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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Quad Cities Nuclear Power Station, Units 1 and 2
Facility Operating License Nos. DPR-29 and DPR-30
NRC Docket Nos. 50-254 and 50-265

Subject: Quad Cities Nuclear Station Annual Radiological Environmental Operating Report

In accordance with Quad Cities Technical Specifications 5.6.2, we are submitting the 2002 Radiological Environmental Operating Report for Quad Cities Nuclear Power Station. This report contains the results of the radiological environmental and meteorological monitoring programs.

Should you have any questions concerning this letter, please contact Mr. W. J. Beck at (309) 227-2800.

Respectfully,

Timothy J. Tulon
Site Vice President
Quad Cities Nuclear Power Station

Attachment: The Quad Cities Nuclear Power Station 2002 Annual Radiological Environmental Operating Report

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station

IE25

Attachment

The
Quad Cities Nuclear Power Station
2002 Annual Radiological Environmental
Operating Report

QUAD CITIES STATION

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

2002

MAY 2003

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INTRODUCTION

Units 1 and 2 of the Quad Cities Station, located near Cordova, Illinois next to the Mississippi River, are 2957 MW_{th} boiling water reactors. The station has been designed to keep releases to the environment at levels below those specified in the regulations.

Liquid effluents from Quad Cities are released to the Mississippi 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 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 effluent and meteorological data.

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

SUMMARY

Calculations based gaseous and liquid effluents and hydrogen addition activities indicate that public dose due to radioactive material attributable to Quad Cities 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 Quad Cities Station calculated for the maximally-exposed individual for the period is 6.28 mrem. The annual limit on TEDE is 100 mrem. This value is largely dominated by the direct radiation constituent from the Unit 1 and Unit 2 turbines (5.94 mrem). The balance of the calculated maximum dose (0.34 mrem) is due to exposure from radionuclides released from the Station in liquid and gaseous effluents.

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

1.0 EFFLUENTS

1.1 Gaseous Effluents to the Atmosphere

Measured concentrations and isotopic composition of noble gases, radioiodine, and particulate radioactivity released to the atmosphere during the year, are listed in Table 1.1-1. A total of 3.36E+02 curies of fission and activation gases was released with a maximum quarterly average release rate of 1.44E+01 μCi/sec.

A total of 5.45E-03 curies of I-131 was released during the year with a maximum quarterly average release rate of 2.88E-04 μCi/sec.

A total of 2.96E-02 curies of beta-gamma emitters was released as airborne particulate matter with a maximum quarterly average release rate of 2.36E-03 μCi/sec. A total of 2.39E-05 curies of alpha-emitting radionuclides was released.

A total of 1.82E+02 curies of tritium was released with a maximum quarterly average release rate of 7.56E+00 μCi/sec.

1.2 Liquids Released to the Mississippi River

A total of 7.91E+06 liters of radioactive liquid waste (prior to dilution) containing 7.68E-02 curies (excluding tritium, noble gases, and alpha) was discharged from the station. These wastes were released at a maximum quarterly average diluted concentration of 7.10E-09 μCi/ml. No alpha radioactivity was detected in the liquid waste. A total of 4.42E+01 curies of tritium was released at a maximum quarterly average concentration of 1.73E-06 μCi/ml. Quarterly release estimates and principal radionuclides in liquid effluents are given in Table 1.2-1.

2.0 SOLID RADIOACTIVE WASTE

Forty-one shipments of solid radioactive waste were shipped to waste processors via truck and 5 via rail during 2002; 15 shipments were sent, via truck, to disposal sites. For further detail, refer to the Quad Cities 2002 Effluent Report.

3.0 DOSE TO MAN

3.1 Gaseous Effluent Pathways

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

3.1.1 Noble Gases

3.1.1.1 Gamma Dose Rates

Offsite gamma air and total body 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 dose to an individual would be 1.97E-02 mrem for the year (Table 3.1-1), 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 4.88E-02 mrem (Table 3.4-1). The maximum gamma air dose was 1.23E-03 mrad (Table 3.1-1) based on measured effluents and average meteorological data and 9.98E-03 mrad based on concurrent meteorological data (Table 3.4-1).

3.1.1.2 Beta Air and Skin Dose Rates

The range of beta particles in air is relatively small (on the order of a few meters or less); consequently, plumes of gaseous effluents may be considered "infinite" for purpose of calculating the dose from beta radiation incident on the skin. However, the actual dose to sensitive skin tissues is difficult to calculate due to the effect of the beta particle energies, thickness of inert skin and clothing covering sensitive tissues. For purposes of this report the skin is taken to have a thickness of 7.0 mg/cm^2 and an occupancy factor of 1.0 is used. The skin dose from beta and gamma radiation for the year was 5.85E-02 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 for the year was 7.20E-04 mrad (Table 3.1-1) and 1.65E-03 mrad based on concurrent meteorological data (Table 3.4-1).

The difference between the calculated doses from average meteorology and those calculated by the contractor from concurrent meteorology are attributable to:

1. Concurrent meteorology will almost always produce higher Chi/Q values than those using average meteorology data.

2. The dose calculated using concurrent meteorological data is also using a slightly different dose calculation than the ODCM calculation.

This is because not all of the Exelon sites have implemented the NUREG 0133 methodology in use at Quad Cities since January 2001.

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 a person resulting in a dose to the thyroid. The principal pathway of interest for this radionuclide is ingestion of radioiodine in milk.

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 offsite concentration is estimated to be 8.22E-05 pCi/m^3 for the year (Table 3.4-1).

3.1.2.2 Dose to Thyroid

The hypothetical thyroid dose to a maximum exposed individual living near the station via ingestion of milk was calculated. The radionuclide considered was I-131 and the source of milk was taken to be the nearest dairy farm with the cows pastured from May through October. The maximum annual thyroid dose was 3.86E-01 mrem (infant) {Table 3.1-1}.

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 level is estimated to be 3.02E+00 pCi/m^3 (Table 3.4-1).

3.2 Liquid Effluent Pathways

The three principal pathways through the aquatic environment for potential doses to man from liquid waste are ingestion of potable water, eating aquatic foods, and exposure while on the shoreline. Not all of these pathways are significant or applicable at a given time 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

* Nuclear Regulatory Commission, NUREG 0133 methodology and Regulatory Guide 1.109 (Rev. 1) dose conversion factors.

the whole body, lower GI tracts, thyroid, bone, skin; specific parameters for use in the equations are given in the ComEd Offsite Dose Calculation Manual. The maximum whole body dose for the year was 2.46E-03 mrem and no organ dose exceeded 4.17E-03 mrem (Table 3.2-1 [teen]).

3.3 Assessment of Dose to Member of Public

During the period January to December, 2002, Quad Cities Station did not exceed the following limits as shown in Table 3.1-1 and Table 3.2-1 (based on yearly average meteorological data), as shown in Figure 3.1-1 (based on concurrent meteorological data), and as shown in Table 3.3-1:

- The RETS limits on dose or dose commitment to an individual due to radioactive materials in liquid effluents from each reactor unit (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 mrads for gamma radiation or 20 mrad for beta radiation during any calendar year).

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

- The RETS 40CFR190 limits for dose due to radioactive liquid and gaseous effluents to the whole body or any organ (25 mrem during the calendar year) and to the thyroid (75 mrem during the calendar year).

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

4.0 SITE METEOROLOGY

A summary of the site meteorological measurements taken during each quarter of the year is given in Appendix II. The data are presented as cumulative joint frequency distributions of the wind direction for the 296' level and wind speed class by atmospheric stability class determined from the temperature difference between the 296' and 33' levels. Average data recovery for all measurements on the tower was 99.5% for 2002 (Table 3.4-1).

5.0 ENVIRONMENTAL MONITORING

Table 5.0-1 provides an outline of the Radiological Environmental Monitoring Program (REMP) as required in current Technical Specifications. Table 5.0-2 identifies the sampling locations, sample collections and analyses for each location. Tables 5.0-3 to 5.0-6 summarize data for the year. A detailed listing of all data is presented in Appendix III.

Specific findings for various environmental media are discussed below.

5.1 Gamma Radiation

External radiation dose from onsite sources and noble gases released to the atmosphere was measured using CaF_2 thermoluminescent dosimeters (TLDs). The quarterly average external radiation dose for the year was 20.2 mR at the indicator locations and 19.1 mR at the control locations. TLD results are listed in Table 4.0 of Appendix III and locations are shown in Figure 5.0-1 and 5.0-2.

Quarterly average of external radiation dose (including background) at indicator air sampling locations averaged 19.7±2.0 mR and was similar to levels measured in 1986 (13.5 mR), 1987 (14.1 mR), 1988 (13.4 mR), 1989 (14.5 mR), 1990 (14.6 mR), 1991 (15.8 mR), 1992 (14.7 mR) and 1993 (14.1 mR), 1994 (14.1 mR), 1995 (15.0 mR), 1996 (14.8 mR), 1997 (13.5 mR), 1998 (15.1 mR), 1999 (14.9 mR), 2000 (15.2 mR) and 2001 (20.0 mR). The differences are not statistically different than the control locations.

5.2 Airborne I-131 and Particulate Radioactivity

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

Gross beta concentrations ranged from 0.011 to 0.063 pCi/m^3 and averaged 0.027 pCi/m^3 and was similar to overall average levels in 1985 (0.024 pCi/m^3), 1986 (0.025 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 (0.023 pCi/m^3), 1988 (0.030 pCi/m^3), 1989 (0.028 pCi/m^3), 1990 (0.020 pCi/m^3), 1991 (0.022 pCi/m^3), 1992 (0.021 pCi/m^3), 1993 (0.021 pCi/m^3), 1994 (0.022 pCi/m^3), 1995 (0.022 pCi/m^3), 1996 (0.022 pCi/m^3) 1997 (0.022 pCi/m^3), 1998 (0.023 pCi/m^3), 1999 (0.027 pCi/m^3), 2000 (0.028 pCi/m^3) and 2001 (0.026 pCi/m^3).

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

5.3 Aquatic Radioactivity

Well water was collected quarterly from one nearsite well (Q-35) and one farsite well (Q-36) and was analyzed for tritium and gamma-emitting nuclides. All nuclides remained below the limits of detection for the year.

Weekly surface water samples from upstream (Q-34) and downstream (Q-33) from the station on the Mississippi River were composited monthly and analyzed for gamma-emitting nuclides and gross beta activity. Quarterly composites were analyzed for tritium.

Cs-134 and Cs-137 concentrations were below the LLD of 15 pCi/L and 18 pCi/L, respectively, in all samples.

Gross beta concentrations at Q-33 averaged 3.6 pCi/L with a range of 2.7-4.9 pCi/L; concentrations at Q-34 averaged 3.9 pCi/L with a range of 2.4-5.9 pCi/L.

Tritium concentrations remained below the LLD of 200 pCi/L in all samples.

Levels of gamma radioactivity in fish were measured and found in all cases to be below the lower limit of detection for the program. One downstream sediment sample was analyzed by gamma spectrometry. All gamma-emitters were below the limits of detection indicating that no radioactivity was found due to station operation.

Water, sediment, and fish sample locations are shown in Figure 5.0-3.

5.4 Milk

Milk samples from the Bill Stanley Farm (located 3.5 miles east southeast of the station) were collected monthly from November through April and biweekly from May through October and analyzed for I-131.

I-131 remained below the detection limits during the non-grazing period (November through April) and the grazing period (May through October).

Milk sample locations are shown in Figure 5.0-3.

5.5 Terrestrial Radioactivity

Vegetables were collected in the third quarter 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 there was no measurable amount of radioactivity attributable to station releases.

5.6 Sample Collections

All samples were collected as scheduled except those listed in the Listing of Missed Samples, Appendix III Table 2.0.

5.7 Program Modifications

There were no changes to the program in 2002.

6.0 ANALYTICAL PROCEDURES

Procedures used during the period covered in this report remain unchanged. A summary of the procedures is given in Appendix VI of the 1993 Annual Radiological Environmental Operating Report.

7.0 MILCH ANIMALS AND NEAREST LIVESTOCK CENSUS

A census of milch animals and nearest livestock was conducted around the station by G. Kreuder. The survey was conducted on August 13, 2002.

Milch animal and nearest livestock census results are presented on pages 31 and 32 of Appendix III.

8.0 NEAREST RESIDENCE CENSUS

A census of the nearest residences within a 6.2-mile radius was conducted on August 13, 2002 by G. Kreuder.

The nearest residence census results are presented on page 33 of Appendix III.

9.0 INTERLABORATORY COMPARISON PROGRAM RESULTS

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

10.0 ERRATA DATA

There is no errata data for 2002.

APPENDIX I

DATA TABLES AND FIGURES

Table 1.1-1

ATTACHMENT 1
Effluent & Waste Disposable Annual Report

GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES

Period: January – June 2002

A. FISSION & ACTIVATION GASES	UNIT	FIRST QUARTER	SECOND QUARTER	EST. TOTAL ERROR %
1. Total Release	Ci	7.98E+01	1.13E+02	12.4
2. Average release rate for the period	µCi/sec	1.03E+01	1.44E+01	
3. *Percent of ODCM limit Chimney & Stack	%	5.07E-03	5.78E-03	
		1.51E-03	1.90E-03	

B. IODINE				
1. Total Iodine – 131.	Ci	9.55E-04	7.87E-04	40.0
2. Average release rate for the period	µCi/sec	1.23E-04	1.00E-04	

C. PARTICULATES				
1. Particulates with half-lives > 8 days	Ci	4.01E-03	2.51E-03	30.1
2. Average release rate for the period	µCi/sec	5.15E-04	3.20E-04	
3. Gross alpha radioactivity	Ci	<LLD**	4.95E-06	

D. TRITIUM				
1. Total Release	Ci	3.51E+01	3.16E+01	8.1
2. Average release rate for the period	µCi/sec	4.51E00	4.02E00	

E. IODINE 131 & 133, TRITIUM & PARTICULATE			
1. Percent of ODCM limit Chimney & Stack	%	1.09E00	6.75E-01

* % NOBLE GAS GAMMA/NOBLE GAS BETA DOSE LIMITS

Table 1.1-1 (continued)

ATTACHMENT 1
Effluent & Waste Disposable Annual Report

GASEOUS EFFLUENTS – SUMMATION OF ALL RELEASES

Period: July – December 2002

A. FISSION & ACTIVATION GASES	UNIT	THIRD QUARTER	FOURTH QUARTER	EST. TOTAL ERROR %
1. Total Release	Ci	9.24E+01	5.06E+01	12.4
2. Average release rate for the period	µCi/sec	1.16E+01	6.36E00	
3. *Percent of ODCM limit Chimney & Stack	%	8.88E-03	4.94E-03	
		2.34E-03	1.45E-03	

B. IODINE				
1. Total Iodine – 131.	Ci	1.42E-03	2.29E-03	40.0
2. Average release rate for the period	µCi/sec	1.79E-04	2.88E-04	

C. PARTICULATES				
1. Particulates with half-lives > 8 days	Ci	4.28E-03	1.88E-02	30.1
2. Average release rate for the period	µCi/sec	5.39E-04	2.36E-03	
3. Gross alpha radioactivity	Ci	8.53E-06	1.04E-05	

D. TRITIUM				
1. Total Release	Ci	6.01E+01	5.55E+01	8.1
2. Average release rate for the period	µCi/sec	7.56E00	6.98E00	

E. IODINE 131 & 133, TRITIUM & PARTICULATE			
1. Percent of ODCM limit Chimney & Stack	%	1.27E00	2.11E00

* % NOBLE GAS GAMMA/NOBLE GAS BETA DOSE LIMITS

Table 1.2-1

ATTACHMENT 1
Effluent & Waste Disposable Annual Report

LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES

A. FISSION & ACTIVATION PRODUCTS	UNIT	FIRST QUARTER	SECOND QUARTER	EST TOTAL ERROR%
1. Total Release (not including tritium, gases & alpha)	Ci	4.24E-02	4.53E-03	5.6
2. Average diluted concentration during batch discharges for the period.	µCi/mL	7.10E-09	5.45E-10	
3. Percent of applicable limit*	%	1.19E-01	1.31E-02	
		6.33E-02	6.90E-03	
4. Maximum diluted concentration during batch discharges	µCi/mL	6.88E-09	6.35E-10	
B. TRITIUM				
1. Total Release	Ci	1.03E+01	6.22E00	4.1
2. Average diluted concentration during batch discharges for the period	µCi/mL	1.73E-06	7.48E-07	
3. Percent of applicable limit	%	5.40E-02	3.21E-02	
C. DISSOLVED & ENTRAINED GASES				
1. Total Release	Ci	<LLD	<LLD	5.6
2. Average diluted concentration during batch discharges for the period	µCi/mL	<LLD	<LLD	
3. Percent of applicable limit	%	NA	NA	
D. GROSS ALPHA ACTIVITY				
1. Total Release	Ci	<LLD**	<LLD**	14.8
2. Average diluted concentration during batch discharges for the period	µCi/mL	NA	NA	
E. VOLUME OF WASTE RELEASED (prior to dilution)	Liters	2.30E+06	1.24E+06	
F. VOLUME OF DILUTION WATER USED DURING BATCH DISCHARGES	Liters	5.97E+09	8.32E+09	
G. TOTAL VOLUME OF DILUTION WATER USED DURING PERIOD (quarter)	Liters	2.00E+11	4.48E+11	

* Whole Body/Organ (ODCM)

Table 1.2-1 (continued)

ATTACHMENT 1
Effluent & Waste Disposable Annual Report

LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES

A. FISSION & ACTIVATION PRODUCTS	UNIT	THIRD QUARTER	FOURTH QUARTER	EST TOTAL ERROR%
1. Total Release (not including tritium, gases & alpha)	Ci	2.71E-03	2.72E-02	5.6
2. Average diluted concentration during batch discharges for the period.	µCi/mL	1.90E-10	2.81E-09	
3. Percent of applicable limit*	%	2.16E-02	5.42E-02	
		1.03E-02	2.69E-02	
4. Maximum diluted concentration during batch discharges	µCi/mL	1.70E-10	6.83E-09	
B. TRITIUM				
1. Total Release	Ci	1.53E+01	1.24E+01	4.1
2. Average diluted concentration during batch discharges for the period	µCi/mL	1.08E-06	1.28E-06	
3. Percent of applicable limit	%	8.02E-02	6.40E-02	
C. DISSOLVED & ENTRAINED GASES				
1. Total Release	Ci	<LLD	5.84E-05	5.6
2. Average diluted concentration during batch discharges for the period	µCi/mL	<LLD	6.04E-12	
3. Percent of applicable limit	%	NA	3.02E-06	
D. GROSS ALPHA ACTIVITY				
1. Total Release	Ci	<LLD**	<LLD**	14.8
2. Average diluted concentration during batch discharges for the period	µCi/Ml	NA	NA	
E. VOLUME OF WASTE RELEASED (prior to dilution)	Liters	1.81E+06	2.56E+06	
F. VOLUME OF DILUTION WATER USED DURING BATCH DISCHARGES	Liters	1.42E+10	9.67E+09	
G. TOTAL VOLUME OF DILUTION WATER USED DURING PERIOD (quarter)	Liters	4.86E+11	3.14E+11	

* Whole Body/Organ (ODCM)

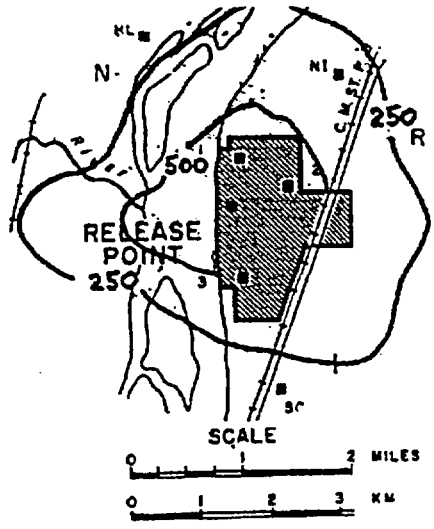
TABLE 2.0-1

Table 2.0-1 has been deliberately deleted. For Solid Waste Disposal detail, refer to Quad Cities 2002 Effluent Report.

Figure 3.1-1

Estimated Cumulative Gamma Dose (In mrem)
from the Quad Cities Station for the period
January-December 2002

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



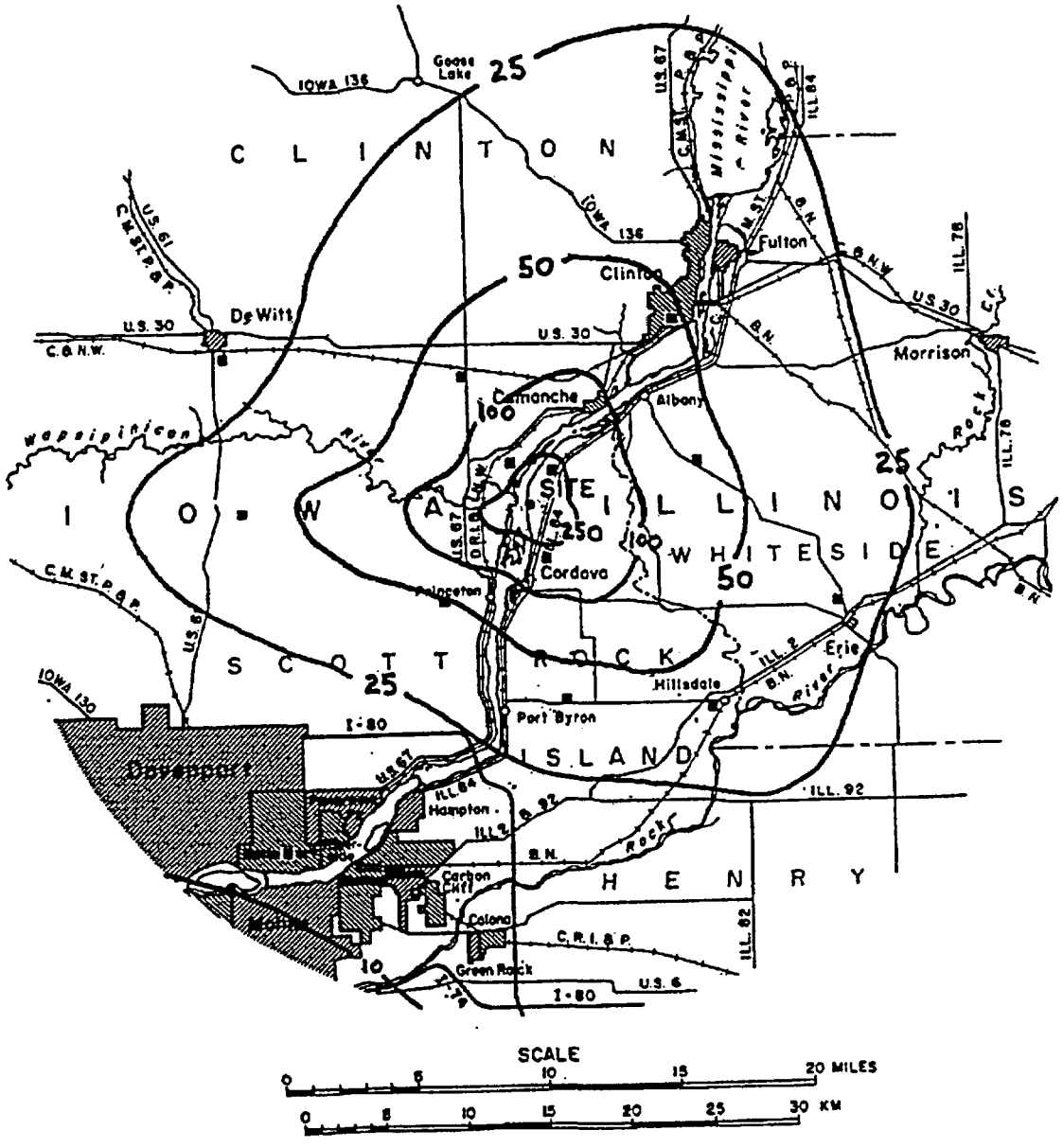
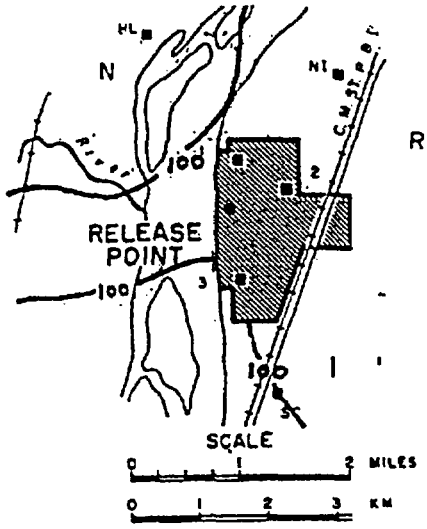


Figure 3.1-2

Estimated Total Concentrations (in pCi/m3)
of Noble Gases from the Quad Cities Station
for the period January-December 2002

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



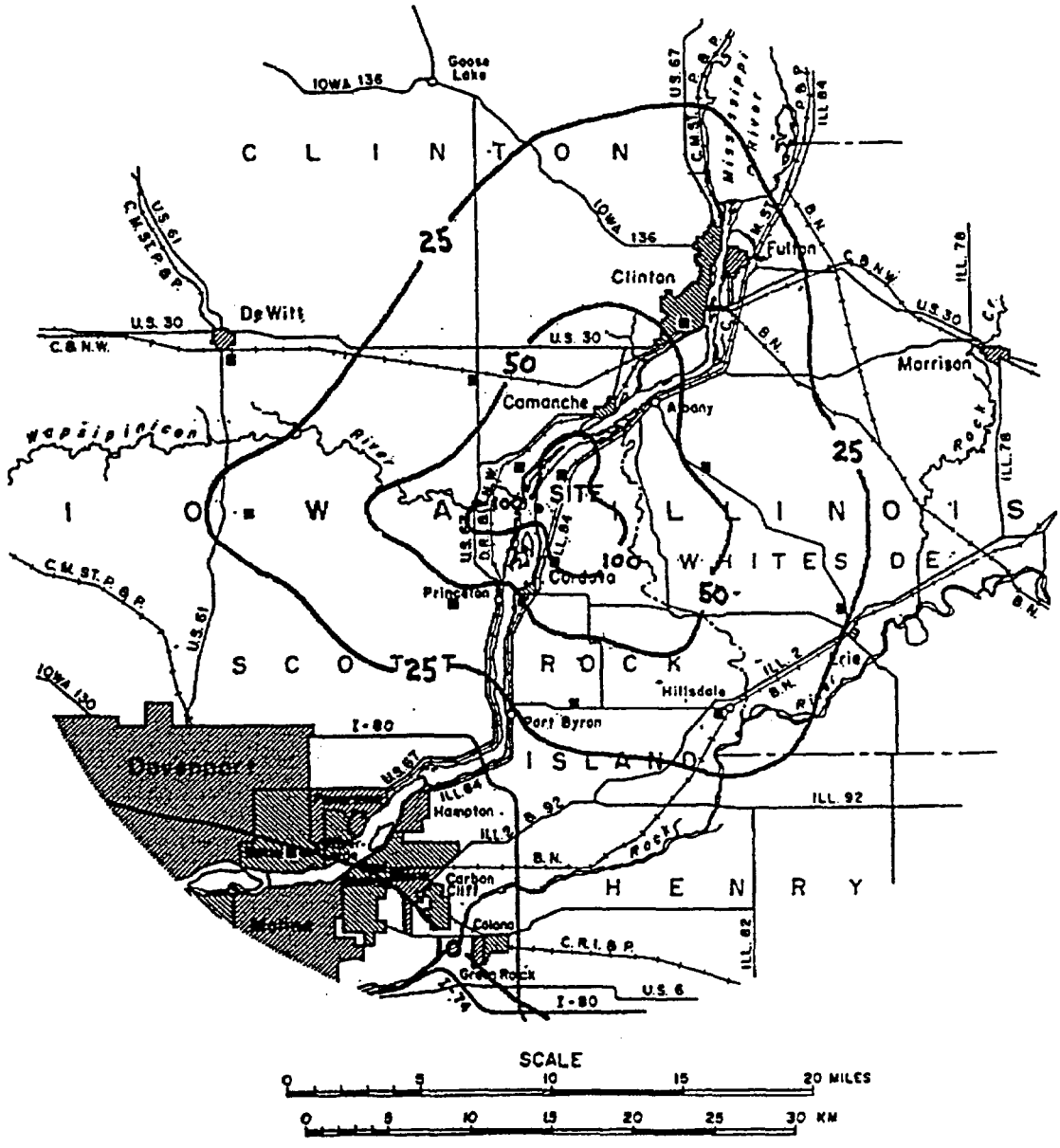
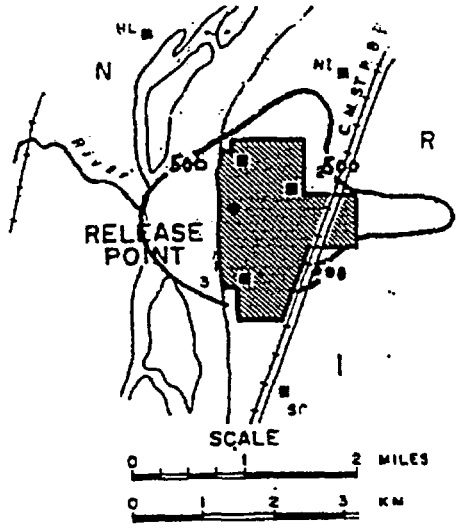


Figure 3.1-3

Estimated Total Concentrations (in pCi/m3) of Iodines from the Quad Cities Station for the period January-December 2002

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



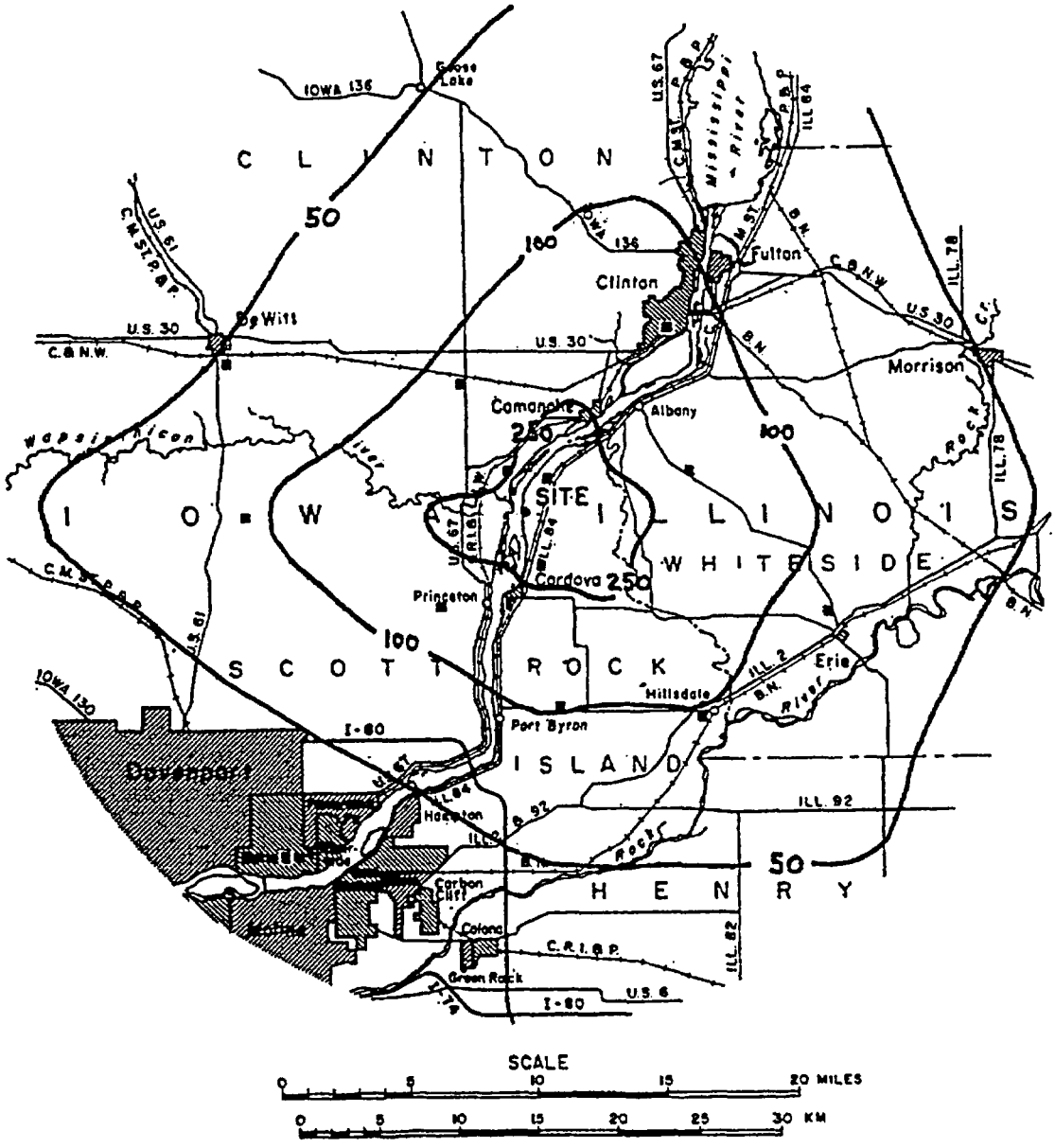
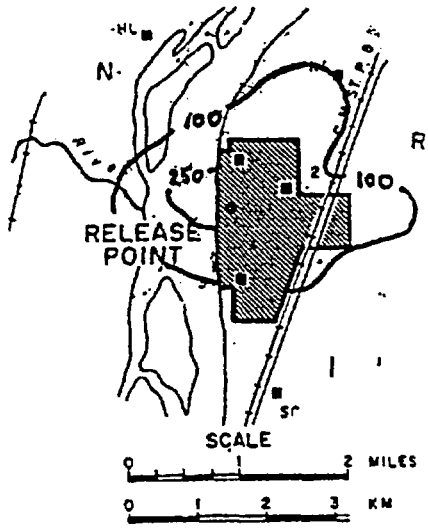


Figure 3.1-4

Estimated Total Concentrations (in pCi/m3)
of Particulates from the Quad Cities Station
for the period January-December 2002

Isopleth Labels
Small figure - multiply by 10^{-2}
Large figure - multiply by 10^{-3}



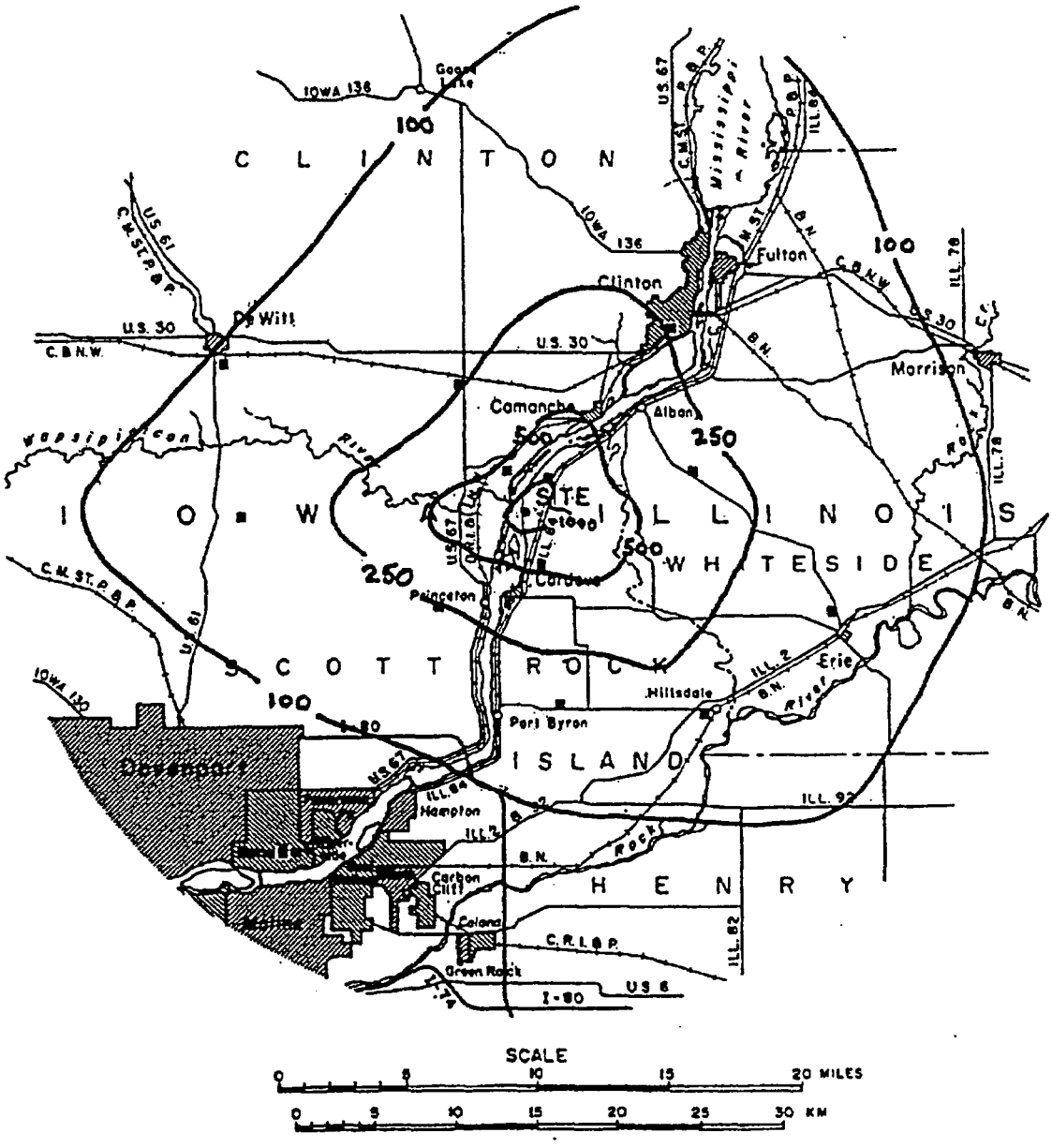


Table 3.1-1

GASEOUS ANNUAL DOSE SUMMARY REPORT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Releases
Year.....: 2002
Coefficient Type.....: Historical
Receptor.....: 5 Composite Crit. Receptor - IP
Distance (meters).....: 0.0
Compass Point.....: 0.0

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

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Quarter 1	INFANT	THYROID	8.18E-02	Quarter	5.63E+00	1.45E+00	7.50E+00	1.09E+00
Quarter 2	INFANT	THYROID	5.06E-02	Quarter	5.63E+00	9.00E-01	7.50E+00	6.75E-01
Quarter 3	INFANT	THYROID	9.51E-02	Quarter	5.63E+00	1.69E+00	7.50E+00	1.27E+00
Quarter 4	INFANT	THYROID	1.58E-01	Quarter	5.63E+00	2.82E+00	7.50E+00	2.11E+00
Annual	INFANT	THYROID	3.86E-01	Annual	1.13E+01	3.43E+00	1.50E+01	2.57E+00

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

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Quarter 1	CHILD	TBODY	6.63E-03	Quarter	5.25E+00	1.26E-01	7.50E+00	8.84E-02
Quarter 2	CHILD	TBODY	2.06E-03	Quarter	5.25E+00	3.92E-02	7.50E+00	2.75E-02
Quarter 3	CHILD	TBODY	4.38E-03	Quarter	5.25E+00	8.33E-02	7.50E+00	5.83E-02
Quarter 4	CHILD	TBODY	6.64E-03	Quarter	5.25E+00	1.26E-01	7.50E+00	8.85E-02
Annual	CHILD	TBODY	1.97E-02	Annual	1.05E+01	1.88E-01	1.50E+01	1.31E-01

Receptor.....: 4 Composite Crit. Receptor - NG
Distance (meters).....: 0.0
Compass Point.....: 0.0

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

Dose Period	Dose Type	Dose (mrad)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Quarter 1	Gamma	2.53E-04	Quarter	3.75E+00	6.76E-03	5.00E+00	5.07E-03
Quarter 2	Gamma	2.89E-04	Quarter	3.75E+00	7.70E-03	5.00E+00	5.78E-03
Quarter 3	Gamma	4.44E-04	Quarter	3.75E+00	1.18E-02	5.00E+00	8.88E-03
Quarter 4	Gamma	2.47E-04	Quarter	3.75E+00	6.58E-03	5.00E+00	4.94E-03
Annual	Gamma	1.23E-03	Annual	7.50E+00	1.64E-02	1.00E+01	1.23E-02

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

Dose Period	Dose Type	Dose (mrad)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Quarter 1	Beta	1.51E-04	Quarter	7.50E+00	2.01E-03	1.00E+01	1.51E-03
Quarter 2	Beta	1.90E-04	Quarter	7.50E+00	2.54E-03	1.00E+01	1.90E-03
Quarter 3	Beta	2.34E-04	Quarter	7.50E+00	3.11E-03	1.00E+01	2.34E-03
Quarter 4	Beta	1.45E-04	Quarter	7.50E+00	1.93E-03	1.00E+01	1.45E-03
Annual	Beta	7.20E-04	Annual	1.50E+01	4.80E-03	2.00E+01	3.60E-03

Table 3.2-1

LIQUID ANNUAL DOSE SUMMARY REPORT
--------- (PERIOD BASIS) --------

Release ID.....: 11 River Discharge Tank
Year.....: 2002
Liquid Receptor.....: 0 Liquid Receptor

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

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Quarter 1	TEEN	LIVER	1.64E-03	Quarter	3.75E+00	4.36E-02	5.00E+00	3.27E-02
Quarter 2	TEEN	LIVER	2.86E-04	Quarter	3.75E+00	7.62E-03	5.00E+00	5.71E-03
Quarter 3	TEEN	LIVER	4.83E-04	Quarter	3.75E+00	1.29E-02	5.00E+00	9.66E-03
Quarter 4	TEEN	LIVER	1.16E-03	Quarter	3.75E+00	3.10E-02	5.00E+00	2.32E-02
Annual	TEEN	LIVER	3.18E-03	Annual	7.50E+00	4.24E-02	1.00E+01	3.18E-02

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

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Quarter 1	ADULT	TBODY	9.47E-04	Quarter	1.13E+00	8.42E-02	1.50E+00	6.31E-02
Quarter 2	ADULT	TBODY	1.69E-04	Quarter	1.13E+00	1.50E-02	1.50E+00	1.12E-02
Quarter 3	ADULT	TBODY	3.09E-04	Quarter	1.13E+00	2.75E-02	1.50E+00	2.06E-02
Quarter 4	ADULT	TBODY	7.16E-04	Quarter	1.13E+00	6.36E-02	1.50E+00	4.77E-02
Annual	ADULT	TBODY	1.93E-03	Annual	2.25E+00	8.57E-02	3.00E+00	6.43E-02

Release ID.....: 2 Abnormal Liquid Continuous
Year.....: 2002
Liquid Receptor.....: 0 Liquid Receptor

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

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Quarter 1	TEEN	LIVER	1.53E-03	Quarter	3.75E+00	4.08E-02	5.00E+00	3.06E-02
Quarter 2	ADULT	LIVER	5.94E-05	Quarter	3.75E+00	1.59E-03	5.00E+00	1.19E-03
Quarter 3	TEEN	LIVER	3.12E-05	Quarter	3.75E+00	8.32E-04	5.00E+00	6.24E-04
Quarter 4	TEEN	LIVER	1.84E-04	Quarter	3.75E+00	4.92E-03	5.00E+00	3.69E-03
Annual	TEEN	LIVER	9.88E-04	Annual	7.50E+00	1.32E-02	1.00E+01	9.88E-03

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

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Quarter 1	ADULT	TBODY	8.42E-04	Quarter	1.13E+00	7.49E-02	1.50E+00	5.62E-02
Quarter 2	ADULT	TBODY	2.90E-05	Quarter	1.13E+00	2.58E-03	1.50E+00	1.93E-03
Quarter 3	ADULT	TBODY	1.55E-05	Quarter	1.13E+00	1.37E-03	1.50E+00	1.03E-03
Quarter 4	ADULT	TBODY	9.81E-05	Quarter	1.13E+00	8.72E-03	1.50E+00	6.54E-03
Annual	ADULT	TBODY	5.34E-04	Annual	2.25E+00	2.37E-02	3.00E+00	1.78E-02

Table 3.3-1

QUAD CITIES STATION UNIT ONE

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/02 THROUGH 12/31/02

CALCULATED 03/25/03

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

Total Effective Dose Equivalent,	mrem/yr	2.93
10 CFR 20.1301 (a) (1) limit	mrem/yr	100.0
	% of limit	2.93

Compliance Summary - 10CFR20

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	% of Limit
TEDE	6.01E-01	8.54E-01	8.03E-01	6.70E-01	2.93E+00

Table 3.3-1 (continued)

QUAD CITIES STATION UNIT TWO

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/02 THROUGH 12/31/02

CALCULATED 03/25/03

2. 10 CFR 20.1301 (a) (1) Compliance

Total Effective Dose Equivalent,	mrem/yr	3.35
10 CFR 20.1301 (a) (1) limit	mrem/yr	100.0
	% of limit	3.35

Compliance Summary - 10CFR20

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	% of Limit
TEDE	6.29E-01	8.94.E-01	8.58E-01	9.66E-01	3.35E+00

Table 3.4-1

Quad Cities Station - Unit 1

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

2002

TYPE OF DOSE	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	ANNUAL
GAMMA AIR (mrad)	8.450E-04(E)	1.270E-03(N)	2.915E-03(W)	8.406E-04(E)	4.988E-03(W)
BETA AIR (mrad)	2.140E-04(E)	2.485E-04(NE)	5.200E-04(WSW)	1.623E-04(E)	8.230E-04(NNE)
WHOLE BODY (mrem)	8.735E-03(NNE)	3.030E-03(NNE)	6.160E-03(NNE)	6.485E-03(NNE)	2.441E-02(NNE)
SKIN (mrem)	1.035E-02(NNE)	3.700E-03(NNE)	7.475E-03(NNE)	7.745E-03(NNE)	2.926E-02(NNE)
ORGAN (mrem)	1.613E-04(E)	1.230E-04(WNW)	4.025E-04(WNW)	2.572E-04(WNW)	8.846E-04(WNW)
CRITICAL PERSON	Teenager	Teenager	Teenager	Teenager	Teenager
CRITICAL ORGAN	Lung	Lung	Lung	Lung	Lung

COMPLIANCE STATUS

TYPE OF DOSE	10 CFR 50 APP. I QUARTERLY OBJECTIVE	% OF APP. I	10 CFR 50 APP.I YEARLY OBJECTIVE	% OF APP. I
GAMMA AIR (mrad)	5.0	0.06	10.0	0.05
BETA AIR (mrad)	10.0	0.01	20.0	0.00
WHOLE BODY (mrem)	2.5	0.35	5.0	0.49
SKIN (mrem)	7.5	0.14	15.0	0.20
ORGAN (mrem)	7.5	0.01	15.0	0.01
CRITICAL PERSON		Teenager		Teenager
CRITICAL ORGAN		Lung		Lung

Calculation used release data from the following:

Unit 0 - Vent

Unit 0 - Chimney

Date of calculation: 4/30/2003

Table 3.4-1 (continued)

Quad Cities Station - Unit 2

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

2002

TYPE OF DOSE	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	ANNUAL
GAMMA AIR (mrad)	8.450E-04(E)	1.270E-03(N)	2.915E-03(W)	8.406E-04(E)	4.988E-03(W)
BETA AIR (mrad)	2.140E-04(E)	2.485E-04(NE)	5.200E-04(WSW)	1.623E-04(E)	8.230E-04(NNE)
WHOLE BODY (mrem)	8.735E-03(NNE)	3.030E-03(NNE)	6.160E-03(NNE)	6.485E-03(NNE)	2.441E-02(NNE)
SKIN (mrem)	1.035E-02(NNE)	3.700E-03(NNE)	7.475E-03(NNE)	7.745E-03(NNE)	2.926E-02(NNE)
ORGAN (mrem)	1.613E-04(E)	1.230E-04(WNW)	4.025E-04(WNW)	2.572E-04(WNW)	8.846E-04(WNW)
CRITICAL PERSON	Teenager	Teenager	Teenager	Teenager	Teenager
CRITICAL ORGAN	Lung	Lung	Lung	Lung	Lung

COMPLIANCE STATUS

TYPE OF DOSE	10 CFR 50 APP. I QUARTERLY OBJECTIVE	% OF APP. I	10 CFR 50 APP.I YEARLY OBJECTIVE	% OF APP. I
GAMMA AIR (mrad)	5.0	0.06	10.0	0.05
BETA AIR (mrad)	10.0	0.01	20.0	0.00
WHOLE BODY (mrem)	2.5	0.36	5.0	0.49
SKIN (mrem)	7.5	0.14	15.0	0.20
ORGAN (mrem)	7.5	0.01	15.0	0.01
CRITICAL PERSON		Teenager		Teenager
CRITICAL ORGAN		Lung		Lung

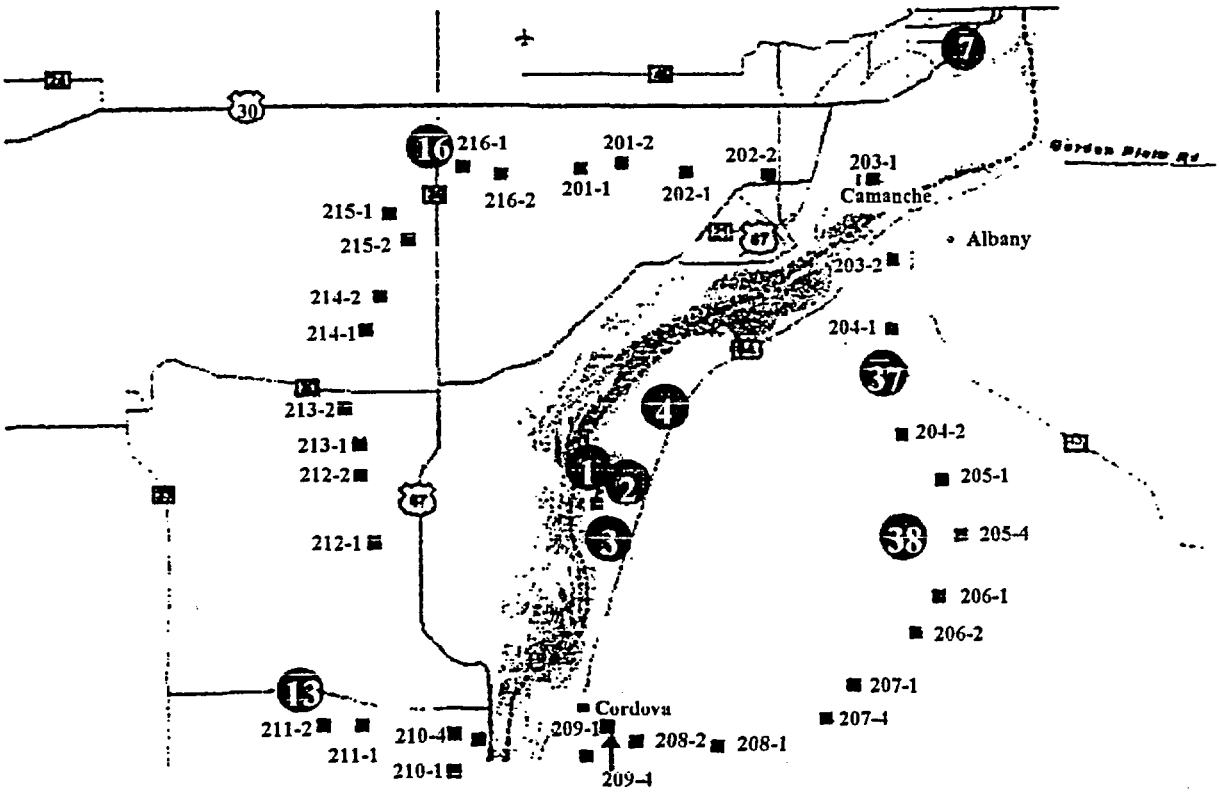
Calculation used release data from the following:
Unit 0 - Vent
Unit 0 - Chimney

Maximum Offsite Values (pCi/m3)	
Iodine	8.22E-05
Particulate Matter	3.02E+00
Data Recovery (priority parameters)	99.5%

Date of calculation: 4/30/2003

Figure 5.0-1

Quad Cities Outer Ring TLD's
and Air Sampling Sites



● = Air Sampling Sites

■ = Outer Ring TLD Locations

Air Sampling Sites

Q-01 Onsite No. 1	Q-07 Clinton (C)
Q-02 Onsite No. 2	Q-13 Princeton
Q-03 Onsite No. 3	Q-16 Low Moor
Q-04 Nitrin	Q-37 Meredosia Road

Q-38 Fuller Road

Figure 5.0-2

Quad Cities Inner Ring TLD Locations

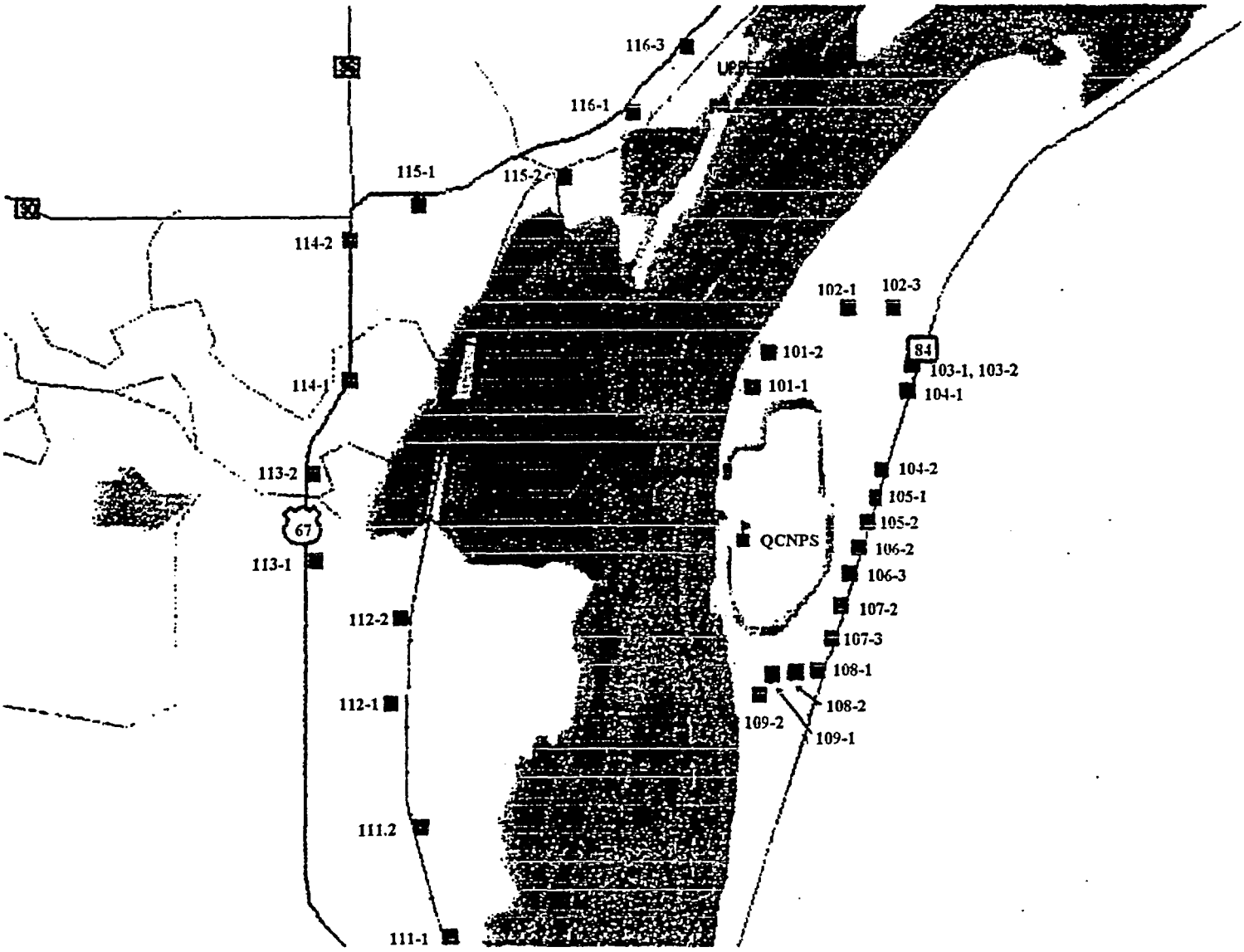
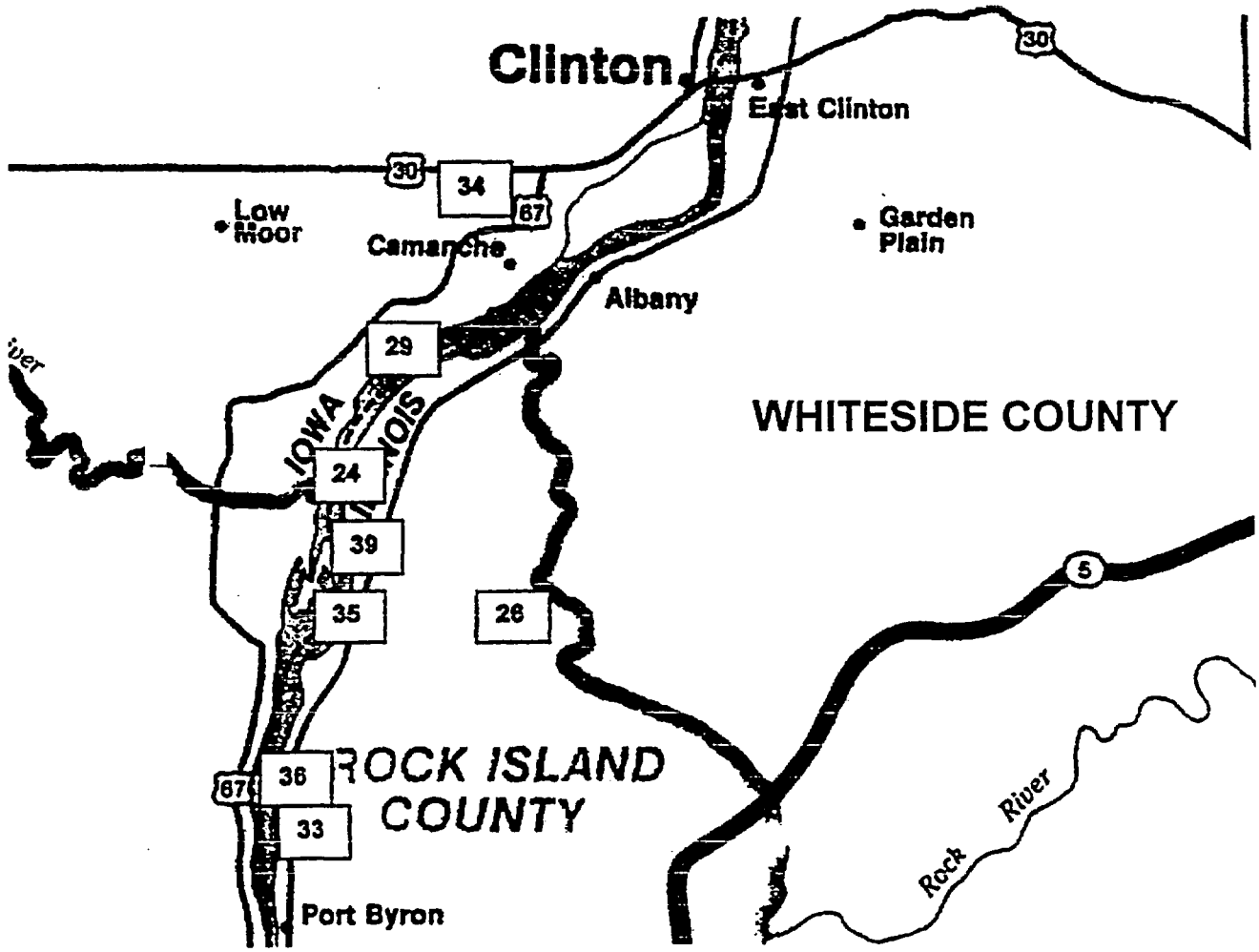


Figure 5.0-3

Milk, Fish, Water and Sediment Sampling Locations



Milk, Fish, Water and Sediment Sample Locations

Q-24 Pool #14 of Mississippi River
Q-26 Bill Stanley Dairy
Q-29 Mississippi River, Upstream (C)
Q-33 Cordova
Q-34 Camanche (C)
Q-35 McMillan Well
Q-36 Cordova Well
Q-39 Cordova, Downstream on Mississippi River

TABLE 5.0-1

Quad Cities Station Radiological Environmental Monitoring Locations	Air Sampling	TLD	Fish	Milk	Sediments	Surface Water	Well Water	Vegetation
Q-01 Onsite No. 1	✓	✓	.	.	.	.	.	.
Q-02 Onsite No. 2	✓	✓	.	.	.	.	.	.
Q-03 Onsite No. 3	✓	✓	.	.	.	.	.	.
Q-04 Nitrin	✓	✓	.	.	.	.	.	.
Q-07 Clinton	✓	✓	.	.	.	.	.	.
Q-13 Princeton	✓	✓	.	.	.	.	.	.
Q-16 Low Moor	✓	✓	.	.	.	.	.	.
Q-24 Pool #14 of Mississippi River	.	.	✓	.	.	.	.	.
Q-26 Bill Stanley Dairy	.	.	.	✓				
Q-29 Mississippi River, Upstream	.	.	✓	.	.	.	.	.
Q-33 Cordova	.	.	.	.	.	✓	.	.
Q-34 Camanche	.	.	.	.	.	✓	.	.
Q-35 McMillan Well	.	.	.	.	.	.	✓	.
Q-36 Cordova Well	.	.	.	.	.	.	✓	.
Q-37 Meredosia Road	✓	✓	.	.	.	.	.	.
Q-38 Fuller Road	✓	✓	.	.	.	.	.	.
Q-39 Cordova, Downstream on Mississippi	.	.	.	.	✓	.	.	.
Q-Quad 1	.	.	.	.	.	.	.	✓
Q-Quad 2	.	.	.	.	.	.	.	✓
Q-Quad 3	.	.	.	.	.	.	.	✓
Q-Quad 4	.	.	.	.	.	.	.	✓
Q-Control	.	.	.	.	.	.	.	✓

CENSUS

Dairy
Residence
Livestock

TABLE 5.0-2

QUAD CITIES STATION

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM, SAMPLING LOCATIONS

1. AIR SAMPLERS

Site Code[a]	Location	Distance (miles)	Direction	Sector
Q-01	Onsite No. 1	0.5	N	A
Q-02	Onsite No. 2	0.5	ENE	D
Q-03	Onsite No. 3	0.6	S	J
Q-04	Nitrin	1.5	NE	C
Q-07 (C)	Clinton	9.0	NE	C
Q-13	Princeton	4.8	SW	L
Q-16	Low Moor	6.0	NNW	R
Q-37	Meredosia Road	4.4	ENE	D
Q-38	Fuller Road	4.7	E	E

2. TLDs
   a. Same as No. 1.

   b. Special TLD locations

Site Code	Distance (miles)	Direction	Sector
Inner Ring			
Q-101-1	0.6	N	A
Q-101-2	0.9	N	A
Q-102-1	1.3	NNE	B
Q-102-3	1.4	NNE	B
Q-103-1,2	1.2	NE	C
Q-104-1	1.1	ENE	D
Q-104-2	0.9	ENE	D
Q-105-1,2	0.8	E	E
Q-106-2,3	0.7	ESE	F
Q-107-2	0.7	SE	G
Q-107-3	0.8	SE	G
Q-108-1	1.0	SSE	H
Q-108-2	0.9	SSE	H
Q-109-1	0.9	S	J
Q-109-2	1.2	S	J
Q-111-1	2.6	SW	L
Q-111-2	2.5	SW	L
Q-112-1	2.5	WSW	M
Q-112-2	2.2	WSW	M
Q-113-1,2	2.5	W	N
Q-114-1	2.1	WNW	P
Q-114-2	2.5	WNW	P
Q-115-1	2.6	NW	Q
Q-115-2	2.3	NW	Q
Q-116-1	2.3	NNW	R
Q-116-3	2.4	NNW	R

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

TABLE 5.0-2 (continued)

QUAD CITIES STATION

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM, SAMPLING LOCATIONS

2. TLDs
   b. Special TLD locations (continued)

Site Code	Distance (miles)	Direction	Sector
Outer Ring			
Q-201-1,2	4.2	N	A
Q-202-1	4.4	NNE	B
Q-202-2	4.8	NNE	B
Q-203-1	4.7	NE	C
Q-203-2	5.0	NE	C
Q-204-1	4.7	ENE	D
Q-204-2	4.5	ENE	D
Q-205-1	4.7	E	E
Q-205-4	4.8	E	E
Q-206-1,2	4.8	ESE	F
Q-207-1,4	4.7	SE	G
Q-208-1	4.3	SSE	H
Q-208-2	4.9	SSE	H
Q-209-1,4	4.8	S	J
Q-210-1,4	4.4	SSW	K
Q-211-1,2	4.5	SW	L
Q-212-1	5.4	WSW	M
Q-212-2	4.4	WSW	M
Q-213-1	4.3	W	N
Q-213-2	4.8	W	N
Q-214-1	4.7	WNW	P
Q-214-2	4.4	WNW	P
Q-215-1	5.0	NW	Q
Q-215-2	4.2	NW	Q
Q-216-1	4.6	NNW	R
Q-216-2	4.3	NNW	R

3. MILK

Site Code[a]	Location	Distance (mile)	Direction	Sector
Q-26	Bill Stanley Dairy	3.5	ESE	F

4. SURFACE WATER

Site Code[a]	Location	Distance (miles)	Direction	Sector
Q-33	Cordova	3.3	SSW	K
Q-34(C)	Camanche	4.4	NNE	C

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

Table 5.0-2 (continued)

QUAD CITIES STATION

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM, SAMPLING LOCATIONS

5. WELL WATER

Site Code[a]	Location	Distance (miles)	Direction	Sector
Q-35	McMillan Well	1.5	S	J
Q-36	Cordova Well	3.3	SSW	K

6. FISH

Site Code[a]	Location	Distance (miles)	Direction	Sector
Q-24	Pool #14 of Mississippi River	0.5	SW	L
Q-29 (C)	Mississippi River, Upstream	1.0	N	A

7. SEDIMENTS

Site Code[a]	Location	Distance (miles)	Direction	Sector
Q-39	Cordova, Downstream on Mississippi River	0.8	SSW	K

8. VEGETABLES

Site Code[a]	Location	Distance (miles)	Direction	Sector
Q-Quad 1	Robert Ziegler	6.0	NE	C
Q-Quad 2	Dale Nimmic	3.0	ESE	F
Q-Quad 3	Amy Johnston	1.8	S	J
Q-Quad 4	Mike Fauwcet	4.5	WNW	P
Q-Control(C)	Charles Leavens	9.5	NE	C

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

TABLE 5.0-2 (continued)

QUAD CITIES STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM, SAMPLE COLLECTION AND ANALYSES

Sample Media	Location Code[a]	Site	Collection Frequency	Type of Analysis	Frequency of Analysis
1. Airborne Particulates	Onsite, Nearfield and Control		Filter exchange weekly	Gross Beta Gamma Isot.	Weekly Quarterly Composite (or if weekly gross beta in a sample exceeds 5X the average concentration of preceding calendar quarter).
	Q-01	Onsite No. 1			
	Q-02	Onsite No. 2			
	Q-03	Onsite No.3			
	Q-04	Nitrin			
	Q-07 (C)	Clinton			
	Far Field			Gamma Isot.	If gross beta in a sample exceeds 10 times the yearly mean of control samples and radioactivity is confirmed as having its origin in airborne effluents from station.
	Q-13	Princeton			
	Q-16	Low Moor			
	Q-37	Meredosia Road			
	Q-38	Fuller Road			
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.	Q-101-1,2	Inner Ring			
	102-1,3				
	103-1,2				
	104-1,2				
	105-1,2				
	106-2,3				
	107-2,3				
	108-1,2				
	109-1,2				
	111-1,2				
	112-1,2				
	113-1,2				
	114-1,2				
	115-1,2				
	116-1,3				
c.	Q-201-1,2	Outer Ring			
	202-1,2				
	203-1,2				
	204-1,2				
	205-1,4				
	206-1,2				
	207-1,4				
	208-1,2				
	209-1,4				
	210-1,4				
	211-1,2				

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

TABLE 5.0-2 (continued)

QUAD CITIES STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM, SAMPLE COLLECTION AND ANALYSES

Sample Media	Location Code[a]	Location Site	Collection Frequency	Type of Analysis	Frequency of Analysis
4. TLDs (continued)					
	Outer Ring		Quarterly	Gamma	Quarterly
	Q-212-1,2 213-1,2 214-1,2 215-1,2 216-1,2				
5. Milk	Q-26	Bill Stanley Dairy	Biweekly: May-October Monthly: November-April	I-131 Gamma Isot.	Biweekly: May-October Monthly: November-April
6. Vegetables	Quad 1 Quad 2 Quad 3 Quad 4 Control	Robert Ziegler Dale Nimmic Amy Johnston William Dohrmann Charles Leavens	Annually - two varieties from each location as available at harvest.	Gamma Isot. I-131	Annually Annually, on broad leaf vegetation.
7. Ground/Well Water	Q-35 Q-36	McMillan Well Cordova Well	Quarterly	Gamma Isot. Tritium	Quarterly
8. Surface Water	Q-33 Q-34 (C)	Cordova Comanche	Weekly	Gross Beta Gamma Isot. Tritium	Monthly composite. Monthly composite. Quarterly composite.
9. Fish (at least two species)	Q-24 Q-29 (C)	Pool #14 of Mississippi River Mississippi River Upstream	Two times/year	Gamma Isot.	Two times/year on edible portions only.
10. Sediments	Q-28	Cordova, Downstream on Mississippi River	Semiannually	Gamma Isot.	Semiannually
11. Land Use Census					
Milch Animals					
a.	Site Boundary to 2 miles		-	a. Enumeration by a door to door or equivalent counting technique.	Annually during grazing season.
b.	2 miles to 6.2 miles		-	b. Using referenced information from county agricultural agents or other reliable sources.	
c.	At dairies listed in Item 5.		-	c. Inquire as to feeding practices:	Annually during grazing season.

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

TABLE 5.0-2 (continued)

QUAD CITIES STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM, SAMPLE COLLECTION AND ANALYSES

Sample Media	Location Code[a]	Location Site	Collection Frequency	Type of Analysis	Frequency of Analysis
13. Land Use Census (continued)				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%.	
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 Quad Cities Nuclear Power Station Docket No. 50-254, 50-265
Location of Facility Rock Island, Illinois Reporting Period 1st Quarter 2002
(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	65	0.01	0.030 (52/52) (0.011-0.055)	Q-07, Clinton 8.9 mi. NE, Sector C	0.031 (13/13) (0.017-0.060)	0.031 (13/13) (0.017-0.060)	0
	Gamma Spec.	5						
	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	35	0.07	<LLD	-	-	<LLD	0
Milk (pCi/L)	I-131	3	5	<LLD	-	-	None	0
	Gamma Spec.	3						
	Cs-134		15	<LLD	-	-	None	0
	Cs-137		18	<LLD	-	-	None	0
	Ba/La-140		15	<LLD	-	-	None	0
	Other Gammas		10-15	<LLD	-	-	None	0
Surface Water (pCi/L)	Gross Beta	2	4	<LLD	Q-34, Comanche 4.4 mi. NNE, Sector C	5.8 (1/3)	5.8 (1/3)	0
	Gamma Spec.	2						
	Cs-134		15	<LLD	-	-	<LLD	0
	Cs-137		18	<LLD	-	-	<LLD	0
	Other ODCM-Required Gammas		15-30	<LLD	-	-	<LLD	0
	Tritium	2	200	<LLD	-	-	<LLD	0
Well Water (pCi/L)	Tritium	2	200	<LLD	-	-	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	80	9.7	20.6 (77/78) (16-27)	Q-215-2 4.2 mi. NW, Sector Q	27 (1/1)	19 (2/2) (17-21)	0

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

Table 5.0-4

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Quad Cities Nuclear Power Station Docket No. 50-254, 50-265
Location of Facility Rock Island, Illinois Reporting Period 2nd Quarter 2002
(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	65	0.01	0.020 (52/52) (0.012-0.034)	Q-01[b], Onsite No. 1 0.5 mi N, Sector A	0.021 (13/13) (0.014-0.034)	0.021 (13/13) (0.015-0.028)	0
	Gamma Spec.	5						
	Cs-134		0.01	<LLD	-	-	<LLD	0
	Cd-137		0.01	<LLD	-	-	<LLD	0
	Other Gammas		0.01-0.04	<LLD	-	-	<LLD	0
Airborne Iodine (pCi/m^3)	I-131	30	0.07	<LLD	-	-	None	0
Milk (pCi/L)	I-131	6	5.0/0.5[c]	<LLD	-	-	None	0
	Gamma Spec.	6						
	Cs-134		15	<LLD	-	-	None	0
	Cs-137		18	<LLD	-	-	None	0
	Ba/La-140		15	<LLD	-	-	None	0
	Other Gammas		10-15	<LLD	-	-	None	0
Fish (pCi/g wet)	Gamma Spec.	4						
	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
Bottom Sediments (pCi/g dry)	Gamma Spec.	1						
	Cs-134		0.15	<LLD	-	-	None	0
	Cs-137		0.18	<LLD	-	-	None	0
	Other ODCM-Required Gammas		0.10-0.60	<LLD	-	-	None	0

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

[b] Locations Q-01 and Q-07 (C) had identical means of 0.021 pCi/m^3. Both are detailed in this summary.

[c] November - April LLD=5.0 ; May - October LLD=0.5.

Table 5.0-4 (continued)

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Quad Cities Nuclear Power Station Docket No. 50-254, 50-265
Location of Facility Rock Island, Illinois Reporting Period 2nd Quarter 2002
(County, State)

Sample Type (Units)	Type and Number of Analyses		LLD	Indicator Locations Mean[a] Range	Location with Highest Quarterly Mean	Highest Mean[a] Range	Control Locations Mean[a] Range	Number of Non-routine Results
Surface Water (pCi/L)	Gross Beta	6	4	4.9 (1/3)	Q-34, Camanche 4.4 mi. NNE, Sector C	5.8 (1/3)	5.8 (1/3)	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	<LLD	-	-	<LLD	0
Well Water (pCi/L)	Tritium	2	200	<LLD	-	-	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	80	9.7	20.1 (78/78) (6.0-29.0)	Q-215-1, 5.0 mi. NW Sector Q	29.0 (1/1)	19.5 (2/2) (19.0-20.0)	0

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

Table 5.0-5

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Quad Cities Nuclear Power Station Docket No. 50-254, 50-265
Location of Facility Rock Island, Illinois Reporting Period 3rd Quarter 2002
(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	63	0.01	0.026 (50/50) (0.014-0.037)	Q-07, Clinton 8.9 mi NE, Sector C	0.028 (13/13) (0.019-0.037)	0.028 (13/13) (0.019-0.037)	0
	Gamma Spec.	5						
	Cs-134		0.01	<LLD	-	-	-	0
	Cs-137		0.01	<LLD	-	-	-	0
	Other Gammas		0.01-0.04	<LLD	-	-	-	0
Airborne Iodine (pCi/m^3)	I-131	35	0.10	<LLD	-	-	None	0
Milk (pCi/L)	I-131	6	0.5	<LLD	-	-	None	0
	Gamma Spec.	6						
	Cs-134		15	<LLD	-	-	None	0
	Cs-137		18	<LLD	-	-	None	0
	Ba/La-140		15	<LLD	-	-	None	0
	Other Gammas		10-15	<LLD	-	-	None	0
Vegetation (pCi/gr. wet)	I-131	10	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	4.3 (2/3) (4.3-4.3)	Q-33 Cordova 3.3 mi. SSW, Sector K	4.3 (2/3) (4.3-4.3)	<LLD	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	<LLD	-	-	<LLD	0

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

Table 5.0-5 (continued)

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Quad Cities Nuclear Power Station Docket No. 50-254, 50-265
Location of Facility Rock Island, Illinois Reporting Period 3rd Quarter 2002
(County, State)

Sample Type (Units)	Type and Number of Analyses		LLD	Indicator Locations Meana Range	Location with Highest Quarterly Mean	Highest Meana Range	Control Locations Meana Range	Number of Non-routine Results
Well Water (pCi/L)	Tritium	2	200	<LLD	-	-	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	80	9.7	17.7 (78/78) (15.0-34.0)	Q-216-2 4.3 mi. NNW Sector R	34.0 (1/1)	16.0 (2/2) (16.0-16.0)	0

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

Table 5.0-6

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Quad Cities Nuclear Power Station Docket No. 50-254, 50-265
Location of Facility Rock Island, Illinois Reporting Period 4th Quarter 2002
(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	65	0.01	0.030 (52/52) (0.019-0.060)	Q-07, Clinton 8.9 mi NE, Sector C	0.033 (13/13) (0.019-0.063)	0.033 (13/13) (0.019-0.063)	0
	Gamma Spec.	5						
	Cs-134		0.01	<LLD	-	-	-	0
	Cs-137		0.01	<LLD	-	-	-	0
	Other Gammas		0.01-0.04	<LLD	-	-	-	0
Airborne Iodine (pCi/m^3)	I-131	30	0.07	<LLD	-	-	None	0
Milk (pCi/L)	I-131	4	1.0	<LLD	-	-	None	0
	Gamma Spec.	4						
	Cs-134		15	<LLD	-	-	None	0
	Cs-137		18	<LLD	-	-	None	0
	La-140		15	<LLD	-	-	None	0
	Ba-140		60	<LLD	-	-	None	0
	Other Gammas		10-15					
Fish (pCi/g wet)	Gamma Spec.	4						
	Cs-134		0.13	<LLD	-	-	<LLD	0
	Cs-137		0.15	<LLD	-	-	<LLD	0
	Other ODCM-Required Gammas		0.13-0.26	<LLD	-	-	<LLD	0
	Other Gammas		0.20-.030	<LLD	-	-	<LLD	0
Bottom Sediments (pCi/g dry)	Gamma Spec.	1						
	Cs-134		0.15	<LLD	-	-	<LLD	0
	Cs-137		0.18	<LLD	-	-	<LLD	0
	Other Gammas		0.10-0.60	<LLD	-	-	<LLD	0
Surface Water (pCi/L)	Gross Beta	6	4	4.4 (1/3)	Q-34 Camanche 4.4 mi. NNE, Sector C	5.0 (1/3)	5.0 (1/3)	0
	Gamma Spec.	6						
	Cs-134		15	<LLD	-	-	<LLD	0
	Cs-137		18	<LLD	-	-	<LLD	0
	Other ODCM-Required Gammas		15-60	<LLD	-	-	<LLD	0
	Tritium	2	200	<LLD	-	-	<LLD	0

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

Table 5.0-6 (continued)

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Quad Cities Nuclear Power Station Docket No. 50-254, 50-265
Location of Facility Rock Island, Illinois Reporting Period 4th Quarter 2002
(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	<LLD	-	-	None	0
	Gamma Spec.						
	Cs-134	15	<LLD	-	-	None	0
	Cs-137	18	<LLD	-	-	None	0
	Other ODCM-Required Gammas	15-60	<LLD	-	-	None	0
Gamma Background (TLDs) (mR/Qtr.)	Gamma Dose 80	9.7	22.3 (78/78) (20.0-26.0)	Q-204-2[b], 4.9 mi. SSE, Sector H	26 (1/1)	22.0 (2/2) (22.0-22.0)	0

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

[b] Locations Q-204-2 and Q-211-1,2 had identical results of 26 mR. Only Q-204-2 is detailed in this summary.

APPENDIX II

METEOROLOGICAL DATA

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Extremely Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	7	0	0	0	10
NNE	1	3	0	0	0	0	4
NE	0	5	4	2	0	0	11
ENE	1	8	6	1	0	0	16
E	0	3	1	0	0	0	4
ESE	0	1	1	0	0	0	2
SE	0	5	1	0	0	0	6
SSE	0	2	9	0	0	0	11
S	0	13	12	0	0	0	25
SSW	1	35	6	0	0	0	42
SW	1	22	7	0	0	0	30
WSW	1	27	7	0	0	0	35
W	2	25	41	1	0	0	69
WNW	1	9	38	0	0	0	48
NW	2	8	6	6	0	0	22
NNW	0	6	1	0	0	0	7
Variable	0	0	0	0	0	0	0
Total	10	175	147	10	0	0	342

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

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Moderately Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	1	0	0	0	1
NNE	0	1	0	0	0	0	1
NE	0	0	2	0	0	0	2
ENE	0	1	2	0	0	0	3
E	0	2	1	0	0	0	3
ESE	0	0	0	0	0	0	0
SE	0	1	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	1	0	0	0	1
SSW	0	2	1	0	0	0	3
SW	2	2	1	0	0	0	5
WSW	0	6	1	0	0	0	7
W	4	3	7	1	0	0	15
WNW	0	0	4	0	0	0	4
NW	1	1	0	1	0	0	3
NNW	1	1	1	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	8	20	22	2	0	0	52

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

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Slightly Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	2	0	0	0	5
NNE	0	1	0	0	0	0	1
NE	0	0	6	0	0	0	6
ENE	2	2	1	0	0	0	5
E	1	4	2	0	0	0	7
ESE	0	0	2	1	0	0	3
SE	0	3	0	0	0	0	3
SSE	1	1	1	0	0	0	3
S	2	1	1	0	0	0	4
SSW	1	3	3	0	0	0	7
SW	1	6	2	0	0	0	9
WSW	1	6	0	0	0	0	7
W	0	4	5	2	0	0	11
WNW	0	1	8	0	0	0	9
NW	1	5	2	0	0	0	8
NNW	1	4	4	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	11	44	39	3	0	0	97

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

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Neutral - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	5	21	13	1	0	0	40
NNE	3	18	7	0	0	0	28
NE	2	50	25	7	0	0	84
ENE	1	11	17	2	0	0	31
E	0	8	15	0	0	0	23
ESE	2	6	4	0	0	0	12
SE	3	15	1	0	0	0	19
SSE	4	11	4	0	0	0	19
S	2	18	3	0	0	0	23
SSW	2	14	3	0	0	0	19
SW	6	38	13	0	0	0	57
WSW	4	48	10	0	0	0	62
W	9	39	53	12	5	0	118
WNW	14	46	86	2	0	0	148
NW	6	45	32	5	0	0	88
NNW	3	31	20	0	0	0	54
Variable	0	0	0	0	0	0	0
Total	66	419	306	29	5	0	825

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

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Slightly Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	5	0	0	0	0	6
NNE	6	8	0	0	0	0	14
NE	0	0	1	0	0	0	1
ENE	2	5	4	0	0	0	11
E	6	12	0	0	0	0	18
ESE	5	8	0	0	0	0	13
SE	16	26	0	0	0	0	42
SSE	19	28	2	0	0	0	49
S	12	21	8	0	0	0	41
SSW	11	50	9	0	0	0	70
SW	10	77	12	0	0	0	99
WSW	21	51	11	0	0	0	83
W	30	36	7	0	0	0	73
WNW	25	19	0	0	0	0	44
NW	11	17	0	0	0	0	28
NNW	4	7	0	0	0	0	11
Variable	0	0	0	0	0	0	0
Total	179	370	54	0	0	0	603

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

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Moderately Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	4	0	0	0	0	0	4
NNE	1	0	0	0	0	0	1
NE	3	0	0	0	0	0	3
ENE	6	1	0	0	0	0	7
E	6	4	0	0	0	0	10
ESE	19	13	0	0	0	0	32
SE	14	7	0	0	0	0	21
SSE	14	3	0	0	0	0	17
S	9	4	0	0	0	0	13
SSW	12	8	0	0	0	0	20
SW	6	1	0	0	0	0	7
WSW	3	0	0	0	0	0	3
W	17	0	0	0	0	0	17
WNW	12	0	0	0	0	0	12
NW	2	0	0	0	0	0	2
NNW	2	0	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	130	41	0	0	0	0	171

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

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Extremely Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	0	0	0	0	0	1
NNE	2	0	0	0	0	0	2
NE	1	0	0	0	0	0	1
ENE	2	0	0	0	0	0	2
E	4	1	0	0	0	0	5
ESE	4	3	0	0	0	0	7
SE	3	1	0	0	0	0	4
SSE	13	0	0	0	0	0	13
S	6	0	0	0	0	0	6
SSW	6	0	0	0	0	0	6
SW	4	0	0	0	0	0	4
WSW	1	0	0	0	0	0	1
W	2	0	0	0	0	0	2
WNW	3	0	0	0	0	0	3
NW	0	0	0	0	0	0	0
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	53	5	0	0	0	0	58

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

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Extremely Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	3	0	0	0	3
NNE	0	0	3	0	0	0	3
NE	0	0	1	0	1	0	2
ENE	0	0	3	0	4	0	7
E	0	0	2	1	1	0	4
ESE	0	0	0	0	0	0	0
SE	0	0	0	3	0	0	3
SSE	0	0	0	1	1	1	3
S	0	1	0	5	12	0	18
SSW	0	1	12	10	5	0	28
SW	0	1	6	1	0	0	8
WSW	0	0	11	6	1	0	18
W	0	0	9	11	11	1	32
WNW	0	1	2	10	5	0	18
NW	0	0	2	2	2	4	10
NNW	0	1	0	1	0	1	3
Variable	0	0	0	0	0	0	0
Total	0	5	54	51	43	7	160

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 3
Hours of missing stability measurements in all stability classes: 10

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Moderately Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	3	1	0	0	5
NNE	0	0	1	0	0	0	1
NE	0	0	2	1	0	0	3
ENE	0	0	2	3	0	0	5
E	0	0	0	0	0	0	0
ESE	0	0	0	1	0	0	1
SE	0	0	1	0	0	0	1
SSE	0	0	0	0	2	1	3
S	0	1	1	2	3	0	7
SSW	0	2	1	3	4	0	10
SW	0	6	3	2	1	0	12
WSW	0	2	6	8	0	0	16
W	0	5	6	9	4	1	25
WNW	0	3	1	7	13	1	25
NW	0	3	0	1	3	2	9
NNW	0	2	2	1	0	0	5
Variable	0	0	0	0	0	0	0
Total	0	25	29	39	30	5	128

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 10

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Slightly Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	2	3	1	0	7
NNE	0	0	1	0	0	0	1
NE	2	1	2	1	0	0	6
ENE	0	0	1	4	1	0	6
E	0	3	6	3	0	0	12
ESE	0	1	0	1	1	0	3
SE	0	1	1	0	1	0	3
SSE	0	0	2	0	0	0	2
S	0	1	0	2	1	1	5
SSW	0	3	0	3	2	0	8
SW	0	3	2	6	1	1	13
WSW	1	3	5	5	1	0	15
W	2	3	2	7	4	0	18
WNW	0	1	1	4	5	2	13
NW	0	3	0	0	4	2	9
NNW	0	4	5	0	3	0	12
Variable	0	0	0	0	0	0	0
Total	5	28	30	39	25	6	133

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 1
Hours of missing stability measurements in all stability classes: 10

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Neutral - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	5	14	19	10	0	49
NNE	1	7	13	8	0	0	29
NE	1	1	18	45	16	6	87
ENE	0	3	7	12	7	3	32
E	0	1	6	24	5	0	36
ESE	0	1	1	9	2	1	14
SE	0	2	8	9	1	0	20
SSE	0	1	3	10	11	1	26
S	1	3	2	20	10	3	39
SSW	1	0	7	12	8	1	29
SW	0	2	8	31	17	3	61
WSW	0	4	16	14	7	2	43
W	1	7	8	41	40	22	119
WNW	3	4	14	50	57	13	141
NW	1	13	13	39	26	6	98
NNW	2	4	13	44	5	1	69
Variable	0	0	0	0	0	0	0
Total	12	58	151	387	222	62	892

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 16
Hours of missing stability measurements in all stability classes: 10

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Slightly Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	12	3	0	0	15
NNE	0	0	3	5	0	0	8
NE	0	0	5	2	2	0	9
ENE	0	0	1	1	2	0	4
E	0	1	1	6	0	0	8
ESE	1	2	5	8	2	0	18
SE	1	3	6	7	0	0	17
SSE	1	1	7	31	10	4	54
S	1	2	12	23	16	7	61
SSW	0	0	9	47	52	5	113
SW	1	0	11	45	21	1	79
WSW	2	2	9	43	12	0	68
W	0	1	14	26	9	1	51
WNW	0	2	11	28	2	0	43
NW	0	4	23	18	2	0	47
NNW	0	2	12	9	1	0	24
Variable	0	0	0	0	0	0	0
Total	7	20	141	302	131	18	619

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 3
Hours of missing stability measurements in all stability classes: 10

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Moderately Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	4	0	0	0	6
NNE	0	1	1	0	0	0	2
NE	0	1	0	0	0	0	1
ENE	0	0	1	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	1	8	5	1	0	15
SE	0	2	4	13	6	0	25
SSE	1	1	4	5	0	0	11
S	0	3	7	15	2	1	28
SSW	0	1	2	9	6	1	19
SW	0	1	3	5	0	0	9
WSW	1	3	4	4	0	0	12
W	1	2	4	5	1	0	13
WNW	0	1	2	3	0	0	6
NW	1	2	4	0	0	0	7
NNW	0	1	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	4	22	48	64	16	2	156

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 13
Hours of missing stability measurements in all stability classes: 10

Quad Cities Nuclear Station

Period of Record: January - March 2002
Stability Class - Extremely Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

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

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 10

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Extremely Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	1	0	0	0	2
NNE	0	2	8	0	0	0	10
NE	0	7	7	0	0	0	14
ENE	0	11	5	0	0	0	16
E	0	10	3	0	0	0	13
ESE	0	14	1	0	0	0	15
SE	0	15	15	0	0	0	30
SSE	1	20	22	0	0	0	43
S	0	22	7	0	0	0	29
SSW	1	38	31	0	0	0	70
SW	3	55	6	0	0	0	64
WSW	0	13	2	0	0	0	15
W	1	20	11	6	0	0	38
WNW	4	17	10	2	0	0	33
NW	0	35	16	0	0	0	51
NNW	1	21	4	0	0	0	26
Variable	0	0	0	0	0	0	0
Total	11	301	149	8	0	0	469

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

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Moderately Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	1	0	0	0	3
NNE	0	1	1	0	0	0	2
NE	0	3	1	0	0	0	4
ENE	0	4	2	0	0	0	6
E	0	2	0	0	0	0	2
ESE	0	2	1	0	0	0	3
SE	1	3	0	0	0	0	4
SSE	0	2	0	0	0	0	2
S	0	1	1	0	0	0	2
SSW	0	4	3	0	0	0	7
SW	0	6	2	0	0	0	8
WSW	0	2	0	0	0	0	2
W	2	3	1	0	0	0	6
WNW	0	3	3	0	0	0	6
NW	1	3	1	0	0	0	5
NNW	0	5	1	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	4	46	18	0	0	0	68

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

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Slightly Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	2	1	0	0	0	4
NNE	0	1	0	0	0	0	1
NE	0	3	3	0	0	0	6
ENE	0	7	0	0	0	0	7
E	0	5	1	0	0	0	6
ESE	0	3	0	0	0	0	3
SE	1	1	0	0	0	0	2
SSE	0	5	1	0	0	0	6
S	2	3	1	0	0	0	6
SSW	2	1	1	0	0	0	4
SW	1	15	2	0	0	0	18
WSW	1	3	1	0	0	0	5
W	1	3	1	1	0	0	6
WNW	0	3	4	0	0	0	7
NW	2	15	3	0	0	0	20
NNW	0	10	1	0	0	0	11
Variable	0	0	0	0	0	0	0
Total	11	80	20	1	0	0	112

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

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Neutral - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	18	17	0	0	0	36
NNE	6	4	4	0	0	0	14
NE	3	18	12	2	0	0	35
ENE	2	23	15	3	0	0	43
E	3	20	32	0	0	0	55
ESE	6	18	25	1	0	0	50
SE	2	7	6	0	0	0	15
SSE	4	17	1	0	0	0	22
S	5	14	0	0	0	0	19
SSW	3	13	5	0	0	0	21
SW	8	29	6	3	0	0	46
WSW	3	9	3	3	0	0	18
W	6	28	8	0	0	0	42
WNW	5	25	41	0	0	0	71
NW	4	28	12	2	0	0	46
NNW	0	36	5	0	0	0	41
Variable	0	0	0	0	0	0	0
Total	61	307	192	14	0	0	574

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

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Slightly Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	2	0	0	0	0	5
NNE	1	2	2	0	0	0	5
NE	4	3	3	0	0	0	10
ENE	13	17	0	0	0	0	30
E	13	15	5	0	0	0	33
ESE	12	21	3	0	0	0	36
SE	10	21	4	0	0	0	35
SSE	12	36	3	0	0	0	51
S	12	26	0	0	0	0	38
SSW	19	27	12	0	0	0	58
SW	17	60	13	0	0	0	90
WSW	17	24	2	0	0	0	43
W	14	30	0	0	0	0	44
WNW	14	14	2	0	0	0	30
NW	7	24	1	0	0	0	32
NNW	8	9	1	0	0	0	18
Variable	0	0	0	0	0	0	0
Total	176	331	51	0	0	0	558

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

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Moderately Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	5	1	0	0	0	0	6
NNE	5	1	0	0	0	0	6
NE	9	1	0	0	0	0	10
ENE	9	0	0	0	0	0	9
E	15	1	0	0	0	0	16
ESE	26	4	0	0	0	0	30
SE	33	6	0	0	0	0	39
SSE	19	4	0	0	0	0	23
S	18	4	0	0	0	0	22
SSW	15	2	0	0	0	0	17
SW	11	3	0	0	0	0	14
WSW	4	1	0	0	0	0	5
W	12	0	0	0	0	0	12
WNW	11	0	0	0	0	0	11
NW	9	5	0	0	0	0	14
NNW	10	1	0	0	0	0	11
Variable	0	0	0	0	0	0	0
Total	211	34	0	0	0	0	245

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

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Extremely Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	5	0	0	0	0	0	5
NE	3	0	0	0	0	0	3
ENE	9	0	0	0	0	0	9
E	14	0	0	0	0	0	14
ESE	27	3	0	0	0	0	30
SE	18	0	0	0	0	0	18
SSE	12	0	0	0	0	0	12
S	18	0	0	0	0	0	18
SSW	4	0	0	0	0	0	4
SW	7	0	0	0	0	0	7
WSW	1	0	0	0	0	0	1
W	3	0	0	0	0	0	3
WNW	7	0	0	0	0	0	7
NW	5	0	0	0	0	0	5
NNW	0	0	0	0	0	1	1
Variable	0	0	0	0	0	0	0
Total	133	3	0	0	0	1	137

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

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Extremely Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	1	0	0	0	2
NNE	0	0	0	5	0	0	5
NE	0	0	3	2	1	0	6
ENE	0	0	3	0	0	0	3
E	0	1	4	1	0	0	6
ESE	0	2	5	1	0	0	8
SE	0	4	10	6	5	0	25
SSE	0	2	7	7	8	4	28
S	0	2	10	14	15	2	43
SSW	0	5	26	22	16	8	77
SW	0	9	16	5	0	0	30
WSW	0	0	5	1	1	0	7
W	1	10	2	2	1	3	19
WNW	0	4	15	9	4	7	39
NW	0	3	15	11	5	0	34
NNW	0	1	7	1	1	0	10
Variable	0	0	0	0	0	0	0
Total	1	44	129	87	57	24	342

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 1
Hours of missing stability measurements in all stability classes: 7

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Moderately Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	0	2	1	0	0	4
NNE	0	0	3	1	0	0	4
NE	0	0	3	7	0	0	10
ENE	0	4	4	2	1	0	11
E	0	3	2	1	0	0	6
ESE	0	0	3	0	0	0	3
SE	0	2	2	2	1	0	7
SSE	0	2	1	0	0	1	4
S	0	0	4	4	1	2	11
SSW	0	4	5	4	4	1	18
SW	1	8	9	7	0	0	25
WSW	1	3	5	0	0	0	9
W	0	2	0	2	0	1	5
WNW	0	1	2	3	4	3	13
NW	0	7	9	7	0	0	23
NNW	0	3	5	6	2	0	16
Variable	0	0	0	0	0	0	0
Total	3	39	59	47	13	8	169

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: 7

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Slightly Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	1	0	0	0	5
NNE	0	1	0	2	0	0	3
NE	0	0	2	6	0	0	8
ENE	0	5	6	2	0	0	13
E	0	4	2	1	0	0	7
ESE	0	0	1	0	0	0	1
SE	0	0	1	2	0	0	3
SSE	1	2	2	2	0	0	7
S	0	2	2	1	3	0	8
SSW	0	2	3	2	2	2	11
SW	0	4	5	3	0	0	12
WSW	0	1	0	0	1	0	2
W	1	2	0	1	1	0	5
WNW	0	1	3	2	2	1	9
NW	0	5	11	2	1	0	19
NNW	0	5	7	3	1	1	17
Variable	0	0	0	0	0	0	0
Total	2	38	46	29	11	4	130

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: 7

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Neutral - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	12	18	4	0	36
NNE	1	4	1	5	1	0	12
NE	0	3	5	13	8	2	31
ENE	1	8	14	16	6	3	48
E	1	10	18	25	14	2	70
ESE	1	3	12	12	25	5	58
SE	2	4	6	6	10	1	29
SSE	0	2	3	12	10	4	31
S	1	5	7	20	14	1	48
SSW	0	3	10	17	12	12	54
SW	1	4	18	21	8	5	57
WSW	1	1	9	5	2	2	20
W	0	3	10	9	4	2	28
WNW	0	6	19	26	25	3	79
NW	1	3	14	26	7	8	59
NNW	0	4	19	27	4	0	54
Variable	0	0	0	0	0	0	0
Total	10	65	177	258	154	50	714

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 1
Hours of missing stability measurements in all stability classes: 7

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Slightly Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	11	1	0	0	16
NNE	0	2	4	1	0	0	7
NE	0	3	8	2	2	0	15
ENE	0	4	5	4	0	0	13
E	0	6	14	3	1	0	24
ESE	1	3	10	17	1	0	32
SE	0	4	9	10	3	0	26
SSE	1	6	13	26	18	0	64
S	0	2	5	32	22	0	61
SSW	0	4	30	16	21	4	75
SW	0	5	15	27	8	2	57
WSW	1	3	6	6	3	0	19
W	0	2	10	21	2	0	35
WNW	0	3	9	18	0	1	31
NW	1	4	8	16	0	0	29
NNW	1	3	7	15	0	0	26
Variable	0	0	0	0	0	0	0
Total	5	58	164	215	81	7	530

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: 7

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Moderately Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	4	3	1	0	0	9
NNE	0	6	5	0	0	0	11
NE	0	1	5	2	0	0	8
ENE	1	2	3	2	0	0	8
E	0	2	6	2	0	0	10
ESE	0	0	2	2	2	0	6
SE	0	1	4	12	1	0	18
SSE	0	0	10	17	1	0	28
S	2	3	21	24	0	0	50
SSW	3	2	7	19	0	0	31
SW	0	1	4	14	1	0	20
WSW	0	0	3	1	0	0	4
W	0	2	1	3	0	0	6
WNW	0	1	1	1	0	0	3
NW	0	0	5	1	0	0	6
NNW	1	2	2	3	0	0	8
Variable	0	0	0	0	0	0	0
Total	8	27	82	104	5	0	226

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: 7

Quad Cities Nuclear Station

Period of Record: April - June 2002
Stability Class - Extremely Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	0	1	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	0	1	0	0	0	0	1
ENE	0	1	0	0	0	0	1
E	0	1	0	0	0	0	1
ESE	0	0	0	1	0	0	1
SE	0	0	0	1	0	0	1
SSE	2	1	3	1	0	0	7
S	1	3	3	8	0	0	15
SSW	0	3	11	7	0	0	21
SW	0	2	7	2	0	0	11
WSW	0	0	1	0	0	0	1
W	0	1	0	0	0	0	1
WNW	0	1	0	0	0	0	1
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	26	20	0	0	64

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: 7

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Extremely Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	13	5	0	0	0	18
NNE	1	12	3	0	0	0	16
NE	1	18	1	0	0	0	20
ENE	2	32	10	0	0	0	44
E	0	21	11	0	0	0	32
ESE	1	29	9	0	0	0	39
SE	4	29	0	0	0	0	33
SSE	0	24	2	0	0	0	26
S	0	32	0	0	0	0	32
SSW	1	47	11	0	0	0	59
SW	1	76	7	0	0	0	84
WSW	3	48	1	0	0	0	52
W	7	28	4	0	0	0	39
WNW	1	13	7	0	0	0	21
NW	3	19	0	0	0	0	22
NNW	1	15	2	0	0	0	18
Variable	0	0	0	0	0	0	0
Total	26	456	73	0	0	0	555

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

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Moderately Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

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

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

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Slightly Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	0	0	0	0	2
NNE	0	2	0	0	0	0	2
NE	0	4	0	0	0	0	4
ENE	1	9	0	0	0	0	10
E	1	2	1	0	0	0	4
ESE	0	3	0	0	0	0	3
SE	0	7	0	0	0	0	7
SSE	1	5	0	0	0	0	6
S	2	5	2	0	0	0	9
SSW	3	4	1	0	0	0	8
SW	1	11	2	0	0	0	14
WSW	2	6	0	0	0	0	8
W	1	1	0	0	0	0	2
WNW	2	3	0	0	0	0	5
NW	1	2	1	0	0	0	4
NNW	0	1	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	15	67	7	0	0	0	89

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

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Neutral - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	13	5	0	0	0	20
NNE	3	15	0	0	0	0	18
NE	4	21	3	0	0	0	28
ENE	4	23	4	0	0	0	31
E	4	11	3	0	0	0	18
ESE	7	11	0	0	0	0	18
SE	6	18	1	0	0	0	25
SSE	4	7	0	0	0	0	11
S	5	9	2	0	0	0	16
SSW	3	16	2	0	0	0	21
SW	5	23	2	0	0	0	30
WSW	7	16	1	0	0	0	24
W	6	12	0	0	0	0	18
WNW	7	7	2	0	0	0	16
NW	4	10	3	0	0	0	17
NNW	1	8	1	0	0	0	10
Variable	0	0	0	0	0	0	0
Total	72	220	29	0	0	0	321

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

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Slightly Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	6	8	2	0	0	0	16
NNE	9	4	0	0	0	0	13
NE	16	10	0	0	0	0	26
ENE	15	42	2	0	0	0	59
E	22	20	3	0	0	0	45
ESE	21	22	0	0	0	0	43
SE	13	12	1	0	0	0	26
SSE	10	15	0	0	0	0	25
S	14	28	0	0	0	0	42
SSW	14	36	4	0	0	0	54
SW	11	47	4	0	0	0	62
WSW	22	10	0	0	0	0	32
W	18	5	0	0	0	0	23
WNW	22	8	1	0	0	0	31
NW	19	22	3	0	0	0	44
NNW	4	17	1	0	0	0	22
Variable	0	0	0	0	0	0	0
Total	236	306	21	0	0	0	563

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

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Moderately Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	12	0	0	0	0	0	12
NNE	16	0	0	0	0	0	16
NE	23	0	0	0	0	0	23
ENE	15	2	0	0	0	0	17
E	26	0	0	0	0	0	26
ESE	19	3	0	0	0	0	22
SE	20	1	0	0	0	0	21
SSE	20	0	0	0	0	0	20
S	20	1	0	0	0	0	21
SSW	16	3	0	0	0	0	19
SW	17	0	0	0	0	0	17
WSW	11	0	0	0	0	0	11
W	11	1	0	0	0	0	12
WNW	9	0	0	0	0	0	9
NW	6	2	0	0	0	0	8
NNW	10	0	0	0	0	0	10
Variable	0	0	0	0	0	0	0
Total	251	13	0	0	0	0	264

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

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Extremely Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	13	0	0	0	0	0	13
NNE	18	0	0	0	0	0	18
NE	15	0	0	0	0	0	15
ENE	13	0	0	0	0	0	13
E	42	0	0	0	0	0	42
ESE	66	0	0	0	0	0	66
SE	18	0	0	0	0	0	18
SSE	5	0	0	0	0	0	5
S	4	0	0	0	0	0	4
SSW	6	0	0	0	0	0	6
SW	4	0	0	0	0	0	4
WSW	1	0	0	0	0	0	1
W	11	0	0	0	0	0	11
WNW	11	0	0	0	0	0	11
NW	1	0	0	0	0	0	1
NNW	5	0	0	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	233	0	0	0	0	0	233

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

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Extremely Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	9	5	0	0	15
NNE	0	7	7	2	0	0	16
NE	0	4	7	0	0	0	11
ENE	0	19	7	1	0	0	27
E	0	11	13	8	0	0	32
ESE	1	18	10	4	4	0	37
SE	0	9	16	1	0	0	26
SSE	0	4	14	6	0	0	24
S	0	6	17	16	0	0	39
SSW	0	14	24	20	13	0	71
SW	0	23	17	5	1	0	46
WSW	0	16	19	9	0	0	44
W	0	28	8	4	0	0	40
WNW	1	8	3	4	3	0	19
NW	1	11	6	0	0	0	18
NNW	0	6	9	3	0	0	18
Variable	0	0	0	0	0	0	0
Total	3	185	186	88	21	0	483

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

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Moderately Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	4	0	0	0	7
NNE	0	2	2	0	0	0	4
NE	0	3	1	0	0	0	4
ENE	3	7	3	1	0	0	14
E	1	9	1	0	0	0	11
ESE	1	6	3	1	0	0	11
SE	1	3	4	0	0	0	8
SSE	1	2	4	2	0	0	9
S	0	3	6	1	0	0	10
SSW	0	6	5	5	4	0	20
SW	0	4	7	1	0	0	12
WSW	0	3	2	2	0	0	7
W	1	2	2	2	0	0	7
WNW	0	1	0	2	0	0	3
NW	0	2	2	1	0	0	5
NNW	0	3	1	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	8	59	47	18	4	0	136

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

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Slightly Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	1	0	0	0	4
NNE	0	2	2	0	0	0	4
NE	0	2	3	1	0	0	6
ENE	0	8	6	1	0	0	15
E	1	1	4	1	0	0	7
ESE	0	4	1	1	0	0	6
SE	0	1	6	1	0	0	8
SSE	0	3	1	0	1	0	5
S	0	4	1	2	1	0	8
SSW	0	1	3	2	3	0	9
SW	0	2	5	0	0	0	7
WSW	1	1	1	3	0	0	6
W	0	0	2	1	0	0	3
WNW	1	0	1	0	0	0	2
NW	0	5	2	0	0	0	7
NNW	0	4	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	3	41	39	13	5	0	101

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

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Neutral - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	6	14	3	1	0	25
NNE	0	4	9	6	1	0	20
NE	1	7	13	2	1	0	24
ENE	0	8	9	9	1	0	27
E	3	6	16	12	0	0	37
ESE	0	6	11	5	0	0	22
SE	1	8	14	7	0	1	31
SSE	1	3	9	7	2	0	22
S	3	3	8	10	6	0	30
SSW	1	5	10	17	7	0	40
SW	1	6	11	14	2	0	34
WSW	3	4	10	7	0	0	24
W	3	5	12	3	0	0	23
WNW	0	3	11	4	1	0	19
NW	0	5	15	5	6	0	31
NNW	0	1	8	8	3	0	20
Variable	0	0	0	0	0	0	0
Total	18	80	180	119	31	1	429

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

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Slightly Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	5	2	10	0	0	17
NNE	1	2	6	3	0	0	12
NE	0	5	8	3	0	0	16
ENE	2	2	27	13	0	0	44
E	3	7	30	10	0	0	50
ESE	0	6	16	15	0	0	37
SE	0	4	14	13	0	0	31
SSE	1	6	11	14	3	0	35
S	0	3	7	19	14	0	43
SSW	0	5	10	41	16	2	74
SW	0	4	6	22	4	0	36
WSW	0	9	14	14	0	0	37
W	0	6	12	1	1	0	20
WNW	0	1	8	2	0	0	11
NW	0	4	17	8	0	0	29
NNW	1	6	11	6	0	0	24
Variable	0	0	0	0	0	0	0
Total	8	75	199	194	38	2	516

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 9
Hours of missing stability measurements in all stability classes: 2

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Moderately Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	2	3	0	0	0	6
NNE	0	1	4	3	0	0	8
NE	0	3	5	2	0	0	10
ENE	2	4	5	2	0	0	13
E	2	9	26	4	0	0	41
ESE	0	3	22	13	1	0	39
SE	0	1	16	10	1	0	28
SSE	0	4	13	14	0	0	31
S	0	3	17	16	0	0	36
SSW	0	5	8	14	0	0	27
SW	0	6	11	2	1	0	20
WSW	2	5	7	2	0	0	16
W	0	4	2	2	0	0	8
WNW	0	2	1	2	0	0	5
NW	0	7	6	1	0	0	14
NNW	1	5	3	1	0	0	10
Variable	0	0	0	0	0	0	0
Total	8	64	149	88	3	0	312

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

Quad Cities Nuclear Station

Period of Record: July - September 2002
Stability Class - Extremely Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	1	0	0	0	5
NNE	1	0	2	0	0	0	3
NE	0	2	1	1	0	0	4
ENE	0	1	5	0	0	0	6
E	1	4	3	1	0	0	9
ESE	0	0	4	0	0	0	4
SE	0	3	8	16	1	0	28
SSE	2	7	20	17	0	0	46
S	0	4	21	2	0	0	27
SSW	2	7	13	4	0	0	26
SW	1	3	9	5	0	0	18
WSW	0	2	2	0	0	0	4
W	1	1	0	0	0	0	2
WNW	3	4	4	2	0	0	13
NW	0	8	6	0	0	0	14
NNW	0	1	2	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	11	51	101	48	1	0	212

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

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Extremely Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	10	3	0	0	0	14
NNE	0	5	0	0	0	0	5
NE	0	5	1	0	0	0	6
ENE	0	6	2	0	0	0	8
E	0	5	1	1	0	0	7
ESE	0	1	1	1	0	0	3
SE	0	2	5	0	0	0	7
SSE	0	0	0	0	0	0	0
S	0	3	7	0	0	0	10
SSW	0	23	7	0	0	0	30
SW	0	30	13	0	0	0	43
WSW	0	2	7	0	0	0	9
W	1	11	29	0	0	0	41
WNW	0	7	10	0	0	0	17
NW	0	10	7	0	0	0	17
NNW	0	11	8	0	0	0	19
Variable	0	0	0	0	0	0	0
Total	2	131	101	2	0	0	236

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

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Moderately Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	3	2	0	0	0	5
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	1	0	1	0	0	0	2
ESE	1	0	0	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	1	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	0	2	0	0	0	0	2
SW	0	5	1	0	0	0	6
WSW	0	6	0	0	0	0	6
W	0	4	2	0	0	0	6
WNW	2	1	0	0	0	0	3
NW	0	4	1	0	0	0	5
NNW	0	2	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	4	28	7	0	0	0	39

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

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Slightly Unstable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	1	0	0	0	4
NNE	0	5	7	0	0	0	12
NE	0	8	1	0	0	0	9
ENE	0	4	0	0	0	0	4
E	0	3	1	0	0	0	4
ESE	1	1	4	0	0	0	6
SE	0	1	0	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	0	0
SW	0	3	2	0	0	0	5
WSW	2	5	4	0	0	0	11
W	0	4	7	1	0	0	12
WNW	0	6	8	3	0	0	17
NW	0	6	4	0	0	0	10
NNW	0	4	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	3	54	39	4	0	0	100

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

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Neutral - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	8	55	18	3	0	0	84
NNE	4	26	12	0	0	0	42
NE	9	39	9	0	0	0	57
ENE	3	40	2	0	0	0	45
E	8	28	28	4	0	0	68
ESE	4	26	9	5	0	0	44
SE	2	4	0	0	0	0	6
SSE	2	5	1	0	0	0	8
S	2	6	0	0	0	0	8
SSW	2	18	3	0	0	0	23
SW	2	19	9	0	0	0	30
WSW	8	45	12	0	0	0	65
W	8	61	77	11	0	0	157
WNW	7	66	35	6	0	0	114
NW	8	62	18	4	0	0	92
NNW	4	31	10	0	0	0	45
Variable	0	0	0	0	0	0	0
Total	81	531	243	33	0	0	888

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

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Slightly Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	5	14	1	0	0	0	20
NNE	8	7	0	0	0	0	15
NE	4	6	0	0	0	0	10
ENE	1	17	2	0	0	0	20
E	7	7	0	0	0	0	14
ESE	11	7	4	0	0	0	22
SE	12	4	0	0	0	0	16
SSE	15	18	6	0	0	0	39
S	19	28	2	0	0	0	49
SSW	8	21	6	0	0	0	35
SW	17	51	24	0	0	0	92
WSW	20	56	6	0	0	0	82
W	23	52	12	0	0	0	87
WNW	16	34	1	0	0	0	51
NW	11	27	5	0	0	0	43
NNW	6	17	0	0	0	0	23
Variable	0	0	0	0	0	0	0
Total	183	366	69	0	0	0	618

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

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Moderately Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	0	0	0	0	0	3
NNE	4	2	0	0	0	0	6
NE	8	0	0	0	0	0	8
ENE	8	0	0	0	0	0	8
E	9	1	0	0	0	0	10
ESE	5	6	0	0	0	0	11
SE	11	1	0	0	0	0	12
SSE	14	3	0	0	0	0	17
S	14	1	0	0	0	0	15
SSW	10	0	0	0	0	0	10
SW	5	0	0	0	0	0	5
WSW	4	0	0	0	0	0	4
W	5	2	0	0	0	0	7
WNW	6	3	0	0	0	0	9
NW	3	1	0	0	0	0	4
NNW	2	0	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	111	20	0	0	0	0	131

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

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Extremely Stable - 196Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	0	0	0	0	0	2
NNE	2	0	0	0	0	0	2
NE	4	0	0	0	0	0	4
ENE	4	1	0	0	0	0	5
E	13	1	0	0	0	0	14
ESE	33	6	0	0	0	0	39
SE	9	0	0	0	0	0	9
SSE	10	0	0	0	0	0	10
S	7	0	0	0	0	0	7
SSW	2	0	0	0	0	0	2
SW	2	0	0	0	0	0	2
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	2	0	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	90	8	0	0	0	0	98

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

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Extremely Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	1	0	0	0	4
NNE	0	1	0	0	0	0	1
NE	0	0	2	0	0	0	2
ENE	0	0	0	1	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	2	3	0	0	5
SSE	0	0	0	0	1	0	1
S	0	1	3	3	4	0	11
SSW	0	6	7	13	3	0	29
SW	0	1	8	2	0	0	11
WSW	0	0	2	2	3	0	7
W	0	2	3	13	3	0	21
WNW	0	4	0	2	1	0	7
NW	0	0	3	7	0	0	10
NNW	0	2	3	5	0	0	10
Variable	0	0	0	0	0	0	0
Total	0	20	34	51	15	0	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: 1

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Moderately Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	4	1	0	0	6
NNE	0	3	1	0	0	0	4
NE	0	2	2	1	0	0	5
ENE	0	1	1	0	0	0	2
E	0	2	0	0	0	0	2
ESE	0	0	0	2	0	0	2
SE	0	1	1	0	1	0	3
SSE	0	0	0	0	0	0	0
S	0	3	3	2	1	0	9
SSW	0	4	5	5	4	0	18
SW	0	2	4	5	4	0	15
WSW	0	2	2	5	1	0	10
W	0	2	2	11	1	0	16
WNW	0	3	1	4	1	0	9
NW	0	2	3	2	0	0	7
NNW	0	3	4	1	0	0	8
Variable	0	0	0	0	0	0	0
Total	0	31	33	39	13	0	116

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

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Slightly Unstable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	5	0	0	0	8
NNE	0	5	0	3	0	0	8
NE	0	2	2	0	0	0	4
ENE	0	3	2	0	0	0	5
E	0	2	3	1	1	0	7
ESE	0	0	0	0	3	0	3
SE	1	0	0	0	0	0	1
SSE	0	0	1	1	0	0	2
S	0	0	0	0	0	0	0
SSW	0	3	4	2	1	0	10
SW	0	1	5	3	0	0	9
WSW	0	3	2	3	1	0	9
W	0	2	4	7	1	1	15
WNW	0	1	3	6	0	1	11
NW	0	4	5	1	0	0	10
NNW	0	1	2	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	1	30	38	27	7	2	105

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

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Neutral - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	8	43	16	2	0	71
NNE	0	13	27	16	2	0	58
NE	1	10	24	23	3	0	61
ENE	1	3	30	25	0	0	59
E	1	11	22	15	14	0	63
ESE	1	4	15	15	9	5	49
SE	0	4	3	2	0	0	9
SSE	1	1	2	5	4	6	19
S	0	0	3	12	4	0	19
SSW	0	2	14	13	7	0	36
SW	3	2	13	16	11	0	45
WSW	2	3	20	23	7	0	55
W	1	4	22	62	56	17	162
WNW	1	7	41	39	24	10	122
NW	0	8	36	46	13	4	107
NNW	0	6	24	23	4	0	57
Variable	0	0	0	0	0	0	0
Total	14	86	339	351	160	42	992

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 12
Hours of missing stability measurements in all stability classes: 1

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Slightly Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	0	7	11	0	0	19
NNE	0	6	16	5	0	0	27
NE	0	1	6	4	0	0	11
ENE	1	1	3	6	2	0	13
E	0	2	5	2	0	0	9
ESE	0	1	2	3	5	1	12
SE	1	0	6	8	0	0	15
SSE	0	1	8	10	1	0	20
S	1	3	23	27	19	0	73
SSW	1	4	28	34	21	8	96
SW	0	3	15	37	15	2	72
WSW	0	0	21	35	5	0	61
W	1	1	27	29	7	0	65
WNW	0	3	23	26	0	0	52
NW	0	2	16	29	1	0	48
NNW	0	1	15	13	0	0	29
Variable	0	0	0	0	0	0	0
Total	6	29	221	279	76	11	622

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

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Moderately Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	3	1	0	0	4
NNE	1	2	2	0	0	0	5
NE	0	1	3	1	0	0	5
ENE	1	2	1	0	0	0	4
E	0	6	12	2	0	0	20
ESE	0	1	2	1	1	0	5
SE	0	3	14	10	0	0	27
SSE	0	2	6	5	0	0	13
S	0	1	3	16	0	0	20
SSW	0	0	8	12	1	0	21
SW	1	3	7	0	0	0	11
WSW	0	4	2	2	0	0	8
W	1	0	2	1	0	0	4
WNW	0	3	3	1	0	0	7
NW	0	1	4	6	0	0	11
NNW	0	0	8	2	0	0	10
Variable	0	0	0	0	0	0	0
Total	4	29	80	60	2	0	175

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

Quad Cities Nuclear Station

Period of Record: October - December2002
Stability Class - Extremely Stable - 296Ft-33Ft Delta-T (F)
Winds Measured at 296 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	0	0	0	0	1
NNE	1	0	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	1	0	0	0	0	1
E	0	2	3	1	0	0	6
ESE	0	0	3	0	0	0	3
SE	0	2	5	10	0	0	17
SSE	0	0	3	3	0	0	6
S	0	0	5	7	1	0	13
SSW	0	1	8	6	0	0	15
SW	0	0	1	0	0	0	1
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	1	0	0	0	0	1
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	1	8	28	27	1	0	65

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

QUAD CITIES

APPENDIX III

2002 REMP SAMPLE RESULTS

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1.0 INTRODUCTION

The following constitutes the current 2002 Monthly Progress Report for the Radiological Environmental Monitoring Program conducted at the Quad Cities Nuclear Power Station, Cordova, 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±2s;2TPU, where "x" is the significant result, "s" is the one standard deviation counting uncertainty, and TPU is the total propagated uncertainty at the one sigma confidence level.

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

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

TLD data is provided by Exelon Generation Company.

Deviations from Scheduled Sampling and Corrective Actions Taken

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

Unusual Environmental Measurements

Sample Type	Location Code	Collection Date	Comments

None for 2002.

2.0 LISTING OF MISSED SAMPLES

Sample Type	Location Code	Expected Collection Date	Reason
SW	Q-33	01-04-02	No sample; water frozen.
SW	Q-34	01-04-02	No sample; water frozen.
SW	Q-33	01-18-02	No sample; water frozen.
SW	Q-34	01-18-02	No sample; water frozen.
TLD	Other	02-02-02	TLD Q-112-2 found missing during monthly check; collector placed Spare #02018928.
SW	Q-33	02-02-02	No sample; water frozen.
SW	Q-34	02-02-02	No sample; water frozen.
TLD	Other	03-01-02	TLD Q-112-2 found missing during monthly check; collector placed spare #02018925.
TLD	Other	07-27-02	TLD Q-112-2 found missing during monthly check; collector placed spare #2025705.
A	Q-02	08-09-02	No sample; power out. Station Point of Contact notified.
A/I	Q-02	08-17-02	No sample; power out.
SW	Q-33	12-06-02	No sample - river frozen.
SW	Q-34	12-06-02	No sample - river frozen.

3.0 LISTING OF SAMPLE ANOMALIES

Sample Type	Location Code	Collection Date	Reason
A/I	Q-02	08-02-02	Low reading of 65.5 hours due to power outage.
A/I	Q-07	08-16-02	Low reading of 121.5 hours due to power outage.
A	Q-02	08-23-02	Slightly low reading of 160.7 hours due to power outage and recent power restoration.
A/I	Q-07	08-23-02	Slightly low reading of 164.7 hours due to power outage and recent power restoration.

Table 1. Airborne Particulates and Iodine Cartridges

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

Required LLD: 0.01 pCi/m³ for Gross Beta and 0.07 pCi/m³ for I-131

Units: 10^{-2} pCi/m³

Q-01 Onsite No. 1

Date Collected	Volume (m³)	Gross Beta	I-131[a]	Date Collected	Volume (m³)	Gross Beta	I-131[a]
01-04-02	282	3.2 ± 0.4 ; 0.7	0.3 ± 0.5 ; 0.5	07-05-02	287	3.0 ± 0.3 ; 0.6	0.2 ± 0.4 ; 0.4
01-11-02	286	3.9 ± 0.4 ; 0.8	-	07-12-02	274	2.6 ± 0.3 ; 0.6	-
01-18-02	289	2.6 ± 0.3 ; 0.6	0.3 ± 0.5 ; 0.5	07-19-02	294	2.8 ± 0.4 ; 0.6	-0.4 ± 0.5 ; 0.5
01-25-02	281	3.2 ± 0.4 ; 0.7	-	07-26-02	278	2.3 ± 0.4 ; 0.5	-
02-01-02	283	2.6 ± 0.3 ; 0.6	0.6 ± 0.5 ; 0.5	08-02-02	288	3.0 ± 0.3 ; 0.6	0.3 ± 0.3 ; 0.3
02-08-02	285	5.3 ± 0.4 ; 1.0	-	08-09-02	282	2.0 ± 0.4 ; 0.5	-
02-15-02	286	2.5 ± 0.3 ; 0.6	0.4 ± 0.4 ; 0.4	08-16-02	283	3.0 ± 0.3 ; 0.6	0.2 ± 0.4 ; 0.4
02-22-02	281	1.5 ± 0.3 ; 0.4	-	08-23-02	286	2.0 ± 0.3 ; 0.5	-
03-01-02	289	2.0 ± 0.3 ; 0.5	-0.1 ± 0.4 ; 0.4	08-30-02	285	2.5 ± 0.4 ; 0.6	-0.3 ± 0.3 ; 0.3
03-08-02	281	3.2 ± 0.4 ; 0.7	-	09-06-02	284	2.9 ± 0.3 ; 0.6	-
03-15-02	285	3.2 ± 0.4 ; 0.7	0.3 ± 0.5 ; 0.5	09-13-02	286	3.6 ± 0.4 ; 0.8	-0.3 ± 0.3 ; 0.3
03-22-02	286	2.8 ± 0.3 ; 0.6	-	09-21-02	285	3.2 ± 0.4 ; 0.7	-
03-29-02	281	2.7 ± 0.4 ; 0.6	0.2 ± 0.5 ; 0.5	09-27-02	285	2.6 ± 0.3 ; 0.6	-0.5 ± 0.4 ; 0.4
1st Qtr. Mean±s.d.		3.0 ± 0.9	0.3 ± 0.2	3rd Qtr. Mean±s.d.		2.7 ± 0.5	-0.1 ± 0.3
04-05-02	283	1.9 ± 0.4 ; 0.5	-	10-04-02	285	3.5 ± 0.4 ; 0.7	-
04-12-02	283	2.5 ± 0.3 ; 0.6	-0.0 ± 0.5 ; 0.5	10-12-02	327	2.9 ± 0.4 ; 0.6	0.1 ± 0.3 ; 0.3
04-19-02	286	2.3 ± 0.4 ; 0.6	-	10-18-02	242	2.0 ± 0.4 ; 0.5	-
04-26-02	287	2.2 ± 0.3 ; 0.5	-0.0 ± 0.5 ; 0.5	10-25-02	287	2.0 ± 0.3 ; 0.5	0.4 ± 0.4 ; 0.4
05-03-02	279	1.7 ± 0.3 ; 0.4	-	11-02-02	322	2.7 ± 0.3 ; 0.6	-
05-10-02	288	2.0 ± 0.3 ; 0.5	0.2 ± 0.5 ; 0.5	11-09-02	288	5.9 ± 0.5 ; 1.2	-0.2 ± 0.3 ; 0.3
05-17-02	286	1.4 ± 0.3 ; 0.4	-	11-15-02	251	3.5 ± 0.5 ; 0.8	-
05-24-02	285	1.8 ± 0.3 ; 0.4	0.5 ± 0.4 ; 0.4	11-22-02	282	2.2 ± 0.4 ; 0.5	0.0 ± 0.4 ; 0.4
05-31-02	286	2.1 ± 0.3 ; 0.5	-	11-30-02	325	2.1 ± 0.3 ; 0.5	-
06-07-02	286	1.7 ± 0.3 ; 0.4	-0.1 ± 0.4 ; 0.4	12-06-02	244	2.7 ± 0.4 ; 0.6	0.1 ± 0.4 ; 0.4
06-14-02	277	2.1 ± 0.3 ; 0.5	-	12-13-02	287	4.6 ± 0.4 ; 0.9	-
06-20-02	250	2.6 ± 0.4 ; 0.6	0.1 ± 0.5 ; 0.5	12-20-02	286	3.9 ± 0.4 ; 0.8	0.8 ± 0.3 ; 0.3
06-28-02	327	3.4 ± 0.4 ; 0.7	-	12-27-02	282	2.5 ± 0.4 ; 0.6	-
2nd Qtr. Mean±s.d.		2.1 ± 0.5	0.1 ± 0.2	4th Qtr. Mean±s.d.		3.1 ± 1.1	0.2 ± 0.3

[a] Volume based on a two week collection period.

NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 1. Airborne Particulates and Iodine Cartridges

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

Required LLD: 0.01 pCi/m³ for Gross Beta and 0.07 pCi/m³ for I-131

Units: 10^{-2} pCi/m³

Q-02 Onsite No. 2

Date Collected	Volume (m³)	Gross Beta	I-131[a]	Date Collected	Volume (m³)	Gross Beta	I-131[a]
01-04-02	282	3.5 ± 0.4 ; 0.8	-0.0 ± 0.5 ; 0.5	07-05-02	287	2.7 ± 0.3 ; 0.6	0.1 ± 0.4 ; 0.4
01-11-02	287	3.8 ± 0.4 ; 0.8	-	07-12-02	275	2.2 ± 0.3 ; 0.5	-
01-18-02	286	2.7 ± 0.3 ; 0.6	0.6 ± 0.4 ; 0.4	07-19-02	294	3.2 ± 0.4 ; 0.7	-0.2 ± 0.4 ; 0.4
01-25-02	284	3.5 ± 0.4 ; 0.7	-	07-26-02	278	2.3 ± 0.4 ; 0.6	-
02-01-02	282	2.2 ± 0.3 ; 0.5	0.1 ± 0.5 ; 0.5	08-02-02	111[b]	2.4 ± 0.6 ; 0.7	-0.3 ± 0.6 ; 0.6
02-08-02	285	5.2 ± 0.4 ; 1.0	-	08-09-02	NS[c]	-	-
02-15-02	286	2.3 ± 0.3 ; 0.5	0.3 ± 0.4 ; 0.4	08-16-02	NS[c]	-	-
02-22-02	286	1.2 ± 0.3 ; 0.4	-	08-23-02	273[d]	1.4 ± 0.3 ; 0.4	-
03-01-02	289	2.0 ± 0.3 ; 0.5	-0.0 ± 0.4 ; 0.4	08-30-02	284	2.4 ± 0.4 ; 0.6	0.9 ± 0.3 ; 0.4
03-08-02	281	3.4 ± 0.4 ; 0.7	-	09-06-02	285	3.0 ± 0.4 ; 0.6	-
03-15-02	285	3.5 ± 0.4 ; 0.8	0.2 ± 0.2 ; 0.2	09-13-02	286	3.6 ± 0.4 ; 0.8	0.2 ± 0.4 ; 0.4
03-22-02	286	2.2 ± 0.3 ; 0.5	-	09-21-02	285	2.9 ± 0.3 ; 0.6	-
03-29-02	285	2.9 ± 0.4 ; 0.7	-0.1 ± 0.5 ; 0.5	09-27-02	285	2.6 ± 0.3 ; 0.6	-0.3 ± 0.4 ; 0.4
1st Qtr. Mean±s.d.		3.0 ± 1.0	0.1 ± 0.2	3rd Qtr. Mean±s.d.		2.6 ± 0.6	0.1 ± 0.5
04-05-02	283	1.6 ± 0.4 ; 0.5	-	10-04-02	285	3.6 ± 0.4 ; 0.7	-
04-12-02	283	2.6 ± 0.3 ; 0.6	-0.1 ± 0.5 ; 0.5	10-12-02	327	3.0 ± 0.4 ; 0.7	-0.2 ± 0.3 ; 0.3
04-19-02	286	2.2 ± 0.4 ; 0.5	-	10-18-02	242	2.6 ± 0.4 ; 0.6	-
04-26-02	287	1.9 ± 0.3 ; 0.5	0.8 ± 0.5 ; 0.6	10-25-02	286	1.9 ± 0.3 ; 0.5	-0.1 ± 0.4 ; 0.4
05-03-02	284	1.4 ± 0.3 ; 0.4	-	11-02-02	322	2.7 ± 0.3 ; 0.6	-
05-10-02	288	1.7 ± 0.3 ; 0.4	0.2 ± 0.4 ; 0.4	11-09-02	288	6.0 ± 0.5 ; 1.2	-0.3 ± 0.4 ; 0.4
05-17-02	286	1.7 ± 0.3 ; 0.5	-	11-15-02	251	2.8 ± 0.4 ; 0.7	-
05-24-02	285	1.9 ± 0.3 ; 0.5	-0.1 ± 0.4 ; 0.4	11-22-02	281	2.1 ± 0.4 ; 0.5	0.6 ± 0.3 ; 0.3
05-31-02	286	1.9 ± 0.3 ; 0.4	-	11-30-02	325	2.0 ± 0.3 ; 0.5	-
06-07-02	286	1.7 ± 0.3 ; 0.4	0.1 ± 0.4 ; 0.4	12-06-02	244	2.5 ± 0.4 ; 0.6	-0.1 ± 0.4 ; 0.4
06-14-02	273	1.8 ± 0.3 ; 0.4	-	12-13-02	287	4.3 ± 0.4 ; 0.9	-
06-20-02	249	2.1 ± 0.4 ; 0.5	0.3 ± 0.5 ; 0.5	12-20-02	286	3.2 ± 0.4 ; 0.7	-0.4 ± 0.4 ; 0.4
06-28-02	327	3.1 ± 0.4 ; 0.7	-	12-27-02	282	2.7 ± 0.4 ; 0.6	-
2nd Qtr. Mean±s.d.		2.0 ± 0.5	0.2 ± 0.4	4th Qtr. Mean±s.d.		3.0 ± 1.1	-0.1 ± 0.4

[a] Volume based on a two week collection period.
[b] Volume low due to power outage.
[c] "NS" = No sample; power out.
[d] Volume low due to recent power restoration.
NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 1. Airborne Particulates and Iodine Cartridges

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

Required LLD: 0.01 pCi/m³ for Gross Beta and 0.07 pCi/m³ for I-131

Units: 10^{-2} pCi/m³

Q-03 Onsite No. 3

Date Collected	Volume (m³)	Gross Beta	I-131[a]	Date Collected	Volume (m³)	Gross Beta	I-131[a]
01-04-02	282	3.3 ± 0.4 ; 0.7	-1.1 ± 0.5 ; 0.5	07-05-02	287	2.5 ± 0.3 ; 0.6	-0.4 ± 0.4 ; 0.4
01-11-02	286	4.0 ± 0.4 ; 0.8	-	07-12-02	274	2.1 ± 0.3 ; 0.5	-
01-18-02	289	2.4 ± 0.3 ; 0.5	0.4 ± 0.5 ; 0.5	07-19-02	294	2.9 ± 0.4 ; 0.7	0.4 ± 0.5 ; 0.5
01-25-02	281	3.3 ± 0.4 ; 0.7	-	07-26-02	278	2.2 ± 0.4 ; 0.5	-
02-01-02	283	2.6 ± 0.3 ; 0.6	0.1 ± 0.4 ; 0.4	08-02-02	288	2.7 ± 0.3 ; 0.6	-0.9 ± 0.5 ; 0.5
02-08-02	285	4.7 ± 0.4 ; 0.9	-	08-09-02	282	1.9 ± 0.4 ; 0.5	-
02-15-02	286	2.2 ± 0.3 ; 0.5	0.6 ± 0.4 ; 0.4	08-16-02	283	3.2 ± 0.4 ; 0.7	0.8 ± 0.3 ; 0.3
02-22-02	286	1.1 ± 0.3 ; 0.4	-	08-23-02	286	2.0 ± 0.3 ; 0.5	-
03-01-02	289	1.9 ± 0.3 ; 0.5	0.2 ± 0.5 ; 0.5	08-30-02	284	2.3 ± 0.4 ; 0.6	-0.2 ± 0.4 ; 0.4
03-08-02	281	3.8 ± 0.4 ; 0.8	-	09-06-02	285	2.9 ± 0.3 ; 0.6	-
03-15-02	285	2.9 ± 0.4 ; 0.7	0.3 ± 0.4 ; 0.4	09-13-02	286	3.3 ± 0.4 ; 0.8	-0.4 ± 0.4 ; 0.4
03-22-02	286	2.2 ± 0.3 ; 0.5	-	09-21-02	285	2.8 ± 0.3 ; 0.6	-
03-29-02	281	2.7 ± 0.4 ; 0.6	0.1 ± 0.4 ; 0.4	09-27-02	285	2.6 ± 0.3 ; 0.6	-0.1 ± 0.4 ; 0.4
1st Qtr. Mean±s.d.		2.9 ± 1.0	0.1± 0.5	3rd Qtr. Mean±s.d.		2.6 ± 0.4	-0.1± 0.6
04-05-02	283	1.5 ± 0.4 ; 0.4	-	10-04-02	280	3.2 ± 0.4 ; 0.7	-
04-12-02	283	2.1 ± 0.3 ; 0.5	0.5 ± 0.4 ; 0.4	10-12-02	327	2.5 ± 0.4 ; 0.6	-0.3 ± 0.3 ; 0.3
04-19-02	286	1.9 ± 0.4 ; 0.5	-	10-18-02	242	2.6 ± 0.4 ; 0.6	-
04-26-02	287	1.6 ± 0.3 ; 0.4	0.0 ± 0.4 ; 0.4	10-25-02	286	1.9 ± 0.3 ; 0.5	0.4 ± 0.4 ; 0.4
05-03-02	284	1.3 ± 0.3 ; 0.4	-	11-02-02	322	2.6 ± 0.3 ; 0.6	-
05-10-02	288	2.1 ± 0.3 ; 0.5	0.1 ± 0.5 ; 0.5	11-09-02	288	5.0 ± 0.5 ; 1.0	0.2 ± 0.3 ; 0.3
05-17-02	286	1.5 ± 0.3 ; 0.4	-	11-15-02	251	3.2 ± 0.5 ; 0.7	-
05-24-02	285	1.6 ± 0.3 ; 0.4	0.2 ± 0.4 ; 0.4	11-22-02	281	2.0 ± 0.4 ; 0.5	-0.1 ± 0.4 ; 0.4
05-31-02	286	2.0 ± 0.3 ; 0.5	-	11-30-02	325	2.1 ± 0.3 ; 0.5	-
06-07-02	287	1.5 ± 0.3 ; 0.4	-0.3 ± 0.4 ; 0.4	12-06-02	244	2.4 ± 0.4 ; 0.6	0.3 ± 0.4 ; 0.4
06-14-02	276	1.9 ± 0.3 ; 0.5	-	12-13-02	287	4.0 ± 0.4 ; 0.8	-
06-20-02	250	2.0 ± 0.4 ; 0.5	0.2 ± 0.4 ; 0.4	12-20-02	286	4.1 ± 0.5 ; 0.9	0.1 ± 0.4 ; 0.4
06-28-02	327	3.0 ± 0.4 ; 0.7	-	12-27-02	282	2.8 ± 0.4 ; 0.6	-
2nd Qtr. Mean±s.d.		1.8 ± 0.4	0.1± 0.3	4th Qtr. Mean±s.d.		3.0 ± 0.9	0.1± 0.3

[a] Volume based on a two week collection period.

NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 1. Airborne Particulates and Iodine Cartridges

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

Required LLD: 0.01 pCi/m³ for Gross Beta and 0.07 pCi/m³ for I-131

Units: 10^{-2} pCi/m³

Q-04 Nitrin

Date Collected	Volume (m³)	Gross Beta	I-131[a]	Date Collected	Volume (m³)	Gross Beta	I-131[a]
01-04-02	282	3.3 ± 0.4 ; 0.7	0.4 ± 0.4 ; 0.4	07-05-02	287	2.4 ± 0.3 ; 0.5	0.3 ± 0.4 ; 0.4
01-11-02	286	4.0 ± 0.4 ; 0.8	-	07-12-02	274	2.0 ± 0.3 ; 0.5	-
01-18-02	289	2.5 ± 0.3 ; 0.6	-0.3 ± 0.5 ; 0.5	07-19-02	294	3.0 ± 0.4 ; 0.7	0.2 ± 0.3 ; 0.4
01-25-02	280	3.5 ± 0.4 ; 0.7	-	07-26-02	278	2.5 ± 0.4 ; 0.6	-
02-01-02	283	2.2 ± 0.3 ; 0.5	0.1 ± 0.5 ; 0.5	08-02-02	288	2.9 ± 0.3 ; 0.6	0.2 ± 0.3 ; 0.3
02-08-02	285	5.5 ± 0.4 ; 1.1	-	08-09-02	282	1.9 ± 0.4 ; 0.5	-
02-15-02	286	2.8 ± 0.3 ; 0.6	0.9 ± 0.5 ; 0.5	08-16-02	283	3.4 ± 0.4 ; 0.7	0.8 ± 0.4 ; 0.4
02-22-02	286	1.3 ± 0.3 ; 0.4	-	08-23-02	286	1.6 ± 0.3 ; 0.4	-
03-01-02	289	2.2 ± 0.4 ; 0.5	-0.2 ± 0.5 ; 0.5	08-30-02	285	2.1 ± 0.4 ; 0.5	-0.4 ± 0.4 ; 0.4
03-08-02	281	3.3 ± 0.4 ; 0.7	-	09-06-02	284	2.9 ± 0.3 ; 0.6	-
03-15-02	285	3.1 ± 0.4 ; 0.7	1.4 ± 0.5 ; 0.5	09-13-02	286	3.7 ± 0.4 ; 0.8	-0.5 ± 0.3 ; 0.3
03-22-02	286	2.3 ± 0.3 ; 0.5	-	09-21-02	285	2.8 ± 0.3 ; 0.6	-
03-29-02	285	2.9 ± 0.4 ; 0.7	0.3 ± 0.5 ; 0.5	09-27-02	285	2.5 ± 0.3 ; 0.6	0.2 ± 0.4 ; 0.4
1st Qtr. Mean±s.d.		3.0 ± 1.0	0.4 ± 0.6	3rd Qtr. Mean±s.d.		2.6 ± 0.6	0.1 ± 0.4
04-05-02	283	1.2 ± 0.3 ; 0.4	-	10-04-02	284	3.3 ± 0.4 ; 0.7	-
04-12-02	283	2.2 ± 0.3 ; 0.5	-0.3 ± 0.4 ; 0.4	10-12-02	327	2.5 ± 0.4 ; 0.6	0.1 ± 0.2 ; 0.2
04-19-02	286	2.3 ± 0.4 ; 0.6	-	10-18-02	242	2.4 ± 0.4 ; 0.6	-
04-26-02	287	2.0 ± 0.3 ; 0.5	-0.7 ± 0.4 ; 0.4	10-25-02	287	2.0 ± 0.3 ; 0.5	-0.0 ± 0.4 ; 0.4
05-03-02	284	1.3 ± 0.3 ; 0.4	-	11-02-02	322	2.6 ± 0.3 ; 0.6	-
05-10-02	288	1.9 ± 0.3 ; 0.5	0.1 ± 0.4 ; 0.4	11-09-02	288	5.5 ± 0.5 ; 1.1	-0.1 ± 0.3 ; 0.3
05-17-02	286	1.8 ± 0.3 ; 0.5	-	11-15-02	251	3.2 ± 0.5 ; 0.7	-
05-24-02	286	1.9 ± 0.3 ; 0.5	-0.1 ± 0.5 ; 0.5	11-22-02	282	2.2 ± 0.4 ; 0.5	0.0 ± 0.4 ; 0.4
05-31-02	286	1.9 ± 0.3 ; 0.4	-	11-30-02	325	2.0 ± 0.3 ; 0.5	-
06-07-02	286	1.5 ± 0.3 ; 0.4	-0.7 ± 0.4 ; 0.4	12-06-02	244	2.6 ± 0.4 ; 0.6	0.7 ± 0.4 ; 0.4
06-14-02	277	1.7 ± 0.3 ; 0.4	-	12-13-02	287	4.6 ± 0.4 ; 0.9	-
06-20-02	250	2.3 ± 0.4 ; 0.6	-0.0 ± 0.5 ; 0.5	12-20-02	291	3.7 ± 0.4 ; 0.8	-0.3 ± 0.4 ; 0.4
06-28-02	327	3.0 ± 0.4 ; 0.6	-	12-27-02	282	2.7 ± 0.4 ; 0.6	-
2nd Qtr. Mean±s.d.		1.9 ± 0.5	-0.3 ± 0.3	4th Qtr. Mean±s.d.		3.0 ± 1.0	0.1 ± 0.4

[a] Volume based on a two week collection period.

NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 1. Airborne Particulates and Iodine Cartridges

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

Required LLD: 0.01 pCi/m³ for Gross Beta and 0.07 pCi/m³ for I-131

Units: 10^{-2} pCi/m³

Q-07 (C) Clinton

Date Collected	Volume (m³)	Gross Beta	I-131[a]	Date Collected	Volume (m³)	Gross Beta	I-131[a]
01-04-02	291	3.4 ± 0.4 ; 0.7	-0.9 ± 0.6 ; 0.6	07-05-02	300	3.0 ± 0.3 ; 0.6	-0.1 ± 0.5 ; 0.5
01-11-02	284	3.8 ± 0.4 ; 0.8	-	07-12-02	273	2.4 ± 0.3 ; 0.5	-
01-18-02	283	3.2 ± 0.4 ; 0.7	0.1 ± 0.5 ; 0.5	07-19-02	287	3.6 ± 0.4 ; 0.8	-0.3 ± 0.4 ; 0.4
01-25-02	287	3.6 ± 0.4 ; 0.7	-	07-27-02	324	2.5 ± 0.3 ; 0.6	-
02-02-02	318	2.6 ± 0.3 ; 0.6	0.2 ± 0.5 ; 0.5	08-02-02	240	3.1 ± 0.4 ; 0.7	-0.3 ± 0.4 ; 0.4
02-09-02	289	6.0 ± 0.5 ; 1.2	-	08-09-02	284	2.1 ± 0.4 ; 0.5	-
02-16-02	279	2.1 ± 0.3 ; 0.5	-0.8 ± 0.5 ; 0.5	08-16-02	206[b]	3.7 ± 0.5 ; 0.8	-0.4 ± 0.5 ; 0.5
02-23-02	292	1.7 ± 0.3 ; 0.5	-	08-23-02	279	1.9 ± 0.3 ; 0.5	-
03-01-02	237	2.1 ± 0.4 ; 0.6	0.1 ± 0.5 ; 0.5	08-31-02	327	2.7 ± 0.4 ; 0.6	0.5 ± 0.3 ; 0.3
03-08-02	283	3.2 ± 0.4 ; 0.7	-	09-07-02	288	3.1 ± 0.4 ; 0.7	-
03-15-02	298	3.4 ± 0.4 ; 0.7	0.2 ± 0.3 ; 0.3	09-14-02	272	3.5 ± 0.4 ; 0.8	-0.5 ± 0.4 ; 0.4
03-22-02	284	2.7 ± 0.3 ; 0.6	-	09-21-02	294	3.0 ± 0.3 ; 0.6	-
03-29-02	279	2.9 ± 0.4 ; 0.7	-0.4 ± 0.5 ; 0.5	09-27-02	281	2.4 ± 0.3 ; 0.5	0.2 ± 0.3 ; 0.3
1st Qtr. Mean±s.d.		3.1 ± 1.1	-0.2± 0.5	3rd Qtr. Mean±s.d.		2.8 ± 0.6	-0.1± 0.4
04-05-02	292	1.9 ± 0.4 ; 0.5	-	10-05-02	294	3.1 ± 0.3 ; 0.7	-
04-12-02	285	2.8 ± 0.3 ; 0.6	0.1 ± 0.5 ; 0.5	10-12-02	282	3.3 ± 0.4 ; 0.7	0.3 ± 0.4 ; 0.4
04-19-02	282	2.6 ± 0.4 ; 0.6	-	10-18-02	280	2.5 ± 0.4 ; 0.6	-
04-26-02	285	2.0 ± 0.3 ; 0.5	0.3 ± 0.5 ; 0.5	10-25-02	245	1.9 ± 0.4 ; 0.5	0.0 ± 0.4 ; 0.4
05-03-02	284	1.7 ± 0.3 ; 0.4	-	11-01-02	289	3.6 ± 0.4 ; 0.7	-
05-10-02	316	1.8 ± 0.3 ; 0.4	-0.0 ± 0.4 ; 0.4	11-08-02	280	6.3 ± 0.5 ; 1.2	0.2 ± 0.4 ; 0.4
05-17-02	254	1.5 ± 0.4 ; 0.5	-	11-15-02	284	3.7 ± 0.4 ; 0.8	-
05-24-02	285	1.7 ± 0.3 ; 0.4	-0.2 ± 0.4 ; 0.4	11-22-02	286	2.3 ± 0.4 ; 0.6	0.2 ± 0.4 ; 0.4
05-31-02	280	2.1 ± 0.3 ; 0.5	-	11-30-02	319	2.3 ± 0.4 ; 0.5	-
06-07-02	283	1.7 ± 0.3 ; 0.5	0.3 ± 0.4 ; 0.4	12-06-02	251	3.0 ± 0.4 ; 0.7	-0.3 ± 0.4 ; 0.4
06-14-02	280	2.0 ± 0.3 ; 0.5	-	12-15-02	361	4.9 ± 0.4 ; 1.0	-
06-21-02	282	2.2 ± 0.4 ; 0.5	0.0 ± 0.5 ; 0.5	12-21-02	254	3.2 ± 0.4 ; 0.7	0.0 ± 0.4 ; 0.4
06-28-02	285	2.7 ± 0.4 ; 0.6	-	12-27-02	237	2.6 ± 0.4 ; 0.6	-
2nd Qtr. Mean±s.d.		2.1 ± 0.4	0.1± 0.2	4th Qtr. Mean±s.d.		3.3 ± 1.2	0.1± 0.2

[a] Volume based on a two week collection period.
[b] Volume low due to power outage.
[c] Volume slightly low due recent power restoration.
NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 2. Airborne Particulates
Collection: Quarterly composites of weekly collections
ODCM-Required LLDs: Cs- 134 = 0.01, Cs-137 = 0.01 pCi/m³

Units: 10^{-4} pCi/m³

Sample Description and Concentration

Q-01 Onsite No. 1

2002 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	QAP-2788	QAP-4999	QAP-7204	QAP-8900
Volume	3,700	3,712	3,703	3,714
Mn-54	-1.9 ± 8.0 ; 8.0	-1.3 ± 4.1 ; 4.2	1.5 ± 5.8 ; 5.9	-2.4 ± 6.7 ; 6.7
Fe-59	-12.3 ± 12.9 ; 13.0	2.4 ± 8.8 ; 8.8	-15.7 ± 11.0 ; 11.4	-9.7 ± 10.2 ; 10.4
Co-58	-5.7 ± 3.7 ; 3.8	-0.8 ± 3.9 ; 3.9	-1.5 ± 4.6 ; 4.6	5.4 ± 4.2 ; 4.3
Co-60	-6.1 ± 7.3 ; 7.4	0.9 ± 6.2 ; 6.2	-0.4 ± 7.0 ; 7.0	5.3 ± 4.2 ; 4.3
Zn-65	3.1 ± 14.7 ; 14.7	-17.8 ± 10.1 ; 10.6	0.8 ± 11.0 ; 11.0	-21.8 ± 13.2 ; 13.8
Zr/Nb-95	10.3 ± 10.2 ; 10.4	-8.6 ± 10.5 ; 10.6	-1.2 ± 5.2 ; 5.2	0.2 ± 4.8 ; 4.8
Cs-134	0.4 ± 5.8 ; 5.8	1.9 ± 5.1 ; 5.1	2.0 ± 6.7 ; 6.7	1.3 ± 6.6 ; 6.6
Cs-137	0.3 ± 4.9 ; 4.9	4.2 ± 4.9 ; 4.9	-5.1 ± 6.2 ; 6.2	4.2 ± 6.1 ; 6.1
Ba/La-140	38.6 ± 4.6 ; 8.3	-15.1 ± 7.9 ; 8.4	-63.5 ± 7.6 ; 13.6	-32.9 ± 6.5 ; 8.8

Q-02 Onsite No. 2

2002 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	QAP-2789	QAP-5000	QAP-7205	QAP-8901
Volume	3,709	3,711	2,947	3,713
Mn-54	-0.4 ± 6.9 ; 6.9	-0.6 ± 4.6 ; 4.6	-6.2 ± 7.9 ; 7.9	-0.3 ± 5.5 ; 5.5
Fe-59	-10.7 ± 10.8 ; 10.9	9.8 ± 8.2 ; 8.4	10.6 ± 9.4 ; 9.6	1.2 ± 10.1 ; 10.1
Co-58	1.5 ± 5.2 ; 5.2	-0.8 ± 4.5 ; 4.5	3.6 ± 5.6 ; 5.6	-4.8 ± 4.3 ; 4.4
Co-60	12.3 ± 8.7 ; 9.0	4.5 ± 5.9 ; 5.9	-0.7 ± 7.1 ; 7.1	6.3 ± 6.1 ; 6.2
Zn-65	-17.3 ± 14.4 ; 14.7	-4.1 ± 10.3 ; 10.3	-1.0 ± 13.8 ; 13.8	1.6 ± 12.9 ; 12.9
Zr/Nb-95	3.2 ± 6.3 ; 6.3	-5.2 ± 4.2 ; 4.3	-10.6 ± 6.8 ; 7.0	-4.7 ± 4.8 ; 4.9
Cs-134	2.0 ± 6.1 ; 6.1	0.6 ± 4.5 ; 4.5	2.9 ± 6.4 ; 6.4	2.7 ± 6.3 ; 6.3
Cs-137	-0.6 ± 6.0 ; 6.0	7.4 ± 6.5 ; 6.6	-3.0 ± 7.8 ; 7.8	-1.0 ± 4.7 ; 4.7
Ba/La-140	23.6 ± 7.7 ; 8.8	-142.7 ± 8.6 ; 26.8	20.5 ± 10.3 ; 10.9	-21.9 ± 4.4 ; 5.9

NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 2. Airborne Particulates
Collection: Quarterly composites of weekly collections
ODCM-Required LLDs: Cs- 134 = 0.01, Cs-137 = 0.01 pCi/m³

Units: 10^{-4} pCi/m³

Sample Description and Concentration

Q-03 Onsite No. 3

2002 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	QAP-2790	QAP-5001	QAP-7206	QAP-8902
Volume	3,705	3,716	3,703	3,709
Mn-54	0.8 ± 6.4 ; 6.4	-0.3 ± 5.5 ; 5.5	2.4 ± 4.2 ; 4.2	1.2 ± 3.9 ; 3.9
Fe-59	7.7 ± 8.7 ; 8.8	0.9 ± 7.8 ; 7.8	19.3 ± 7.2 ; 8.0	-17.1 ± 9.2 ; 9.6
Co-58	-6.3 ± 6.7 ; 6.8	-8.4 ± 5.0 ; 5.2	1.2 ± 4.2 ; 4.2	-5.0 ± 5.3 ; 5.4
Co-60	4.6 ± 6.8 ; 6.8	2.1 ± 4.6 ; 4.7	-4.8 ± 5.8 ; 5.9	2.1 ± 6.4 ; 6.4
Zn-65	20.3 ± 11.2 ; 11.8	-6.3 ± 17.3 ; 17.3	-13.0 ± 13.4 ; 13.6	-6.5 ± 14.7 ; 14.7
Zr/Nb-95	6.9 ± 4.7 ; 4.9	-6.6 ± 13.1 ; 13.2	-6.2 ± 5.6 ; 5.7	6.0 ± 5.3 ; 5.4
Cs-134	-2.4 ± 7.5 ; 7.5	-1.4 ± 6.3 ; 6.4	1.4 ± 6.1 ; 6.1	3.9 ± 7.1 ; 7.1
Cs-137	5.1 ± 5.3 ; 5.4	1.7 ± 5.2 ; 5.2	-0.7 ± 6.1 ; 6.1	-0.7 ± 6.1 ; 6.1
Ba/La-140	51.7 ± 5.4 ; 10.7	2.5 ± 5.9 ; 5.9	27.8 ± 6.5 ; 8.2	-44.0 ± 6.2 ; 10.0

Q-04 Nitrin

2002 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	QAP-2791	QAP-5002	QAP-7207	QAP-8903
Volume	3,709	3,716	3,703	3,719
Mn-54	6.1 ± 5.9 ; 6.0	0.4 ± 6.1 ; 6.1	-8.6 ± 6.6 ; 6.8	-1.5 ± 5.3 ; 5.3
Fe-59	-1.5 ± 12.2 ; 12.2	7.1 ± 10.5 ; 10.6	-6.0 ± 9.1 ; 9.1	13.4 ± 11.5 ; 11.8
Co-58	-4.3 ± 6.9 ; 7.0	8.0 ± 6.6 ; 6.8	4.5 ± 4.7 ; 4.8	-5.7 ± 4.7 ; 4.8
Co-60	4.6 ± 6.8 ; 6.8	2.0 ± 9.1 ; 9.1	3.7 ± 5.4 ; 5.5	8.0 ± 6.7 ; 6.8
Zn-65	-7.1 ± 12.1 ; 12.2	-13.8 ± 18.6 ; 18.8	0.8 ± 11.4 ; 11.4	17.8 ± 13.0 ; 13.4
Zr/Nb-95	4.4 ± 6.9 ; 7.0	-1.6 ± 7.7 ; 7.7	-11.0 ± 12.0 ; 12.1	4.9 ± 5.2 ; 5.3
Cs-134	6.2 ± 6.2 ; 6.3	-3.6 ± 8.8 ; 8.9	-0.5 ± 5.7 ; 5.7	3.5 ± 5.9 ; 6.0
Cs-137	-1.2 ± 5.9 ; 5.9	0.7 ± 6.3 ; 6.3	0.1 ± 5.0 ; 5.0	4.4 ± 5.3 ; 5.3
Ba/La-140	38.8 ± 4.6 ; 8.3	-82.5 ± 10.1 ; 17.8	18.1 ± 6.2 ; 6.9	28.8 ± 6.5 ; 8.3

NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 2. Airborne Particulates
Collection: Quarterly composites of weekly collections
ODCM-Required LLDs: Cs- 134 = 0.01, Cs-137 = 0.01 pCi/m³

Units: 10^{-4} pCi/m³

Sample Description and Concentration

Q-07 (C) Clinton

2002 Collection Period	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Lab Code	QAP-2792	QAP-5003	QAP-7208	QAP-8904
Volume	3,712	3,699	3,662	3,669
Mn-54	-4.2 ± 6.1 ; 6.2	2.6 ± 4.1 ; 4.1	-8.6 ± 7.6 ; 7.8	1.9 ± 5.4 ; 5.4
Fe-59	30.6 ± 9.9 ; 11.3	7.3 ± 7.7 ; 7.8	7.2 ± 9.3 ; 9.4	-41.9 ± 12.3 ; 14.4
Co-58	3.6 ± 5.5 ; 5.6	2.6 ± 4.2 ; 4.2	-2.5 ± 5.3 ; 5.3	0.3 ± 4.6 ; 4.6
Co-60	-6.0 ± 7.3 ; 7.3	-2.2 ± 4.4 ; 4.4	1.9 ± 4.9 ; 4.9	6.2 ± 4.5 ; 4.7
Zn-65	4.1 ± 12.5 ; 12.5	7.3 ± 12.7 ; 12.8	11.5 ± 11.9 ; 12.0	-17.2 ± 14.4 ; 14.7
Zr/Nb-95	-1.0 ± 5.3 ; 5.3	1.9 ± 4.6 ; 4.6	-5.9 ± 5.2 ; 5.4	3.5 ± 5.6 ; 5.6
Cs-134	2.0 ± 6.1 ; 6.1	4.3 ± 4.1 ; 4.2	4.9 ± 5.7 ; 5.8	-2.0 ± 6.0 ; 6.0
Cs-137	3.4 ± 6.8 ; 6.9	-2.2 ± 3.6 ; 3.6	2.9 ± 5.1 ; 5.1	-0.7 ± 6.2 ; 6.2
Ba/La-140	-4.3 ± 9.5 ; 9.5	-25.4 ± 5.5 ; 7.1	7.9 ± 5.9 ; 6.0	49.9 ± 7.3 ; 11.5

NOTE: Several ODCM-required LLDs were changed in September 2002.

QUAD CITIES

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

Q-26 Bill Stanley Dairy

Date Collected	01-04-02	02-01-02	03-01-02	04-05-02
Lab Code	QMI-76	QMI-587	QMI-1343	QMI-2118,9
I-131	-0.15 ± 0.16 ; 0.16	0.02 ± 0.26 ; 0.26	-0.06 ± 0.21 ; 0.21	-0.15 ± 0.23 ; 0.23
Mn-54	-0.3 ± 4.7 ; 4.7	1.3 ± 2.6 ; 2.6	-2.2 ± 3.7 ; 3.7	-0.5 ± 2.1 ; 2.1
Fe-59	9.9 ± 10.3 ; 10.4	0.7 ± 5.3 ; 5.3	1.6 ± 7.2 ; 7.2	-2.3 ± 3.7 ; 3.7
Co-58	0.6 ± 4.5 ; 4.5	0.6 ± 2.2 ; 2.2	-3.2 ± 3.6 ; 3.6	-0.6 ± 1.9 ; 1.9
Co-60	-1.9 ± 6.6 ; 6.6	-0.7 ± 3.5 ; 3.5	0.8 ± 4.7 ; 4.7	2.0 ± 2.5 ; 2.5
Zn-65	7.5 ± 11.3 ; 11.4	7.6 ± 6.0 ; 6.1	7.1 ± 9.7 ; 9.7	-0.7 ± 5.0 ; 5.0
Zr/Nb-95	-3.4 ± 4.6 ; 4.7	0.5 ± 2.7 ; 2.7	-3.8 ± 3.6 ; 3.7	-1.7 ± 2.0 ; 2.0
Cs-134	4.7 ± 5.4 ; 5.5	1.5 ± 2.3 ; 2.3	-3.1 ± 4.2 ; 4.2	1.7 ± 2.5 ; 2.5
Cs-137	5.3 ± 5.1 ; 5.1	4.3 ± 3.0 ; 3.0	3.5 ± 3.9 ; 4.0	0.8 ± 2.4 ; 2.4
Ba/La-140	-0.5 ± 5.3 ; 5.3	3.7 ± 2.3 ; 2.4	8.7 ± 3.4 ; 3.6	-2.9 ± 2.1 ; 2.1

Date Collected	05-03-02	05-17-02	05-31-02	06-14-02
Lab Code	QMI-2978	QMI-3276	QMI-3526	QMI-3950
I-131	0.16 ± 0.17 ; 0.17	-0.21 ± 0.21 ; 0.21	0.11 ± 0.22 ; 0.22	0.07 ± 0.26 ; 0.26
Mn-54	1.1 ± 2.2 ; 2.2	-0.4 ± 2.6 ; 2.6	-2.3 ± 2.1 ; 2.1	0.2 ± 1.0 ; 1.0
Fe-59	1.8 ± 4.8 ; 4.8	0.9 ± 5.8 ; 5.8	-1.8 ± 4.7 ; 4.7	0.1 ± 2.3 ; 2.3
Co-58	1.7 ± 2.1 ; 2.1	-0.7 ± 3.3 ; 3.3	-1.1 ± 2.1 ; 2.1	1.0 ± 1.0 ; 1.0
Co-60	-0.4 ± 2.3 ; 2.3	0.5 ± 3.8 ; 3.8	-1.4 ± 2.3 ; 2.4	-0.0 ± 1.1 ; 1.1
Zn-65	-3.6 ± 5.2 ; 5.3	3.8 ± 6.2 ; 6.2	-3.6 ± 5.0 ; 5.1	-1.2 ± 2.4 ; 2.4
Zr/Nb-95	1.5 ± 2.0 ; 2.0	-0.8 ± 3.1 ; 3.1	0.6 ± 1.9 ; 1.9	-2.3 ± 1.1 ; 1.1
Cs-134	0.9 ± 2.5 ; 2.5	2.6 ± 3.4 ; 3.4	-2.2 ± 2.3 ; 2.4	0.0 ± 1.1 ; 1.1
Cs-137	1.5 ± 2.7 ; 2.7	-0.1 ± 3.5 ; 3.5	1.8 ± 2.3 ; 2.4	1.8 ± 1.1 ; 1.2
Ba/La-140	-1.9 ± 2.3 ; 2.3	4.5 ± 3.9 ; 4.0	-1.1 ± 1.7 ; 1.7	-11.7 ± 1.0 ; 1.9

NOTE: Several ODCM-required LLDs were changed in September 2002.

QUAD CITIES

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

Q-26 Bill Stanley Dairy

Date Collected	06-28-02	07-12-02	07-26-02	08-09-02
Lab Code	QMI-4303	QMI-4636	QMI-5015	QMI-5298
I-131	0.01 ± 0.19 ; 0.19	-0.01 ± 0.17 ; 0.17	-0.21 ± 0.31 ; 0.31	0.06 ± 0.19 ; 0.19
Mn-54	0.4 ± 4.1 ; 4.1	1.1 ± 2.2 ; 2.2	0.5 ± 4.8 ; 4.8	-3.3 ± 4.4 ; 4.4
Fe-59	-5.9 ± 8.6 ; 8.6	2.9 ± 4.8 ; 4.8	0.7 ± 9.7 ; 9.7	6.3 ± 8.3 ; 8.4
Co-58	-6.4 ± 3.9 ; 4.0	-1.7 ± 2.2 ; 2.2	1.8 ± 4.0 ; 4.0	-0.8 ± 4.0 ; 4.0
Co-60	0.2 ± 5.1 ; 5.1	-0.0 ± 2.6 ; 2.6	4.1 ± 4.5 ; 4.5	0.2 ± 5.6 ; 5.6
Zn-65	-12.8 ± 9.2 ; 9.3	-1.4 ± 5.1 ; 5.1	-8.6 ± 9.4 ; 9.5	-9.8 ± 8.4 ; 8.5
Zr/Nb-95	-6.4 ± 3.6 ; 3.7	-0.6 ± 2.2 ; 2.2	2.4 ± 4.3 ; 4.3	2.2 ± 3.9 ; 3.9
Cs-134	-1.1 ± 3.4 ; 3.4	1.1 ± 2.3 ; 2.3	-0.3 ± 4.9 ; 4.9	-1.3 ± 4.9 ; 4.9
Cs-137	1.1 ± 3.6 ; 3.6	1.1 ± 2.7 ; 2.7	7.0 ± 5.1 ; 5.2	-0.8 ± 4.2 ; 4.2
Ba/La-140	-10.9 ± 4.3 ; 4.6	5.8 ± 2.5 ; 2.6	-0.1 ± 5.0 ; 5.0	-12.6 ± 6.1 ; 6.3

Date Collected	08-23-02	09-06-02	09-20-02	10-04-02
Lab Code	QMI-5573	QMI-5810	QMI-6230	QMI-6576,7
I-131	-0.14 ± 0.15 ; 0.15	0.20 ± 0.25 ; 0.25	0.17 ± 0.26 ; 0.27	-0.06 ± 0.15 ; 0.15
Mn-54	-4.3 ± 4.2 ; 4.2	0.3 ± 2.8 ; 2.8	-0.5 ± 2.4 ; 2.4	1.3 ± 2.7 ; 2.8
Fe-59	-3.7 ± 10.9 ; 10.9	1.4 ± 5.6 ; 5.6	-1.3 ± 6.7 ; 6.7	1.9 ± 5.5 ; 5.5
Co-58	-4.3 ± 4.7 ; 4.7	-0.1 ± 2.7 ; 2.7	0.5 ± 2.8 ; 2.8	0.7 ± 2.6 ; 2.6
Co-60	6.1 ± 6.6 ; 6.7	0.3 ± 3.0 ; 3.0	2.0 ± 3.6 ; 3.6	-2.5 ± 3.2 ; 3.2
Zn-65	0.1 ± 14.2 ; 14.2	-4.6 ± 6.8 ; 6.9	1.1 ± 7.8 ; 7.8	-2.6 ± 6.0 ; 6.0
Zr/Nb-95	3.4 ± 4.6 ; 4.6	0.6 ± 2.3 ; 2.3	-0.4 ± 2.9 ; 2.9	0.2 ± 2.3 ; 2.3
Cs-134	-3.0 ± 5.9 ; 5.9	-2.2 ± 2.9 ; 2.9	1.2 ± 3.4 ; 3.4	-0.1 ± 2.7 ; 2.7
Cs-137	-1.7 ± 5.4 ; 5.4	1.9 ± 2.8 ; 2.8	-0.2 ± 3.1 ; 3.1	1.6 ± 2.8 ; 2.8
Ba/La-140	2.2 ± 5.1 ; 5.1	-2.7 ± 2.3 ; 2.3	-4.2 ± 2.9 ; 3.0	-3.7 ± 3.2 ; 3.2

NOTE: Several ODCM-required LLDs were changed in September 2002.

QUAD CITIES

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

Q-26 Bill Stanley Dairy

Date Collected	10-18-02	11-02-02	12-06-02
Lab Code	QMI-7049	QMI-7499	QMI-8186
I-131	-0.12 ± 0.25 ; 0.25	0.02 ± 0.21 ; 0.21	-0.08 ± 0.16 ; 0.16
Mn-54	0.6 ± 3.7 ; 3.7	2.6 ± 3.2 ; 3.3	-0.5 ± 1.6 ; 1.6
Fe-59	1.6 ± 7.9 ; 7.9	2.0 ± 7.3 ; 7.3	4.8 ± 5.0 ; 5.0
Co-58	-2.6 ± 3.2 ; 3.2	1.2 ± 3.2 ; 3.2	-0.1 ± 1.9 ; 1.9
Co-60	1.6 ± 3.8 ; 3.8	-3.4 ± 4.1 ; 4.1	0.7 ± 2.4 ; 2.4
Zn-65	2.4 ± 9.5 ; 9.5	-3.3 ± 7.8 ; 7.9	-3.2 ± 6.5 ; 6.5
Zr/Nb-95	-1.5 ± 3.3 ; 3.3	-0.9 ± 2.9 ; 2.9	-3.4 ± 2.4 ; 2.4
Cs-134	1.0 ± 4.1 ; 4.1	-1.2 ± 4.0 ; 4.0	-0.8 ± 2.3 ; 2.3
Cs-137	1.2 ± 3.5 ; 3.5	1.2 ± 3.9 ; 3.9	1.3 ± 2.4 ; 2.4
Ba/La-140	2.7 ± 2.7 ; 2.7	3.3 ± 3.4 ; 3.4	-1.5 ± 2.5 ; 2.6

NOTE: Several ODCM-required LLDs were changed in September 2002.

QUAD CITIES

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

Q-24 Pool #14 of Mississippi River

Date Collected	05-02-02	05-02-02	10-02-02	10-02-02
Lab Code	QF-2884	QF-2885	QF-6438	QF-6439
Type	Freshwater Drum	Walleye	Channel Catfish	Common Carp
Mn-54	0.1 ± 0.7 ; 0.7	-0.2 ± 0.7 ; 0.7	-0.8 ± 0.8 ; 0.8	0.4 ± 0.7 ; 0.7
Fe-59	-1.2 ± 1.6 ; 1.7	0.3 ± 1.4 ; 1.4	0.4 ± 2.2 ; 2.2	0.2 ± 1.5 ; 1.5
Co-58	0.8 ± 0.7 ; 0.7	-0.6 ± 0.8 ; 0.8	0.2 ± 0.7 ; 0.7	-0.2 ± 0.8 ; 0.8
Co-60	1.1 ± 0.9 ; 0.9	0.2 ± 0.8 ; 0.8	-0.4 ± 1.2 ; 1.2	0.5 ± 1.0 ; 1.0
Zn-65	-0.1 ± 1.8 ; 1.8	0.1 ± 1.9 ; 1.9	-0.9 ± 1.9 ; 1.9	1.0 ± 1.8 ; 1.8
Zr/Nb-95	0.1 ± 0.6 ; 0.6	-1.1 ± 1.6 ; 1.6	0.0 ± 1.0 ; 1.0	0.1 ± 0.6 ; 0.6
Cs-134	0.1 ± 0.8 ; 0.8	0.1 ± 0.8 ; 0.8	-0.5 ± 0.9 ; 0.9	0.1 ± 1.0 ; 1.0
Cs-137	-0.7 ± 0.7 ; 0.7	-0.6 ± 0.8 ; 0.8	0.3 ± 0.7 ; 0.7	-0.0 ± 0.8 ; 0.8
Ba/La-140	4.8 ± 0.7 ; 1.0	2.0 ± 0.6 ; 0.7	-1.1 ± 0.7 ; 0.8	1.2 ± 0.6 ; 0.6

NOTE: Several ODCM-required LLDs were changed in September 2002.

QUAD CITIES

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

Q-29 (C) Mississippi River, Upstream

Date Collected	05-02-02	05-02-02	10-02-02	10-02-02
Lab Code	QF-2886	QF-2887	QF-6436	QF-6437
Type	Largemouth Bass	Quillback	River Carpsucker	Channel Catfish
Mn-54	-0.3 ± 0.6 ; 0.6	-0.6 ± 0.7 ; 0.7	-0.2 ± 0.9 ; 0.9	-0.0 ± 0.9 ; 0.9
Fe-59	0.4 ± 1.7 ; 1.7	-0.4 ± 1.7 ; 1.7	-0.7 ± 1.6 ; 1.6	-0.7 ± 1.8 ; 1.8
Co-58	-0.1 ± 0.7 ; 0.7	-0.4 ± 0.7 ; 0.7	-0.3 ± 0.9 ; 0.9	-0.0 ± 0.6 ; 0.6
Co-60	-0.2 ± 0.7 ; 0.7	0.6 ± 1.0 ; 1.0	0.0 ± 1.0 ; 1.0	-0.8 ± 1.1 ; 1.1
Zn-65	0.2 ± 2.0 ; 2.0	0.4 ± 1.9 ; 1.9	-1.2 ± 1.8 ; 1.8	0.6 ± 1.9 ; 1.9
Zr/Nb-95	1.3 ± 0.7 ; 0.7	-0.1 ± 0.7 ; 0.7	-1.1 ± 0.9 ; 0.9	0.3 ± 0.8 ; 0.8
Cs-134	-0.0 ± 0.8 ; 0.8	-0.1 ± 0.9 ; 0.9	-0.6 ± 1.0 ; 1.0	-0.2 ± 1.0 ; 1.0
Cs-137	0.4 ± 0.7 ; 0.7	-0.6 ± 0.8 ; 0.8	0.1 ± 0.9 ; 0.9	0.7 ± 0.9 ; 0.9
Ba/La-140	-4.1 ± 0.8 ; 1.0	1.2 ± 0.7 ; 0.7	0.1 ± 0.9 ; 0.9	0.7 ± 0.9 ; 0.9

NOTE: Several ODCM-required LLDs were changed in September 2002.

QUAD CITIES

Table 5. Bottom Sediments

Collection:	Semiannually
ODCM-Required LLDs:	Cs-134 = 0.15, Cs-137 = 0.18 pCi/g dry weight
Other LLDs:	Mn-54 = 0.15; Fe-59 = 0.60; Co-58,60 = 0.10; Zn-65 = 0.60; Zr/Nb-95 = 0.20; Ba/La = 0.60
Units:	10^{-2} pCi/g dry weight

Sample Description and Concentration

Q-39 Downstream on Mississippi River

Date Collected	05-24-02	10-12-02
Lab Code	QBS-3351	QBS-6901
Mn-54	1.1 ± 0.9 ; 0.9	-0.6 ± 0.5 ; 0.6
Fe-59	-3.4 ± 1.9 ; 1.9	-0.1 ± 1.3 ; 1.3
Co-58	0.5 ± 0.7 ; 0.7	-0.8 ± 0.5 ; 0.5
Co-60	0.2 ± 1.0 ; 1.0	-0.3 ± 0.7 ; 0.7
Zn-65	2.3 ± 2.3 ; 2.4	-0.1 ± 1.4 ; 1.4
Zr/Nb-95	-1.6 ± 1.0 ; 1.0	-0.3 ± 0.5 ; 0.5
Cs-134	1.1 ± 1.1 ; 1.1	1.3 ± 0.6 ; 0.6
Cs-137	6.1 ± 1.9 ; 2.1	2.8 ± 1.2 ; 1.3
Ba/La-140	-3.8 ± 1.1 ; 1.2	-0.6 ± 0.4 ; 0.4

NOTE: Several ODCM-required LLDs were changed in September 2002.

QUAD CITIES

Table 6. Vegetation

Collection: Annually

ODCM-Required LLDs: I-131 = 0.06, Cs-134 = 0.06, Cs-137 = 0.08

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		
	Q-Control (C) Charles Leavens	
Date Collected	08-01-02	08-01-02
Lab Code	QVE-5185	QVE-5186
Type	Onions	Rhubarb leaves
Mn-54	0.2 ± 0.5 ; 0.5	-0.5 ± 0.7 ; 0.7
Fe-59	0.1 ± 1.0 ; 1.0	0.4 ± 1.4 ; 1.4
Co-58	0.0 ± 0.5 ; 0.5	0.3 ± 0.8 ; 0.8
Co-60	-0.1 ± 0.6 ; 0.6	-0.3 ± 0.8 ; 0.8
Zn-65	-0.6 ± 1.2 ; 1.2	1.1 ± 1.7 ; 1.7
Zr/Nb-95	0.2 ± 0.5 ; 0.5	0.1 ± 0.7 ; 0.7
I-131	-1.0 ± 0.6 ; 0.6	-0.5 ± 0.5 ; 0.5
Cs-134	0.0 ± 0.6 ; 0.6	-0.4 ± 0.7 ; 0.7
Cs-137	0.1 ± 0.6 ; 0.6	0.2 ± 0.8 ; 0.8
Ba/La-140	-0.7 ± 0.5 ; 0.5	-0.2 ± 0.8 ; 0.8
	Q-Quad 1 Robert Ziegler	
Date Collected	08-01-02	08-01-02
Lab Code	QVE-5177	QVE-5178
Type	Onions	Rhubarb leaves
Mn-54	-0.2 ± 0.8 ; 0.8	-0.1 ± 0.4 ; 0.4
Fe-59	0.0 ± 1.8 ; 1.8	0.9 ± 1.0 ; 1.1
Co-58	0.1 ± 0.6 ; 0.6	0.0 ± 0.5 ; 0.5
Co-60	-0.9 ± 0.8 ; 0.8	0.3 ± 0.5 ; 0.5
Zn-65	-0.7 ± 1.5 ; 1.5	-1.1 ± 1.3 ; 1.3
Zr/Nb-95	0.4 ± 0.7 ; 0.7	-1.0 ± 0.5 ; 0.6
I-131	0.4 ± 0.6 ; 0.6	0.5 ± 0.4 ; 0.4
Cs-134	-0.3 ± 0.8 ; 0.8	-0.4 ± 0.5 ; 0.5
Cs-137	1.2 ± 0.8 ; 0.8	0.6 ± 0.5 ; 0.5
Ba/La-140	1.0 ± 1.1 ; 1.1	-0.2 ± 0.4 ; 0.4

NOTE: Several ODCM-required LLDs were changed in September 2002.

QUAD CITIES

Table 6. Vegetation

Collection:	Annually
ODCM-Required LLDs:	I-131 = 0.06, Cs-134 = 0.06, Cs-137 = 0.08
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

Q-Quad 2 Dale Nimmic

Date Collected	08-01-02	08-01-02
Lab Code	QVE-5179	QVE-5180
Type	Rhubarb leaves	Potatoes
Mn-54	0.3 ± 0.7 ; 0.7	-0.7 ± 0.7 ; 0.7
Fe-59	0.4 ± 1.6 ; 1.6	-0.9 ± 1.4 ; 1.4
Co-58	0.1 ± 0.8 ; 0.8	0.8 ± 0.6 ; 0.6
Co-60	0.2 ± 1.0 ; 1.0	0.4 ± 0.8 ; 0.8
Zn-65	-0.1 ± 1.9 ; 1.9	-0.8 ± 1.8 ; 1.8
Zr/Nb-95	0.2 ± 0.7 ; 0.7	-0.9 ± 1.4 ; 1.4
I-131	-0.1 ± 0.7 ; 0.7	-0.2 ± 0.6 ; 0.6
Cs-134	0.5 ± 0.9 ; 0.9	0.8 ± 0.7 ; 0.7
Cs-137	-0.5 ± 0.8 ; 0.8	-0.6 ± 0.7 ; 0.7
Ba/La-140	0.1 ± 0.7 ; 0.7	-0.0 ± 0.8 ; 0.8

Q-Quad 3 Amy Johnston

Date Collected	08-01-02	08-01-02
Lab Code	QVE-5181	QVE-5182
Type	Leafy broccoli	Beets
Mn-54	-0.1 ± 0.7 ; 0.7	-0.1 ± 0.6 ; 0.6
Fe-59	-0.6 ± 1.7 ; 1.7	1.7 ± 1.3 ; 1.4
Co-58	-0.2 ± 0.7 ; 0.7	0.2 ± 0.6 ; 0.6
Co-60	0.9 ± 0.7 ; 0.7	-0.9 ± 0.8 ; 0.8
Zn-65	0.5 ± 1.6 ; 1.6	-1.9 ± 1.8 ; 1.8
Zr/Nb-95	-0.3 ± 0.7 ; 0.7	-0.8 ± 0.7 ; 0.7
I-131	-0.4 ± 0.6 ; 0.6	-0.4 ± 0.5 ; 0.5
Cs-134	0.2 ± 0.7 ; 0.7	-0.2 ± 0.7 ; 0.7
Cs-137	0.3 ± 0.8 ; 0.8	0.3 ± 0.6 ; 0.6
Ba/La-140	-0.7 ± 0.5 ; 0.5	-0.2 ± 0.5 ; 0.5

NOTE: Several ODCM-required LLDs were changed in September 2002.

QUAD CITIES

Table 6. Vegetation

Collection:	Annually
ODCM-Required LLDs:	I-131 = 0.06, Cs-134 = 0.06, Cs-137 = 0.08
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

Q-Quad 4 William Dohrmann

Date Collected	08-01-02	08-01-02
Lab Code	QVE-5184	QVE-5183
Type	Cabbage	Onions
Mn-54	0.5 ± 0.6 ; 0.6	-0.3 ± 0.5 ; 0.5
Fe-59	-1.2 ± 1.3 ; 1.3	0.5 ± 1.0 ; 1.0
Co-58	-0.6 ± 0.5 ; 0.5	-0.0 ± 0.5 ; 0.5
Co-60	-0.1 ± 0.6 ; 0.6	0.3 ± 0.6 ; 0.6
Zn-65	-2.0 ± 1.5 ; 1.5	-1.3 ± 1.5 ; 1.5
Zr/Nb-95	-0.4 ± 0.5 ; 0.5	-0.8 ± 0.6 ; 0.6
I-131	-0.3 ± 0.5 ; 0.5	-0.1 ± 0.4 ; 0.4
Cs-134	0.3 ± 0.6 ; 0.6	-0.3 ± 0.6 ; 0.6
Cs-137	0.5 ± 0.7 ; 0.7	0.1 ± 0.6 ; 0.6
Ba/La-140	-0.5 ± 0.6 ; 0.6	-0.0 ± 0.6 ; 0.6

NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 7. Surface Water

Collection: Monthly composites of weekly collections

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

Units: pCi/L

Sample Description and Concentration			
	Q-33 Cordova		
2002 Collection Period	January	February	March
Lab Code	QSW-716[a]	QSW-1364[b]	QSW-1964
Gross Beta	2.7 ± 1.0 ; 1.1	2.8 ± 0.9 ; 1.0	3.0 ± 1.1 ; 1.2
Mn-54	-0.6 ± 1.3 ; 1.3	-0.2 ± 2.3 ; 2.3	2.9 ± 2.8 ; 2.8
Fe-59	0.4 ± 2.6 ; 2.6	0.2 ± 4.6 ; 4.6	-3.8 ± 6.5 ; 6.6
Co-58	-1.0 ± 1.2 ; 1.2	1.3 ± 2.3 ; 2.3	0.8 ± 2.9 ; 2.9
Co-60	0.0 ± 1.3 ; 1.3	0.2 ± 2.0 ; 2.0	2.0 ± 3.3 ; 3.3
Zn-65	-1.8 ± 2.8 ; 2.9	-0.9 ± 4.8 ; 4.8	3.8 ± 7.1 ; 7.1
Zr/Nb-95	-0.3 ± 1.6 ; 1.6	-3.8 ± 2.2 ; 2.3	6.7 ± 3.0 ; 3.2
Cs-134	0.6 ± 1.4 ; 1.4	-0.4 ± 2.4 ; 2.4	-1.5 ± 3.5 ; 3.5
Cs-137	-1.0 ± 1.6 ; 1.6	1.4 ± 2.5 ; 2.5	2.7 ± 2.7 ; 2.7
Ba/La-140	2.1 ± 1.2 ; 1.2	0.6 ± 2.0 ; 2.0	0.8 ± 3.8 ; 3.8
2002 Collection Period	April	May	June
Lab Code	QSW-2764	QSW-3628	QSW-4387
Gross Beta	3.3 ± 1.0 ; 1.1[c]	3.8 ± 1.0 ; 1.2	4.9 ± 1.4 ; 1.6
Mn-54	0.3 ± 3.2 ; 3.2	-0.3 ± 1.4 ; 1.4	2.1 ± 2.2 ; 2.2
Fe-59	0.3 ± 6.2 ; 6.2	-2.4 ± 2.7 ; 2.8	0.3 ± 4.9 ; 4.9
Co-58	-1.8 ± 2.8 ; 2.8	0.3 ± 1.7 ; 1.7	0.1 ± 2.0 ; 2.0
Co-60	2.0 ± 2.6 ; 2.6	1.4 ± 1.4 ; 1.4	-0.2 ± 2.6 ; 2.6
Zn-65	-5.7 ± 7.2 ; 7.3	-2.4 ± 3.9 ; 3.9	-3.0 ± 4.9 ; 4.9
Zr/Nb-95	-1.5 ± 2.8 ; 2.8	-4.4 ± 1.7 ; 1.8	-0.5 ± 2.2 ; 2.2
Cs-134	1.8 ± 2.4 ; 2.5	-0.1 ± 1.8 ; 1.8	-2.8 ± 2.5 ; 2.6
Cs-137	2.4 ± 3.1 ; 3.1	-0.5 ± 1.9 ; 1.9	0.2 ± 2.2 ; 2.2
Ba/La-140	-6.4 ± 4.3 ; 4.4	-0.7 ± 1.9 ; 1.9	-7.1 ± 3.2 ; 3.3

NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 7. Surface Water

Collection: Monthly composites of weekly collections

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

Units: pCi/L

Sample Description and Concentration

Q-33 Cordova

2002 Collection Period	July	August	September
Lab Code	QSW-5018	QSW-5988	QSW-6690
Gross Beta	4.3 ± 1.5 ; 1.7	3.4 ± 0.9 ; 1.1	4.3 ± 1.4 ; 1.6
Mn-54	-0.1 ± 1.8 ; 1.8	0.8 ± 4.6 ; 4.6	-1.1 ± 2.6 ; 2.6
Fe-59	3.7 ± 3.2 ; 3.3	-2.4 ± 8.6 ; 8.6	2.4 ± 4.6 ; 4.6
Co-58	1.4 ± 1.6 ; 1.6	-1.9 ± 3.9 ; 3.9	-0.1 ± 2.6 ; 2.6
Co-60	0.8 ± 1.6 ; 1.6	4.1 ± 5.2 ; 5.2	2.8 ± 3.5 ; 3.6
Zn-65	-7.1 ± 5.3 ; 5.4	2.7 ± 8.6 ; 8.7	1.5 ± 4.2 ; 4.2
Zr/Nb-95	-0.5 ± 2.1 ; 2.1	-2.3 ± 9.0 ; 9.0	-3.4 ± 2.7 ; 2.8
Cs-134	0.7 ± 2.1 ; 2.1	0.7 ± 5.5 ; 5.5	-1.6 ± 2.8 ; 2.8
Cs-137	-1.6 ± 2.2 ; 2.2	-1.5 ± 4.8 ; 4.8	-2.2 ± 2.9 ; 2.9
Ba/La-140	-9.3 ± 2.2 ; 2.6	-9.6 ± 5.6 ; 5.7	-5.9 ± 3.5 ; 3.6

2002 Collection Period	October	November	December
Lab Code	QSW-7623	QSW-8276	QSW-8678[d]
Gross Beta	3.2 ± 0.9 ; 1.0	4.4 ± 1.0 ; 1.2	3.2 ± 1.1 ; 1.2
Mn-54	-0.7 ± 1.9 ; 1.9	-3.2 ± 3.1 ; 3.2	0.8 ± 2.7 ; 2.7
Fe-59	3.4 ± 3.7 ; 3.7	5.6 ± 6.5 ; 6.5	-0.9 ± 5.1 ; 5.1
Co-58	-1.1 ± 2.2 ; 2.2	-1.6 ± 3.1 ; 3.1	-0.4 ± 3.0 ; 3.0
Co-60	-1.0 ± 2.0 ; 2.0	4.7 ± 4.1 ; 4.1	-0.8 ± 3.8 ; 3.8
Zn-65	-5.2 ± 5.5 ; 5.5	3.8 ± 7.0 ; 7.0	6.5 ± 6.6 ; 6.7
Zr/Nb-95	-0.5 ± 2.5 ; 2.5	1.2 ± 2.6 ; 2.6	1.7 ± 3.1 ; 3.1
Cs-134	-0.7 ± 2.1 ; 2.1	-2.3 ± 3.8 ; 3.8	3.0 ± 3.7 ; 3.7
Cs-137	1.1 ± 2.1 ; 2.1	-1.0 ± 3.7 ; 3.7	-0.9 ± 3.5 ; 3.5
Ba/La-140	-0.3 ± 2.4 ; 2.4	-9.9 ± 4.5 ; 4.7	-9.7 ± 4.5 ; 4.8

[a] Results reflect two samples for month; water frozen on 01-04-02 and 01-18-02.
[b] Results reflect three samples for month; water frozen on 02-02-02.
[c] Gross beta repeated; former result = 6.9+/-1.1 pCi/L.
[d] Results reflect three samples for month; water frozen on 12-06-02.
NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 7. Surface Water

Collection: Monthly composites of weekly collections

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

Units: pCi/L

Sample Description and Concentration

Q-34 (C) Camanche

2002 Collection Period	January	February	March
Lab Code	QSW-717[a]	QSW-1365[b]	QSW-1965
Gross Beta	5.8 ± 1.3 ; 1.6	2.4 ± 0.9 ; 0.9	3.5 ± 1.1 ; 1.2
Mn-54	0.2 ± 1.2 ; 1.2	1.8 ± 2.6 ; 2.6	0.2 ± 1.5 ; 1.5
Fe-59	-2.2 ± 2.8 ; 2.8	-0.9 ± 4.2 ; 4.2	0.1 ± 3.1 ; 3.1
Co-58	0.3 ± 1.3 ; 1.3	-0.7 ± 2.0 ; 2.0	-0.1 ± 1.3 ; 1.3
Co-60	-0.2 ± 1.5 ; 1.5	2.0 ± 2.9 ; 2.9	1.0 ± 1.8 ; 1.8
Zn-65	-1.9 ± 3.2 ; 3.2	1.7 ± 4.4 ; 4.4	0.3 ± 4.2 ; 4.2
Zr/Nb-95	-0.1 ± 1.5 ; 1.5	0.6 ± 2.1 ; 2.1	-0.1 ± 1.6 ; 1.6
Cs-134	0.3 ± 1.5 ; 1.5	-0.3 ± 2.0 ; 2.0	-1.5 ± 1.7 ; 1.7
Cs-137	-0.6 ± 1.5 ; 1.5	0.9 ± 2.2 ; 2.2	-0.4 ± 2.0 ; 2.0
Ba/La-140	-2.5 ± 1.4 ; 1.5	-1.8 ± 2.7 ; 2.7	-2.9 ± 1.8 ; 1.8

2002 Collection Period	April	May	June
Lab Code	QSW-2765	QSW-3629	QSW-4388
Gross Beta	3.7 ± 1.0 ; 1.2	3.9 ± 1.2 ; 1.3	5.9 ± 1.5 ; 1.8
Mn-54	1.9 ± 2.7 ; 2.7	-0.1 ± 2.6 ; 2.6	0.7 ± 2.0 ; 2.0
Fe-59	6.2 ± 7.7 ; 7.8	0.4 ± 3.5 ; 3.5	-1.2 ± 3.6 ; 3.6
Co-58	0.3 ± 3.1 ; 3.1	-1.1 ± 2.2 ; 2.2	-1.7 ± 2.0 ; 2.0
Co-60	2.3 ± 4.1 ; 4.1	-1.2 ± 2.6 ; 2.6	0.6 ± 2.1 ; 2.1
Zn-65	-6.9 ± 9.4 ; 9.4	-1.4 ± 4.6 ; 4.6	1.8 ± 4.3 ; 4.3
Zr/Nb-95	-0.8 ± 3.0 ; 3.0	2.4 ± 3.0 ; 3.0	1.0 ± 1.9 ; 2.0
Cs-134	0.8 ± 4.0 ; 4.0	-1.9 ± 2.9 ; 2.9	0.0 ± 2.4 ; 2.4
Cs-137	1.6 ± 3.5 ; 3.5	0.0 ± 2.8 ; 2.8	-1.3 ± 2.5 ; 2.5
Ba/La-140	-6.0 ± 4.1 ; 4.2	-1.5 ± 3.5 ; 3.6	1.3 ± 2.6 ; 2.7

NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 7. Surface Water

Collection: Monthly composites of weekly collections

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

Units: pCi/L

Sample Description and Concentration

Q-34 (C) Camanche

2002 Collection Period	July	August	September
Lab Code	QSW-5019	QSW-5989	QSW-6691
Gross Beta	3.6 ± 1.4 ; 1.5	3.4 ± 1.0 ; 1.1	3.4 ± 1.4 ; 1.5
Mn-54	-0.1 ± 0.9 ; 0.9	1.1 ± 2.9 ; 2.9	-0.3 ± 2.0 ; 2.0
Fe-59	1.3 ± 1.5 ; 1.5	2.5 ± 6.5 ; 6.5	-0.7 ± 4.3 ; 4.3
Co-58	-0.6 ± 0.9 ; 0.9	-2.2 ± 3.4 ; 3.4	-1.1 ± 1.8 ; 1.8
Co-60	1.7 ± 1.1 ; 1.1	-1.9 ± 4.5 ; 4.5	0.5 ± 1.9 ; 1.9
Zn-65	0.9 ± 2.0 ; 2.0	-2.2 ± 6.5 ; 6.5	-6.1 ± 3.7 ; 3.8
Zr/Nb-95	0.5 ± 0.9 ; 0.9	-1.1 ± 2.6 ; 2.6	-2.4 ± 2.1 ; 2.1
Cs-134	1.1 ± 1.1 ; 1.1	-0.8 ± 3.4 ; 3.4	2.2 ± 2.1 ; 2.1
Cs-137	0.4 ± 1.1 ; 1.1	-3.8 ± 3.6 ; 3.7	-3.9 ± 2.3 ; 2.3
Ba/La-140	3.4 ± 1.2 ; 1.3	-10.4 ± 4.4 ; 4.7	-1.0 ± 2.2 ; 2.2

2002 Collection Period	October	November	December
Lab Code	QSW-7624	QSW-8277	QSW-8679[c]
Gross Beta	3.4 ± 1.0 ; 1.1	5.0 ± 1.1 ; 1.3	2.9 ± 1.0 ; 1.1
Mn-54	-3.1 ± 1.8 ; 1.8	-2.6 ± 3.1 ; 3.1	1.9 ± 1.8 ; 1.8
Fe-59	-0.8 ± 3.3 ; 3.3	-4.9 ± 6.2 ; 6.2	-3.0 ± 3.7 ; 3.7
Co-58	2.2 ± 2.1 ; 2.1	2.3 ± 3.4 ; 3.4	0.2 ± 2.0 ; 2.0
Co-60	-0.4 ± 2.3 ; 2.3	-3.6 ± 4.1 ; 4.1	0.1 ± 2.1 ; 2.1
Zn-65	-10.7 ± 5.5 ; 5.7	-0.4 ± 6.8 ; 6.8	-2.6 ± 4.0 ; 4.0
Zr/Nb-95	-5.0 ± 2.1 ; 2.3	2.0 ± 2.7 ; 2.7	1.7 ± 1.8 ; 1.8
Cs-134	-1.6 ± 2.4 ; 2.4	-0.1 ± 3.8 ; 3.8	-1.0 ± 2.4 ; 2.4
Cs-137	-0.7 ± 2.0 ; 2.0	-1.7 ± 3.4 ; 3.4	-0.3 ± 2.3 ; 2.3
Ba/La-140	1.7 ± 2.2 ; 2.3	0.6 ± 3.4 ; 3.4	-4.4 ± 2.8 ; 2.8

[a] Results reflect two samples for month; water frozen on 01-04-02 and 01-18-02.
[b] Results reflect three samples for month; water frozen on 02-02-02.
[c] Results reflect three samples for month; water frozen on 12-06-02.
NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 7. Surface Water

Collection: Quarterly composites of weekly collections

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

Units: pCi/L

2002 Collection Period	Sample Description and Concentration Lab Code	Tritium
	Q-33 Cordova	
1st Quarter	QSW - 1966	104 ± 70 ; 71
2nd Quarter	QSW - 4389	-36 ± 62 ; 62
3rd Quarter	QSW - 6692	5 ± 70 ; 70
4th Quarter	QSW - 8703	-65 ± 83 ; 84
	Q-34 (C) Camanche	
1st Quarter	QSW - 1967	97 ± 70 ; 71
2nd Quarter	QSW - 4390	-23 ± 63 ; 63
3rd Quarter	QSW - 6693	-48 ± 67 ; 68
4th Quarter	QSW - 8704	-46 ± 84 ; 84

NOTE: Several ODCM-required LLDs were changed in September 2002.

Table 8. Well Water

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

Sample Description and Concentration

Q-35 McMillian Well

Date Collected	01-11-02	04-12-02	07-12-02	10-12-02
Lab Code	QWW-221	QWW-2282	QWW-4639	QWW-6899
H-3	18 ± 65 ; 65	-75 ± 67 ; 68	40 ± 68 ; 68	7 ± 88 ; 88
Mn-54	-0.1 ± 2.3 ; 2.3	-0.2 ± 2.4 ; 2.4	0.7 ± 2.4 ; 2.4	-1.9 ± 4.5 ; 4.5
Fe-59	-2.8 ± 4.5 ; 4.5	1.5 ± 5.5 ; 5.5	0.6 ± 4.4 ; 4.4	-5.1 ± 7.8 ; 7.8
Co-58	-0.4 ± 1.8 ; 1.8	-2.1 ± 3.2 ; 3.2	-0.5 ± 2.4 ; 2.4	4.3 ± 3.8 ; 3.8
Co-60	-1.8 ± 3.0 ; 3.1	-0.9 ± 3.8 ; 3.8	-0.3 ± 2.5 ; 2.5	2.4 ± 4.6 ; 4.6
Zn-65	-4.5 ± 6.1 ; 6.2	0.6 ± 6.4 ; 6.4	-5.6 ± 5.7 ; 5.7	4.3 ± 11.7 ; 11.7
Zr/Nb-95	-0.5 ± 2.4 ; 2.4	0.3 ± 2.7 ; 2.7	0.7 ± 2.0 ; 2.0	-1.8 ± 4.6 ; 4.6
Cs-134	-0.6 ± 2.2 ; 2.2	-1.4 ± 3.8 ; 3.8	0.1 ± 3.2 ; 3.2	1.4 ± 6.1 ; 6.1
Cs-137	0.7 ± 2.5 ; 2.5	2.6 ± 2.7 ; 2.7	0.5 ± 2.5 ; 2.5	-4.7 ± 5.5 ; 5.6
Ba/La-140	2.5 ± 2.8 ; 2.8	5.6 ± 2.8 ; 2.9	9.5 ± 2.9 ; 3.2	0.3 ± 3.4 ; 3.4

Q-36 Cordova Well

Date Collected	01-11-02	04-12-02	07-12-02	10-12-02
Lab Code	QWW-222	QWW-2283	QWW-4640	QWW-6900
H-3	76 ± 68 ; 69	-49 ± 69 ; 69	40 ± 68 ; 68	-18 ± 87 ; 87
Mn-54	-0.6 ± 1.5 ; 1.5	0.7 ± 2.8 ; 2.8	-0.2 ± 1.5 ; 1.5	-0.3 ± 2.6 ; 2.6
Fe-59	0.9 ± 2.8 ; 2.8	-0.9 ± 4.5 ; 4.5	2.4 ± 2.7 ; 2.7	-3.8 ± 6.3 ; 6.3
Co-58	0.1 ± 1.5 ; 1.5	2.8 ± 2.6 ; 2.7	0.3 ± 1.4 ; 1.4	-2.1 ± 2.7 ; 2.7
Co-60	-0.2 ± 1.6 ; 1.6	-1.6 ± 3.4 ; 3.4	0.3 ± 1.6 ; 1.6	-1.8 ± 3.8 ; 3.8
Zn-65	-1.3 ± 2.4 ; 2.4	-4.6 ± 6.1 ; 6.1	-2.6 ± 2.9 ; 2.9	3.4 ± 6.7 ; 6.7
Zr/Nb-95	-1.4 ± 1.6 ; 1.6	2.5 ± 2.8 ; 2.8	1.3 ± 1.3 ; 1.4	-1.4 ± 2.7 ; 2.7
Cs-134	0.4 ± 1.4 ; 1.4	-0.3 ± 2.8 ; 2.8	0.7 ± 1.7 ; 1.7	-0.3 ± 2.9 ; 2.9
Cs-137	-0.8 ± 1.7 ; 1.7	1.1 ± 3.3 ; 3.4	1.0 ± 1.6 ; 1.6	3.1 ± 2.9 ; 2.9
Ba/La-140	0.5 ± 1.3 ; 1.3	0.4 ± 4.0 ; 4.0	-2.4 ± 1.7 ; 1.7	7.6 ± 4.1 ; 4.2

NOTE: Several ODCM-required LLDs were changed in September 2002.

QUAD CITIES

MILCH ANIMALS, NEAREST LIVESTOCK, AND NEAREST RESIDENCES CENSUS

QUAD CITIES

MILCH ANIMALS CENSUS, 2002

Q-26 Bill Stanley Dairy

3.5 miles, Sector F

hay, grain and supplement

6.3 miles, Sector H

10% - Pasture
90% - Chopped and Feed

6.0 miles, Sector N

UNCO-OPERATIVE
No Data Available

Census conducted by G.T. Kreuder on August 13, 2002

QUAD CITIES

NEAREST LIVESTOCK CENSUS, 2002

Nearest livestock of the Quad Cities Station within a 6.2 mile radius.

Sector	Direction	Distance
A	N	3.0 miles
B	NNE	3.5 miles
C	NE	None
D	ENE	3.0 miles
E	E	2.0 miles
F	ESE	3.0 miles
G	SE	3.5 miles
H	SSE	4.7 miles
J	S	2.0 miles
K	SSW	None
L	SW	3.5 miles
M	WSW	3.0 miles
N	W	4.7 miles
P	WNW	3.6 miles
Q	NW	5.0 miles
R	NNW	2.3 miles

Census conducted by G.T. Kreuder on August 12, 2002

QUAD CITIES

NEAREST RESIDENCE CENSUS, 2002

Nearest resident of the Quad Cities Station within a 6.2 mile radius.

Sector	Direction	Distance
A	N	0.5 miles
B	NNE	0.7 miles
C	NE	1.8 miles
D	ENE	3.5 miles
E	E	2.3 miles
F	ESE	3.0 miles
G	SE	2.5 miles
H	SSE	1.0 miles
J	S	0.8 miles
K	SSW	3.0 miles
L	SW	3.0 miles
M	WSW	2.0 miles
N	W	2.3 miles
P	WNW	2.3 miles
Q	NW	2.3 miles
R	NNW	1.7 miles

Census conducted by G.T. Kreuder on August 13, 2002

4.0 TLD DATA*

*TLD Data provided by Exelon Nuclear.

Exelon Nuclear

Environmental Site Report for Quad Cities

Gamma Radiation Measured in mR by TLDs

Site	Description	Quarter 1 2002	Quarter 2 2002	Quarter 3 2002	Quarter 4 2002
I. INDICATOR LOCATIONS					
a. Air Samplers					
Q-01-1	ONSITE NO. 1	20.0	19.0	17.0	21.0
Q-01-2	ONSITE NO. 1	20.0	21.0	16.0	23.0
Q-02-1	ONSITE NO. 2	20.0	20.0	16.0	22.0
Q-02-2	ONSITE NO. 2	20.0	20.0	17.0	22.0
Q-03-1	ONSITE NO. 3	20.0	18.0	15.0	20.0
Q-03-2	ONSITE NO. 3	19.0	18.0	18.0	21.0
Q-04-1	NITRIN	20.0	19.0	19.0	23.0
Q-04-2	NITRIN	20.0	20.0	20.0	21.0
Q-13-1	PRINCETON	23.0	20.0	18.0	23.0
Q-13-2	PRINCETON	21.0	23.0	18.0	22.0
Q-16-1	LOW MOOR	20.0	20.0	16.0	22.0
Q-16-2	LOW MOOR	19.0	19.0	17.0	22.0
Q-37-1	MEREDOSIA ROAD	20.0	21.0	19.0	22.0
Q-37-2	MEREDOSIA ROAD	18.0	21.0	16.0	24.0
Q-38-1	FULLER ROAD	18.0	18.0	17.0	22.0
Q-38-2	FULLER ROAD	20.0	19.0	19.0	20.0
	Air Sampler Mean ± S. D.	19.9 ±1.1	19.8 ±1.3	17.4 ±1.4	21.9 ±1.1
	Annual Air Sampler Mean ± S.D.				19.7 ±2.0
b. Inner Ring (100 Series)					
Q-101-1		18.0	20.0	17.0	21.0
Q-101-2		21.0	18.0	17.0	21.0
Q-102-1		22.0	22.0	17.0	23.0
Q-102-3		21.0	18.0	19.0	22.0
Q-103-1		19.0	20.0	16.0	21.0
Q-103-2		19.0	18.0	16.0	20.0
Q-104-1		19.0	18.0	16.0	22.0
Q-104-2		20.0	21.0	16.0	21.0
Q-105-1		20.0	21.0	15.0	22.0
Q-105-2		19.0	20.0	15.0	21.0
Q-106-2		19.0	21.0	18.0	20.0
Q-106-3		20.0	20.0	16.0	20.0
Q-107-2		19.0	17.0	16.0	22.0
Q-107-3		20.0	20.0	17.0	23.0
Q-108-1		20.0	21.0	18.0	21.0
Q-108-2		20.0	18.0	17.0	21.0
Q-109-1		22.0	21.0	18.0	22.0
Q-109-2		19.0	20.0	18.0	22.0
Q-111-1		24.0	23.0	18.0	23.0
Q-111-2		20.0	18.0	16.0	23.0

Exelon Nuclear
Environmental Site Report for Quad Cities

Gamma Radiation Measured in mR by TLDs

Site	Description	Quarter 1 2002	Quarter 2 2002	Quarter 3 2002	Quarter 4 2002
b. Inner Ring (100 Series)					
Q-112-1		21.0	18.0	17.0	23.0
Q-112-2		ND[a]	18.0	15.0	20.0
Q-113-1		20.0	19.0	16.0	24.0
Q-113-2		20.0	18.0	16.0	20.0
Q-114-1		20.0	19.0	16.0	21.0
Q-114-2		20.0	19.0	18.0	22.0
Q-115-1		20.0	19.0	18.0	21.0
Q-115-2		20.0	20.0	18.0	25.0
Q-116-1		18.0	19.0	21.0	25.0
Q-116-3		22.0	21.0	17.0	22.0
	Inner Ring Mean ± S.D.	20.1 ±1.3	19.5 ±1.5	16.9 ±1.3	21.8 ±1.4
	Annual Inner Ring Mean ± S.D.				19.6 ±2.2
c. Outer Ring (200 Series)					
Q-201-1		24.0	21.0	17.0	24.0
Q-201-2		21.0	23.0	19.0	24.0
Q-202-1		20.0	17.0	16.0	20.0
Q-202-2		22.0	18.0	16.0	22.0
Q-203-1		22.0	18.0	17.0	22.0
Q-203-2		22.0	20.0	20.0	24.0
Q-204-1		23.0	24.0	19.0	24.0
Q-204-2		24.0	21.0	19.0	26.0
Q-205-1		23.0	21.0	19.0	24.0
Q-205-4		22.0	23.0	19.0	25.0
Q-206-1		21.0	20.0	17.0	23.0
Q-206-2		18.0	19.0	17.0	22.0
Q-207-1		23.0	23.0	18.0	22.0
Q-207-4		21.0	22.0	17.0	21.0
Q-208-1		18.0	22.0	17.0	21.0
Q-208-2		23.0	22.0	18.0	24.0
Q-209-1		22.0	20.0	18.0	23.0
Q-209-4		19.0	22.0	18.0	23.0
Q-210-1		21.0	20.0	17.0	22.0
Q-210-4		23.0	20.0	17.0	22.0
Q-211-1		24.0	25.0	20.0	26.0
Q-211-2		23.0	23.0	20.0	26.0
Q-212-1		23.0	21.0	19.0	25.0
Q-212-2		18.0	19.0	16.0	21.0
Q-213-1		20.0	20.0	17.0	20.0
Q-213-2		16.0	21.0	16.0	20.0
Q-214-1		19.0	20.0	18.0	23.0
Q-214-2		20.0	20.0	20.0	24.0

Exelon Nuclear
Environmental Site Report for Quad Cities

Gamma Radiation Measured in mR by TLDs

Site	Description	Quarter 1 2002	Quarter 2 2002	Quarter 3 2002	Quarter 4 2002
Outer Ring (200 Series)					
Q-215-1		19.0	29.0	19.0	24.0
Q-215-2		27.0	23.0	21.0	25.0
Q-216-1		23.0	23.0	19.0	22.0
Q-216-2		22.0	6.0	34.0	22.0
	Outer Ring Mean ± S.D.	21.4 ±2.3	20.8 ±3.6	18.6 ±3.1	23.0 ±1.7
	Annual Outer Ring Mean ± S.D.				21.0 ±3.2
	INDICATOR LOCATION MEAN ± S.D.	20.6 ±1.9	20.1 ±2.6	17.7 ±2.4	22.3 ±1.6
	Annual INDICATOR MEAN ± S.D.				20.2 ±2.7
II. CONTROL LOCATIONS					
Q-07-1	CLINTON	17.0	19.0	16.0	22.0
Q-07-2	CLINTON	21.0	20.0	16.0	22.0
	CONTROL LOCATION MEAN ± S.D.	19.0 ±2.8	19.5 ±0.7	16.0 ±0.0	22.0 ±0.0
	Annual CONTROL LOCATION MEAN ± S.D.				19.1 ±2.5

5.0 GRAPHS OF DATA TRENDS

Air Particulates - Gross Beta

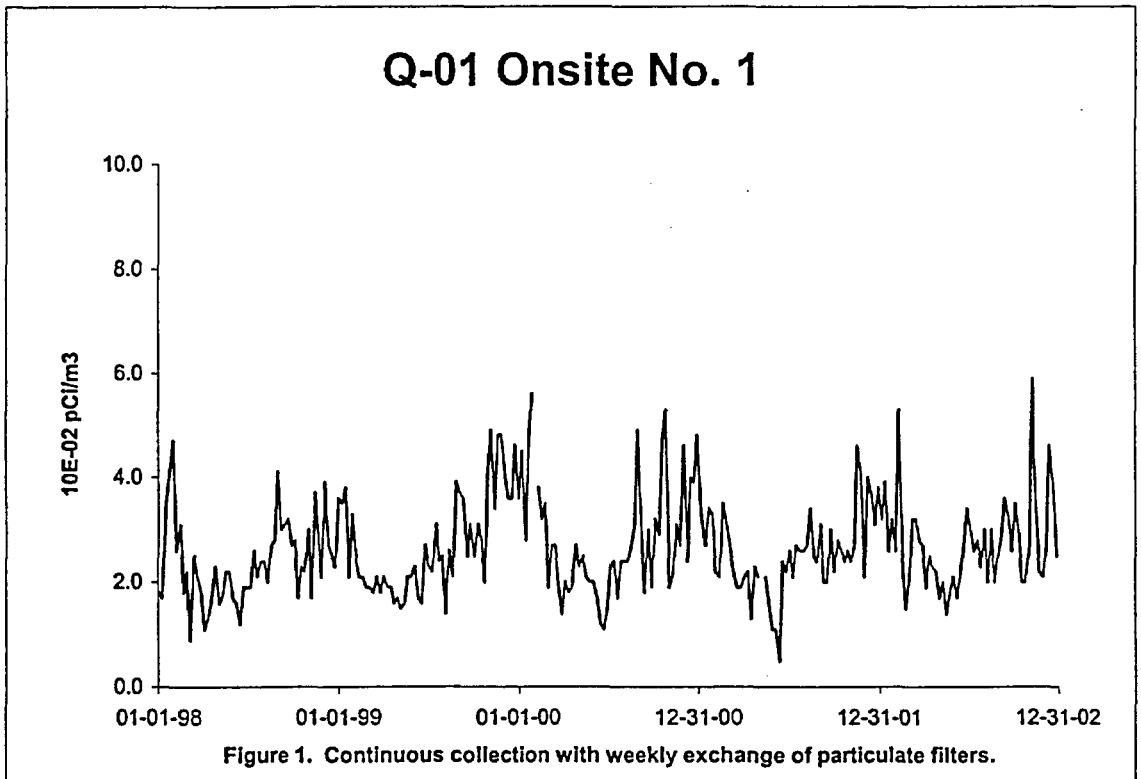

Figure 1. Continuous collection with weekly exchange of particulate filters.

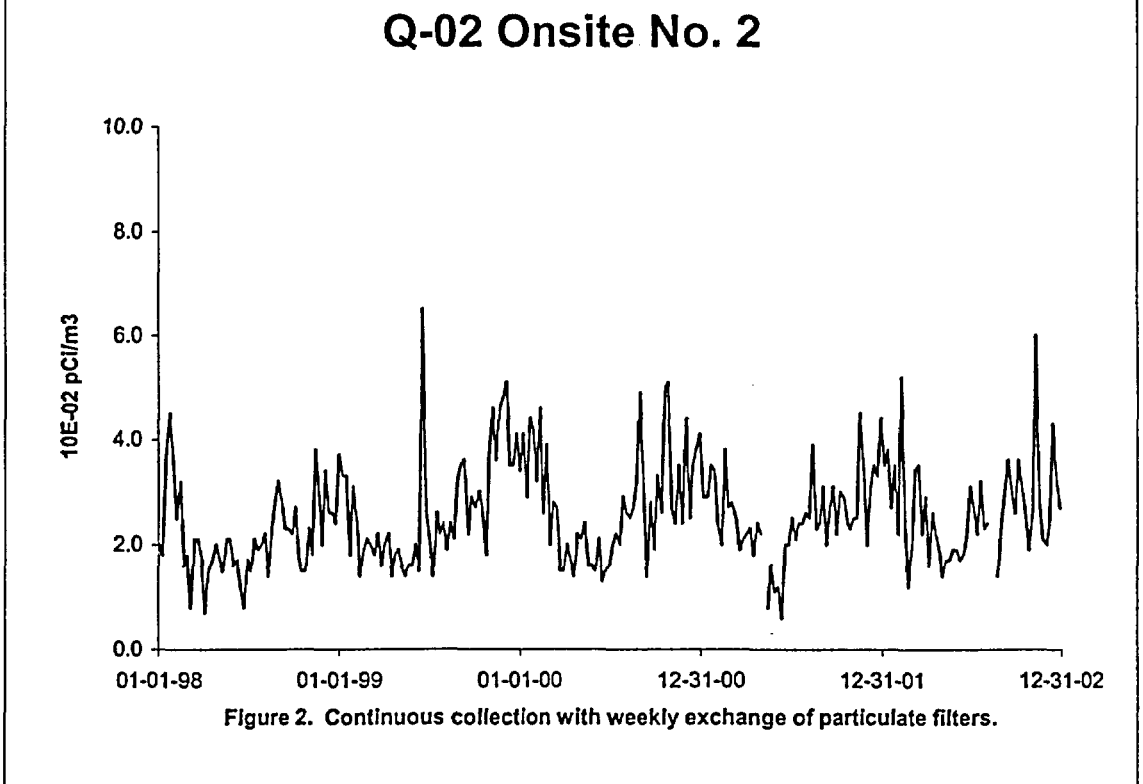

Figure 2. Continuous collection with weekly exchange of particulate filters.

Air Particulates - Gross Beta

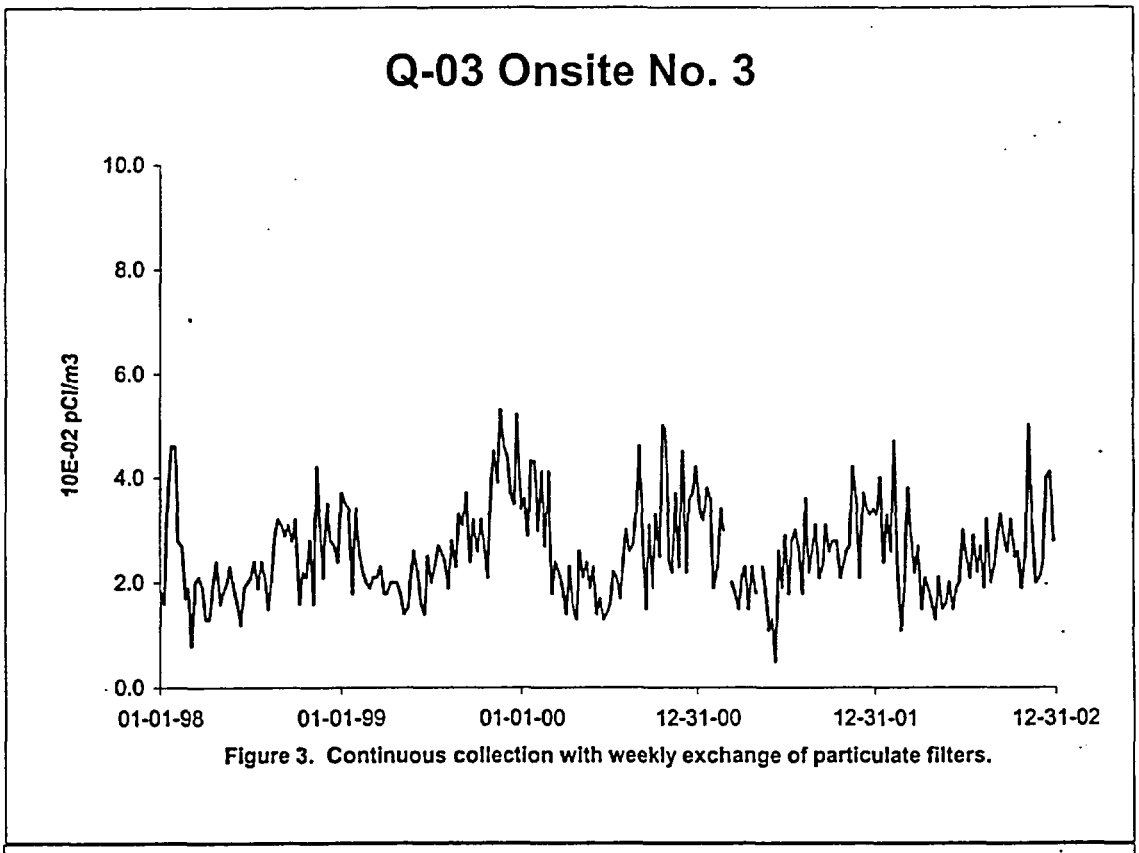

Figure 3. Continuous collection with weekly exchange of particulate filters.

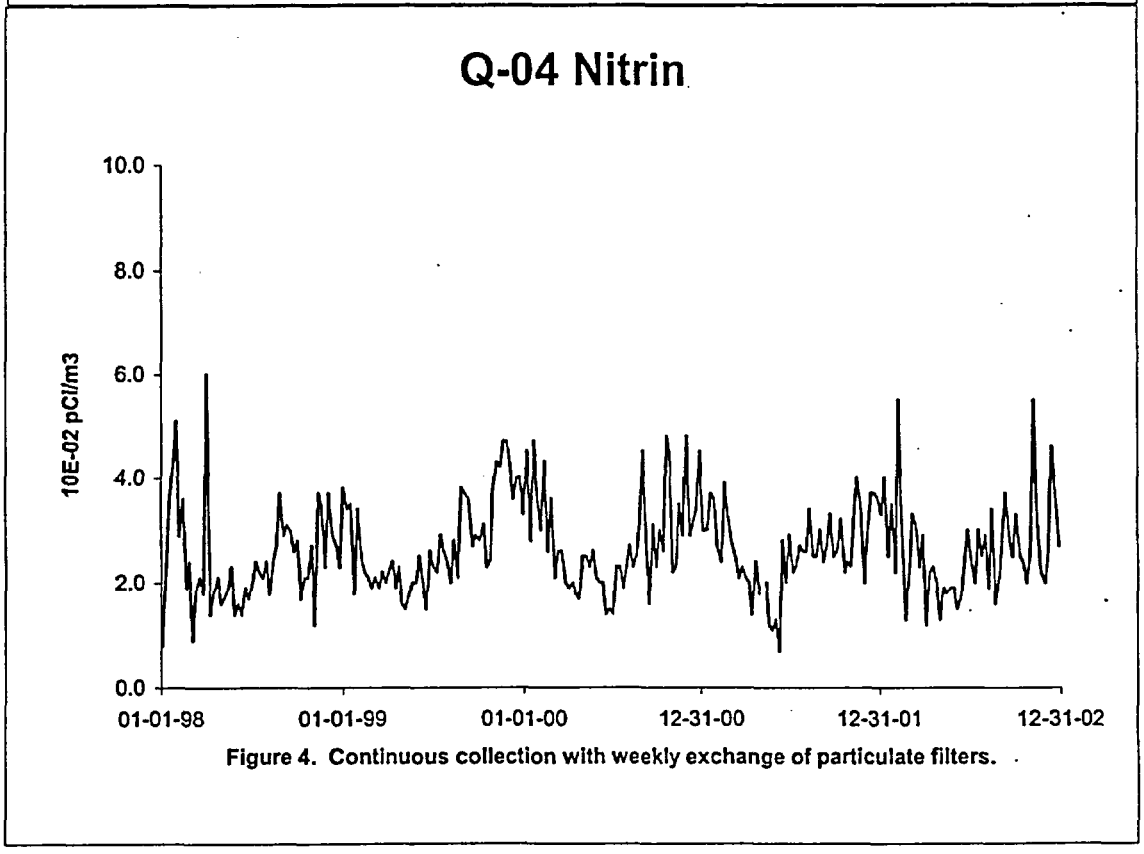

Figure 4. Continuous collection with weekly exchange of particulate filters.

Air Particulates - Gross Beta

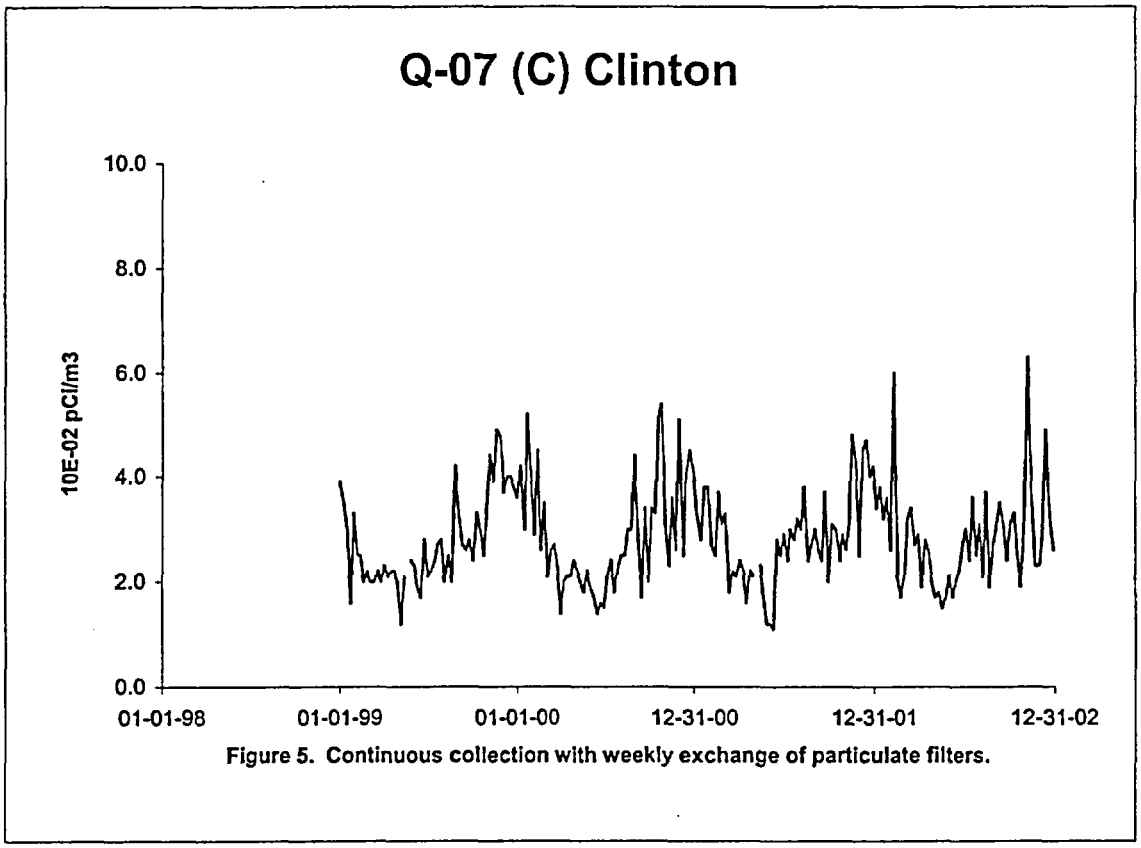

Figure 5. Continuous collection with weekly exchange of particulate filters.

Surface Water-Gross Beta

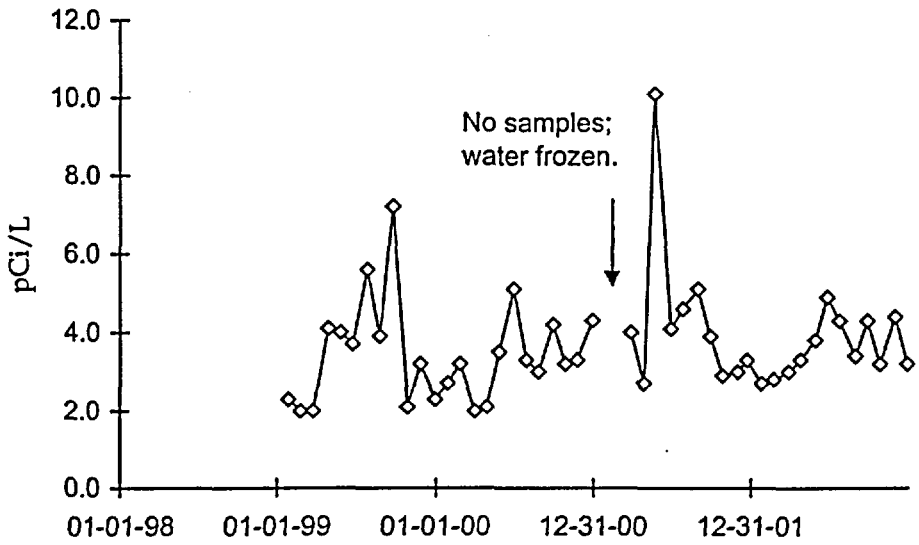

Figure 7. Monthly composites of weekly collections

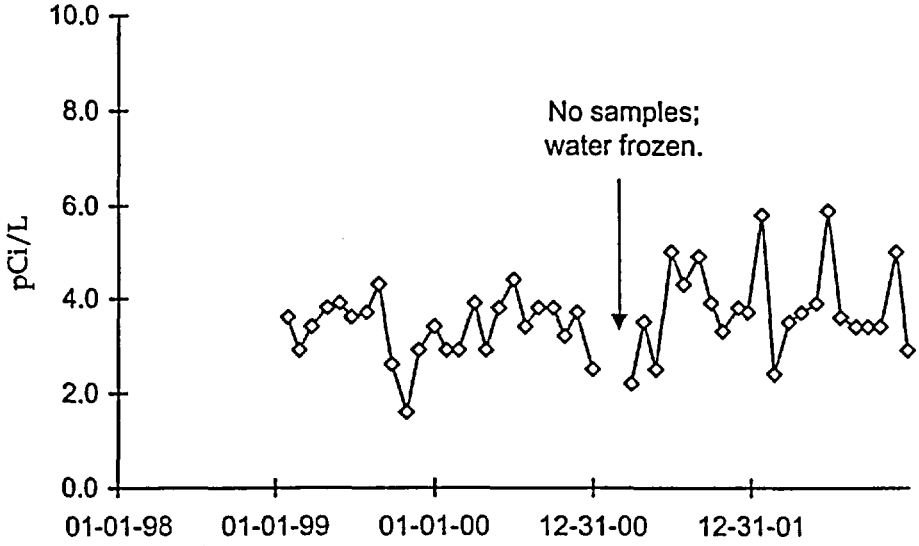

Figure 8. Monthly composites of weekly collections.

Surface Water-Tritium

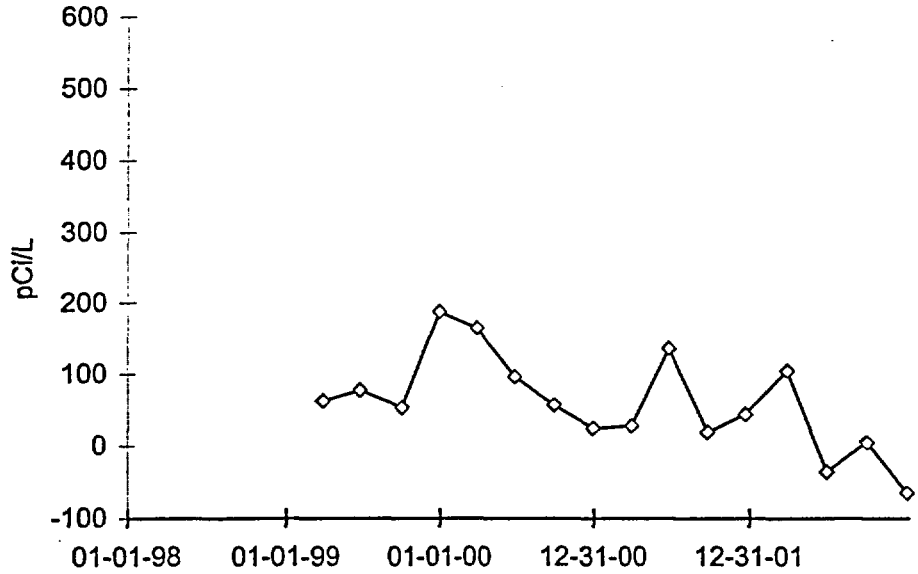

Figure 8. Quarterly composites of weekly collections.

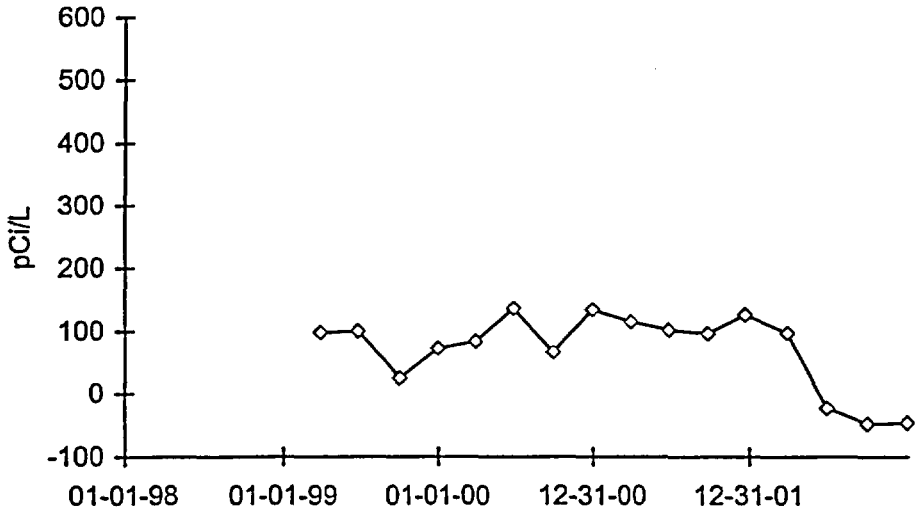

Figure 9. Quarterly composites of weekly collections.

Well Water-Tritium

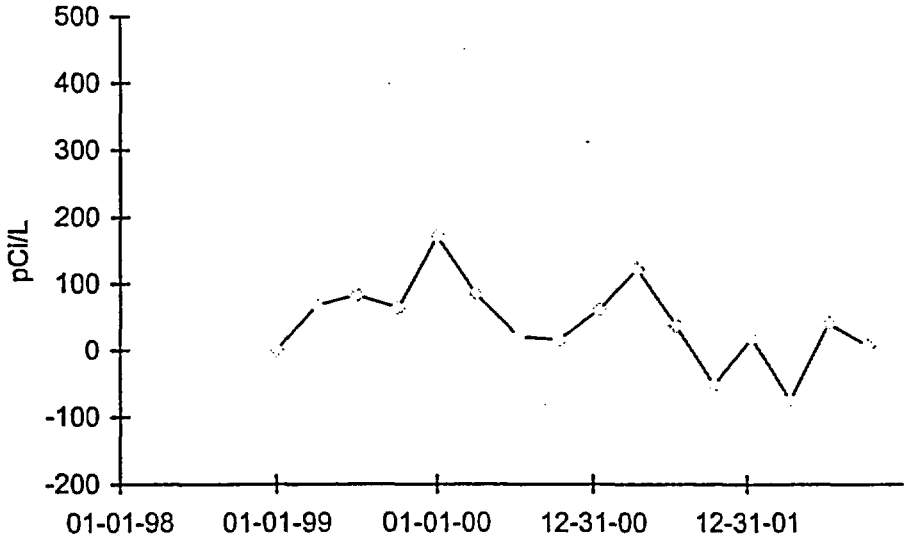

Figure 10. Quarterly collections.

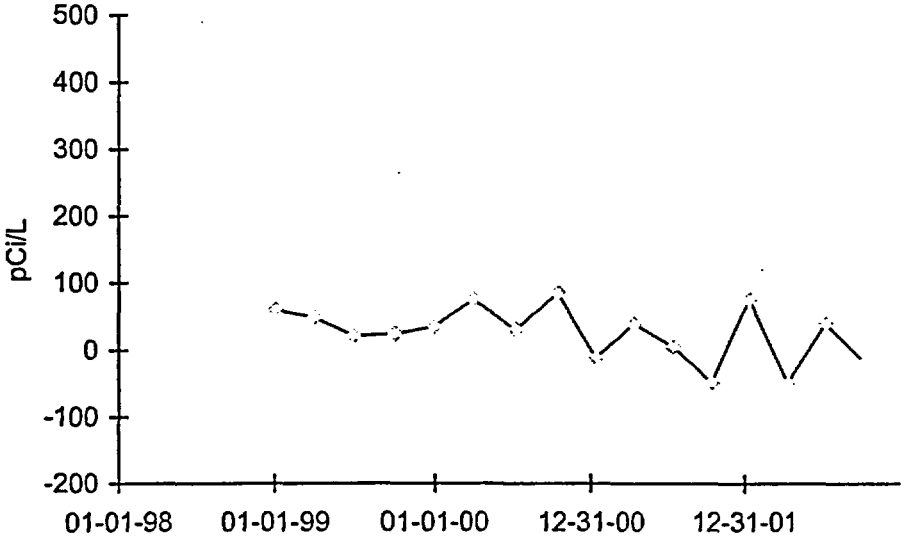

Figure 11. Quarterly collections.

APPENDIX IV

INTERLABORATORY COMPARISON PROGRAM

Appendix IV

Interlaboratory Comparison Program Results

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

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

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

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

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

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

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

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

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

Attachment A lists acceptance criteria for "spiked" samples.

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

Attachment A

ACCEPTANCE CRITERIA FOR "SPIKED" SAMPLES

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

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

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

[b] Laboratory limit.

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

Lab Code	Date	Analysis	Concentration (pCi/L) Laboratory Result[b]	ERA Result[c]	Control Limits
STW-940	02/20/02	Sr-89	53.0 ± 2.5	55.3 ± 5.0	46.6 - 64.0
STW-940	02/20/02	Sr-90	16.6 ± 0.5	15.9 ± 5.0	7.2 - 24.6
STW-942	02/20/02	Gr. Alpha	6.5 ± 0.6	8.0 ± 5.0	0.0 - 16.7
STW-942	02/20/02	Gr. Beta	45.7 ± 3.1	48.3 ± 5.0	39.6 - 57.0
STW-944	02/20/02	Ba-133	25.8 ± 1.5	28.9 ± 5.0	20.2 - 37.6
STW-944	02/20/02	Co-60	76.9 ± 2.7	73.4 ± 5.0	64.7 - 82.1
STW-944	02/20/02	Cs-134	38.7 ± 1.6	42.1 ± 5.0	33.4 - 50.8
STW-944	02/20/02	Cs-137	92.9 ± 2.7	88.8 ± 5.0	80.1 - 97.5
STW-944	02/20/02	Ra-226	15.3 ± 0.7	14.3 ± 2.2	10.6 - 18.0
STW-944	02/20/02	Ra-228	17.5 ± 0.4	16.9 ± 4.2	9.6 - 24.2
STW-944	02/20/02	Uranium	23.8 ± 1.1	28.3 ± 3.0	23.1 - 33.5
STW-944	02/20/02	Zn-65	361.0 ± 9.2	359.0 ± 35.9	298.0 - 420.0
STW-951	05/22/02	Gr. Alpha	23.9 ± 2.5	22.8 ± 5.7	13.0 - 32.6
STW-951	05/22/02	Ra-226	5.9 ± 0.5	6.1 ± 0.9	4.5 - 7.7
STW-951	05/22/02	Ra-228	5.6 ± 0.9	4.5 ± 1.1	2.6 - 6.5
STW-951	05/22/02	Uranium	7.6 ± 0.2	9.3 ± 3.0	4.1 - 14.5
STW-952	05/22/02	Co-60	37.9 ± 0.7	39.1 ± 5.0	30.4 - 47.8
STW-952	05/22/02	Cs-134	14.5 ± 0.8	17.1 ± 5.0	8.4 - 25.8
STW-952	05/22/02	Cs-137	50.0 ± 2.0	52.1 ± 5.0	43.4 - 60.8
STW-952	05/22/02	Gr. Beta	171.0 ± 2.5	189.0 ± 28.4	140.0 - 238.0
STW-952	05/22/02	Sr-89	28.4 ± 4.8	31.7 ± 5.0	23.0 - 40.4
STW-952	05/22/02	Sr-90	32.4 ± 3.1	28.3 ± 5.0	19.6 - 37.0
STW-953[d]	05/22/02	H-3	13900.0 ± 100.0	17400.0 ± 1740.0	14400.0 - 20400.0
STW-954	05/22/02	I-131	14.6 ± 0.3	14.7 ± 2.0	11.2 - 18.2
STW-965	08/21/02	Ba-133	71.9 ± 2.1	80.0 ± 8.0	66.4 - 93.6
STW-965	08/21/02	Co-60	23.8 ± 1.0	23.3 ± 5.0	14.6 - 32.0
STW-965	08/21/02	Cs-134[e]	62.9 ± 1.2	71.7 ± 5.0	63.0 - 80.4
STW-965	08/21/02	Cs-137	219.3 ± 10.7	214.0 ± 10.7	195.0 - 233.0
STW-965	08/21/02	Gr. Alpha	74.4 ± 0.6	58.8 ± 14.7	33.5 - 84.1
STW-965	08/21/02	Gr. Beta	26.7 ± 0.4	21.9 ± 2.2	13.2 - 30.6
STW-965	08/21/02	Ra-226	5.0 ± 0.5	5.0 ± 0.8	3.7 - 6.3
STW-965	08/21/02	Ra-228	6.0 ± 0.7	4.7 ± 1.2	2.7 - 6.7
STW-965	08/21/02	Sr-89	28.4 ± 1.5	29.0 ± 5.0	20.3 - 37.7
STW-965	08/21/02	Sr-90	36.5 ± 1.1	36.4 ± 5.0	27.7 - 45.1
STW-965	08/21/02	Uranium	4.1 ± 0.1	5.0 ± 3.0	0.0 - 10.2
STW-965	08/21/02	Zn-65	92.4 ± 2.2	95.7 ± 9.6	79.4 - 112.0
STW-966	11/20/02	Gr. Alpha	9.3 ± 0.4	12.2 ± 5.0	3.5 - 20.9
STW-966	11/20/02	Gr. Beta	44.7 ± 1.0	47.0 ± 5.0	38.3 - 55.7
STW-967	11/20/02	H-3	10100.0 ± 38.7	10200.0 ± 1020.0	8440.0 - 12000.0
STW-968	11/20/02	Ra-226	11.6 ± 0.1	12.1 ± 1.8	9.0 - 15.2
STW-968	11/20/02	Ra-228	16.0 ± 1.4	15.1 ± 3.8	8.6 - 21.6
STW-968	11/20/02	Uranium	15.5 ± 0.5	19.2 ± 3.0	14.0 - 24.4
STW-969	11/20/02	I-131	6.0 ± 0.4	6.8 ± 2.0	3.3 - 10.2

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

Lab Code	Date	Analysis	Concentration (pCi/L)		
			Laboratory Result[b]	ERA Result[c]	Control Limits
STW-970	11/20/02	Co-60	104.0 ± 7.1	104.0 ± 5.2	95.0 - 113.0
STW-970	11/20/02	Cs-134	48.2 ± 2.3	55.5 ± 5.0	46.8 - 64.2
STW-970	11/20/02	Cs-137	109.0 ± 12.6	117.0 ± 5.9	107.0 - 127.0
STW-970	11/20/02	Gr. Beta	252.0 ± 26.8	288.0 ± 49.5	244.0 - 416.0
STW-970	11/20/02	Sr-89	43.2 ± 0.7	47.6 ± 5.0	38.9 - 56.3
STW-970	11/20/02	Sr-90	7.5 ± 0.2	7.6 ± 5.0	0.0 - 16.2
STW-971	11/20/02	Gr. Alpha	74.9 ± 1.5	103.0 ± 25.8	58.4 - 148.0
STW-971	11/20/02	Ra-226	8.9 ± 0.0	9.1 ± 1.4	6.7 - 11.5
STW-971	11/20/02	Ra-228	15.3 ± 0.1	17.8 ± 4.5	10.1 - 25.5
STW-971	11/20/02	Uranium	51.7 ± 1.6	61.7 ± 6.2	51.0 - 72.4

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

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

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

[d] Analysis was repeated; result of reanalysis: 16114±487 pCi/L.

[e] ERA acknowledged an unacceptably high percentage of failure for Cs-134 and questioned its own control limits. No problems were identified in the analysis.

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

Lab Code	TLD Type	Date	Measurement	mR Known Value	mR Lab Result ± 2 sigma	Control Limits
Environmental, Inc.						
2001-1	CaSO4: Dy Cards	12/24/2001	Reader 1, #1	3.98	3.71 ± 0.12	2.79 - 5.17
2001-1	CaSO4: Dy Cards	12/24/2001	Reader 1, #1	3.98	3.38 ± 0.09	2.79 - 5.17
2001-1	CaSO4: Dy Cards	12/24/2001	Reader 1, #2	7.07	7.89 ± 0.18	4.95 - 9.19
2001-1	CaSO4: Dy Cards	12/24/2001	Reader 1, #2	7.07	7.64 ± 0.25	4.95 - 9.19
2001-1	CaSO4: Dy Cards	12/24/2001	Reader 1, #3	15.9	18.62 ± 0.40	11.13 - 20.67
2001-1	CaSO4: Dy Cards	12/24/2001	Reader 1, #3	15.9	19.58 ± 0.12	11.13 - 20.67
2001-1	CaSO4: Dy Cards	12/24/2001	Reader 1, #4	63.61	78.24 ± 1.23	44.53 - 82.69
2001-1	CaSO4: Dy Cards	12/24/2001	Reader 1, #4	63.61	79.89 ± 2.47	44.53 - 82.69
Environmental, Inc.						
2002-1	CaSO4: Dy Cards	5/28/2002	Reader 1, #1	4.84	4.44 ± 0.16	3.39 - 6.29
2002-1	CaSO4: Dy Cards	5/28/2002	Reader 1, #1	4.84	4.37 ± 0.20	3.39 - 6.29
2002-1	CaSO4: Dy Cards	5/28/2002	Reader 1, #2	8.60	9.08 ± 0.14	6.02 - 11.18
2002-1	CaSO4: Dy Cards	5/28/2002	Reader 1, #2	8.60	8.76 ± 0.16	6.02 - 11.18
2002-1	CaSO4: Dy Cards	5/28/2002	Reader 1, #3	19.34	22.14 ± 0.27	13.54 - 25.14
2002-1	CaSO4: Dy Cards	5/28/2002	Reader 1, #3	19.34	24.03 ± 0.30	13.54 - 25.14
2002-1	CaSO4: Dy Cards	5/28/2002	Reader 1, #4	77.36	92.77 ± 0.58	54.15 - 100.57
2002-1	CaSO4: Dy Cards	5/28/2002	Reader 1, #4	77.36	85.25 ± 0.37	54.15 - 100.57
Environmental, Inc.						
2002-2	CaSO4: Dy Cards	12/13/2002	Reader 1, 30	56.73	71.61 ± 1.79	39.71 - 73.75
2002-2	CaSO4: Dy Cards	12/13/2002	Reader 1, 45[a]	25.21	33.49 ± 1.38	17.65 - 32.77
[a] Precision of the distance (cm) measurement can significantly increase the error. The placement of the card holder on the table could account for the higher error.						
2002-2	CaSO4: Dy Cards	12/13/2002	Reader 1, 60	14.18	17.37 ± 1.24	9.93 - 18.43
2002-2	CaSO4: Dy Cards	12/13/2002	Reader 1, 75	9.08	10.65 ± 1.02	6.36 - 11.80
2002-2	CaSO4: Dy Cards	12/13/2002	Reader 1, 90	6.30	6.37 ± 0.54	4.41 - 8.19
2002-2	CaSO4: Dy Cards	12/13/2002	Reader 1, 120	3.55	4.60 ± 0.41	2.49 - 4.62
2002-2	CaSO4: Dy Cards	12/13/2002	Reader 1, 135	2.80	2.51 ± 0.23	1.96 - 3.64
2002-2	CaSO4: Dy Cards	12/13/2002	Reader 1, 150	2.28	2.22 ± 0.28	1.60 - 2.96

[c] Control limits are based on Attachment A, Page IV3 of this report.

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

Lab Code	Sample Type	Date	Analysis	Concentration (pCi/L)[a] Laboratory results 2s, n=1[b]	Known Activity	Control Limits[c]
SPW-11552	Water	1/7/2002	Gr. Alpha	35.33 ± 1.83	34.57	17.29 - 51.86
SPW-11552	Water	1/7/2002	Gr. Beta	112.62 ± 2.44	107.70	96.93 - 118.47
SPMI-595	Milk	1/31/2002	Cs-134	29.63 ± 4.98	27.10	17.10 - 37.10
SPMI-595	Milk	1/31/2002	Cs-137	51.31 ± 7.55	50.89	40.89 - 60.89
SPMI-597	Milk	1/31/2002	Co-60	44.18 ± 7.76	41.36	31.36 - 51.36
SPMI-597	Milk	1/31/2002	Cs-134	20.15 ± 5.08	22.59	12.59 - 32.59
SPMI-597	Milk	1/31/2002	Cs-137	54.88 ± 8.32	50.89	40.89 - 60.89
SPAP-594	Air Filter	2/6/2002	Gr. Beta	1.58 ± 0.02	1.55	0.00 - 11.55
SPW-599	Water	2/19/2002	H-3	47607 ± 595	50189	40151 ± 60227
SPMI-1446	Milk	3/8/2002	I-131(G)	87.84 ± 11.47	85.20	75.20 - 95.20
SPW-1446	Water	3/8/2002	I-131	82.98 ± 1.20	85.20	68.16 - 102.24
SPW-1446	Water	3/8/2002	I-131(G)	92.75 ± 12.87	85.20	75.20 - 95.20
SPMI-1448	Milk	3/8/2002	I-131	88.00 ± 1.13	85.20	68.16 - 102.24
SPVE-1444	Vegetation	3/11/2002	I-131(G)	0.39 ± 0.04	0.42	0.25 - 0.58
SPAP-2078	Air Filter	4/8/2002	Gr. Beta	1.43 ± 0.01	1.55	0.00 - 11.55
SPW-2080	Water	4/5/2002	H-3	49121 ± 608	46912	37530 ± 56294
SPF-2082	Fish	4/5/2002	Cs-134	0.83 ± 0.04	0.83	0.50 - 1.16
SPF-2082	Fish	4/5/2002	Cs-137	1.29 ± 0.07	1.35	0.81 - 1.89
SPMI-2084	Milk	4/8/2002	Cs-134	20.93 ± 5.82	24.69	14.69 - 34.69
SPMI-2084	Milk	4/8/2002	Cs-137	51.83 ± 10.23	50.56	40.56 - 60.56
SPMI-2084	Milk	4/8/2002	I-131	87.72 ± 1.28	88.37	70.70 - 106.04
SPMI-2084	Milk	4/8/2002	I-131(G)	84.08 ± 10.75	88.37	78.37 - 98.37
SPMI-2084	Milk	4/8/2002	Sr-90	62.81 ± 1.99	66.85	53.48 - 80.22
SPW-2115	Water	4/8/2002	I-131	82.42 ± 1.27	88.37	70.70 - 106.04
SPW-2116	Water	4/8/2002	Co-60	32.47 ± 5.78	33.09	23.09 - 43.09
SPW-2116	Water	4/8/2002	Cs-134	30.80 ± 3.60	28.80	18.80 - 38.80
SPW-2116	Water	4/8/2002	Cs-137	53.85 ± 7.07	50.56	40.56 - 60.56
SPW-2116	Water	4/8/2002	I-131(G)	79.09 ± 7.58	88.37	78.37 - 98.37
SPW-2116	Water	4/8/2002	Sr-90	70.35 ± 2.32	66.85	53.48 - 80.22
SPW-2019	Water	5/3/2002	Gr. Alpha	25.89 ± 1.71	34.57	17.29 - 51.86
SPW-2019	Water	5/3/2002	Gr. Beta	101.19 ± 2.37	107.70	96.93 - 118.47
SPCH-3064	Charcoal	5/11/2002	I-131(G)	0.74 ± 0.04	0.85	0.51 - 1.18
SPW-4682	Water	7/17/2002	H-3	40856 ± 548	46179	36943 ± 55415
SPAP-4685	Air Filter	7/17/2002	Gr. Beta	1.58 ± 0.02	1.55	0.00 - 11.55
W-71702S	Water	7/17/2002	Fe-55	10463.00 ± 126.00	12200.60	9760.48 - 14640.72
W-71702S	Water	07/17/02	H-3	45779 ± 583	46179	36943 ± 55415
W-71702S	Water	07/17/02	Ni-63	17.02 ± 1.50	17.10	10.26 - 23.94
SPVE-4910	Vegetation	07/22/02	Sr-90	10.22 ± 0.80	9.04	0.00 - 19.04
W-72302S	Water	07/23/02	Sr-90	21.43 ± 0.97	26.55	16.55 - 36.55
W-80102S	Water	08/01/02	Gr. Alpha	41.25 ± 4.58	34.45	17.23 - 51.68
W-80102S	Water	08/01/02	Gr. Beta	113.66 ± 5.30	107.70	96.93 - 118.47
W-80202S	Water	08/02/02	Tc-99	16.39 ± 0.72	14.13	2.13 - 26.13
SPW-7188	Water	10/25/02	Fe-55	20396 ± 265	22778	18222 - 27334
SPW-7190	Water	10/25/02	Ni-63	227.18 ± 11.60	170.80	102.48 - 239.12

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

Lab Code	Sample Type	Date	Analysis	Concentration (pCi/L) Laboratory results 2s, n=1[b]	Known Activity	Control Limits[c]
SPW-7192	Water	10/25/02	H-3	96310 ± 871	90963	72770 - 109156
SPW-7194	Water	10/25/02	C-14	42938 ± 167	49661	29796 - 69525
SPAP-7198	Air Filter	10/25/02	Gr. Beta	1.65 ± 0.02	1.53	0.00 - 11.53
SPW-7335	Water	10/30/02	Co-60	39.67 ± 7.38	37.05	27.05 - 47.05
SPW-7335	Water	10/30/02	Cs-134	33.09 ± 5.96	34.11	24.11 - 44.11
SPW-7335	Water	10/30/02	Cs-137	46.80 ± 10.39	49.90	39.90 - 59.90
SPMI-7336	Milk	10/30/02	Cs-134	34.40 ± 4.99	34.11	24.11 - 44.11
SPMI-7336	Milk	10/30/02	Cs-137	46.52 ± 8.52	49.91	39.91 - 59.91
SPF-7340	Fish	10/30/02	Cs-134	0.66 ± 0.03	0.68	0.41 - 0.95
SPF-7340	Fish	10/30/02	Cs-137	1.35 ± 0.05	1.33	0.80 - 1.86
SPS-8102	Sediment	11/01/02	Sr-90	14.69 ± 0.67	13.45	3.45 - 23.45

[a] Results are reported in units of pCi/L, except for air filters (pCi/Filter), food products, vegetation, soil, sediment (pCi/g).
[b] Results are based on single determinations.
[c] Control limits are based on Attachment A, Page IV3 of this report.

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

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

Lab Code	Sample Type	Date	Analysis	Concentration (pCi/L)[a]		
				Laboratory results (4.66σ)		Acceptance
				LLD	Activity[b]	Criteria (4.66 σ)
SPW-11551	water	1/7/2002	Gr. Alpha	0.47	0.45 ± 0.39	1
SPW-11551	water	1/7/2002	Gr. Beta	1.37	0.55 ± 1.03	3.2
SPAP-590	Air Filter	1/31/2002	Co-60	1.78		100
SPAP-590	Air Filter	1/31/2002	Cs-134	3.42		100
SPAP-590	Air Filter	1/31/2002	Cs-137	2.33		100
SPAP-590	Air Filter	1/31/2002	Gr. Beta	0.74	-0.096 ± 0.38	3.2
SPMI-596	Milk	1/31/2002	Co-60	3.54		10
SPMI-596	Milk	1/31/2002	Cs-134	3.24		10
SPMI-596	Milk	1/31/2002	Cs-137	3.89		10
SPMI-596	Milk	1/31/2002	K-40		1472.1 ± 101.50	0
SPW-598	water	1/31/2002	Co-60	2.30		10
SPW-598	water	1/31/2002	Cs-134	3.74		10
SPW-598	water	1/31/2002	Cs-137	3.23		10
SPW-600	water	1/31/2002	H-3	138.80	-96.5 ± 63.40	200
SPMI-1447	Milk	3/7/2002	I-131(G)	7.63		20
SPVE-1443	Vegetation	3/8/2002	I-131(G)	0.02		20
SPW-1445	water	3/8/2002	Co-60	2.76		10
SPW-1445	water	3/8/2002	Cs-134	2.87		10
SPW-1445	water	3/8/2002	Cs-137	4.34		10
SPW-1445	water	3/8/2002	I-131	0.45	0.17 ± 0.31	0.5
SPW-1445	water	3/8/2002	I-131(G)	6.50		20
SPMI-1447	Milk	3/8/2002	I-131	0.31	0.15 ± 0.22	0.5
SPAP-2077	Air Filter	4/8/2002	Gr. Beta	0.32	-0.055 ± 0.19	3.2
SPW-2079	water	4/5/2002	H-3	134.17	16.13 ± 67.39	200
SPF-2081	Fish	4/5/2002	Cs-134	7.67		100
SPF-2081	Fish	4/5/2002	Cs-137	9.54		100
SPMI-2083	Milk	4/8/2002	Cs-134	2.90		10
SPMI-2083	Milk	4/8/2002	Cs-137	3.03		10
SPMI-2083	Milk	4/8/2002	I-131	0.52	-0.38 ± 0.34	0.5
SPMI-2083	Milk[c]	4/8/2002	Sr-90	0.48	1.29 ± 0.36	1
SPW-2115	water	4/8/2002	Co-60	1.49		10
SPW-2115	water	4/8/2002	Cs-134	2.09		10
SPW-2115	water	4/8/2002	Cs-137	3.78		10
SPW-2115	water	4/8/2002	I-131	0.50	-0.16 ± 0.33	0.5
SPW-2115	water	4/8/2002	I-131(G)	3.30		20
SPW-2115	water	4/8/2002	Sr-90	0.66	0.10 ± 0.32	1
SPW-2018	water	4/22/2002	Gr. Alpha	0.56	-0.24 ± 0.38	1
SPW-2018	water	4/22/2002	Gr. Beta	1.38	3.19 ± 1.03	3.2
SPch-3063	Charcoal	5/11/2002	I-131(G)	8.27		9.6
SPW-4683	water	7/17/2002	H-3	129.00	-62.8 ± 60.30	200
W-71702	water	7/17/2002	Fe-55	33.61	-1.72 ± 15.63	1000
W-71702	water	7/17/2002	Ni-63	2.56	0.71 ± 1.37	20
W-71802B	water	7/18/2002	Gr. Alpha	0.48	0.31 ± 0.36	1
W-71802B	water	7/18/2002	Gr. Beta	1.33	0.9 ± 0.95	3.2

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

Lab Code	Sample Type	Date	Analysis	Concentration (pCi/L)[a] Laboratory results (4.66σ) LLD	Activity[b]	Acceptance Criteria (4.66 σ)
W-72302	water	7/23/2002	Sr-90	0.27	0.027 ± 0.13	1
W-80202	water	8/2/2002	Tc-99	0.34	-0.051 ± 0.16	10
SPW-7189	water	10/25/2002	Fe-55	978.21	21.77 ± 595.33	1000
SPW-7191	water	10/25/2002	Ni-63	11.74	4.47 ± 7.24	20
SPW-7193	water	10/25/2002	H-3	146.00	-92 ± 65.00	200
SPAP-7199	Air Filter	10/25/2002	Gr. Beta	0.00	-0.0024 ± 0.00	3.2
SPMI-7333	Milk	10/30/2002	Cs-134	5.30		10
SPMI-7333	Milk	10/30/2002	Cs-137	4.80		10
SPW-7334	water	10/30/2002	Co-60	3.69		10
SPW-7334	water	10/30/2002	Cs-134	5.37		10
SPW-7334	water	10/30/2002	Cs-137	3.90		10
SPF-7339	Fish	10/30/2002	Cs-134	4.69		100
SPF-7339	Fish	10/30/2002	Cs-137	11.18		100

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

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

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

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

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result
CF-20, 21	1/2/2002	Be-7	0.47 ± 0.25	0.37 ± 0.12	0.42 ± 0.14
CF-20, 21	1/2/2002	Gr. Beta	7.82 ± 0.20	7.95 ± 0.21	7.89 ± 0.14
CF-20, 21	1/2/2002	K-40	6.65 ± 0.55	6.53 ± 0.36	6.59 ± 0.33
CF-20, 21	1/2/2002	Sr-90	0.01 ± 0.01	0.01 ± 0.01	0.01 ± 0.00
AP-11804, 11805	1/2/2002	Be-7	0.054 ± 0.011	0.049 ± 0.019	0.052 ± 0.011
AP-11825, 11826	1/2/2002	Be-7	0.053 ± 0.013	0.043 ± 0.013	0.048 ± 0.009
AP-11846, 11847	1/2/2002	Be-7	0.054 ± 0.018	0.048 ± 0.016	0.051 ± 0.012
WW-150, 151	1/7/2002	Gr. Beta	1.26 ± 0.50	1.04 ± 0.46	1.15 ± 0.34
MI-124, 125	1/8/2002	K-40	1332.30 ± 158.90	1271.70 ± 151.50	1302.00 ± 109.77
W-172, 173	1/8/2002	H-3	153.00 ± 68.00	148.00 ± 68.00	150.50 ± 48.08
SW-11698, 11699	1/8/2002	Gr. Alpha	2.51 ± 1.36	3.71 ± 1.80	3.11 ± 1.13
SW-11698, 11699	1/8/2002	Gr. Beta	7.68 ± 1.33	8.49 ± 1.43	8.09 ± 0.98
U-275, 276	1/10/2002	Gr. Alpha	1.40 ± 1.00	1.10 ± 1.20	1.25 ± 0.78
LW-356, 357	1/16/2002	Gr. Beta	3.47 ± 0.65	2.94 ± 0.61	3.21 ± 0.45
LW-377, 378	1/16/2002	Gr. Beta	2.75 ± 0.68	2.84 ± 0.61	2.79 ± 0.46
SW-525, 526	1/30/2002	Gr. Alpha	0.56 ± 0.35	0.24 ± 0.35	0.40 ± 0.25
SW-525, 526	1/30/2002	Gr. Beta	2.29 ± 0.41	2.58 ± 0.39	2.43 ± 0.28
DW-504, 505	1/31/2002	Gr. Alpha	2.30 ± 1.70	3.90 ± 1.40	3.10 ± 1.10
MI-649, 650	2/5/2002	K-40	1319.40 ± 176.70	1210.80 ± 118.20	1265.10 ± 106.29
DW-697, 698	2/6/2002	Gr. Beta	5.10 ± 1.20	4.70 ± 1.20	4.90 ± 0.85
DW-927, 928	2/8/2002	Sr-90	0.69 ± 0.29	0.71 ± 0.29	0.70 ± 0.21
W-973, 974	2/18/2002	Fe-55	7.29 ± 0.97	6.86 ± 0.94	7.08 ± 0.68
W-1673, 1674	2/25/2002	H-3	2640.00 ± 155.00	2908.00 ± 161.00	2774.00 ± 111.74
SWT-1395, 1396	2/26/2002	Gr. Beta	2.96 ± 0.59	2.29 ± 0.53	2.63 ± 0.40
MI-1268, 1269	2/27/2002	K-40	1460.50 ± 162.50	1573.00 ± 168.00	1516.75 ± 116.87
MI-1268, 1269	2/27/2002	Sr-90	0.77 ± 0.36	0.95 ± 0.40	0.86 ± 0.27
MI-1332, 1333	3/5/2002	K-40	1503.00 ± 164.00	1305.00 ± 168.00	1404.00 ± 117.39
MI-1332, 1333	3/5/2002	Sr-90	1.35 ± 0.38	1.07 ± 0.40	1.21 ± 0.28
MI-1458, 1459	3/6/2002	K-40	1411.70 ± 166.70	1390.00 ± 172.30	1400.85 ± 119.87
DW-10100, 10101	3/9/2002	Gr. Alpha	4.10 ± 1.70	1.80 ± 1.60	2.95 ± 1.17
DW-10111, 10112	3/9/2002	Gr. Alpha	7.10 ± 2.00	8.30 ± 2.30	7.70 ± 1.52
MI-1521, 1522	3/11/2002	K-40	1270.80 ± 103.30	1369.10 ± 121.60	1319.95 ± 79.78
MI-1521, 1522	3/11/2002	Sr-90	1.69 ± 0.46	2.46 ± 0.49	2.07 ± 0.34
MI-1541, 1542	3/11/2002	K-40	1562.20 ± 122.80	1529.30 ± 126.10	1545.75 ± 88.01
MI-1541, 1542	3/11/2002	Sr-90	0.85 ± 0.57	1.48 ± 0.43	1.16 ± 0.36
LW-1651, 1652	3/14/2002	Gr. Beta	2.90 ± 0.57	2.57 ± 0.56	2.74 ± 0.40
DW-10134, 10135	3/16/2002	Gr. Alpha	5.60 ± 1.90	5.40 ± 1.60	5.50 ± 1.24
WW-1694, 1695	3/18/2002	Gr. Beta	1.79 ± 0.59	1.53 ± 0.50	1.66 ± 0.39
SO-1715, 1716	3/19/2002	Cs-137	0.03 ± 0.01	0.02 ± 0.01	0.03 ± 0.01
SO-1715, 1716	3/19/2002	Gr. Beta	18.50 ± 1.70	19.10 ± 1.70	18.80 ± 1.20
DW-10302, 10303	3/20/2002	Gr. Alpha	2.30 ± 1.40	3.30 ± 1.60	2.80 ± 1.06
W-1758, 1759	3/25/2002	Gr. Alpha	2.50 ± 0.70	2.30 ± 0.60	2.40 ± 0.46
W-1758, 1759	3/25/2002	Gr. Beta	4.10 ± 1.20	2.50 ± 1.10	3.30 ± 0.81

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

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result
MI-1926, 1927	3/26/2002	K-40	1414.00 ± 115.00	1316.00 ± 128.00	1365.00 ± 86.04
MI-1926, 1927	3/26/2002	Sr-90	2.30 ± 0.70	2.40 ± 0.70	2.35 ± 0.49
SWU-2010, 2011	3/26/2002	Gr. Beta	2.90 ± 0.60	2.20 ± 0.50	2.55 ± 0.39
DW-10376, 10377	3/27/2002	Gr. Beta	10.50 ± 1.30	10.10 ± 1.50	10.30 ± 0.99
AP-2479, 2480	3/28/2002	Be-7	0.064 ± 0.023	0.068 ± 0.014	0.066 ± 0.013
DW-10395, 10396	3/29/2002	Gr. Alpha	10.20 ± 2.10	14.60 ± 2.40	12.40 ± 1.59
LW-2181, 2182	3/31/2002	Gr. Beta	2.98 ± 0.68	1.99 ± 0.70	2.48 ± 0.49
LW-2181, 2182	3/31/2002	H-3	2694.43 ± 156.53	2688.84 ± 156.40	2691.64 ± 110.64
CW-2437, 2438	3/31/2002	Gr. Beta	1.09 ± 0.61	1.14 ± 0.58	1.11 ± 0.42
CW-2437, 2438	3/31/2002	H-3	6456.70 ± 229.20	6292.80 ± 226.52	6374.75 ± 161.12
MI-1947, 1948	4/1/2002	K-40	1421.40 ± 130.90	1256.80 ± 104.20	1339.10 ± 83.65
AP-2458, 2459	4/1/2002	Be-7	0.077 ± 0.011	0.081 ± 0.010	0.079 ± 0.008
DW-10409, 10410	4/1/2002	Gr. Alpha	39.30 ± 4.00	35.30 ± 3.60	37.30 ± 2.69
MI-2052, 2053	4/3/2002	K-40	1283.70 ± 103.20	1434.80 ± 147.90	1359.25 ± 90.17
MI-2052, 2053	4/3/2002	Sr-90	0.81 ± 0.36	0.75 ± 0.35	0.78 ± 0.25
AP-2711, 2712	4/3/2002	Be-7	0.071 ± 0.01	0.07 ± 0.01	0.07 ± 0.01
W-938, 939	4/9/2002	Ni-63	1.73 ± 0.10	1.82 ± 0.10	1.78 ± 0.07
SS-2202, 2203	4/9/2002	Gr. Beta	5.83 ± 1.16	5.52 ± 1.19	5.67 ± 0.83
SS-2202, 2203	4/9/2002	K-40	5.75 ± 0.48	6.11 ± 0.51	5.93 ± 0.35
F-2307, 2308	4/10/2002	K-40	2.75 ± 0.27	2.49 ± 0.32	2.62 ± 0.21
DW-10476, 10477	4/12/2002	Gr. Alpha	5.10 ± 1.30	3.90 ± 1.60	4.50 ± 1.03
W-2244, 2245	4/15/2002	Gr. Beta	1.70 ± 1.10	1.60 ± 1.00	1.65 ± 0.74
DW-10509, 10510	4/17/2002	Gr. Alpha	6.00 ± 2.00	7.30 ± 1.80	6.65 ± 1.35
SW-2690, 2691	4/24/2002	Gr. Beta	2.25 ± 0.68	2.15 ± 0.59	2.20 ± 0.45
SO-2903, 2904	4/24/2002	Be-7	1.22 ± 0.57	0.78 ± 0.43	1.00 ± 0.36
SO-2903, 2904	4/24/2002	Cs-137	0.13 ± 0.05	0.09 ± 0.05	0.11 ± 0.04
SO-2903, 2904	4/24/2002	K-40	21.06 ± 1.48	19.91 ± 1.16	20.48 ± 0.94
DW-10562, 10563	4/24/2002	Gr. Alpha	2.17 ± 1.13	3.25 ± 1.54	2.71 ± 0.96
DW-10578, 10579	4/29/2002	Gr. Alpha	8.20 ± 2.20	7.40 ± 2.00	7.80 ± 1.49
SO-2861, 2862	4/30/2002	Cs-137	236.40 ± 46.00	200.70 ± 52.60	218.55 ± 34.94
SO-2861, 2862	4/30/2002	K-40	10191.00 ± 784.60	11025.00 ± 941.30	10608.00 ± 612.71
SL-2819, 2820	5/1/2002	Be-7	805.70 ± 301.50	860.73 ± 164.80	833.22 ± 171.80
SL-2819, 2820	5/1/2002	Gr. Beta	5566.00 ± 124.00	5359.00 ± 122.00	5462.50 ± 86.98
SL-2819, 2820	5/1/2002	K-40	5524.00 ± 632.90	5277.50 ± 431.40	5400.75 ± 382.97
SL-2840, 2841	5/1/2002	Be-7	1010.00 ± 352.10	872.95 ± 181.70	941.48 ± 198.11
SL-2840, 2841	5/1/2002	Gr. Beta	4399.00 ± 221.80	4593.00 ± 276.00	4496.00 ± 177.04
SL-2840, 2841	5/1/2002	K-40	2422.80 ± 352.10	2254.10 ± 371.40	2338.45 ± 255.89
MI-2971, 2972	5/5/2002	K-40	1338.90 ± 83.44	1345.80 ± 100.90	1342.35 ± 65.47
MI-2971, 2972	5/5/2002	Sr-90	0.83 ± 0.47	1.65 ± 0.46	1.24 ± 0.33
DW-10603, 10604	5/6/2002	Gr. Alpha	6.30 ± 1.70	5.50 ± 1.60	5.90 ± 1.17
SS-3037, 3038	5/9/2002	K-40	11585.00 ± 749.00	11612.00 ± 787.00	11598.50 ± 543.22
MI-3124, 3125	5/13/2002	K-40	1329.50 ± 103.80	1373.00 ± 107.40	1351.25 ± 74.68
MI-3208, 3209	5/14/2002	K-40	1494.60 ± 158.40	1462.60 ± 182.50	1478.60 ± 120.83
LW-3250, 3251	5/15/2002	Gr. Beta	3.14 ± 0.55	3.28 ± 0.63	3.21 ± 0.42

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

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result
CF-3292, 3293	5/20/2002	K-40	1.33 ± 0.99	1.14 ± 0.91	1.23 ± 0.67
MI-3376, 3377	5/26/2002	K-40	1333.30 ± 159.40	1090.70 ± 143.40	1212.00 ± 107.21
MI-3418, 3419	5/28/2002	K-40	1423.70 ± 121.30	1443.30 ± 164.30	1433.50 ± 102.11
SWT-3461, 3462	5/28/2002	Gr. Beta	2.65 ± 0.54	3.28 ± 0.60	2.97 ± 0.40
SO-3503, 3504	5/29/2002	Cs-137	0.17 ± 0.04	0.18 ± 0.05	0.18 ± 0.03
SO-3503, 3504	5/29/2002	Gr. Beta	27.72 ± 2.26	25.45 ± 2.03	26.58 ± 1.52
SO-3503, 3504	5/29/2002	K-40	20.24 ± 1.19	20.54 ± 1.24	20.39 ± 0.86
SL-3545, 3546	6/3/2002	Gr. Beta	4436.00 ± 90.00	4281.00 ± 89.00	4358.50 ± 63.29
SL-3545, 3546	6/3/2002	K-40	4684.20 ± 734.40	5242.50 ± 884.50	4963.35 ± 574.82
DW-10754, 10755	6/6/2002	Sr-90	0.50 ± 0.30	0.60 ± 0.30	0.55 ± 0.21
SW-3777, 3778	6/11/2002	Gr. Alpha	4.42 ± 1.50	2.97 ± 1.40	3.70 ± 1.02
SW-3777, 3778	6/11/2002	Gr. Beta	7.57 ± 1.22	6.83 ± 1.16	7.20 ± 0.84
MI-3798, 3799	6/11/2002	K-40	1433.40 ± 124.20	1401.20 ± 96.96	1417.30 ± 78.78
LW-3924, 3925	6/13/2002	Gr. Beta	3.05 ± 0.59	3.38 ± 0.72	3.21 ± 0.46
MI-3966, 3967	6/18/2002	K-40	1245.20 ± 109.20	1340.20 ± 121.90	1292.70 ± 81.83
MI-3966, 3967	6/18/2002	Sr-90	2.38 ± 0.51	2.63 ± 0.52	2.51 ± 0.36
MI-3987, 3988	6/19/2002	Sr-90	0.98 ± 0.35	0.97 ± 0.35	0.98 ± 0.25
MI-4095, 4096	6/25/2002	K-40	1256.10 ± 138.20	1199.00 ± 128.30	1227.55 ± 94.29
SWU-4221, 4222	6/25/2002	Gr. Beta	6.89 ± 1.97	5.38 ± 1.93	6.13 ± 1.38
LW-4179, 4180	6/27/2002	Gr. Beta	2.37 ± 0.58	2.00 ± 0.62	2.19 ± 0.42
G-4329, 4330	7/1/2002	Be-7	1394.80 ± 538.40	1098.10 ± 437.40	1246.45 ± 346.84
G-4329, 4330	7/1/2002	Gr. Beta	8.10 ± 0.27	8.00 ± 0.25	8.05 ± 0.18
G-4329, 4330	7/1/2002	K-40	7758.20 ± 1100.00	8399.80 ± 929.30	8079.00 ± 720.00
SL-4337, 4338	7/1/2002	Be-7	1480.90 ± 223.80	1726.40 ± 552.60	1603.65 ± 298.10
SL-4337, 4338	7/1/2002	Cs-137	32.30 ± 14.70	50.97 ± 27.10	41.64 ± 15.42
SL-4337, 4338	7/1/2002	Gr. Beta	5262.40 ± 522.10	5432.40 ± 540.00	5347.40 ± 375.56
SL-4337, 4338	7/1/2002	K-40	2249.00 ± 381.90	2989.90 ± 509.60	2619.45 ± 318.41
AP-4864, 4865	7/1/2002	Be-7	0.085 ± 0.009	0.085 ± 0.006	0.085 ± 0.006
MI-4359, 4360	7/2/2002	K-40	1390.10 ± 168.30	1567.40 ± 194.30	1478.75 ± 128.53
AP-4569, 4570	7/2/2002	Be-7	0.068 ± 0.016	0.086 ± 0.018	0.077 ± 0.012
AP-4843, 4844	7/2/2002	Be-7	0.077 ± 0.016	0.090 ± 0.020	0.084 ± 0.013
AP-4789, 4790	7/3/2002	Be-7	0.080 ± 0.013	0.078 ± 0.015	0.079 ± 0.010
SWU-4810, 4811	7/3/2002	Gr. Beta	2.40 ± 0.84	2.47 ± 0.88	2.43 ± 0.61
MI-4548, 4549	7/9/2002	K-40	1511.80 ± 127.00	1446.80 ± 101.80	1479.30 ± 81.38
DW-4737, 4738	7/12/2002	I-131	0.52 ± 0.20	0.49 ± 0.29	0.51 ± 0.18
MI-4632, 4633	7/15/2002	K-40	1198.40 ± 114.10	1371.30 ± 146.90	1284.85 ± 93.00
MI-5054, 5055	7/30/2002	K-40	1428.80 ± 105.60	1344.30 ± 106.40	1386.55 ± 74.95
G-5075, 5076	7/30/2002	Gr. Beta	7.11 ± 0.07	6.99 ± 0.07	7.05 ± 0.05
SWU-5124, 5125	7/30/2002	Gr. Beta	1.75 ± 0.84	1.90 ± 0.78	1.82 ± 0.57
G-5151, 5152	7/31/2002	Be-7	1.82 ± 0.30	2.05 ± 0.32	1.93 ± 0.22
G-5151, 5152	7/31/2002	K-40	5.13 ± 0.66	5.72 ± 0.70	5.42 ± 0.48
MI-5103, 5104	8/2/2002	K-40	1415.90 ± 70.57	1423.80 ± 129.20	1419.85 ± 73.61
LW-5434, 5435	8/5/2002	Gr. Beta	2.77 ± 0.35	2.26 ± 0.35	2.52 ± 0.25
MI-5215, 5216	8/7/2002	K-40	1361.10 ± 111.90	1358.30 ± 115.80	1359.70 ± 80.52

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

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result
MI-5355, 5356	8/13/2002	K-40	1405.00 ± 165.80	1549.30 ± 114.40	1477.15 ± 100.72
F-5413, 5414	8/15/2002	Gr. Beta	2.37 ± 0.10	2.55 ± 0.10	2.46 ± 0.07
F-5413, 5414	8/15/2002	K-40	1.47 ± 0.32	1.73 ± 0.43	1.60 ± 0.27
MI-5603, 5604	8/26/2002	I-131	0.64 ± 0.34	0.52 ± 0.36	0.58 ± 0.25
MI-5603, 5604	8/26/2002	K-40	1353.60 ± 83.13	1261.40 ± 117.80	1307.50 ± 72.09
MI-5578, 5579	8/27/2002	K-40	1301.50 ± 161.70	1381.60 ± 111.20	1341.55 ± 98.12
VE-5682, 5683	8/28/2002	Be-7	0.29 ± 0.10	0.25 ± 0.11	0.27 ± 0.08
VE-5682, 5683	8/28/2002	Gr. Beta	3.79 ± 0.08	3.80 ± 0.08	3.79 ± 0.06
VE-5682, 5683	8/28/2002	K-40	3.06 ± 0.29	3.31 ± 0.42	3.18 ± 0.25
WW-6188, 6189	8/31/2002	Gr. Beta	2.70 ± 0.57	2.30 ± 0.57	2.50 ± 0.41
SL-5724, 5725	9/3/2002	Be-7	0.92 ± 0.19	1.04 ± 0.23	0.98 ± 0.15
SL-5724, 5725	9/3/2002	Cs-137	0.05 ± 0.02	0.05 ± 0.02	0.05 ± 0.01
SL-5724, 5725	9/3/2002	K-40	2.09 ± 0.31	2.28 ± 0.48	2.19 ± 0.29
MI-5877, 5878	9/9/2002	K-40	1340.70 ± 165.00	1168.50 ± 172.50	1254.60 ± 119.35
MI-6157, 6158	9/19/2002	K-40	1372.10 ± 115.10	1136.50 ± 222.70	1254.30 ± 125.34
MI-6258, 6259	9/24/2002	K-40	1328.60 ± 201.00	1312.60 ± 118.60	1320.60 ± 116.69
LW-6278, 6279	9/30/2002	Gr. Beta	2.15 ± 0.51	1.70 ± 0.50	1.93 ± 0.36
MI-6385, 6386	10/1/2002	K-40	1297.10 ± 168.90	1310.10 ± 128.30	1303.60 ± 106.05
BS-6453, 6454	10/1/2002	Cs-137	0.43 ± 0.03	0.44 ± 0.03	0.44 ± 0.02
BS-6453, 6454	10/1/2002	K-40	16.50 ± 0.51	16.80 ± 0.61	16.65 ± 0.40
SO-6478, 6479	10/1/2002	Cs-137	0.074 ± 0.016	0.070 ± 0.016	0.072 ± 0.011
SO-6478, 6479	10/1/2002	Gr. Alpha	8.01 ± 4.36	7.55 ± 4.57	7.78 ± 3.16
SO-6478, 6479	10/1/2002	Gr. Beta	30.41 ± 4.07	33.04 ± 4.28	31.73 ± 2.95
SO-6478, 6479	10/1/2002	K-40	19.82 ± 0.53	20.39 ± 0.58	20.10 ± 0.39
SO-6478, 6479	10/1/2002	Sr-90	0.087 ± 0.017	0.094 ± 0.020	0.091 ± 0.013
AP-6641, 6642	10/1/2002	Be-7	0.070 ± 0.016	0.080 ± 0.015	0.075 ± 0.011
MI-6544, 6545	10/2/2002	K-40	1331.60 ± 125.20	1326.50 ± 171.60	1329.05 ± 106.21
AP-6857, 6858	10/3/2002	Be-7	0.062 ± 0.015	0.071 ± 0.015	0.066 ± 0.010
AP-6857, 6858	10/3/2002	Be-7	0.062 ± 0.015	0.071 ± 0.015	0.066 ± 0.010
AP-6857, 6858	10/3/2002	Be-7	0.062 ± 0.015	0.071 ± 0.015	0.066 ± 0.010
BS-6620, 6621	10/7/2002	Co-60	0.090 ± 0.020	0.11 ± 0.02	0.10 ± 0.01
BS-6620, 6621	10/7/2002	Cs-137	0.62 ± 0.04	0.63 ± 0.03	0.62 ± 0.02
BS-6620, 6621	10/7/2002	K-40	11.38 ± 0.48	10.78 ± 0.52	11.08 ± 0.35
MI-6651, 6652	10/8/2002	K-40	1565.50 ± 141.00	1640.60 ± 189.20	1603.05 ± 117.98
G-6760, 6761	10/9/2002	Be-7	2.17 ± 0.49	2.31 ± 0.34	2.24 ± 0.30
G-6760, 6761	10/9/2002	K-40	6.24 ± 1.00	6.61 ± 0.60	6.42 ± 0.58
SWU-7054, 7055	10/10/2002	Gr. Beta	3.09 ± 0.57	2.06 ± 0.52	2.57 ± 0.39
U-7126, 7127	10/11/2002	Gr. Beta	2.61 ± 1.24	2.61 ± 1.08	2.61 ± 0.82
XW-7768, 7769	10/14/2002	Cs-137	2.25 ± 0.25	2.09 ± 0.18	2.17 ± 0.15
XW-7768, 7769	10/14/2002	H-3	2.63 ± 0.10	2.64 ± 0.10	2.64 ± 0.07
F-7148, 7149	10/15/2002	K-40	2.57 ± 0.28	2.98 ± 0.44	2.77 ± 0.26
BS-7337, 7338	10/23/2002	Co-60	0.083 ± 0.025	0.073 ± 0.031	0.078 ± 0.020
BS-7337, 7338	10/23/2002	Cs-137	0.082 ± 0.019	0.11 ± 0.04	0.10 ± 0.02
BS-7337, 7338	10/23/2002	Gr. Beta	12.54 ± 2.34	12.99 ± 2.22	12.77 ± 1.61
SO-7407, 7408	10/29/2002	Cs-137	0.14 ± 0.03	0.15 ± 0.03	0.15 ± 0.02
SO-7407, 7408	10/29/2002	Gr. Beta	16.73 ± 2.21	16.62 ± 2.27	16.67 ± 1.58
SO-7407, 7408	10/29/2002	K-40	12.05 ± 0.61	12.27 ± 0.81	12.16 ± 0.51

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

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result
MI-7428, 7429	10/29/2002	K-40	1542.60 ± 213.00	1355.80 ± 185.70	1449.20 ± 141.29
pw-7621, 7622	10/30/2002	Gr. Beta	2.22 ± 0.92	2.08 ± 0.83	2.15 ± 0.62
TD-7653, 7654	10/31/2002	H-3	11122.00 ± 387.00	11259.00 ± 390.00	11190.50 ± 274.71
SW-7569, 7570	11/5/2002	Gr. Beta	15.90 ± 1.25	16.24 ± 1.27	16.07 ± 0.89
SW-7569, 7570	11/5/2002	K-40	14.79 ± 1.48	14.79 ± 1.48	14.79 ± 1.05
SO-8010, 8011	11/7/2002	Cs-137	0.11 ± 0.02	0.11 ± 0.03	0.11 ± 0.02
SO-8010, 8011	11/7/2002	K-40	6.91 ± 0.54	7.21 ± 0.54	7.06 ± 0.38
VE-7747, 7748	11/11/2002	Gr. Beta	3.59 ± 0.05	3.25 ± 0.05	3.42 ± 0.03
VE-7747, 7748	11/11/2002	K-40	3.17 ± 0.36	3.26 ± 0.46	3.22 ± 0.29
MI-7789, 7790	11/13/2002	K-40	1319.30 ± 167.60	1301.20 ± 140.70	1310.25 ± 109.41
DW-8082, 8083	11/29/2002	I-131	0.83 ± 0.24	0.98 ± 0.22	0.90 ± 0.16
SW-8054, 8055	12/2/2002	Gr. Beta	2.60 ± 0.46	2.21 ± 0.39	2.41 ± 0.30
SW-8054, 8055	12/2/2002	K-40	1.44 ± 0.14	1.43 ± 0.14	1.44 ± 0.10
MI-8105, 8106	12/4/2002	K-40	1300.60 ± 111.30	1315.40 ± 108.90	1308.00 ± 77.86
TD-8298, 8299	12/5/2002	H-3	355.00 ± 94.00	469.00 ± 99.00	412.00 ± 68.26
MI-8396, 8397	12/17/2002	K-40	1409.20 ± 117.30	1449.60 ± 108.60	1429.40 ± 79.93
SWT-8654, 8655	12/30/2002	Gr. Beta	1.63 ± 0.50	1.40 ± 0.47	1.51 ± 0.34
AP-8783, 8784	12/31/2002	Be-7	0.044 ± 0.009	0.042 ± 0.008	0.043 ± 0.006

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

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

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

			Concentration[b]			
Lab Code	Type	Date	Analysis	Laboratory result	Known Activity	Control Limits[c]
STW-939	water	12/01/01	Am-241	1.25 ± 0.0	1.19 ± 0.0	0.83 - 1.6
STW-939	water	12/01/01	Co-57	138.9 ± 0.5	143 ± 14.3	100.1 - 185.9
STW-939	water	12/01/01	Co-60	139.1 ± 0.5	141 ± 14.1	98.7 - 183.3
STW-939	water	12/01/01	Cs-134	25.16 ± 0.2	28.5 ± 0.3	19.95 - 37.1
STW-939	water	12/01/01	Cs-137	279.96 ± 0.9	286 ± 28.6	200.2 - 371.8
STW-939[d]	water	12/01/01	Fe-55	19.68 ± 23.2	9.2 ± 0.9	6.44 - 12.0
STW-939	water	12/01/01	Mn-54	253.64 ± 0.9	246 ± 0.2	172.2 - 319.8
STW-939	water	12/01/01	Ni-63	65.88 ± 1.9	88.3 ± 8.8	61.81 - 114.8
STW-939[e]	water	12/01/01	Pu-238	0.060 ± 0.01	0.0 ± 0.0	-
STW-939	water	12/01/01	Pu-239/40	2.79 ± 0.0	2.99 ± 0.3	2.09 - 3.9
STW-939	water	12/01/01	Sr-90	4.88 ± 0.3	4.8 ± 0.5	3.36 - 6.2
STW-939	water	12/01/01	U-233/4	0.89 ± 0.0	0.98 ± 0.1	0.69 - 1.3
STW-939	water	12/01/01	U-238	6.75 ± 0.0	7.8 ± 0.8	5.46 - 10.1
STW-939	water	12/01/01	Zn-65	70.6 ± 1.1	67.3 ± 6.7	47.11 - 87.5
STSO-955	soil	10/16/02	Am-241	40.54 ± 2.7	43.5 ± 4.4	30.45 - 56.6
STSO-955	soil	10/16/02	Co-57	210.58 ± 2.0	246 ± 24.6	172.2 - 319.8
STSO-955	soil	10/16/02	Co-60	84.38 ± 0.9	87.5 ± 8.8	61.25 - 113.8
STSO-955	soil	10/16/02	Cs-134	692.6 ± 2.1	862 ± 86.0	603.4 - 1120.6
STSO-955	soil	10/16/02	Cs-137	96.98 ± 1.7	111 ± 11.1	77.7 - 144.3
STSO-955	soil	10/16/02	Fe-55	1714.6 ± 299.6	1870 ± 187.0	1309 - 2431.0
STSO-955	soil	10/16/02	Mn-54	509.74 ± 3.4	546 ± 54.6	382.2 - 709.8
STSO-955	soil	10/16/02	Ni-63	890.6 ± 22.4	1180 ± 118.0	826 - 1534.0
STSO-955	soil	10/16/02	Pu-238	34.04 ± 6.0	33.3 ± 3.3	23.31 - 43.3
STSO-955	soil	10/16/02	Pu-239/40	68.7 ± 3.7	72.9 ± 7.3	51.03 - 94.8
STSO-955[e]	soil	10/16/02	Sr-90	1.5 ± 3.0	0.0 ± 0.0	-
STSO-955	soil	10/16/02	U-233/4	166.33 ± 3.8	229 ± 22.9	160.3 - 297.7
STSO-955	soil	10/16/02	U-238	169.76 ± 3.8	220 ± 22.0	154 - 286.0
STSO-955	soil	10/16/02	Zn-65	783.59 ± 6.4	809 ± 80.9	566.3 - 1051.7

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

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

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

[d] Known activity below the laboratory LLD. The sample was recounted for 2000 minutes; result : 11.52 ± 5.55 Bq /L

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

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

			Concentration[a]			
Lab Code	Type	Date	Analysis	Laboratory results	EML Result[b]	Control Limits[c]
STW-945	Water	03/01/02	Am-241	1.68 ± 0.14	1.47	0.79 - 1.41
STW-945	Water	03/01/02	Co-60	349.20 ± 2.60	347.33	0.80 - 1.20
STW-945	Water	03/01/02	Cs-134	3.40 ± 0.60	3.36	0.80 - 1.30
STW-945	Water	03/01/02	Cs-137	57.20 ± 1.70	56.07	0.80 - 1.22
STW-945	Water	03/01/02	Pu-238	0.45 ± 0.11	0.49	0.74 - 1.20
STW-945	Water	03/01/02	Pu-239/40	4.47 ± 0.28	4.22	0.79 - 1.20
STW-945	Water	03/01/02	Sr-90	7.40 ± 1.30	7.58	0.69 - 1.34
STW-945	Water	03/01/02	Uranium	3.27 ± 0.43	2.84	0.75 - 1.33
STW-946	Water	03/01/02	Gr. Alpha	265.40 ± 7.70	375.00	0.58 - 1.29
STW-946	Water	03/01/02	Gr. Beta	930.60 ± 12.00	1030.00	0.61 - 1.43
STW-946	Water	03/01/02	H-3	226.30 ± 32.70	283.70	0.78 - 2.45
STSO-947	Soil	03/01/02	Ac-228	55.00 ± 5.50	51.17	0.80 - 1.38
STSO-947	Soil	03/01/02	Am-241	8.30 ± 3.30	10.93	0.65 - 2.28
STSO-947	Soil	03/01/02	Bi-212	49.20 ± 12.40	53.43	0.50 - 1.34
STSO-947	Soil	03/01/02	Bi-214	46.60 ± 3.10	53.93	0.78 - 1.42
STSO-947	Soil	03/01/02	Cs-137	1401.60 ± 9.10	1326.67	0.80 - 1.25
STSO-947	Soil	03/01/02	K-40	613.10 ± 28.10	621.67	0.80 - 1.32
STSO-947	Soil	03/01/02	Pb-212	51.60 ± 2.60	51.10	0.78 - 1.32
STSO-947	Soil	03/01/02	Pb-214	52.00 ± 3.60	54.37	0.76 - 1.46
STSO-947	Soil	03/01/02	Pu-239/40	14.70 ± 3.50	19.10	0.71 - 1.30
STSO-947	Soil	03/01/02	Sr-90	52.10 ± 6.30	53.76	0.67 - 2.90
STSO-947	Soil	03/01/02	Th-234	122.40 ± 6.30	89.30	0.63 - 2.35
STSO-947	Soil	03/01/02	Uranium	143.40 ± 9.40	194.77	0.71 - 1.32
STVE-948	Vegetation	03/01/02	Am-241	3.10 ± 2.20	2.23	0.73 - 2.02
STVE-948	Vegetation	03/01/02	Cm-244	0.90 ± 0.80	1.32	0.61 - 1.59
STVE-948	Vegetation	03/01/02	Co-60	13.50 ± 2.10	11.23	0.80 - 1.44
STVE-948	Vegetation	03/01/02	Cs-137	350.40 ± 6.30	313.67	0.80 - 1.31
STVE-948	Vegetation	03/01/02	K-40	940.80 ± 45.60	864.33	0.79 - 1.39
STVE-948[d]	Vegetation	03/01/02	Pu-239/40	16.90 ± 0.70	3.54	0.69 - 1.31
STVE-948	Vegetation	03/01/02	Sr-90	543.40 ± 24.90	586.28	0.55 - 1.21
STAP-949	Air Filter	03/01/02	Am-241	0.09 ± 0.05	0.09	0.70 - 2.34
STAP-949	Air Filter	03/01/02	Co-60	30.10 ± 0.30	30.52	0.80 - 1.26
STAP-949	Air Filter	03/01/02	Cs-137	29.90 ± 0.30	28.23	0.80 - 1.32
STAP-949	Air Filter	03/01/02	Mn-54	40.40 ± 0.40	38.53	0.80 - 1.35
STAP-949	Air Filter	03/01/02	Pu-238	0.05 ± 0.02	0.06	0.67 - 1.33
STAP-949	Air Filter	03/01/02	Pu-239/40	0.15 ± 0.02	0.19	0.73 - 1.26
STAP-949	Air Filter	03/01/02	Sr-90	3.40 ± 0.40	4.83	0.53 - 1.84
STAP-949	Air Filter	03/01/02	Uranium	0.80 ± 0.20	0.61	0.79 - 2.10
STAP-950	Air Filter	03/01/02	Gr. Alpha	0.43 ± 0.04	0.53	0.73 - 1.43
STAP-950	Air Filter	03/01/02	Gr. Beta	1.34 ± 0.05	1.30	0.76 - 1.36
STW-959	Water	09/01/02	Am-241	3.00 ± 0.10	3.04	0.79 - 1.41
STW-959	Water	09/01/02	Co-60	258.40 ± 2.30	268.67	0.80 - 1.20
STW-959	Water	09/01/02	Cs-134	50.80 ± 3.30	60.20	0.80 - 1.30
STW-959	Water	09/01/02	Cs-137	80.10 ± 0.30	81.43	0.80 - 1.22
STW-959	Water	09/01/02	Cs-137	80.10 ± 0.30	81.43	0.80 - 1.22
STW-959	Water	09/01/02	Am-241	3.00 ± 0.10	3.04	0.79 - 1.41

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

Lab Code	Type	Date	Concentration[b] Analysis	Laboratory results	EML Result[c]	Control Limits[d]
STW-959	Water	09/01/02	Am-241	3.00 ± 0.10	3.04	0.79 - 1.41
STW-959	Water	09/01/02	Co-60	258.40 ± 2.30	268.67	0.80 - 1.20
STW-959	Water	09/01/02	Cs-134	50.80 ± 3.30	60.20	0.80 - 1.30
STW-959	Water	09/01/02	Cs-137	80.10 ± 0.30	81.43	0.80 - 1.22
STW-959	Water	09/01/02	H-3	271.90 ± 20.90	227.30	0.78 - 2.45
STW-959	Water	09/01/02	Pu-238	4.40 ± 0.20	4.33	0.74 - 1.20
STW-959	Water	09/01/02	Pu-239/40	2.10 ± 0.10	2.07	0.79 - 1.20
STW-959	Water	09/01/02	Sr-90	9.70 ± 0.20	8.69	0.69 - 1.34
STW-959	Water	09/01/02	Uranium	5.60 ± 0.10	6.84	0.75 - 1.33
STW-960	Water	09/01/02	Gr. Alpha	204.90 ± 3.20	210.00	0.58 - 1.29
STW-960	Water	09/01/02	Gr. Beta	852.00 ± 26.50	900.00	0.61 - 1.43
STSO-961	Soil	09/01/02	Ac-228	47.60 ± 1.90	42.30	0.80 - 1.38
STSO-961	Soil	09/01/02	Am-241	7.80 ± 1.40	6.77	0.65 - 2.28
STSO-961	Soil	09/01/02	Bi-212	45.60 ± 1.70	45.93	0.50 - 1.34
STSO-961[e]	Soil	09/01/02	Bi-214	48.80 ± 4.90	33.63	0.78 - 1.42
STSO-961	Soil	09/01/02	Cs-137	819.60 ± 16.60	829.33	0.80 - 1.25
STSO-961	Soil	09/01/02	K-40	705.30 ± 31.40	637.67	0.80 - 1.32
STSO-961	Soil	09/01/02	Pb-212	48.60 ± 3.40	43.43	0.78 - 1.32
STSO-961	Soil	09/01/02	Pb-214	51.10 ± 5.10	35.20	0.76 - 1.46
STSO-961[f]	Soil	09/01/02	Pu-239/40	20.20 ± 0.80	12.90	0.71 - 1.30
STSO-961	Soil	09/01/02	Sr-90	38.50 ± 0.10	41.16	0.67 - 2.90
STSO-961[g]	Soil	09/01/02	Uranium	58.90 ± 0.70	87.21	0.71 - 1.32
STVE-962	Vegetation	09/01/02	Am-241	2.10 ± 0.30	2.25	0.73 - 2.02
STVE-962	Vegetation	09/01/02	Cm-244	1.00 ± 0.30	1.25	0.61 - 1.59
STVE-962	Vegetation	09/01/02	Co-60	11.80 ± 1.50	9.66	0.80 - 1.44
STVE-962	Vegetation	09/01/02	Cs-137	340.30 ± 16.80	300.67	0.80 - 1.31
STVE-962	Vegetation	09/01/02	K-40	1646.00 ± 74.40	1480.00	0.79 - 1.39
STVE-962	Vegetation	09/01/02	Pu-239/40	3.00 ± 0.30	3.43	0.69 - 1.31
STVE-962	Vegetation	09/01/02	Sr-90	345.60 ± 97.80	476.26	0.55 - 1.21
STAP-963[h]	Air Filter	09/01/02	Am-241	0.20 ± 0.01	0.19	0.70 - 2.34
STAP-963	Air Filter	09/01/02	Co-60	24.90 ± 0.60	23.00	0.80 - 1.26
STAP-963	Air Filter	09/01/02	Cs-137	38.00 ± 1.30	32.50	0.80 - 1.32
STAP-963	Air Filter	09/01/02	Mn-54	60.80 ± 1.90	52.20	0.80 - 1.35
STAP-963[h]	Air Filter	09/01/02	Pu-238	0.11 ± 0.02	0.12	0.67 - 1.33
STAP-963[h]	Air Filter	09/01/02	Pu-239/40	0.21 ± 0.01	0.21	0.73 - 1.26
STAP-963	Air Filter	09/01/02	Sr-90	5.20 ± 0.20	5.56	0.53 - 1.84
STAP-963[h]	Air Filter	09/01/02	Uranium	0.41 ± 0.04	0.47	0.79 - 2.10
STAP-964	Air Filter	09/01/02	Gr. Alpha	0.40 ± 0.10	0.29	0.73 - 1.43
STAP-964	Air Filter	09/01/02	Gr. Beta	0.80 ± 0.10	0.87	0.76 - 1.36

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

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

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

[d] An error was found in the conversion from pCi/g to Bq/kg. Corrected result : 2.84 ± 0.59 Bq/kg.

[e] Naturally-occurring radium daughters are present in the shield background, and a probable cause of the higher bias seen for isotopes of lead and bismuth.

[f] Reporting error.The average result of the triplicate analyses was 14.1± 5.7 Bq/kg.

[g] The analysis was repeated in duplicate; result of reanalysis, 87.05 ± 7.64 Bq/kg.

[h] STAP-963, Calculations for the transuranics analyses (Am-241, Uranium, Pu-238, -239/40) were not converted to Bq/total filter. The data listed is the result of recalculation.