 2.2; 2.2	-
Ba/La-140	-0.8 ± 5.0; 5.0	-1.5 ± 10.9; 10.9	-1.9 ± 2.6; 2.7	-
Date Collected	08-13-99	08-27-99	09-10-99	09-24-99
Lab Code	CDMI-5966	CDMI-6246	CDMI-6648	CDMI-7009
I-131	0.02 ± 0.25; 0.25	0.04 ± 0.19; 0.19	0.01 ± 0.21; 0.21	0.02 ± 0.20; 0.20
Mn-54	-0.4 ± 1.7; 1.7	-0.8 ± 1.8; 1.8	-0.8 ± 3.3; 3.3	-1.0 ± 3.6; 3.6
Fe-59	-1.6 ± 9.2; 9.2	2.3 ± 2.0; 2.0	-1.2 ± 4.6; 4.6	-4.5 ± 7.2; 7.2
Co-58	0.9 ± 1.8; 1.8	-1.9 ± 1.8; 1.8	2.2 ± 3.8; 3.9	0.4 ± 3.5; 3.5
Co-60	-1.2 ± 1.9; 1.9	-0.3 ± 2.0; 2.0	0.3 ± 0.5; 0.5	1.7 ± 2.8; 2.8
Zn-65	-6.0 ± 4.8; 4.9	0.2 ± 5.1; 5.1	-3.6 ± 9.7; 9.7	0.6 ± 8.9; 8.9
Zr/Nb-95	0.3 ± 2.1; 2.1	0.1 ± 1.9; 1.9	-1.9 ± 3.1; 3.1	0.2 ± 3.0; 3.0
Cs-134	0.4 ± 0.3; 0.3	0.3 ± 0.2; 0.2	0.4 ± 1.0; 1.0	1.1 ± 2.2; 2.2
Cs-137	0.4 ± 1.9; 1.9	0.3 ± 2.1; 2.1	1.2 ± 3.4; 3.4	-0.7 ± 3.7; 3.7
Ba/La-140	-0.9 ± 1.1; 1.1	-0.4 ± 1.2; 1.2	-1.7 ± 3.7; 3.7	3.3 ± 3.5; 3.5

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Table 3.	Milk	
Collection:	Biweekly (May - October)	
	Monthly (November - April)	
ODCM- Required LLDs:	I-131 = 0.5 pCi/L (May - October), I-131 = 5 pCi/L (November - April), Cs-134 = 15, Cs-137 = 18, Ba/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	10-08-99	10-22-99	11-05-99	12-03-99
Lab Code	CDMI-7585	CDMI-8287	CDMI-8691	CDMI-9281
I-131	-0.20 ± 0.26; 0.26	-0.02 ± 0.19; 0.19	0.04 ± 0.18; 0.18	-0.32 ± 0.38; 0.39
Mn-54	1.2 ± 2.1; 2.1	-0.1 ± 1.9; 1.9	1.4 ± 2.0; 2.0	0.8 ± 2.5; 2.5
Fe-59	6.1 ± 9.8; 9.9	-3.0 ± 5.4; 5.4	1.9 ± 8.0; 8.0	-1.3 ± 3.1; 3.1
Co-58	-1.5 ± 2.0; 2.0	0.6 ± 2.0; 2.0	0.8 ± 1.9; 1.9	-0.8 ± 2.2; 2.2
Co-60	1.2 ± 10.2; 10.2	-0.3 ± 2.6; 2.6	-0.9 ± 1.6; 1.6	-0.0 ± 2.3; 2.3
Zn-65	-2.2 ± 4.1; 4.1	-3.6 ± 4.9; 5.0	-2.8 ± 5.3; 5.3	-5.1 ± 6.6; 6.6
Zr/Nb-95	0.8 ± 2.3; 2.3	-0.7 ± 2.2; 2.2	-3.5 ± 9.9; 9.9	0.6 ± 3.0; 3.0
Cs-134	0.1 ± 0.1; 0.1	1.5 ± 0.7; 0.7	-0.5 ± 2.2; 2.2	3.3 ± 3.2; 3.2
Cs-137	0.1 ± 2.3; 2.3	1.0 ± 2.2; 2.2	-0.2 ± 2.1; 2.1	-0.5 ± 2.3; 2.3
Ba/La-140	0.3 ± 3.5; 3.5	0.4 ± 0.7; 0.7	2.8 ± 6.1; 6.1	0.6 ± 0.8; 0.8

^a Location shared with Braidwood Station; extra week of milk collection due to scheduling conflict in May 1999; conflict resolved in June 1999.

^b NS = No sample. See Section 2.0, page III-5 - Listing of Missed Samples.

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Table 4. Fish, Edible Portions

Collection: Semiannually

ODCM-

Required LLDs: Mn-54 = 0.13, Fe-59 = 0.26, Co-58 = 0.13, Co-60 = 0.13, Zn-65 = 0.26, Cs-134 = 0.1, Cs-137 = 0.1 pCi/g wet weight

Other LLDs: Zr/Nb-95 = 0.20, Ba/La-140 = 0.30 pCi/g wet weight

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

Sample Description and Concentration

D-28 Dresden Pool of Illinois River

Date Collected	05-11-99	05-11-99	05-11-99	05-11-99
Lab Code	CDF-3288	CDF-3289	CDF-3290	CDF-3291
Type	Carp	Largemouth Bass	Gizzard Shad	Smallmouth Buffalo
Mn-54	-0.5 ± 1.0; 1.0	0.0 ± 0.7; 0.7	-0.2 ± 1.2; 1.2	0.1 ± 0.9; 0.9
Fe-59	-0.3 ± 0.8; 0.8	-0.8 ± 1.6; 1.6	-0.2 ± 1.1; 1.1	-1.5 ± 2.0; 2.0
Co-58	0.1 ± 1.2; 1.2	-0.2 ± 0.9; 0.9	-0.8 ± 1.4; 1.4	0.1 ± 0.9; 0.9
Co-60	-0.0 ± 0.1; 0.1	0.2 ± 1.3; 1.3	1.0 ± 1.1; 1.1	-0.4 ± 4.3; 4.3
Zn-65	1.3 ± 3.1; 3.1	1.6 ± 1.9; 1.9	-0.2 ± 3.2; 3.2	-0.5 ± 2.1; 2.1
Zr/Nb-95	-0.3 ± 2.1; 2.1	-0.4 ± 0.8; 0.8	0.4 ± 1.4; 1.4	1.0 ± 1.2; 1.2
Cs-134	-0.4 ± 45.4; 45.4	-0.1 ± 0.5; 0.5	0.5 ± 4.8; 4.8	0.4 ± 0.8; 0.8
Cs-137	0.0 ± 1.1; 1.1	0.3 ± 0.8; 0.8	-1.0 ± 1.3; 1.3	0.1 ± 0.9; 0.9
Ba/La-140	0.6 ± 4.3; 4.3	-1.5 ± 5.8; 5.8	-1.6 ± 8.2; 8.2	-1.4 ± 3.5; 3.5
Date Collected	10-20-99	10-20-99	10-20-99	10-20-99
Lab Code	CDF-8170	CDF-8171,2	CDF-8173	CDF-8174
Type	Largemouth Bass	Gizzard Shad	Carp	Freshwater Drum
Mn-54	-0.3 ± 0.5; 0.5	-0.1 ± 1.1; 1.1	0.2 ± 0.8; 0.8	0.3 ± 1.1; 1.1
Fe-59	-0.7 ± 1.5; 1.5	1.4 ± 10.8; 10.8	1.1 ± 6.0; 6.0	0.6 ± 4.5; 4.5
Co-58	0.1 ± 0.6; 0.6	0.4 ± 1.1; 1.1	0.5 ± 0.9; 0.9	0.1 ± 0.9; 0.9
Co-60	-0.0 ± 0.2; 0.2	-0.8 ± 1.1; 1.1	0.9 ± 1.6; 1.6	0.3 ± 0.7; 0.7
Zn-65	-0.7 ± 1.3; 1.3	-0.2 ± 2.3; 2.3	-0.9 ± 2.0; 2.0	1.3 ± 2.2; 2.2
Zr/Nb-95	0.4 ± 0.7; 0.7	-0.9 ± 1.5; 1.5	0.5 ± 1.3; 1.3	0.7 ± 1.5; 1.5
Cs-134	0.0 ± 0.0; 0.0	0.6 ± 0.8; 0.8	-1.2 ± 1.9; 1.9	-0.1 ± 0.1; 0.1
Cs-137	0.4 ± 0.5; 0.5	0.2 ± 0.9; 0.9	0.7 ± 0.8; 0.8	0.2 ± 0.9; 0.9
Ba/La-140	-0.5 ± 16.7; 16.7	3.0 ± 5.3; 5.3	-1.3 ± 5.5; 5.5	2.6 ± 13.1; 13.1

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Table 4. Fish, Edible Portions

Collection: Semiannually

ODCM-

Required LLDs: Mn-54 = 0.13, Fe-59 = 0.26, Co-58 = 0.13, Co-60 = 0.13, Zn-65 = 0.26, Cs-134 = 0.1, Cs-137 = 0.1 pCi/g wet weight

Other LLDs: Zr/Nb-95 = 0.20, Ba/La-140 = 0.30 pCi/g wet weight

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

Sample Description and Concentration

D-46 (C) Des Plaines River, Upstream

Date Collected	05-12-99	05-12-99	05-12-99	05-12-99
Lab Code	CDF-3283,4	CDF-3285	CDF-3286	CDF-3287
Type	Channel Catfish	Carp	Largemouth Bass	Smallmouth Buffalo
Mn-54	0.2 ± 0.6; 0.6	-0.3 ± 1.1; 1.1	-0.6 ± 0.8; 0.8	0.0 ± 0.9; 0.9
Fe-59	0.6 ± 4.1; 4.1	-3.5 ± 7.3; 7.3	1.5 ± 5.9; 5.9	0.8 ± 2.8; 2.8
Co-58	-0.0 ± 0.7; 0.7	-0.3 ± 1.1; 1.1	0.6 ± 0.9; 0.9	-1.0 ± 0.8; 0.8
Co-60	0.6 ± 1.0; 1.0	0.6 ± 0.5; 0.5	0.5 ± 1.0; 1.0	0.0 ± 1.3; 1.3
Zn-65	-0.4 ± 1.5; 1.5	-0.7 ± 3.1; 3.1	-1.3 ± 2.3; 2.3	-0.2 ± 1.6; 1.6
Zr/Nb-95	-0.5 ± 0.8; 0.8	-1.3 ± 1.9; 1.9	0.2 ± 0.3; 0.3	0.3 ± 1.0; 1.0
Cs-134	-0.1 ± 0.4; 0.4	0.2 ± 0.7; 0.7	0.3 ± 1.0; 1.0	-0.2 ± 0.7; 0.7
Cs-137	0.1 ± 0.5; 0.5	0.8 ± 1.1; 1.1	-0.1 ± 0.8; 0.8	0.4 ± 0.7; 0.7
Ba/La-140	0.9 ± 1.1; 1.1	1.0 ± 35.0; 35.0	0.2 ± 3.2; 3.2	-0.2 ± 0.4; 0.4
Date Collected	10-20-99	10-20-99	10-20-99	10-20-99
Lab Code	CDF-8166	CDF-8167	CDF-8168	CDF-8169
Type	Carp	Gizzard Shad	Freshwater Drum	Largemouth Bass
Mn-54	0.1 ± 0.9; 0.9	-0.1 ± 0.9; 0.9	0.4 ± 0.6; 0.6	-0.1 ± 0.8; 0.8
Fe-59	-0.7 ± 0.5; 0.5	0.0 ± 0.1; 0.1	-1.3 ± 5.9; 5.9	-1.4 ± 10.5; 10.5
Co-58	0.3 ± 1.0; 1.0	-0.1 ± 1.4; 1.4	0.1 ± 0.6; 0.6	-0.5 ± 0.9; 0.9
Co-60	0.7 ± 2.1; 2.1	0.4 ± 7.9; 7.9	-0.1 ± 0.2; 0.2	1.0 ± 5.2; 5.2
Zn-65	-4.0 ± 2.6; 2.6	-2.4 ± 3.1; 3.1	-3.1 ± 2.1; 2.1	-2.4 ± 2.1; 2.1
Zr/Nb-95	0.9 ± 1.2; 1.2	-0.2 ± 1.6; 1.6	-0.1 ± 0.9; 0.9	-0.8 ± 2.2; 2.2
Cs-134	-0.2 ± 0.1; 0.1	-0.5 ± 0.2; 0.3	0.3 ± 0.2; 0.2	0.1 ± 0.1; 0.1
Cs-137	0.2 ± 0.9; 0.9	-0.5 ± 1.2; 1.2	0.3 ± 0.6; 0.6	0.0 ± 0.7; 0.7
Ba/La-140	0.5 ± 7.8; 7.8	-3.5 ± 42.7; 42.7	-1.1 ± 12.6; 12.6	1.1 ± 14.2; 14.2

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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 = 0.10; Fe-59 = 0.60; Co-58, Co-60 = 0.10; Zn-65 = 0.60; Zr/Nb-95 = 0.20;
Ba/La = 0.60 pCi/g dry weightUnits: 10^{-2} pCi/g dry weight

Sample Description and Concentration

D-27 Dresden Lock & Dam

Date Collected	05-29-99	10-09-99
Lab Code	CDBS-3652	CDBS-7608
Mn-54	-1.4 ± 3.1; 3.1	1.2 ± 1.1; 1.1
Fe-59	0.7 ± 3.3; 3.3	0.2 ± 0.5; 0.5
Co-58	0.5 ± 3.4; 3.4	-0.4 ± 1.2; 1.2
Co-60	2.7 ± 45.0; 45.0	1.4 ± 1.3; 1.3
Zn-65	-6.9 ± 8.3; 8.3	-3.8 ± 2.9; 2.9
Zr/Nb-95	-3.0 ± 5.9; 5.9	-1.3 ± 1.9; 1.9
Cs-134	2.7 ± 5.9; 6.0	2.0 ± 6.7; 6.7
Cs-137	9.2 ± 5.3; 5.4	4.3 ± 2.0; 2.1
Ba/La-140	-30.9 ± 25.3; 25.6	2.6 ± 2.2; 2.2

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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

<u>D-Control Glasscock Farm</u>		
Date Collected	09-11-99	09-11-99
Lab Code	CDVE-6649,50 ^a	CDVE-6651 ^a
Type	Rutabagas	Cabbage
I-131		-0.06 ± 0.13; 0.13
Mn-54	-0.2 ± 0.4; 0.4	0.3 ± 1.1; 1.1
Fe-59	-1.2 ± 9.1; 9.1	0.6 ± 0.9; 0.9
Co-58	0.3 ± 0.4; 0.4	-0.1 ± 0.9; 0.9
Co-60	0.4 ± 0.8; 0.8	0.0 ± 0.0; 0.0
Zn-65	-0.6 ± 1.2; 1.2	-0.5 ± 2.6; 2.6
Zr/Nb-95	-0.2 ± 0.5; 0.5	-0.3 ± 1.0; 1.0
Cs-134	0.3 ± 3.4; 3.4	0.5 ± 0.8; 0.8
Cs-137	-0.1 ± 0.5; 0.5	-0.5 ± 1.0; 1.0
Ba/La-140	-0.5 ± 1.2; 1.2	-0.5 ± 1.3; 1.3
<u>D-Quad 1 Chris Locknar</u>		
Date Collected	08-28-99	08-28-99
Lab Code	CDVE-6265 ^a	CDVE-6266 ^a
Type	Potatoes	Cabbage
I-131		0.05 ± 3.68; 3.68
Mn-54	-0.1 ± 0.8; 0.8	0.5 ± 0.8; 0.8
Fe-59	0.1 ± 0.1; 0.1	1.7 ± 8.8; 8.8
Co-58	-0.5 ± 0.8; 0.8	-0.3 ± 0.7; 0.7
Co-60	-0.1 ± 0.2; 0.2	-0.2 ± 4.0; 4.0
Zn-65	-0.5 ± 2.1; 2.1	-0.0 ± 1.7; 1.7
Zr/Nb-95	-0.6 ± 0.8; 0.8	0.1 ± 0.6; 0.6
Cs-134	-0.2 ± 1.3; 1.3	-0.1 ± 0.4; 0.4
Cs-137	0.1 ± 0.8; 0.8	-0.0 ± 0.7; 0.7
Ba/La-140	-0.1 ± 0.9; 0.9	-0.2 ± 0.2; 0.2

^a ODCM required; cabbage = broad leaf; potatoes, rutabagas = root vegetation.

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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	09-04-99	09-04-99
Lab Code	CDVE-6476 ^a	CDVE-6477 ^a
Type	Potatoes	Cabbage
I-131		-0.25 ± 0.98; 0.98
Mn-54	-0.2 ± 0.5; 0.5	-0.1 ± 0.6; 0.6
Fe-59	0.3 ± 0.4; 0.4	0.1 ± 0.1; 0.1
Co-58	0.2 ± 0.6; 0.6	-0.1 ± 0.8; 0.8
Co-60	0.2 ± 6.1; 6.1	-0.0 ± 0.6; 0.6
Zn-65	-0.4 ± 1.4; 1.4	-1.9 ± 1.9; 1.9
Zr/Nb-95	-0.2 ± 0.6; 0.6	-0.3 ± 0.7; 0.7
Cs-134	0.8 ± 5.4; 5.4	0.1 ± 0.1; 0.1
Cs-137	0.2 ± 0.5; 0.5	0.2 ± 0.8; 0.8
Ba/La-140	-0.3 ± 3.2; 3.2	-0.6 ± 2.9; 2.9

D-Quad 3 Jim Bloom

Date Collected	09-04-99	09-04-99
Lab Code	CDVE-6478 ^a	CDVE-6480 ^a
Type	Beets	Brussel Sprouts
I-131		-0.44 ± 1.65; 1.65
Mn-54	0.0 ± 0.5; 0.5	0.1 ± 1.2; 1.2
Fe-59	-0.5 ± 4.3; 4.3	3.1 ± 7.5; 7.5
Co-58	-0.2 ± 0.5; 0.5	0.8 ± 1.3; 1.3
Co-60	-0.3 ± 2.3; 2.3	-0.9 ± 2.1; 2.1
Zn-65	0.0 ± 1.5; 1.5	-0.7 ± 3.2; 3.2
Zr/Nb-95	0.2 ± 0.6; 0.6	-0.6 ± 1.3; 1.3
Cs-134	0.2 ± 1.3; 1.3	-0.7 ± 0.7; 0.7
Cs-137	0.3 ± 0.5; 0.5	0.1 ± 1.2; 1.2
Ba/La-140	-0.1 ± 0.3; 0.3	1.1 ± 3.4; 3.4

^a ODCM required; cabbage, brussel sprouts = broad leaf; potatoes, beets = root vegetation.

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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

<u>D-Quad 4 J.D. Carmichael</u>		
Date Collected	08-28-99	08-28-99
Lab Code	CDVE-6267 ^a	CDVE-6268 ^a
Type	Potatoes	Cabbage
I-131		0.02 ± 0.20; 0.20
Mn-54	-0.4 ± 0.6; 0.6	0.3 ± 0.5; 0.5
Fe-59	0.3 ± 0.5; 0.5	0.4 ± 0.4; 0.4
Co-58	-0.0 ± 0.6; 0.6	-0.3 ± 0.5; 0.5
Co-60	-0.1 ± 0.3; 0.3	0.1 ± 0.8; 0.8
Zn-65	-1.2 ± 1.4; 1.4	-0.8 ± 1.3; 1.3
Zr/Nb-95	-0.4 ± 0.7; 0.7	0.2 ± 0.5; 0.5
Cs-134	-0.0 ± 0.0; 0.0	0.2 ± 0.9; 0.9
Cs-137	0.4 ± 0.5; 0.5	0.0 ± 0.6; 0.6
Ba/La-140	-0.1 ± 0.6; 0.6	-0.5 ± 1.7; 1.7

^a ODCM required; cabbage = broad leaf, potatoes = root vegetation.

DRESDEN

Table 7. Surface Water
 Collection: Monthly composites of weekly collections
 ODCM- Gross Beta = 4, Mn-54 = 15, Fe-59 = 30, Co-58 = 15, Co-60 = 15, Zn-65 = 30,
 Required LLDs: Zr/Nb-95 = 15, Cs-134 = 15, Cs-137 = 18, Ba/La-140 = 15 pCi/L
 Units: pCi/L

Sample Description and Concentration			
<u>D-51 Dresden Lock & Dam</u>			
1999			
Collection Period	January	February	March
Lab Code	CDSW-630	CDSW-1160	CDSW-1959
Gross Beta	4.5 ± 1.6; 1.8	6.3 ± 2.0; 2.3	5.5 ± 1.8; 2.0
Mn-54	-0.1 ± 1.9; 1.9	0.2 ± 1.8; 1.8	2.1 ± 3.0; 3.0
Fe-59	2.1 ± 2.9; 2.9	4.9 ± 6.5; 6.5	-3.8 ± 30.3; 30.3
Co-58	-1.1 ± 1.9; 1.9	-1.7 ± 1.9; 1.9	-2.0 ± 2.5; 2.5
Co-60	1.8 ± 2.0; 2.0	0.4 ± 0.7; 0.8	-0.1 ± 1.0; 1.0
Zn-65	-1.4 ± 4.3; 4.3	-1.8 ± 3.7; 3.7	-4.6 ± 5.7; 5.7
Zr/Nb-95	-1.3 ± 2.2; 2.2	-1.4 ± 2.1; 2.1	0.1 ± 0.0; 0.0
Cs-134	2.1 ± 5.8; 5.8	-0.9 ± 0.8; 0.8	-2.9 ± 20.4; 20.4
Cs-137	0.1 ± 2.2; 2.2	0.8 ± 2.4; 2.4	0.5 ± 3.1; 3.1
Ba/La-140	-1.9 ± 3.0; 3.0	1.6 ± 3.4; 3.4	0.5 ± 3.9; 3.9
1999			
Collection Period	April	May	June
Lab Code	CDSW-2943	CDSW-4141	CDSW-4717
Gross Beta	3.7 ± 1.5; 1.6	2.6 ± 1.4; 1.4	3.4 ± 1.5; 1.6
Mn-54	1.4 ± 1.9; 1.9	-0.7 ± 1.5; 1.5	0.1 ± 1.6; 1.6
Fe-59	-4.0 ± 3.6; 3.6	0.3 ± 0.3; 0.3	2.4 ± 6.0; 6.0
Co-58	-0.3 ± 2.2; 2.2	1.2 ± 1.5; 1.5	0.7 ± 1.8; 1.8
Co-60	1.1 ± 1.4; 1.4	0.8 ± 1.7; 1.7	2.1 ± 27.1; 27.1
Zn-65	-0.5 ± 4.4; 4.4	-1.1 ± 3.4; 3.4	-2.6 ± 3.9; 3.9
Zr/Nb-95	1.0 ± 2.7; 2.7	0.8 ± 2.3; 2.3	-2.0 ± 3.5; 3.5
Cs-134	0.9 ± 1.2; 1.2	0.7 ± 1.5; 1.5	0.4 ± 0.5; 0.5
Cs-137	0.6 ± 2.0; 2.0	1.4 ± 1.5; 1.5	1.0 ± 1.8; 1.8
Ba/La-140	-3.3 ± 6.0; 6.0	-2.5 ± 11.4; 11.4	-0.6 ± 10.9; 10.9

DRESDEN

Table 7.	Surface Water
Collection:	Monthly composites of weekly collections
ODCM-	Gross Beta = 4, Mn-54 = 15, Fe-59 = 30, Co-58 = 15, Co-60 = 15, Zn-65 = 30,
Required LLDs:	Zr/Nb-95 = 15, Cs-134 = 15, Cs-137 = 18, Ba/La-140 = 15 pCi/L
Units:	pCi/L

Sample Description and Concentration

D-51 Dresden Lock & Dam

1999 Collection Period	July	August	September
Lab Code	CDSW-5728	CDSW-6473	CDSW-7372
Gross Beta	3.4 ± 1.5; 1.6	5.2 ± 1.6; 1.8	6.3 ± 1.3; 1.7
Mn-54	0.1 ± 1.9; 1.9	0.8 ± 2.3; 2.3	3.2 ± 2.5; 2.5
Fe-59	1.0 ± 0.8; 0.8	3.8 ± 15.5; 15.5	-1.3 ± 9.2; 9.2
Co-58	0.3 ± 1.9; 1.9	-0.7 ± 2.6; 2.6	0.9 ± 2.5; 2.5
Co-60	0.6 ± 1.5; 1.5	1.8 ± 2.8; 2.8	0.3 ± 0.5; 0.5
Zn-65	-3.9 ± 4.1; 4.1	1.0 ± 5.0; 5.0	-1.3 ± 5.5; 5.5
Zr/Nb-95	-0.7 ± 1.7; 1.7	1.8 ± 2.8; 2.8	1.7 ± 3.3; 3.3
Cs-134	-0.2 ± 0.2; 0.2	1.4 ± 7.2; 7.2	-0.7 ± 8.1; 8.1
Cs-137	1.1 ± 2.1; 2.1	1.5 ± 2.1; 2.1	0.7 ± 2.5; 2.5
Ba/La-140	-0.7 ± 4.0; 4.0	2.6 ± 7.6; 7.6	-3.7 ± 4.2; 4.2
1999 Collection Period	October	November	December
Lab Code	CDSW-8681	CDSW-9226	CDSW-10212
Gross Beta	4.5 ± 2.0; 2.1	8.3 ± 2.0; 2.4	9.1 ± 2.6; 2.9
Mn-54	1.0 ± 1.8; 1.8	1.1 ± 2.1; 2.1	0.4 ± 0.7; 0.7
Fe-59	2.4 ± 8.5; 8.5	-4.0 ± 15.3; 15.3	-1.1 ± 1.2; 1.2
Co-58	-1.6 ± 2.3; 2.3	-0.4 ± 2.1; 2.1	-0.3 ± 0.6; 0.6
Co-60	1.3 ± 2.4; 2.4	-0.7 ± 5.8; 5.8	1.0 ± 0.6; 0.6
Zn-65	-0.9 ± 4.1; 4.1	-6.6 ± 6.3; 6.4	-0.9 ± 1.4; 1.4
Zr/Nb-95	-0.8 ± 2.8; 2.8	-0.8 ± 2.4; 2.4	0.1 ± 0.7; 0.7
Cs-134	-2.9 ± 13.8; 13.8	-0.6 ± 0.5; 0.5	1.6 ± 0.8; 0.8
Cs-137	-0.3 ± 2.1; 2.1	-2.3 ± 2.3; 2.3	0.1 ± 0.7; 0.7
Ba/La-140	0.6 ± 5.2; 5.2	1.1 ± 12.2; 12.2	-4.9 ± 0.8; 1.1

DRESDEN

Table 7. Surface Water
 Collection: Monthly composites of weekly collections
 ODCM- Gross Beta = 4, Mn-54 = 15, Fe-59 = 30, Co-58 = 15, Co-60 = 15, Zn-65 = 30,
 Required LLDs: Zr/Nb-95 = 15, Cs-134 = 15, Cs-137 = 18, Ba/La-140 = 15 pCi/L
 Units: pCi/L

Sample Description and Concentration			
<u>D-52 (C) Des Plaines River</u>			
1999			
Collection Period	January	February	March
Lab Code	CDSW-631	CDSW-1161	CDSW-1960
Gross Beta	5.5 ± 1.8 ; 2.0	4.0 ± 1.8 ; 1.9	5.6 ± 1.8 ; 2.0
Mn-54	-0.5 ± 1.5 ; 1.5	1.5 ± 3.1 ; 3.1	0.1 ± 1.3 ; 1.3
Fe-59	1.0 ± 1.7 ; 1.7	0.5 ± 1.7 ; 1.7	0.4 ± 0.4 ; 0.4
Co-58	-0.6 ± 1.8 ; 1.8	1.8 ± 2.9 ; 2.9	0.1 ± 1.3 ; 1.3
Co-60	0.6 ± 0.8 ; 0.8	0.4 ± 2.0 ; 2.0	0.6 ± 0.8 ; 0.8
Zn-65	-3.8 ± 3.4 ; 3.4	-1.1 ± 6.2 ; 6.2	-0.6 ± 2.3 ; 2.3
Zr/Nb-95	0.5 ± 2.2 ; 2.2	2.7 ± 3.1 ; 3.1	0.9 ± 1.6 ; 1.6
Cs-134	1.1 ± 0.6 ; 0.6	-0.5 ± 0.4 ; 0.4	-0.6 ± 1.1 ; 1.1
Cs-137	0.1 ± 1.9 ; 1.9	0.3 ± 3.5 ; 3.5	2.1 ± 1.5 ; 1.5
Ba/La-140	-2.9 ± 13.2 ; 13.2	1.2 ± 4.0 ; 4.0	0.9 ± 4.4 ; 4.4
1999			
Collection Period	April	May	June
Lab Code	CDSW-2944	CDSW-4142	CDSW-4718
Gross Beta	6.6 ± 1.9 ; 2.1	5.8 ± 1.8 ; 2.0	5.9 ± 1.8 ; 2.0
Mn-54	0.6 ± 2.0 ; 2.0	-0.6 ± 2.0 ; 2.0	0.4 ± 1.2 ; 1.2
Fe-59	0.7 ± 5.9 ; 5.9	-0.5 ± 0.5 ; 0.5	-2.0 ± 8.9 ; 8.9
Co-58	0.2 ± 2.3 ; 2.3	1.8 ± 2.4 ; 2.4	-0.7 ± 1.4 ; 1.4
Co-60	1.3 ± 4.4 ; 4.4	-1.3 ± 1.1 ; 1.1	-0.7 ± 5.2 ; 5.2
Zn-65	-1.6 ± 4.2 ; 4.2	-5.9 ± 4.3 ; 4.3	-0.2 ± 2.7 ; 2.7
Zr/Nb-95	0.5 ± 2.6 ; 2.6	2.4 ± 2.9 ; 2.9	0.5 ± 1.7 ; 1.7
Cs-134	-0.4 ± 0.5 ; 0.5	2.2 ± 7.1 ; 7.1	0.1 ± 0.2 ; 0.2
Cs-137	0.6 ± 2.0 ; 2.0	0.5 ± 2.0 ; 2.0	1.3 ± 1.3 ; 1.4
Ba/La-140	-2.4 ± 5.7 ; 5.7	-0.5 ± 0.5 ; 0.5	-1.5 ± 16.7 ; 16.7

DRESDEN

Table 7. Surface Water
 Collection: Monthly composites of weekly collections
 ODCM- Gross Beta = 4, Mn-54 = 15, Fe-59 = 30, Co-58 = 15, Co-60 = 15, Zn-65 = 30,
 Required LLDs: Zr/Nb-95 = 15, Cs-134 = 15, Cs-137 = 18, Ba/La-140 = 15 pCi/L
 Units: pCi/L

Sample Description and Concentration			
<u>D-52 (C) Des Plaines River</u>			
1999			
Collection Period	July	August	September
Lab Code	CDSW-5729	CDSW-6474	CDSW-7373
Gross Beta	5.1 ± 1.6; 1.8	5.8 ± 1.8; 2.0	6.6 ± 1.3; 1.6
Mn-54	0.3 ± 1.7; 1.7	0.3 ± 2.5; 2.5	1.3 ± 3.1; 3.1
Fe-59	0.2 ± 0.6; 0.6	-3.0 ± 4.2; 4.2	-1.8 ± 3.6; 3.6
Co-58	-0.3 ± 1.9; 1.9	-1.4 ± 2.3; 2.3	-0.9 ± 3.5; 3.5
Co-60	-1.2 ± 3.2; 3.2	1.4 ± 3.0; 3.0	-1.4 ± 9.8; 9.8
Zn-65	-0.5 ± 3.3; 3.3	1.3 ± 5.9; 5.9	-3.6 ± 7.0; 7.0
Zr/Nb-95	-1.2 ± 2.0; 2.0	-1.4 ± 3.6; 3.6	0.2 ± 4.2; 4.2
Cs-134	-0.5 ± 9.3; 9.3	-1.0 ± 1.3; 1.3	-1.7 ± 2.4; 2.5
Cs-137	0.4 ± 1.8; 1.8	-1.5 ± 2.5; 2.5	1.9 ± 3.1; 3.1
Ba/La-140	2.5 ± 20.0; 20.0	1.6 ± 32.2; 32.2	-3.1 ± 5.7; 5.7
1999			
Collection Period	October	November	December
Lab Code	CDSW-8682	CDSW-9227,8	CDSW-9960
Gross Beta	7.2 ± 2.2; 2.4	9.2 ± 1.4; 1.7	9.4 ± 2.0; 2.5
Mn-54	-1.4 ± 2.6; 2.6	-0.7 ± 1.3; 1.3	-0.1 ± 2.6; 2.6
Fe-59	-1.0 ± 2.9; 2.9	0.9 ± 1.2; 1.3	-0.8 ± 4.2; 4.2
Co-58	-0.4 ± 3.4; 3.4	0.0 ± 1.4; 1.4	3.0 ± 2.0; 2.1
Co-60	0.6 ± 1.4; 1.4	-0.6 ± 6.2; 6.2	-1.5 ± 3.1; 3.1
Zn-65	-6.6 ± 6.6; 6.7	-0.1 ± 2.7; 2.7	-5.8 ± 6.7; 6.7
Zr/Nb-95	0.6 ± 3.5; 3.5	-0.6 ± 1.5; 1.5	-4.6 ± 2.8; 2.9
Cs-134	0.1 ± 1.1; 1.1	0.5 ± 0.7; 0.7	2.0 ± 2.8; 2.8
Cs-137	1.1 ± 3.0; 3.0	-0.2 ± 1.4; 1.4	-2.3 ± 3.0; 3.0
Ba/La-140	-7.7 ± 8.5; 8.6	1.0 ± 2.3; 2.3	-1.5 ± 3.1; 3.1

DRESDEN

Table 7. Surface Water
 Collection:
 ODCM-
 Required LLD: H-3 = 200 pCi/L
 Units: pCi/L

1999 Collection Period	<u>Sample Description and Concentration</u>	Tritium
<u>D-51 Dresden Lock & Dam</u>		
1st Quarter	CDSW- 2303	331 ± 98; 107
2nd Quarter	CDSW- 4509	313 ± 99; 108
3rd Quarter	CDSW- 7026	282 ± 107; 113
4th Quarter	CDSW- 9907	602 ± 101; 130
<u>D-52 (C) Des Plaines River</u>		
1st Quarter	CDSW- 2304	26 ± 86; 86
2nd Quarter	CDSW- 4510	107 ± 91; 92
3rd Quarter	CDSW- 7027	39 ± 96; 96
4th Quarter	CDSW- 9908	24 ± 87; 87

DRESDEN

Table 8. Well Water
 Collection: Quarterly
 ODCM- H-3 = 200, Mn-54 = 15, Fe-59 = 30, Co-58 = 15, Co-60 = 15, Zn-65 = 30,
 Required LLDs: Zr/Nb-95 = 15, Cs-134 = 15, Cs-137 = 18, Ba/La-140 = 15 pCi/L
 Units: pCi/L

Sample Description and Concentration

D-23 Thorsen Well

Date Collected	01-09-99	04-03-99	07-03-99	10-02-99
Lab Code	CDWW-97	CDWW-2009	CDWW-4774	CDWW-7257
H-3	388 ± 97; 110	411 ± 94; 109	395 ± 100; 113	375 ± 105; 117
Mn-54	-2.4 ± 1.6; 1.7	1.1 ± 2.6; 2.6	-0.7 ± 2.2; 2.2	1.2 ± 1.9; 1.9
Fe-59	1.3 ± 1.8; 1.8	-1.6 ± 4.0; 4.0	0.9 ± 1.0; 1.0	3.9 ± 6.2; 6.2
Co-58	0.1 ± 1.5; 1.5	-2.2 ± 2.8; 2.8	2.9 ± 2.9; 2.9	-0.1 ± 2.2; 2.2
Co-60	0.9 ± 12.9; 12.9	1.7 ± 2.2; 2.2	1.6 ± 35.5; 35.5	-0.5 ± 0.7; 0.7
Zn-65	-4.8 ± 3.7; 3.7	-5.7 ± 5.7; 5.7	-1.4 ± 4.7; 4.7	-6.3 ± 4.2; 4.3
Zr/Nb-95	-0.3 ± 1.9; 1.9	-0.6 ± 3.1; 3.1	-0.7 ± 3.9; 3.9	-0.8 ± 2.7; 2.7
Cs-134	0.5 ± 0.1; 0.1	-0.9 ± 1.6; 1.6	-1.1 ± 3.4; 3.4	0.1 ± 0.0; 0.0
Cs-137	-0.1 ± 1.5; 1.5	2.2 ± 2.4; 2.4	0.1 ± 2.4; 2.4	0.5 ± 2.1; 2.1
Ba/La-140	0.9 ± 5.8; 5.8	-4.7 ± 6.4; 6.4	1.6 ± 3.9; 3.9	0.1 ± 1.0; 1.0

D-35 Dresden Lock & Dam

Date Collected	01-09-99	04-03-99	07-03-99	10-02-99
Lab Code	CDWW-98	CDWW-2011	CDWW-4776	CDWW-7258
H-3	-31 ± 80; 80	84 ± 85; 86	18 ± 85; 85	-48 ± 89; 89
Mn-54	-0.1 ± 2.1; 2.1	-3.0 ± 2.2; 2.3	0.4 ± 1.6; 1.6	0.2 ± 2.5; 2.5
Fe-59	-0.4 ± 0.8; 0.8	1.5 ± 3.0; 3.0	0.6 ± 7.2; 7.2	-0.9 ± 3.3; 3.3
Co-58	1.9 ± 1.9; 1.9	0.1 ± 2.3; 2.3	-0.4 ± 2.2; 2.2	1.0 ± 3.0; 3.0
Co-60	1.3 ± 5.8; 5.8	-1.1 ± 1.4; 1.4	0.2 ± 0.2; 0.2	-1.6 ± 12.7; 12.7
Zn-65	-1.3 ± 3.7; 3.7	-0.7 ± 5.0; 5.0	0.4 ± 3.9; 3.9	-6.2 ± 5.5; 5.6
Zr/Nb-95	-0.9 ± 2.0; 2.0	-2.1 ± 2.9; 3.0	-0.2 ± 3.0; 3.0	-0.1 ± 3.5; 3.5
Cs-134	1.2 ± 0.7; 0.7	-0.4 ± 0.4; 0.4	0.9 ± 1.4; 1.4	-0.9 ± 1.7; 1.7
Cs-137	0.1 ± 1.9; 1.9	1.0 ± 2.1; 2.1	0.9 ± 1.9; 1.9	0.9 ± 2.7; 2.7
Ba/La-140	-1.2 ± 42.8; 42.8	-1.7 ± 5.0; 5.0	1.4 ± 6.8; 6.8	-5.5 ± 82.7; 82.7

DRESDEN

MILCH ANIMALS, NEAREST LIVESTOCK AND
NEAREST RESIDENCES CENSUS

DRESDEN

MILCH ANIMALS CENSUS, 1999

Sampling Locations

Halpin's Dairy Farm

16.0 miles, Sector J
10% or less for pasture
25% ground grain
65% green chop, hay or silage

D-25 V. Biros Dairy Farm

11.4 miles, Sector L
25% pasture
25% ground grain
50% green chop

Sherman Tweet Farm

8.5 miles, Sector Q
25% pasture
25% ground grain
50% hay or silage

Census conducted by A.D. Lewis on August 31, 1999

DRESDEN

NEAREST LIVESTOCK CENSUS, 1999

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

<u>Sector</u>	<u>Direction</u>	<u>Distance</u>
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 31, 1999

DRESDEN

NEAREST RESIDENCE CENSUS, 1999

Nearest resident of the DresdenStation within a 6.2 mile radius.

<u>Sector</u>	<u>Direction</u>	<u>Distance</u>
A	N	1.2 miles
B	NNE	0.8 miles
C	NE	2.3 miles
D	ENE	0.8 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	3.7 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 31, 1999

DRESDEN
DREDGE SPOILS CENSUS DATA, 1999

Nearest dredging to station.

<u>Sector</u>	<u>Direction</u>	<u>Distance</u>	<u>Site No.</u>
A	N	0.4	5

DRESDEN

4.0 TLD DATA*

* TLD Data provided by Commonwealth Edison Company.

Commonwealth Edison Company

Date: 27-JAN-00

Environmental Site Report V4 for Dresden

Gamma Radiation Measured in mR by TLDs

Site	Description	Quarter 1 1999	Quarter 2 1999	Quarter 3 1999	Quarter 4 1999
I. INDICATOR LOCATIONS					
a. Air Samplers					
D-01-1	ONSITE STATION 1	16.4	17.9	16.8	17.8
D-01-2	ONSITE STATION 1	16.8	17.4	17.4	16.8
D-02-1	ONSITE STATION 2	15.1	17.3	16.9	15.5
D-02-2	ONSITE STATION 2	15.8	16.8	17.1	15.7
D-03-1	ONSITE STATION 3	14.9	16.3	14.3	15.0
D-03-2	ONSITE STATION 3	13.7	15.5	15.7	14.4
D-04-1	COLLINS ROAD	16.5	18.1	18.4	17.3
D-04-2	COLLINS ROAD	15.5	18.6	17.6	16.6
D-07-1	CLAY PRODUCTS	16.0	16.1 #	16.2	15.5
D-07-2	CLAY PRODUCTS	15.9	16.6	16.1	15.6
D-08-1	PRAIRIE PARKS	16.4	17.7	17.0	17.3
D-08-2	PRAIRIE PARKS	16.4	17.2	17.4	16.6
D-10-1	GOOSE LAKE VILLAGE	16.0	17.7	16.9	16.4
D-10-2	GOOSE LAKE VILLAGE	15.3	17.6	17.5	16.7
D-13-1	MINOOKA	14.3	16.5	14.7	14.9
D-13-2	MINOOKA	14.5	15.4	14.2	15.1
D-14-1	CHANNAHON	14.6	15.9	15.1	13.9
D-14-2	CHANNAHON	16.0	15.8	15.9	15.2
D-45-1	MCKINLEY WOODS ROAD	18.2	19.3	19.2	18.8
D-45-2	MCKINLEY WOODS ROAD	18.5	21.6	19.2	19.2
D-53-1	GUNDY COUNTY LINE ROAD	14.4	14.2	14.0 #	14.2
D-53-2	GRUNDY COUNTY LINE ROAD	12.9	15.3	13.9 #	13.5
Air Sampler Mean ± S.D.		15.6 ± 1.3	17.0 ± 1.6	16.4 ± 1.6	16.0 ± 1.5
Annual Air Sampler Mean ± S.D.		16.3 ± 1.6			

b. Inner Ring (100 Series)

D-101-1	16.9	18.2	17.2	18.5
D-101-2	15.7	17.8	16.1	17.0
D-102-1	16.9	20.1	19.4	17.5
D-102-2	16.4	19.4 #	18.8	18.5
D-103-1	14.6	16.9	16.6	16.1
D-103-2	14.7	16.6	16.6	15.5
D-104-1	17.0	18.3	17.5	17.5
D-104-2	17.7	19.9	19.1	18.2
D-105-1	17.5	19.5	17.1	18.5
D-105-2	16.0	17.6	16.9	17.8
D-106-1	14.9	16.6	15.5	15.2

Date: 27-JAN-00

Environmental Site Report V4 for Dresden

Site	Description	Quarter 1	Quarter 2	Quarter 3	Quarter 4
		1999	1999	1999	1999
b. Inner Ring (100 Series)					
D-106-2		14.8	14.4	14.2	14.4
D-107-1		14.6	16.2	13.7	14.6
D-107-2		13.4	15.7	14.5	14.8
D-108-1		19.5	19.9	17.6	19.6
D-108-2		15.5	17.3	16.4	16.1
D-109-1		17.6	17.1	18.6	17.9
D-109-2		16.3	18.4	16.7	18.4
D-110-2		19.6	21.3	20.8	21.4
D-110-3		20.8	20.3	20.6	21.6
D-110-4		18.5	26.3	20.4	20.5
D-111-1		18.5	17.7	18.9	18.8
D-111-2		15.2	16.4	16.1	16.4
D-112A-1		14.6	16.1	16.5	16.4
D-112A-2		14.5	15.1	17.6	14.7
D-113-1		15.1	16.1	16.4	15.9
D-113-2		15.1	16.7	14.6	16.0
D-114-1		15.2	15.8	15.7	16.5
D-114-2		15.8	17.1	16.8	16.8
D-115-1		17.0	18.9	17.2	18.5
D-115-2		16.6	18.2	17.7	18.4
D-116-1		17.5	19.9	20.1	19.1
D-116-2					
Inner Ring Mean \pm S.D.		16.4 \pm 1.7	18.0 \pm 2.3	17.2 \pm 1.8	17.4 \pm 1.9
Annual Inner Ring Mean \pm S.D.					17.3 \pm 2.0

c. Outer Ring (200 Series)

D-201-1		18.1	21.3	20.5	20.9
D-201-2		19.1	22.4	20.8	21.3
D-202-1		15.8	17.3	17.1	16.6
D-202-2		17.4	18.5	18.3	19.1 #
D-203-1		13.6	15.8	13.7	14.3
D-203-2		16.0	17.4	17.2	17.4
D-204-1		17.5	17.7	18.1	18.3
D-204-2		14.9	15.9	15.0	16.3
D-205-1		16.5	17.7	17.6	17.8
D-205-2		17.1	17.8	18.6	17.6
D-206-1		15.7	16.8	16.3	19.2
D-206-2		15.7	17.4	17.4	17.1
D-207-1		14.7	15.6	16.6	16.1
D-207-2		14.4	16.3	15.9	15.5
D-208-1		14.3	14.8	14.3	15.0
D-208-2		14.0	14.7	14.0	13.6
D-209-1		13.3	14.6	14.3	14.3
D-209-2		12.8	14.4	13.5	13.2
D-210-1		15.2	16.7	15.9	15.5
D-210-2		17.7	18.3	17.4	16.6
D-211-1		16.8	18.5	18.0	17.6 #
D-211-2		16.3	18.5	18.1	17.4
D-212-3		13.9	15.4	14.9	14.8

Date: 27-JAN-00

Environmental Site Report V4 for Dresden

Site	Description	Quarter 1 1999	Quarter 2 1999	Quarter 3 1999	Quarter 4 1999
c. Outer Ring (200 Series)					
D-212-4		13.9	15.5	14.6	14.4
D-213-1		13.3	16.7	14.3	13.6
D-213-2		14.1	17.7	16.1	14.7
D-214-1		19.7	22.7	22.1	20.3
D-214-2		19.2	21.2	20.2	20.9
D-215-1		18.2	21.4	20.1	21.9
D-215-2		18.1	19.1	18.8	20.5
D-216-1		19.0	21.2	19.9	21.2
D-216-2		18.4	21.6	19.6	20.0
Outer Ring Mean \pm S.D.		16.1 \pm 2.0	17.8 \pm 2.4	17.2 \pm 2.3	17.3 \pm 2.6
Annual Outer Ring Mean \pm S.D.					17.1 \pm 2.4
INDICATOR LOCATION MEAN \pm S.D.		16.1 \pm 1.8	17.7 \pm 2.2	17.0 \pm 2.0	17.0 \pm 2.2
Annual INDICATOR LOCATION MEAN \pm S.D.					16.9 \pm 2.1
II. CONTROL LOCATIONS					
D-12-1	LISBON	13.3	16.3	14.4	15.3
D-12-2	LISBON	13.3	14.7	13.9	14.6
CONTROL LOCATION Mean \pm S.D.		13.3 \pm 0.0	15.5 \pm 1.1	14.1 \pm 0.4	15.0 \pm 0.5
Annual CONTROL LOCATION Mean \pm S.D.					14.5 \pm 1.0
III. SPECIAL INTEREST LOCATIONS					
D-306-1		36.5	46.7	41.0	25.6
D-306-2		31.0	43.5	35.9	23.5
D-306-3		31.9	35.1	34.4	24.0
D-310-1		23.4	39.6	38.4	37.7
D-313-1		16.8	21.8	21.1	21.2
D-313-2		16.0 #	19.7	17.0	18.7
SPECIAL INTEREST LOCATION Mean \pm S.D.		25.9 \pm 8.5	34.4 \pm 11.3	31.3 \pm 9.8	25.1 \pm 6.6
Annual SPECIAL INTEREST LOCATION Mean \pm S.D.					29.2 \pm 9.4

COMMENTS: *** Indicates lost dosimeter. A portion of the Dose was estimated.

Indicates edited dosimeter. The original Dose was replaced with an estimated value.

n (n=2..9) Indicates dose is average of n values. A "+*" means more than 9 values.

DRESDEN

GRAPHS OF DATA TRENDS

Air Particulates - Gross Beta

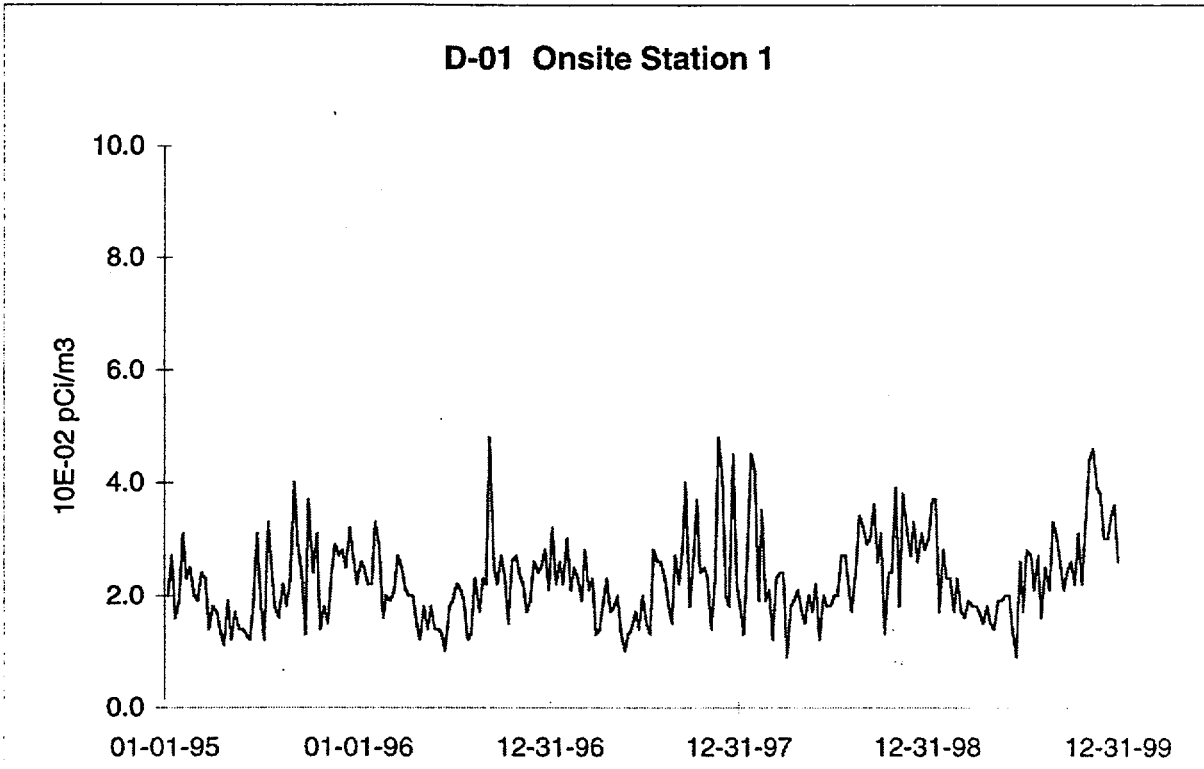


Figure 1. Continuous collection with weekly exchange of particulate filter.

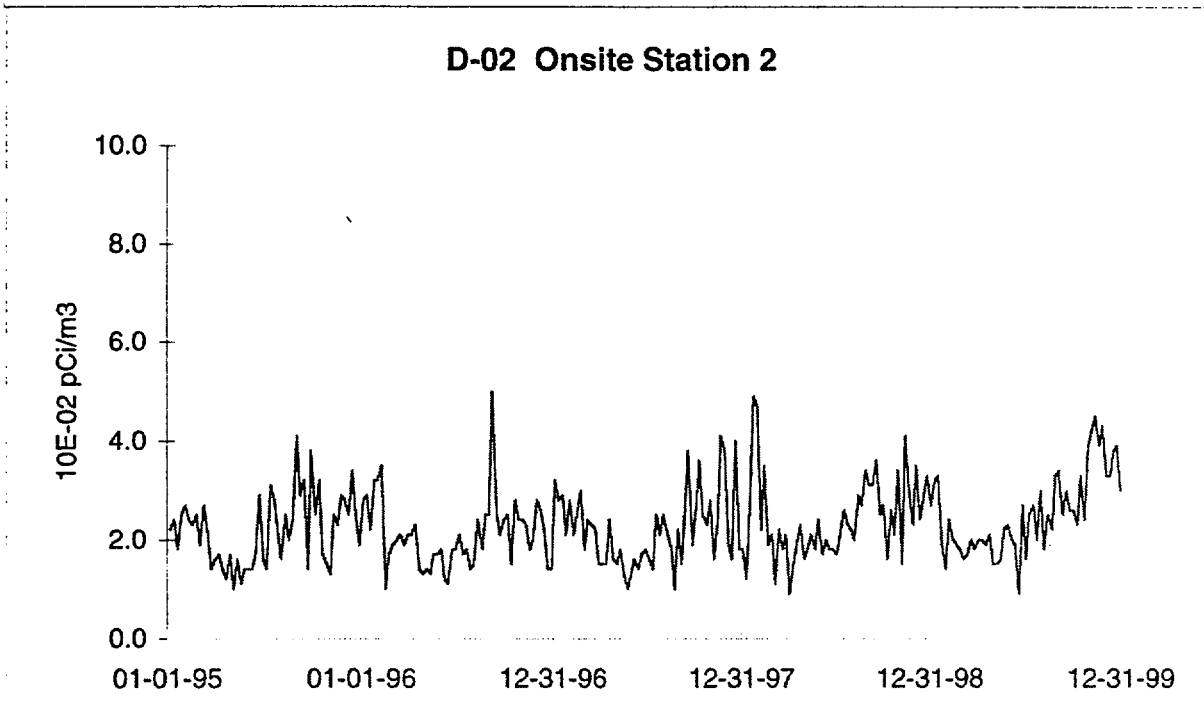
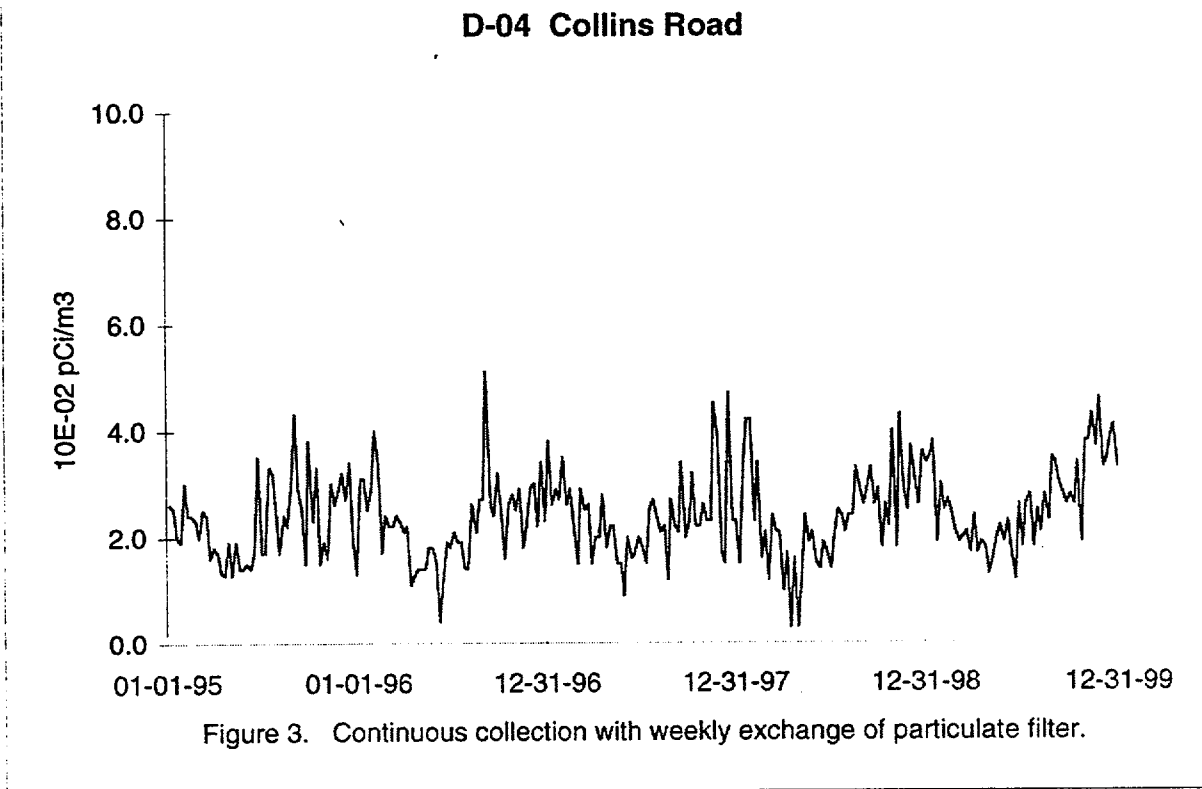
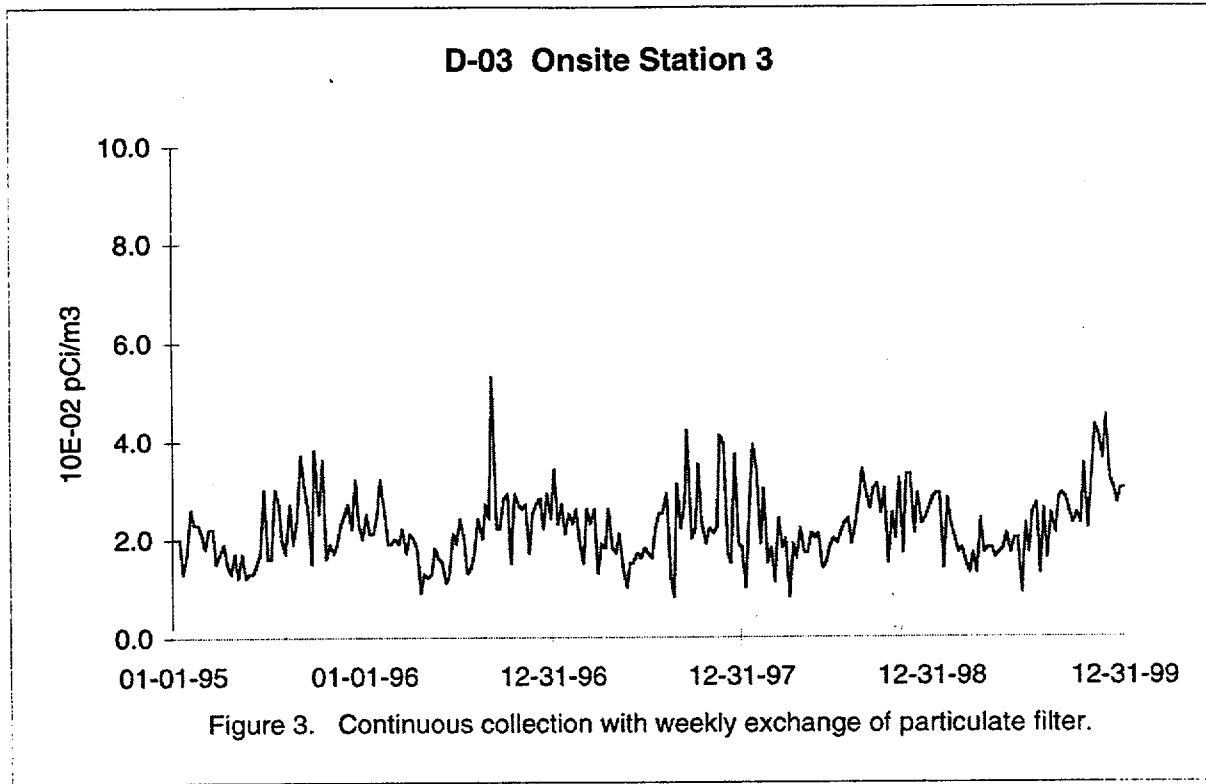
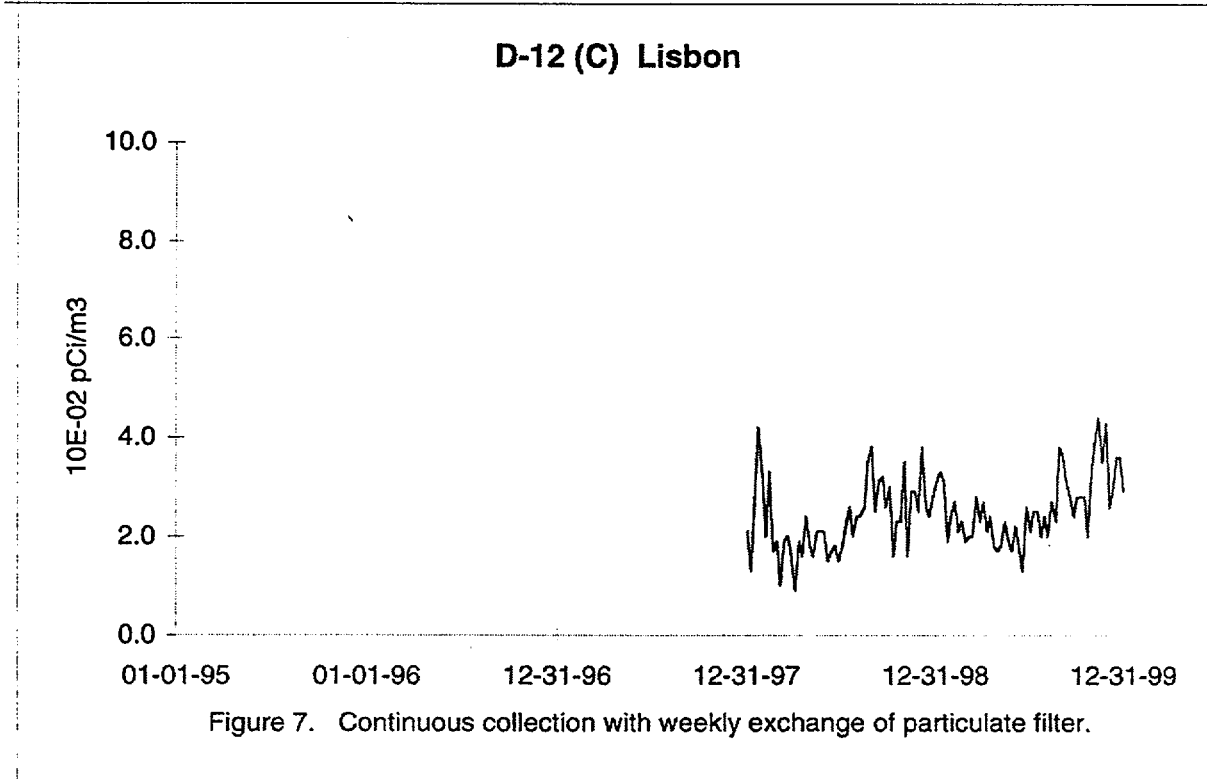
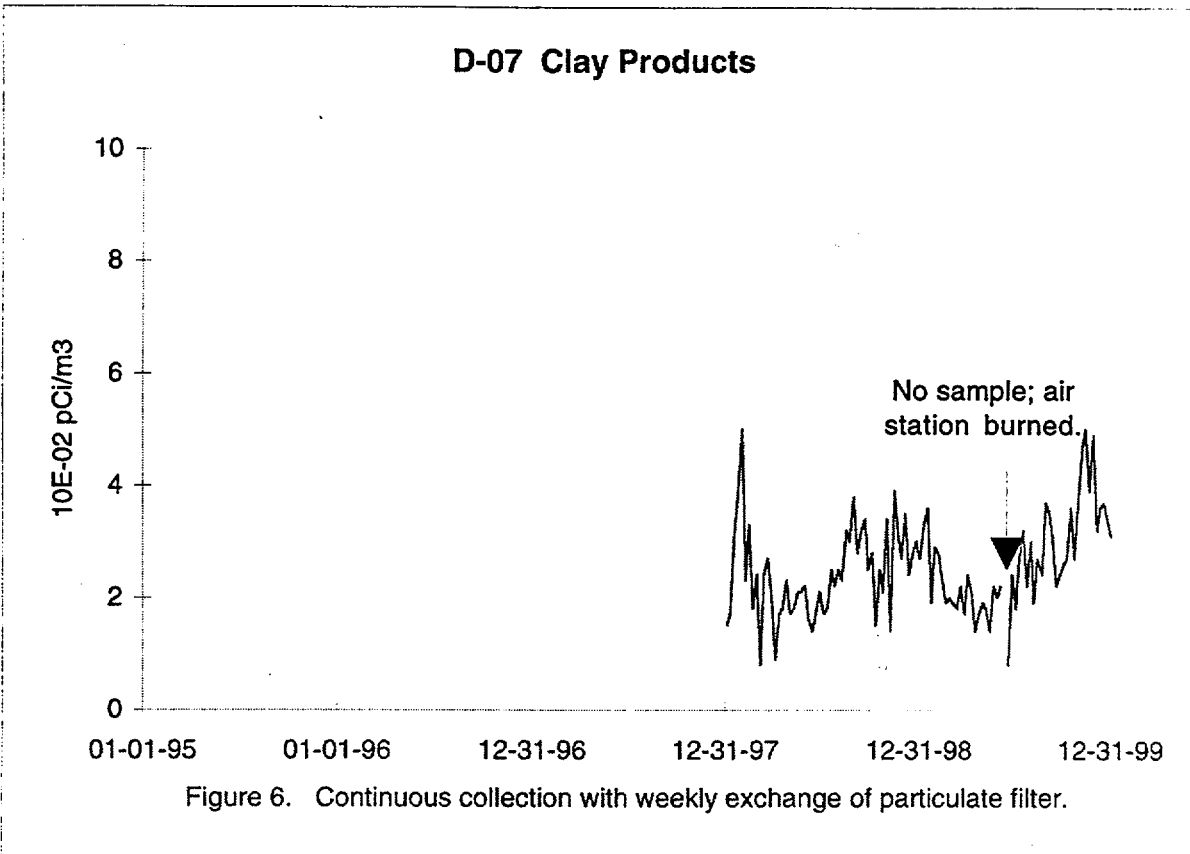


Figure 2. Continuous collection with weekly exchange of particulate filter.

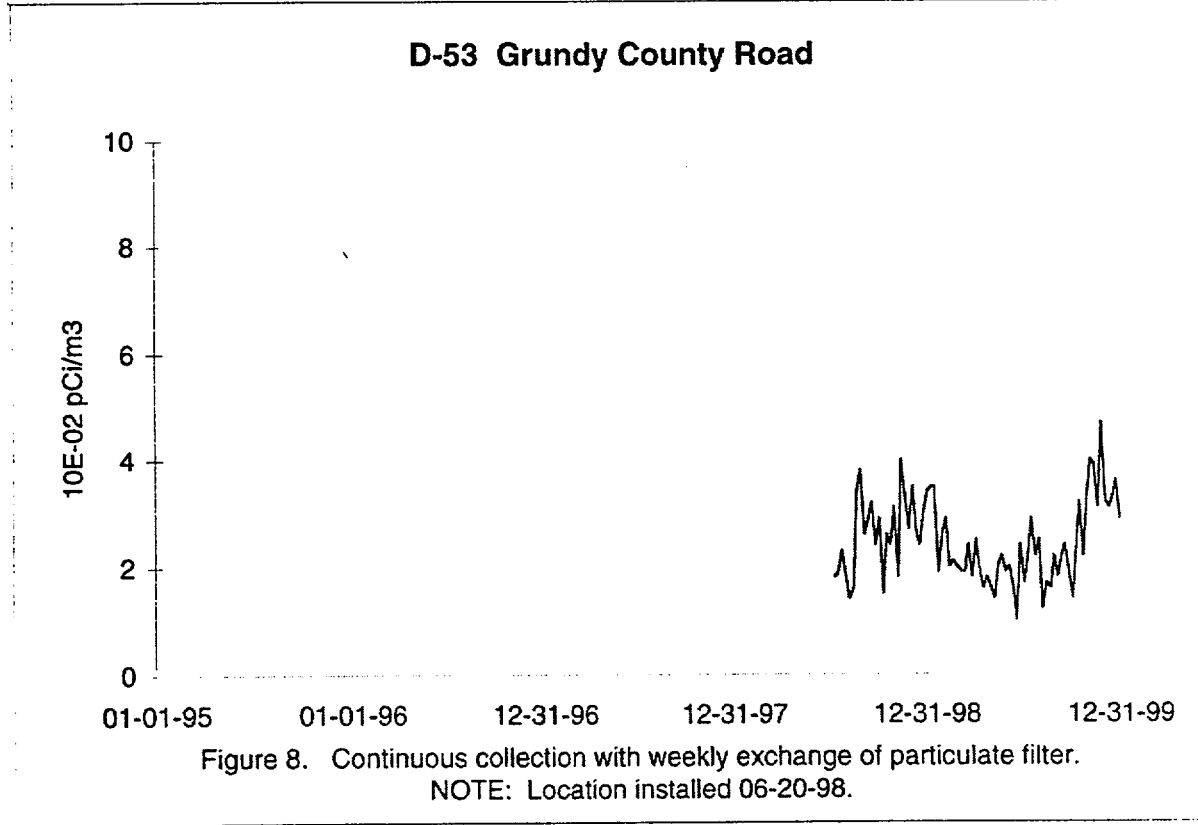
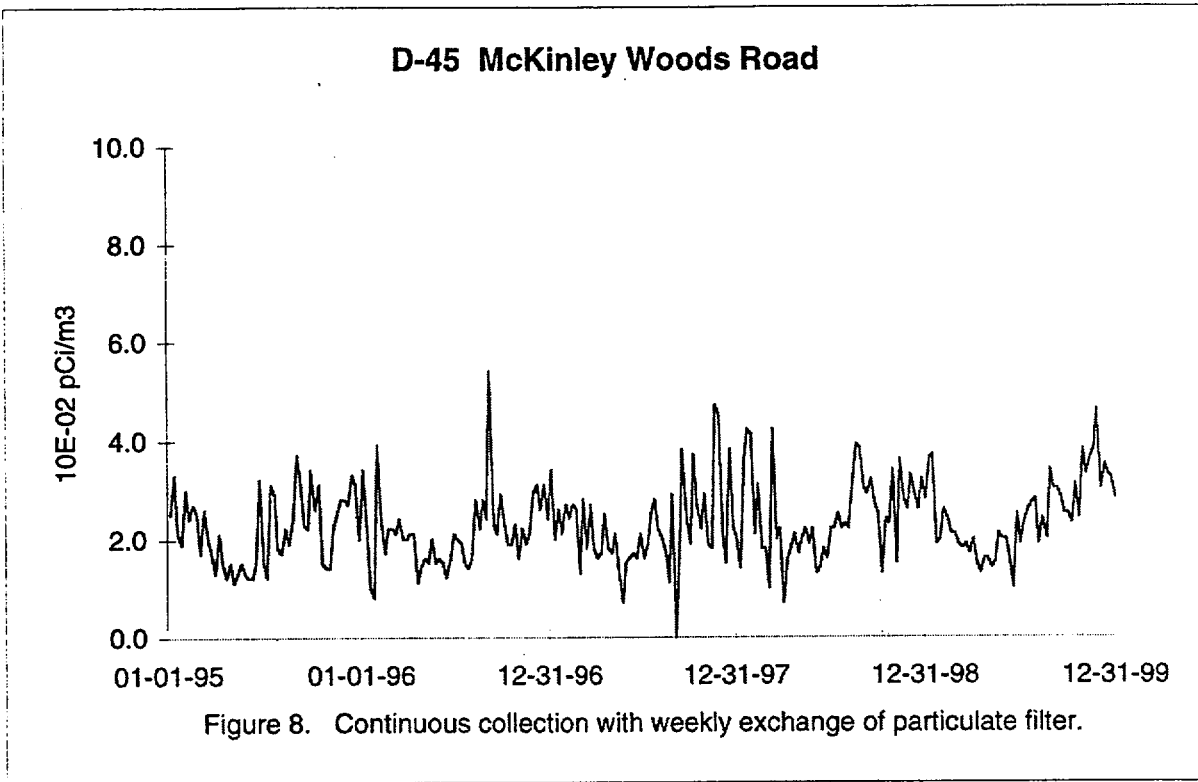
Air Particulates - Gross Beta



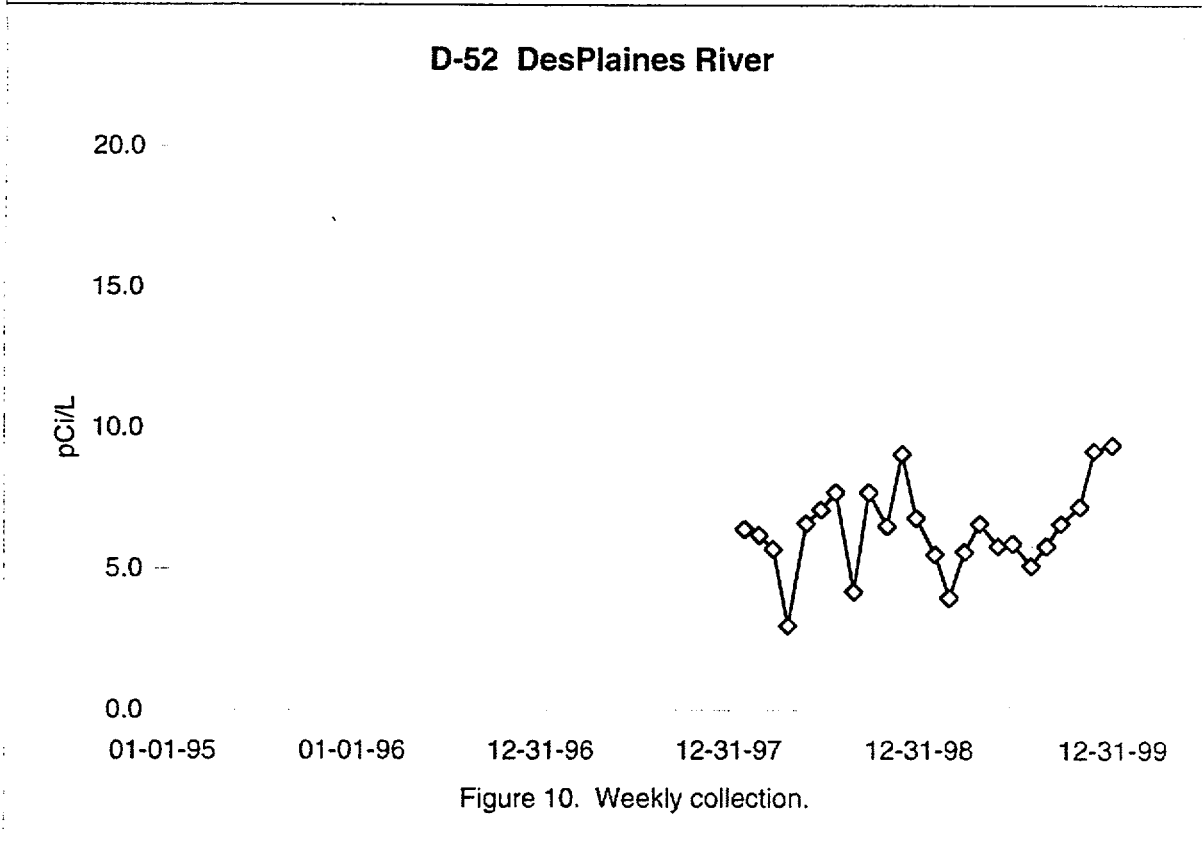
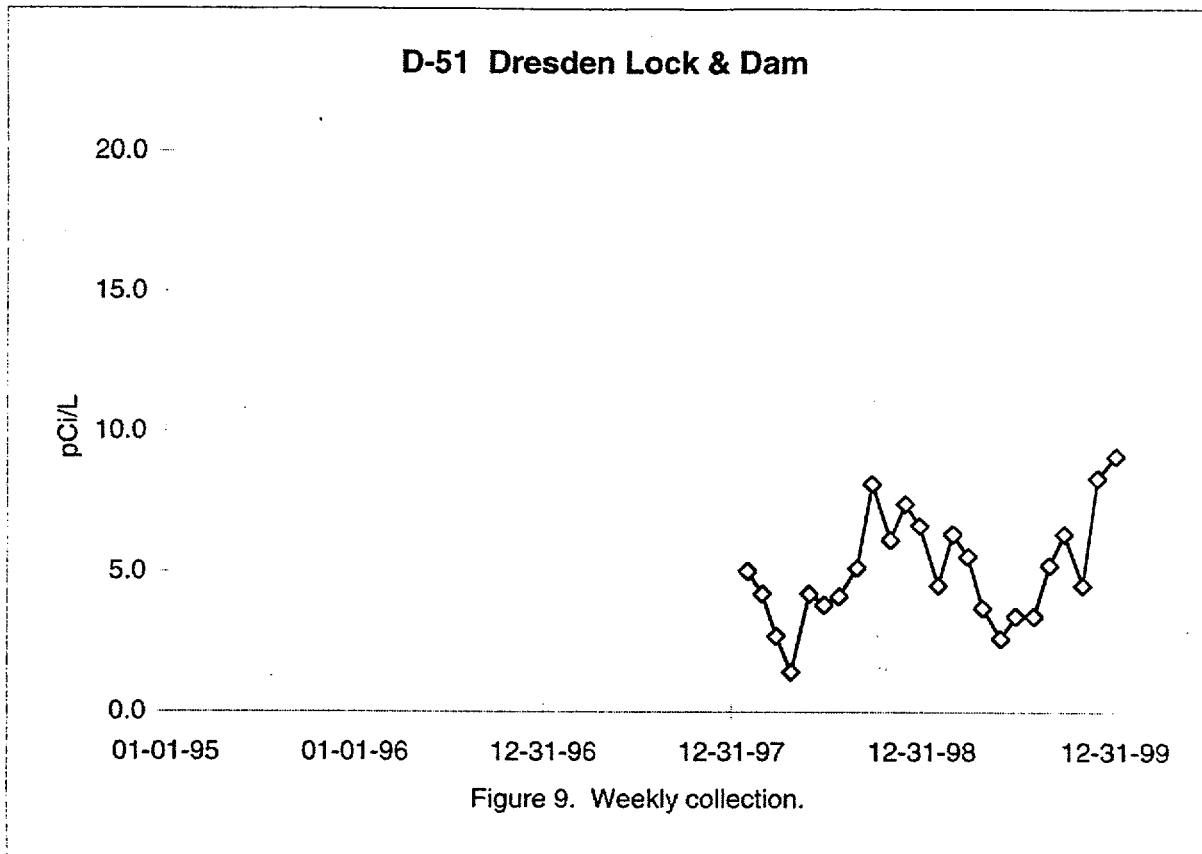
Air Particulates - Gross Beta



Air Particulates - Gross Beta



Surface Water-Gross Beta



Surface Water-Tritium

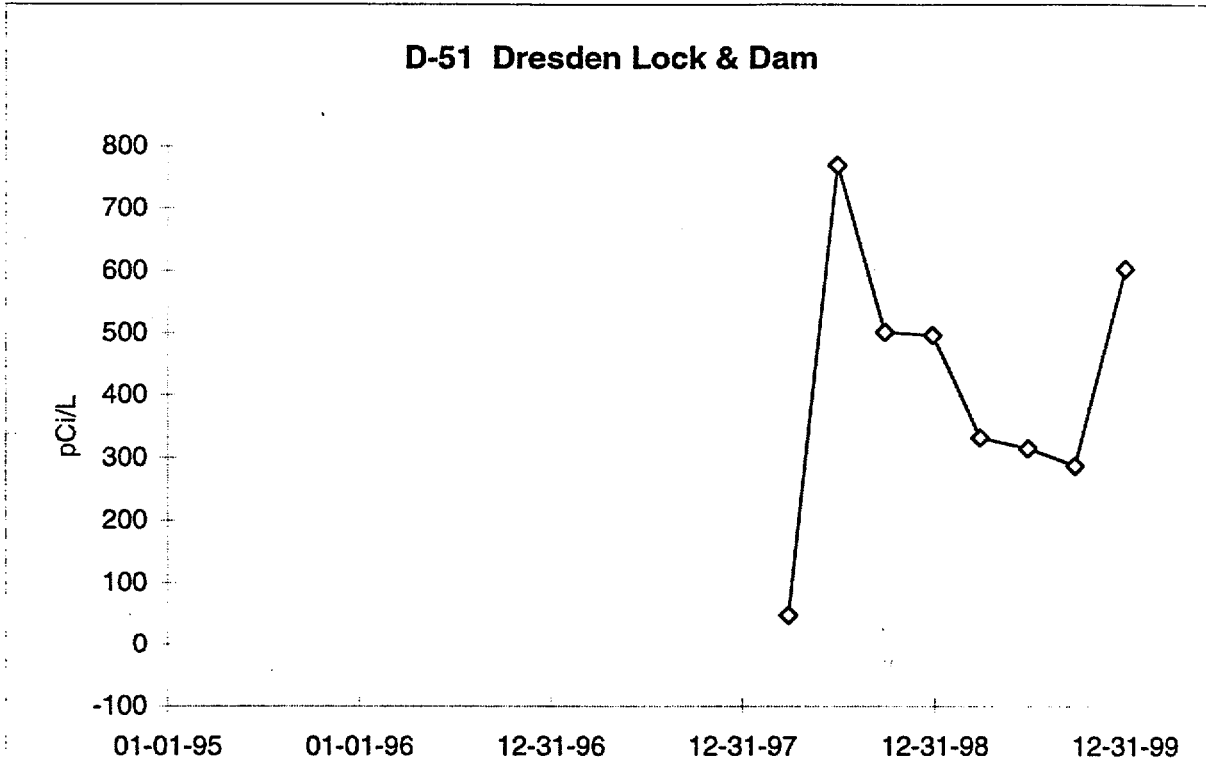


Figure 11. Quarterly composite of weekly collection.

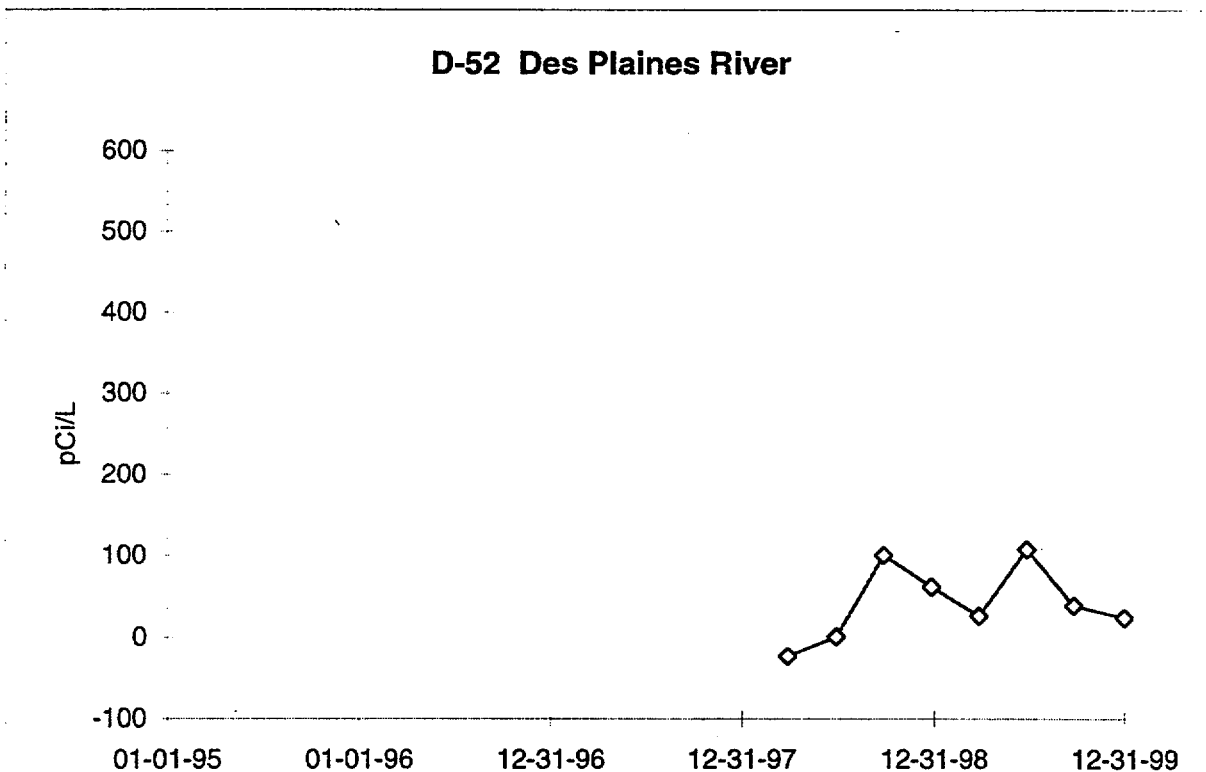
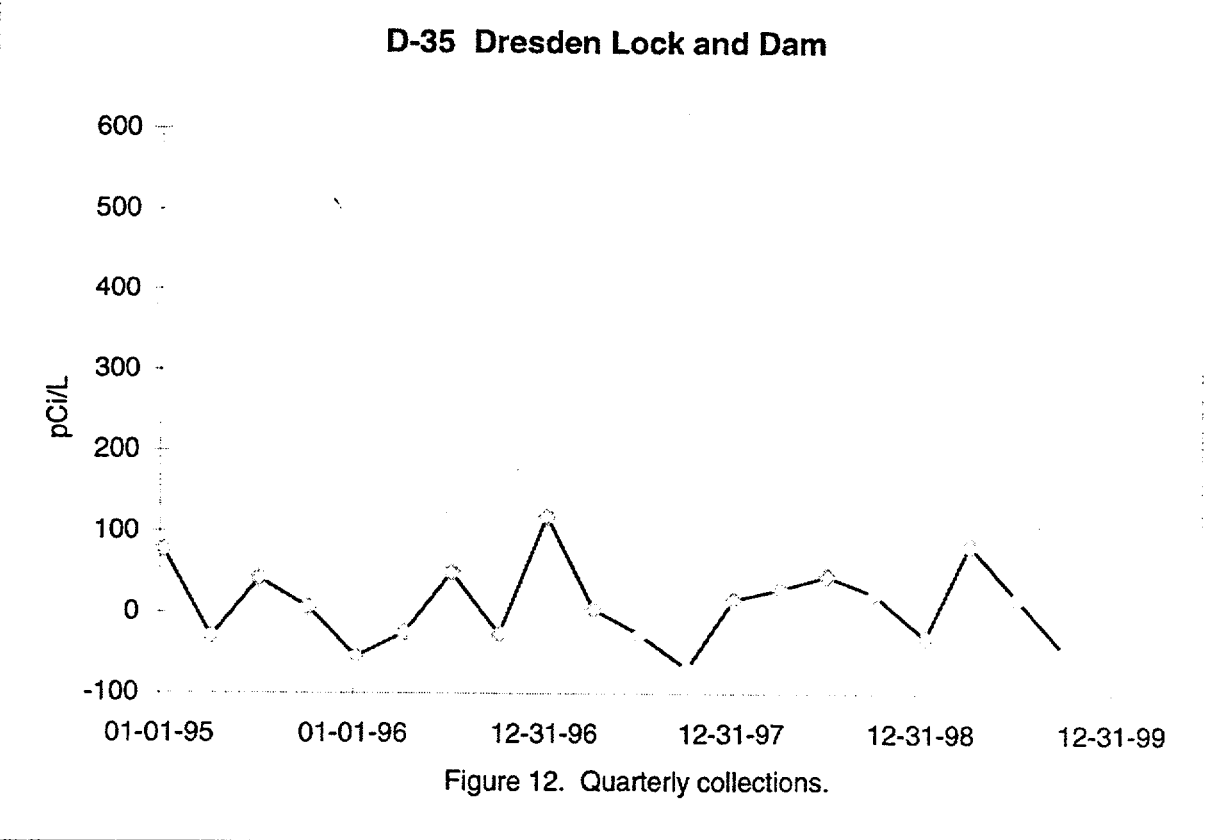
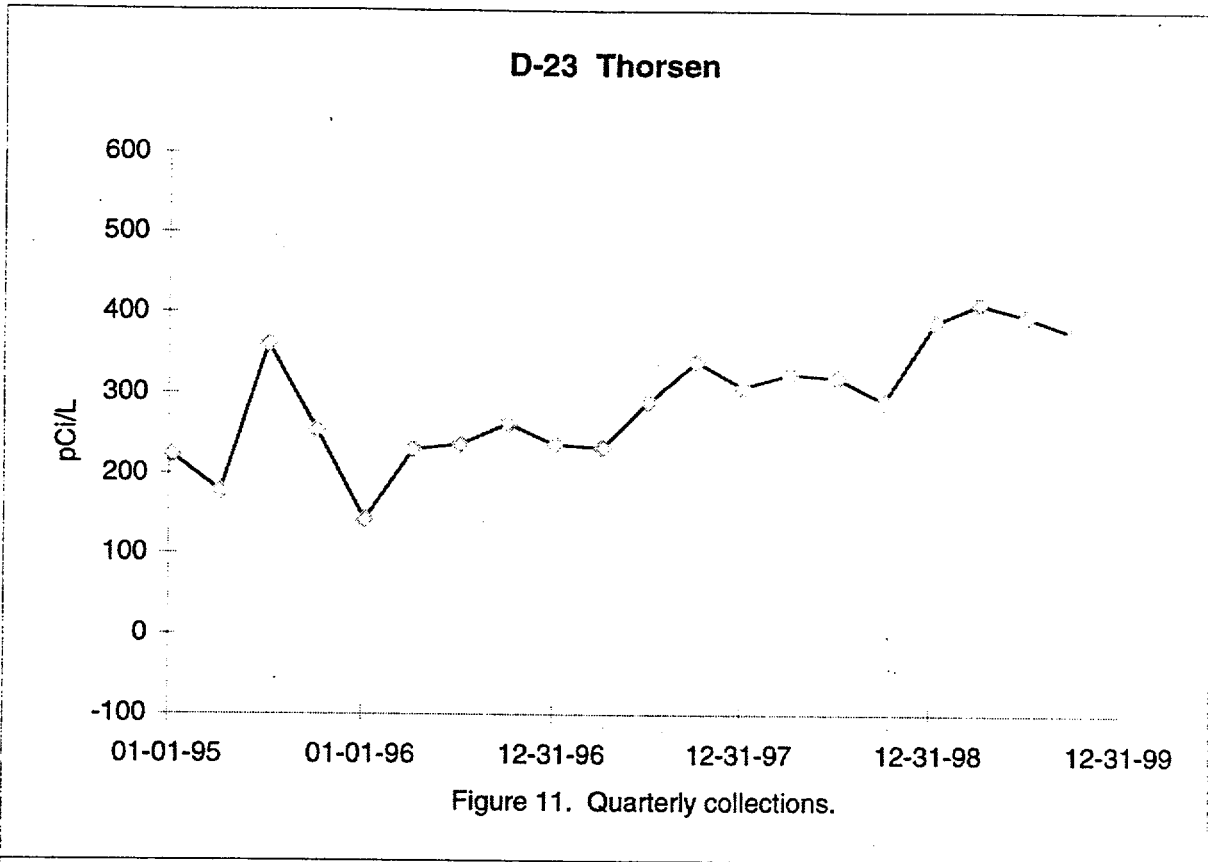


Figure 12. Quarterly composite of weekly collection.

Well Water-Tritium



APPENDIX IV
INTERLABORATORY COMPARISON PROGRAM RESULTS

NOTE: Teledyne Brown Engineering - Environmental Services, 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 annually in Appendix VI. Mixed analyte and Environmental Measurements Laboratory (EML) performance evaluation program results are also reported.

January, 1999 through December, 1999

Appendix IV

Interlaboratory Comparison Program Results

Teledyne Brown Engineering Environmental Services, Midwest Laboratory (formerly Teledyne Isotopes and Hazelton Environmental Services) has participated in interlaboratory comparison (crosscheck) programs since the formulation of its quality control program in December 1971. These programs are operated by agencies which supply environmental type samples (e.g., milk or water) 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 the laboratory's analytical procedures and to alert it to 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.

The results in Table IV-1 were obtained through participation in the environmental sample crosscheck program for milk, water, air filters, and food samples through December 31, 1999. This program was conducted by the Environmental Resource Associates and serves to replace studies formerly conducted by the U. S. Environmental Protection Agency.

Table IV-2 list results of the mixed analyte performance evaluation program.

Table IV-3 list results of the Environmental Measurement Laboratory Quality Assessment Program.

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

Table IV-1. Interlaboratory Comparison Crosscheck program, Environmental Resource Associates (ERA), comparison of ERA and Teledyne Midwest Laboratory results^a.

Lab Code	Sample Type	Date Collected	Analysis	Concentration in pCi/L ^b		
				EPA Result ^c 1s, N=1	Control Limits	TBEESML Results ± 2 Sigma ^d
STW-861	Water	Sep, 1999	Ra-226	16.5 ± 1.7	12.2 - 20.8	15.6 ± 0.3; 1.6
STW-861	Water	Sep, 1999	Ra-228	2.2 ± 0.2	1.2 - 3.1	3.2 ± 0.3; 0.5
The activity reported is the average of three separate analyses. Individual results : 2.6, 2.9 and 4.0.						
STW-861	Water	Sep, 1999	Uranium	45.4 ± 4.5	37.7 - 53.1	39.4 ± 1.2; 4.1
STW-862	Water	Nov, 1999	I-131	23.3 ± 2.3	18.1 - 28.5	23.9 ± 0.1; 2.4

^a Results obtained by Teledyne Brown Engineering Environmental Services Midwest Laboratory as a participant in the environmental sample crosscheck program operated by Environmental Resource Associates(ERA).

^b All results are in pCi/L, except for elemental potassium (K) data in milk, which are in mg/L; air filter samples, which are in pCi/Filter.

^c Unless otherwise indicated, the TBEESML results are given as the mean ± 2 standard deviations for three determinations.

^d ERA results are presented as the known values and expected laboratory precision (1s, 1 determination) and control limits as defined by ERA.

Table IV-2. Department of Energy's Mixed Analyte Performance Evaluation Program (MAPEP), comparison of MAPEP and Teledyne's Midwest Laboratory results for various sample media^a.

Lab Code	Sample Type	Date Collected	Analysis	Concentration in Bq/kg ^b		
				MAPEP Result ^d 1s, N=1	Control Limits	Teledyne Results ±Standard Deviation ^c
SPW-846	WATER	Jan, 1999	Co-57	358.0	250.6 - 465.4	337.6 ± 33.8; 47.7
SPW-846	WATER	Jan, 1999	Cs-137	637.0	445.9 - 828.1	656.6 ± 65.7; 115.1
SPW-846	WATER	Jan, 1999	Fe-55	664.0	464.8 - 863.2	724.5 ± 72.5; 102.5
SPW-846	WATER	Jan, 1999	Mn-54	229.0	160.3 - 297.7	234.2 ± 23.4; 33.1
SPW-846	WATER	Jan, 1999	Pu-238	1.5	1.0 - 1.9	1.1 ± 0.1; 0.2
SPW-846	WATER	Jan, 1999	Pu-239/40	4.0	2.8 - 5.3	3.2 ± 0.3; 0.5
SPW-846	WATER	Jan, 1999	Sr-90	39.5	27.7 - 51.4	40.9 ± 4.1; 5.8
SPW-846	WATER	Jan, 1999	U-233/4	2.7	1.9 - 3.5	2.7 ± 0.3; 0.4
SPW-846	WATER	Jan, 1999	U-238	21.2	14.8 - 27.6	20.8 ± 2.1; 2.9
SPW-846	WATER	Jan, 1999	Zn-65	1,560.0	1,092.0 - 2,028.0	1,508.9 ± 150.9; 264.5
STSO-854	SOIL	Jan, 1999	Am-241	6.6	4.6 - 8.5	6.2 ± 0.7; 0.9
STSO-854	SOIL	Jan, 1999	Co-57	360.0	252.0 - 468.0	311.1 ± 3.6; 31.3
STSO-854	SOIL	Jan, 1999	Co-60	131.0	91.7 - 170.3	134.6 ± 2.2; 13.6
STSO-854	SOIL	Jan, 1999	Cs-134	752.0	526.4 - 977.6	682.4 ± 4.5; 68.4
STSO-854	SOIL	Jan, 1999	Cs-137	331.0	231.7 - 430.3	319.5 ± 3.6; 32.2
STSO-854	SOIL	Jan, 1999	K-40	652.0	456.4 - 847.6	667.0 ± 21.5; 70.1
STSO-854	SOIL	Jan, 1999	Mn-54	345.0	241.5 - 448.5	349.0 ± 7.0; 35.6
STSO-854	SOIL	Jan, 1999	Pu-238	27.5	19.3 - 35.8	25.3 ± 1.0; 2.7
STSO-854	SOIL	Jan, 1999	Pu-239/40	48.1	33.7 - 62.5	45.7 ± 1.0; 4.7
STSO-854	SOIL	Jan, 1999	U-233/4	157.0	109.9 - 204.1	139.6 ± 1.8; 14.1
STSO-854	SOIL	Jan, 1999	U-238	40.7	28.5 - 52.9	23.5 ± 0.8; 2.5
The analysis was repeated. Result of reanalysis; 29.5±6.3 Bq/kg.						
STSO-854	SOIL	Jan, 1999	Zn-65	2,840.0	1,988.0 - 3,692.0	2,697.2 ± 25.0; 270.9

^a Results obtained by Teledyne Brown Engineering Environmental Services 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 Unless otherwise indicated, the TBESML results are given as the mean ± 1 standard deviations for three determinations.

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

Table IV-3. Environmental Measurements Laboratory Quality Assessment Program (EML), comparison of EML and Teledyne's Midwest Laboratory results for various sample media^a.

Lab Code	Sample Type	Date Collected	Analysis	Concentration in Bq/L ^b		Control Limits ^c
				Teledyne Result ^c	EML Result ^d	
STAF-848	Air Filter	Mar, 1999	Gr. Alpha	1.2 ± 0.0; 0.1	1.6 ± 0.2	0.6 - 1.6
STAF-848	Air Filter	Mar, 1999	Gr. Beta	2.0 ± 0.0; 0.2	1.6 ± 0.2	0.6 - 1.6
STW-850	Water	Mar, 1999	Am-241	1.2 ± 0.2; 0.2	1.1 ± 0.1	0.7 - 2.6
STW-850	Water	Mar, 1999	Co-60	54.4 ± 2.0; 8.1	51.1 ± 3.0	0.9 - 1.2
STW-850	Water	Mar, 1999	Cs-137	43.5 ± 2.0; 6.6	39.4 ± 2.4	0.9 - 1.3
STW-850	Water	Mar, 1999	Fe-55	81.5 ± 19.5; 21.1	97.4 ± 1.7	0.3 - 1.5
STW-850	Water	Mar, 1999	Gr. Alpha	1,169.0 ± 37.0; 147.3	1,090.0 ± 20.0	0.5 - 1.3
STW-850	Water	Mar, 1999	Gr. Beta	1,274.6 ± 33.3; 199.1	1,100.0 ± 40.0	0.5 - 1.3
STW-850	Water	Mar, 1999	H-3	90.3 ± 24.8; 27.7	121.1 ± 6.8	0.7 - 1.9
STW-850	Water	Mar, 1999	Ni-63	125.8 ± 6.3; 14.1	114.0 ± 10.0	0.5 - 1.5
STW-850	Water	Mar, 1999	Pu-238	0.8 ± 0.0; 0.1	0.8 ± 0.0	0.8 - 1.4
STW-850	Water	Mar, 1999	Pu-239/40	1.0 ± 0.1; 0.1	1.0 ± 0.1	0.8 - 1.4
STW-850	Water	Mar, 1999	Sr-90	3.6 ± 1.2; 1.3	4.1 ± 0.0	0.5 - 1.5
STW-850	Water	Mar, 1999	U-233/4	0.3 ± 0.1; 0.1	0.3 ± 0.0	0.8 - 1.4
STW-850	Water	Mar, 1999	U-238	0.3 ± 0.1; 0.1	0.3 ± 0.0	0.8 - 1.4
STVE-851	Vegetation	Mar, 1999	Am-241	3.4 ± 0.9; 0.9	3.5 ± 0.6	0.7 - 2.8
STVE-851	Vegetation	Mar, 1999	Cm-244	0.6 ± 0.4; 0.4	1.7 ± 0.5	0.5 - 1.7
STVE-851	Vegetation	Mar, 1999	Co-60	21.0 ± 1.9; 3.4	21.5 ± 1.0	0.6 - 1.4
STVE-851	Vegetation	Mar, 1999	Cs-137	453.9 ± 5.7; 62.0	467.0 ± 20.0	0.8 - 1.5
STVE-851	Vegetation	Mar, 1999	K-40	667.6 ± 33.7; 74.8	656.5 ± 20.0	0.8 - 1.5
STVE-851	Vegetation	Mar, 1999	Sr-90	704.8 ± 27.8; 75.8	736.1 ± 7.7	0.5 - 1.3
STSO-852	Soil	Mar, 1999	Ac-228	45.1 ± 7.4; 8.7	47.2 ± 3.0	0.5 - 1.5
STSO-852	Soil	Mar, 1999	Am-241	5.7 ± 2.4; 2.5	4.9 ± 1.0	0.5 - 2.7
STSO-852	Soil	Mar, 1999	Bi-214	67.3 ± 3.3; 7.5	69.9 ± 5.7	0.5 - 1.5
STSO-852	Soil	Mar, 1999	Cs-137	620.5 ± 5.9; 62.3	659.5 ± 25.0	0.8 - 1.3
STSO-852	Soil	Mar, 1999	K-40	355.7 ± 24.6; 43.2	362.8 ± 20.2	0.7 - 1.7
STSO-852	Soil	Mar, 1999	Pb-212	47.9 ± 3.0; 5.7	47.9 ± 2.6	0.5 - 1.5
STSO-852	Soil	Mar, 1999	Pb-214	70.1 ± 4.8; 8.5	71.0 ± 7.0	0.5 - 1.5
STSO-852	Soil	Mar, 1999	Pu-239/40	7.3 ± 1.3; 1.5	8.1 ± 1.1	0.7 - 1.9
STSO-852	Soil	Mar, 1999	Sr-90	28.3 ± 3.5; 4.5	32.4 ± 0.5	0.5 - 2.8
STSO-852	Soil	Mar, 1999	Th-234	227.4 ± 35.2; 41.9	138.0 ± 4.1	0.5 - 2.0
STSO-852	Soil	Mar, 1999	U-233/4	132.9 ± 6.9; 15.0	140.7 ± 1.2	0.4 - 1.6
STSO-852	Soil	Mar, 1999	U-238	139.4 ± 7.0; 15.6	145.0 ± 1.7	0.4 - 1.6
STAF-853	Air Filter	Mar, 1999	Am-241	0.1 ± 0.0; 0.0	0.1 ± 0.0	0.7 - 2.4
STAF-853	Air Filter	Mar, 1999	Co-57	3.3 ± 0.1; 0.3	3.0 ± 0.1	0.6 - 1.2
STAF-853	Air Filter	Mar, 1999	Co-60	5.3 ± 0.2; 0.5	5.0 ± 0.3	0.6 - 1.4
STAF-853	Air Filter	Mar, 1999	Cs-137	7.0 ± 0.2; 0.7	6.1 ± 0.3	0.7 - 1.3
STAF-853	Air Filter	Mar, 1999	Pu-238	0.3 ± 0.0; 0.0	0.3 ± 0.0	0.6 - 1.5

Table IV-3. Environmental Measurements Laboratory Quality Assessment Program (EML), comparison of EML and Teledyne's Midwest Laboratory results for various sample media^a.

Lab Code	Sample Type	Date Collected	Analysis	Concentration in Bq/L ^b		Control Limits ^e
				Teledyne Result ^c	EML Result ^d	
STAF-853	Air Filter	Mar, 1999	Pu-239/40	0.1 ± 0.0; 0.0	0.1 ± 0.0	0.6 - 1.5
STAF-853	Air Filter	Mar, 1999	Sb-125	4.4 ± 0.3; 0.5	3.6 ± 0.3	0.6 - 1.4
STAF-853	Air Filter	Mar, 1999	Sr-90	0.7 ± 0.2; 0.2	0.6 ± 0.0	0.7 - 2.7
STAF-853	Air Filter	Mar, 1999	U-233/4	0.1 ± 0.0; 0.0	0.1 ± 0.0	0.8 - 3.0
STAF-853	Air Filter	Mar, 1999	U-238	0.1 ± 0.0; 0.0	0.1 ± 0.0	0.8 - 3.0
STW-855	Water	Sep, 1999	Am-241	1.1 ± 0.2; 0.3	0.9 ± 0.1	0.8 - 1.5
STW-855	Water	Sep, 1999	Co-60	54.1 ± 1.1; 7.9	52.4 ± 2.2	0.8 - 1.2
STW-855	Water	Sep, 1999	Cs-137	77.1 ± 1.4; 11.2	76.0 ± 3.4	0.8 - 1.3
STW-855	Water	Sep, 1999	Fe-55	48.6 ± 6.8; 8.4	53.0 ± 2.0	0.4 - 1.5
STW-855	Water	Sep, 1999	U-233/4	0.5 ± 0.1; 0.1	0.4 ± 0.0	0.8 - 1.9
STW-855	Water	Sep, 1999	U-238	0.5 ± 0.1; 0.1	0.4 ± 0.0	0.8 - 1.3
Increasing the sample counting time achieved acceptable results (0.42 ± 0.07 Bq/L).						
STW-856	Water	Sep, 1999	Gr. Alpha	1,543.0 ± 44.0; 193.3	1,580.0 ± 20.0	0.6 - 1.3
STW-856	Water	Sep, 1999	Gr. Beta	1,053.0 ± 31.0; 165.1	740.0 ± 40.0	0.6 - 1.5
STW-856	Water	Sep, 1999	H-3	136.0 ± 25.0; 31.1	80.7 ± 3.7	0.7 - 1.8
STW-856	Water	Sep, 1999	Pu-238	0.8 ± 0.1; 0.1	0.8 ± 0.1	0.8 - 1.3
STW-856	Water	Sep, 1999	Pu-239/40	0.8 ± 0.1; 0.1	0.9 ± 0.1	0.8 - 1.4
STW-856	Water	Sep, 1999	Sr-90	2.2 ± 1.0; 1.0	1.7 ± 1.0	0.8 - 1.5
STW-856	Water	Sep, 1999	U-233/4	0.5 ± 0.1; 0.1	0.4 ± 0.0	0.8 - 1.4
STW-856	Water	Sep, 1999	U-238	0.5 ± 0.1; 0.1	0.4 ± 0.0	0.8 - 1.3
STSO-857	Soil	Sep, 1999	Ac-228	127.3 ± 7.5; 14.8	124.0 ± 4.8	0.8 - 1.8
STSO-857	Soil	Sep, 1999	Bi-212	107.4 ± 2.6; 11.1	140.0 ± 14.0	0.4 - 1.2
STSO-857	Soil	Sep, 1999	Bi-214	90.1 ± 4.2; 9.9	69.5 ± 1.8	0.8 - 1.4
STSO-857	Soil	Sep, 1999	Cs-137	195.9 ± 4.0; 20.0	204.0 ± 5.0	0.8 - 1.3
STSO-857	Soil	Sep, 1999	K-40	744.7 ± 37.7; 83.5	780.0 ± 27.0	0.8 - 1.5
STSO-857	Soil	Sep, 1999	Pb-212	123.4 ± 3.7; 12.9	127.0 ± 4.8	0.7 - 1.3
STSO-857	Soil	Sep, 1999	Pb-214	96.5 ± 5.0; 10.9	72.0 ± 0.4	0.7 - 1.5
STSO-857	Soil	Sep, 1999	Sr-90	13.0 ± 1.4; 1.9	13.0 ± 0.5	0.6 - 3.7
STSO-857	Soil	Sep, 1999	Th-234	298.7 ± 24.6; 38.7	198.0 ± 5.6	0.6 - 1.9
STSO-857	Soil	Sep, 1999	U-233/4	184.4 ± 8.5; 20.3	190.0 ± 5.2	0.5 - 1.3
STSO-857	Soil	Sep, 1999	U-238	184.8 ± 8.5; 20.3	190.0 ± 5.2	0.5 - 1.3
STVE-858	Vegetation	Sep, 1999	Am-241	3.3 ± 0.9; 0.9	2.9 ± 0.2	0.7 - 2.7
STVE-858	Vegetation	Sep, 1999	Cm-244	2.1 ± 0.9; 0.9	1.6 ± 0.4	0.5 - 1.7
STVE-858	Vegetation	Sep, 1999	Co-60	17.6 ± 1.9; 3.1	17.6 ± 1.0	0.7 - 1.5
STVE-858	Vegetation	Sep, 1999	Cs-137	414.6 ± 5.7; 56.7	440.0 ± 20.0	0.8 - 1.4
STVE-858	Vegetation	Sep, 1999	K-40	502.8 ± 34.7; 61.1	513.0 ± 20.0	0.8 - 1.4
STVE-858	Vegetation	Sep, 1999	Pu-239/40	4.1 ± 1.0; 1.1	4.3 ± 0.5	0.7 - 1.6
STAP-859	Air Filter	Sep, 1999	Am-241	0.1 ± 0.1; 0.1	0.1 ± 0.0	0.7 - 2.6

Table IV-3. Environmental Measurements Laboratory Quality Assessment Program (EML), comparison of EML and Teledyne's Midwest Laboratory results for various sample media^a.

Lab Code	Sample Type	Date Collected	Analysis	Concentration in Bq/L ^b		Control Limits ^e
				Teledyne Result ^c	EML Result ^d	
STAP-859	Air Filter	Sep, 1999	Co-57	8.1 ± 0.1; 0.8	7.7 ± 0.0	0.7 - 1.4
STAP-859	Air Filter	Sep, 1999	Co-60	6.7 ± 0.1; 0.7	6.4 ± 0.4	0.8 - 1.3
STAP-859	Air Filter	Sep, 1999	Cs-137	7.1 ± 0.2; 0.7	6.4 ± 0.4	0.7 - 1.4
STAP-859	Air Filter	Sep, 1999	Mn-54	8.8 ± 0.2; 0.9	7.9 ± 0.5	0.8 - 1.4
STAP-859	Air Filter	Sep, 1999	Pu-238	0.1 ± 0.0; 0.0	0.1 ± 0.0	0.7 - 1.4
STAP-859	Air Filter	Sep, 1999	Pu-239/40	0.1 ± 0.0; 0.0	0.1 ± 0.0	0.8 - 1.4
Insufficient sample volume (15 ml.) for accurate analysis.						
STAP-859	Air Filter	Sep, 1999	Ru-106	5.9 ± 0.8; 1.0	5.5 ± 1.8	0.6 - 1.3
STAP-859	Air Filter	Sep, 1999	Sr-90	0.6 ± 0.2; 0.2	0.3 ± 0.0	0.6 - 1.9
STAP-859	Air Filter	Sep, 1999	U-233/4	0.1 ± 0.0; 0.0	0.1 ± 0.0	0.8 - 1.9
STAP-859	Air Filter	Sep, 1999	U-238	0.1 ± 0.0; 0.0	0.1 ± 0.0	0.8 - 2.6
STAP-860	Air Filter	Sep, 1999	Gr. Alpha	3.2 ± 0.1; 0.3	2.8 ± 0.3	0.5 - 1.6
STAP-860	Air Filter	Sep, 1999	Gr. Beta	3.7 ± 0.1; 0.4	2.7 ± 0.3	0.7 - 1.7

^a The Environmental Measurements Laboratory provides the following nuclear species : Air Filters, Soil, Tissue, Vegetation and Water. Teledyne does not participate in the Tissue program.

^b Results are reported in Bq/L⁻¹ with the following exceptions: Air Filter results are reported in Bq/Filter⁻¹, Soil results are reported in Bq/Kg⁻¹, Vegetation results are reported in Bq/Kg⁻¹. The results of elemental Uranium are reported in ug/filter⁻¹, g, or ml.

^c Teledyne results are reported as the mean of three determinations ± standard deviation; total promulgated uncertainty.

^d The EML result listed is the mean of replicate determinations for each nuclide ± the standard error of the mean.

^e The control limits are reported by EML as the ratio of Reported Value / EML value and are established from percentiles of historic data distributions (1982-1992). The evaluation of this historic data and the development of the control limits is presented in DOE report EML-564.