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**NEVADA TEST SITE  
ANNUAL SITE ENVIRONMENTAL  
REPORT - 1989**



**Volume II - Appendices**

Editors: Donald T. Wruble and Elizabeth M. McDowell

November 1990

Work Performed Under  
Contract No. DE-AC08-89NV10630

prepared by:

Reynolds Electrical & Engineering Co., Inc.  
Post Office Box 98521  
Las Vegas, Nevada 89193-8521

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United States Environmental Protection Agency  
Environmental Monitoring Systems Laboratory  
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Las Vegas, Nevada 89193-3478

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# FOREWORD

These appendices contain 1989 NTS onsite environmental monitoring results. The data presented are accompanied by summaries of statistical evaluations of the data. Offsite data collected by the EPA are available from the U.S Environmental Protection Agency, Environmental Monitoring Systems Laboratory, Las Vegas, Nevada.

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# APPENDIX A

## ONSITE <sup>238</sup>Pu, <sup>239</sup>Pu, GAMMA-EMITTING RADIONUCLIDES, AND GROSS BETA IN AIR

Lawrence E. Barker

Sampling locations, dates sampling began and ended, and each sample's measured concentration and analytical standard deviation are given in Tables A.1, A.2, A.3, and A.4. Statistical analyses of these data are discussed below.

### PLUTONIUM-238

The average measured concentration of airborne <sup>238</sup>Pu in particulates was  $2.8 \times 10^{-18}$   $\mu\text{Ci/mL}$ . Measured concentrations ranged from a low of  $-5.6 \times 10^{-17}$   $\mu\text{Ci/mL}$ , measured between April 1 and 30 at Ue7ns, to a high of  $4.3 \times 10^{-17}$   $\mu\text{Ci/mL}$ , measured between October 2 and 31 at E-MAD South. More than 61 percent of the measured concentrations were above the minimum detectable concentration.

The average measured concentration of <sup>238</sup>Pu in particulates was 0.000092 of the Derived Concentration Guide (DCG) of  $3 \times 10^{-14}$   $\mu\text{Ci/mL}$  given in DOE Order 5400.5. If the single very small concentration observed in April at Ue7ns is omitted, the average concentration is  $2.85 \times 10^{-18}$   $\mu\text{Ci/mL}$ , or 0.000095 of the DCG.

There is little evidence concentrations differed in location or time. The distributions of the data subsets were examined using exploratory data analysis methods. In most cases both normality and log-normality were acceptable assumptions. Since it is easier to statistically interpret normal data than log-normal data, the normal distribution was chosen. Concentrations were compared in time and space using a two-way analysis of variance. The patterns of significant differences were identified using Fisher's multiple comparison method.

Differences in measured concentrations among sampling locations were not statistically significant at the five percent level. Differences over time were not statistically significant at the five percent level except for the smaller concentration in April. That is, differences in measured concentrations among sampling locations and over time (except for concentrations measured in April) are small enough to plausibly attribute to random variation. The difference between concentrations in April and the rest of the year is attributable to the single, very low concentration measured at Ue7ns. Without this value, differences in measured concentrations do not differ in a statistically significant manner over time.

### PLUTONIUM-239

The same statistical procedures used to examine <sup>238</sup>Pu data were applied to the <sup>239</sup>Pu data. The average measured concentration of airborne <sup>239</sup>Pu in particulates was  $3.98 \times 10^{-17}$   $\mu\text{Ci/mL}$ . Measured concentrations ranged from a low of  $-1.2 \times 10^{-17}$   $\mu\text{Ci/mL}$ , measured between October 2 and 31 at Area 5 RWMS No. 2, to a high of  $1.2 \times 10^{-15}$   $\mu\text{Ci/mL}$ , measured between October 28 and January 2, 1990, at the BJY.

A review of the counting results did not reveal an explanation for this abnormal result at the BJY. Results from the previous and following months were on the order of  $10^{-17}$

μCi/mL, which are considered typical concentrations of <sup>239</sup>Pu in particulates at the BJY. This sampling station is close to areas which contain low-fired plutonium contamination in soil. However, since the previous and following month's concentrations were 100 times less, this suggests that this result was anomalous and not an indicator of the <sup>239</sup>Pu in particulate levels in the BJY environment. Assuming that the laboratory analysis was without error, the result must stand as is. In this case the annual average <sup>239</sup>Pu in particulates at the BJY of  $1.3 \times 10^{-16}$  μCi/mL still falls well below (0.75 percent of) the DCG for this radionuclide.

The average measured concentration of <sup>239</sup>Pu in particulates is approximately 0.002 of the DCG for <sup>239</sup>Pu in particulates of  $2.0 \times 10^{-14}$  μCi/mL given in DOE Order 5400.5. Differences over time in measured concentrations were not statistically significant at the five percent level. Measured concentrations compared over locations differed, and fell into three distinct groups.

The highest average measured concentrations were at Area 3 ah/at, where measured concentrations ranged from  $1.8 \times 10^{-19}$  to  $9.4 \times 10^{-16}$  μCi/mL, with an average concentration of  $2.1 \times 10^{-16}$  μCi/mL. As this is a waste storage area, it is not surprising to find higher concentrations of <sup>239</sup>Pu in particulates. Intermediate concentrations were found at the Area 3 Complex, 9-300 Bunker, BJY, 3-300 Bunker, and Area 3 Complex No. 2. These are grouped together here since differences among average concentrations were not statistically significant at the five percent level. At these locations, measured concentrations averaged  $1.1 \times 10^{-16}$  μCi/mL. The BJY's concentrations fall in the intermediate group despite this location having the single greatest measured concentration. This is due to a single atypically large measured concentration. If this single observation is ignored, the average measured concentration at the BJY is  $5.0 \times 10^{-17}$  μCi/mL, and the BJY is removed from the intermediate group. For the remainder of the NTS, measured concentrations averaged  $1.5 \times 10^{-17}$  μCi/mL.

### GAMMA-EMITTING RADIONUCLIDES

The statistical procedures used to examine the plutonium data were also applied to data from gamma-emitting radionuclides. Gamma-emitting radionuclides were detected in samples from 42 of the 52 air sampling stations. The radionuclides detected were: <sup>241</sup>Am, <sup>243</sup>Am, <sup>7</sup>Be, <sup>144</sup>Ce, <sup>57</sup>Cs, <sup>137</sup>Co, <sup>131</sup>I, <sup>40</sup>K, <sup>231</sup>Pa, <sup>101</sup>Rh, <sup>106</sup>Ru, <sup>232</sup>Th, <sup>235</sup>U, and <sup>238</sup>U. As radionuclides differ in both chemical and radiological properties, measured concentrations differed among radionuclides. If the radionuclides are made one of the factors in the analysis of variance, differences in time and among sampling locations are not statistically significant at the five percent level. That is, all differences can be plausibly attributed to the detection of different radionuclides or to random variation.

At any time or location, only four radionuclides were found in more than four samples. Even those radionuclides commonly found were not present in many samples. The average concentrations of these radionuclides, in μCi/mL, over all sampling locations in which each radionuclide was found and over all sampling locations whether or not the radionuclide was present are:

<u>Radionuclide</u>	<u>Number of Samples Containing the Radionuclide</u>	<u>Average Over Samples Containing the Radionuclide</u>	<u>Average Over All Samples</u>
<sup>40</sup> K	82	$6.92 \times 10^{-14}$	$4.33 \times 10^{-14}$
<sup>106</sup> Ru	5	$1.95 \times 10^{-14}$	$7.44 \times 10^{-16}$
<sup>232</sup> Th	12	$3.14 \times 10^{-14}$	$2.88 \times 10^{-15}$
<sup>238</sup> U	7	$7.07 \times 10^{-14}$	$3.78 \times 10^{-15}$

The fractions of DCGs for inhaled air given in DOE Order 5400.5 for  $^{40}\text{K}$ ,  $^{106}\text{Ru}$ ,  $^{232}\text{Th}$ , and  $^{238}\text{U}$  averaged over all samples are, respectively, 0.000048, 0.0000074, 0.29, and 0.0019.

### GROSS BETA IN AIR

Measured concentrations of gross beta in air ranged from 0.0  $\mu\text{Ci/mL}$ , measured between June 12 and 19 at the East Boundary, to a high of  $7.0 \times 10^{-13}$ , measured between July 17 and 24 at Area 5 RWMS No. 5. As samples collected at Gate 200 are not analyzed in the same manner as those collected elsewhere, average concentrations for Gate 200 and elsewhere are treated separately.

At locations other than Gate 200, samples are held between five and seven days prior to analysis to allow naturally-occurring radon and its daughter products to decay. Samples collected at Gate 200 are analyzed as quickly as possible, without allowing for radon decay, and hence tend to have greater measured concentrations. Measured concentrations of gross beta in air at Gate 200 range from  $8.6 \times 10^{-15}$  to  $1.3 \times 10^{-13}$   $\mu\text{Ci/mL}$ , with an average measured concentration of  $4.0 \times 10^{-14}$   $\mu\text{Ci/mL}$ . Measured concentrations of gross beta in air for the rest of the NTS averaged  $2.16 \times 10^{-14}$   $\mu\text{Ci/mL}$ .

Other than Gate 200, differences among locations were not statistically significant at the five percent level. Differences over time were not statistically significant at the five percent level, suggesting little difference exists in space or time for concentrations of gross beta in air.

Table A.1 <sup>238</sup>Pu in Air

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 1, BJJ	01/01/89	01/31/89	$8.2 \times 10^{-18}$	$6.2 \times 10^{-18}$
Area 1, BJJ	02/01/89	02/28/89	$3.1 \times 10^{-17}$	$9.3 \times 10^{-18}$
Area 1, BJJ	03/01/89	03/31/89	$3.4 \times 10^{-18}$	$5.4 \times 10^{-18}$
Area 1, BJJ	04/01/89	04/30/89	$-7.7 \times 10^{-18}$	$7.2 \times 10^{-18}$
Area 1, BJJ	05/01/89	05/31/89	$5.8 \times 10^{-18}$	$7.6 \times 10^{-18}$
Area 1, BJJ	06/03/89	07/07/89	$5.3 \times 10^{-18}$	$7.6 \times 10^{-18}$
Area 1, BJJ	07/05/89	07/31/89	$1.2 \times 10^{-17}$	$1.3 \times 10^{-17}$
Area 1, BJJ	07/31/89	09/06/89	$-5.4 \times 10^{-18}$	$5.2 \times 10^{-18}$
Area 1, BJJ	09/06/89	10/02/89	$9.7 \times 10^{-18}$	$8.3 \times 10^{-18}$
Area 1, BJJ	10/02/89	10/31/89	$-2.8 \times 10^{-18}$	$6.7 \times 10^{-18}$
Area 1, BJJ	10/30/89	11/28/89	$2.7 \times 10^{-18}$	$7.3 \times 10^{-18}$
Area 1, BJJ	11/28/89	01/02/90	$1.2 \times 10^{-17}$	$8.4 \times 10^{-18}$
Area 1, Gravel Pit	01/01/89	01/31/89	$1.7 \times 10^{-18}$	$3.0 \times 10^{-18}$
Area 1, Gravel Pit	02/01/89	02/28/89	$1.2 \times 10^{-17}$	$6.0 \times 10^{-18}$
Area 1, Gravel Pit	03/01/89	03/31/89	$2.1 \times 10^{-20}$	$4.0 \times 10^{-18}$
Area 1, Gravel Pit	04/01/89	04/30/89	$-2.7 \times 10^{-18}$	$6.1 \times 10^{-18}$
Area 1, Gravel Pit	05/01/89	05/31/89	$2.4 \times 10^{-18}$	$7.3 \times 10^{-18}$
Area 1, Gravel Pit	06/03/89	07/07/89	$3.7 \times 10^{-18}$	$6.4 \times 10^{-18}$
Area 1, Gravel Pit	07/05/89	07/31/89	$2.1 \times 10^{-19}$	$7.6 \times 10^{-18}$
Area 1, Gravel Pit	07/31/89	09/06/89	$1.4 \times 10^{-18}$	$4.7 \times 10^{-18}$
Area 1, Gravel Pit	09/06/89	10/02/89	$2.1 \times 10^{-18}$	$6.6 \times 10^{-18}$
Area 1, Gravel Pit	10/02/89	10/31/89	$-1.3 \times 10^{-17}$	$8.0 \times 10^{-18}$
Area 1, Gravel Pit	10/30/89	11/28/89	$4.8 \times 10^{-18}$	$7.3 \times 10^{-18}$
Area 1, Gravel Pit	11/28/89	01/02/90	$7.4 \times 10^{-18}$	$6.3 \times 10^{-18}$
Area 2, 2-1 Substation	01/01/89	01/31/89	$9.7 \times 10^{-18}$	$4.3 \times 10^{-18}$
Area 2, 2-1 Substation	02/01/89	02/28/89	$1.5 \times 10^{-17}$	$4.8 \times 10^{-18}$
Area 2, 2-1 Substation	03/01/89	03/31/89	$2.9 \times 10^{-18}$	$4.7 \times 10^{-18}$
Area 2, 2-1 Substation	04/01/89	04/30/89	$-4.9 \times 10^{-18}$	$7.0 \times 10^{-18}$
Area 2, 2-1 Substation	05/01/89	05/31/89	$-5.8 \times 10^{-18}$	$4.2 \times 10^{-18}$
Area 2, 2-1 Substation	06/03/89	07/07/89	$4.9 \times 10^{-18}$	$6.6 \times 10^{-18}$
Area 2, 2-1 Substation	07/05/89	07/31/89	$3.8 \times 10^{-18}$	$8.5 \times 10^{-18}$
Area 2, 2-1 Substation	07/31/89	09/06/89	$8.2 \times 10^{-18}$	$9.8 \times 10^{-18}$
Area 2, 2-1 Substation	09/06/89	10/02/89	$7.6 \times 10^{-19}$	$7.2 \times 10^{-18}$
Area 2, 2-1 Substation	10/02/89	10/31/89	$-2.1 \times 10^{-18}$	$9.1 \times 10^{-18}$
Area 2, 2-1 Substation	10/30/89	11/28/89	$1.0 \times 10^{-18}$	$5.7 \times 10^{-18}$
Area 2, 2-1 Substation	11/28/89	01/02/90	$-1.0 \times 10^{-18}$	$6.0 \times 10^{-18}$
Area 2, Complex	01/01/89	01/31/89	$1.7 \times 10^{-17}$	$6.5 \times 10^{-18}$
Area 2, Complex	02/01/89	02/28/89	$1.3 \times 10^{-17}$	$4.8 \times 10^{-18}$
Area 2, Complex	03/01/89	03/31/89	$-4.1 \times 10^{-19}$	$4.4 \times 10^{-18}$
Area 2, Complex	04/01/89	04/30/89	$1.2 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 2, Complex	05/01/89	05/31/89	$1.7 \times 10^{-17}$	$1.0 \times 10^{-17}$
Area 2, Complex	06/03/89	07/07/89	$6.3 \times 10^{-18}$	$5.7 \times 10^{-18}$
Area 2, Complex	07/05/89	07/31/89	$5.2 \times 10^{-18}$	$6.4 \times 10^{-18}$
Area 2, Complex	07/31/89	09/06/89	$-3.3 \times 10^{-18}$	$5.8 \times 10^{-18}$
Area 2, Complex	09/06/89	10/02/89	$3.6 \times 10^{-18}$	$6.2 \times 10^{-18}$
Area 2, Complex	10/30/89	11/28/89	$-3.6 \times 10^{-18}$	$4.7 \times 10^{-18}$
Area 2, Complex	11/28/89	01/02/90	$2.9 \times 10^{-18}$	$6.0 \times 10^{-18}$
Area 3, 3-300 Bunker	01/01/89	01/31/89	$1.0 \times 10^{-17}$	$4.4 \times 10^{-18}$
Area 3, 3-300 Bunker	02/01/89	02/28/89	$8.1 \times 10^{-18}$	$4.0 \times 10^{-18}$
Area 3, 3-300 Bunker	03/01/89	03/31/89	$5.1 \times 10^{-18}$	$4.6 \times 10^{-18}$



Table A.1 (<sup>238</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 3, 3-300 Bunker	04/01/89	04/30/89	$-3.2 \times 10^{-18}$	$7.3 \times 10^{-18}$
Area 3, 3-300 Bunker	05/01/89	05/31/89	$-4.5 \times 10^{-18}$	$6.8 \times 10^{-18}$
Area 3, 3-300 Bunker	06/03/89	07/07/89	$1.2 \times 10^{-17}$	$7.4 \times 10^{-18}$
Area 3, 3-300 Bunker	07/05/89	07/31/89	$8.8 \times 10^{-18}$	$7.0 \times 10^{-18}$
Area 3, 3-300 Bunker	07/31/89	09/06/89	$-3.5 \times 10^{-18}$	$4.8 \times 10^{-18}$
Area 3, 3-300 Bunker	09/06/89	10/02/89	$1.0 \times 10^{-17}$	$7.4 \times 10^{-18}$
Area 3, 3-300 Bunker	10/02/89	10/31/89	$6.2 \times 10^{-18}$	$7.5 \times 10^{-18}$
Area 3, 3-300 Bunker	10/30/89	11/28/89	$2.1 \times 10^{-17}$	$9.9 \times 10^{-18}$
Area 3, 3-300 Bunker	11/28/89	01/02/90	$-7.2 \times 10^{-18}$	$7.2 \times 10^{-18}$
Area 3, ah/at East	01/01/89	01/31/89	$1.4 \times 10^{-17}$	$7.0 \times 10^{-18}$
Area 3, ah/at East	02/01/89	02/28/89	$4.2 \times 10^{-18}$	$5.3 \times 10^{-18}$
Area 3, ah/at East	03/01/89	03/31/89	$6.1 \times 10^{-18}$	$5.4 \times 10^{-18}$
Area 3, ah/at East	04/01/89	04/30/89	$9.3 \times 10^{-18}$	$5.1 \times 10^{-18}$
Area 3, ah/at East	05/01/89	05/31/89	$4.7 \times 10^{-18}$	$4.1 \times 10^{-18}$
Area 3, ah/at East	06/03/89	07/07/89	$-4.6 \times 10^{-18}$	$9.4 \times 10^{-18}$
Area 3, ah/at East	07/05/89	07/31/89	$-2.1 \times 10^{-18}$	$6.3 \times 10^{-18}$
Area 3, ah/at East	07/31/89	09/06/89	$-6.4 \times 10^{-19}$	$7.8 \times 10^{-18}$
Area 3, ah/at East	09/06/89	10/02/89	$6.2 \times 10^{-18}$	$6.1 \times 10^{-18}$
Area 3, ah/at East	10/02/89	10/31/89	$-1.5 \times 10^{-18}$	$2.8 \times 10^{-17}$
Area 3, ah/at East	10/30/89	11/28/89	$5.7 \times 10^{-18}$	$6.7 \times 10^{-18}$
Area 3, ah/at East	11/28/89	01/02/90	$-3.0 \times 10^{-17}$	$8.9 \times 10^{-18}$
Area 3, ah/at North	01/01/89	01/31/89	$1.6 \times 10^{-17}$	$6.5 \times 10^{-18}$
Area 3, ah/at North	02/01/89	02/28/89	$5.8 \times 10^{-18}$	$4.9 \times 10^{-18}$
Area 3, ah/at North	03/01/89	03/31/89	$3.9 \times 10^{-18}$	$5.1 \times 10^{-18}$
Area 3, ah/at North	04/01/89	04/30/89	$6.3 \times 10^{-18}$	$4.5 \times 10^{-18}$
Area 3, ah/at North	05/01/89	05/31/89	$-6.4 \times 10^{-19}$	$5.1 \times 10^{-18}$
Area 3, ah/at North	06/03/89	07/07/89	$2.0 \times 10^{-18}$	$6.9 \times 10^{-18}$
Area 3, ah/at North	07/05/89	07/31/89	$-1.2 \times 10^{-18}$	$7.3 \times 10^{-18}$
Area 3, ah/at North	07/31/89	09/06/89	$1.3 \times 10^{-17}$	$6.5 \times 10^{-18}$
Area 3, ah/at North	09/06/89	10/02/89	$-2.8 \times 10^{-18}$	$5.8 \times 10^{-18}$
Area 3, ah/at North	10/02/89	10/31/89	$2.5 \times 10^{-18}$	$6.1 \times 10^{-18}$
Area 3, ah/at North	11/28/89	01/02/90	$-1.0 \times 10^{-17}$	$3.9 \times 10^{-18}$
Area 3, ah/at South	01/01/89	01/31/89	$1.0 \times 10^{-17}$	$3.9 \times 10^{-18}$
Area 3, ah/at South	02/01/89	02/28/89	$1.0 \times 10^{-17}$	$1.2 \times 10^{-17}$
Area 3, ah/at South	03/01/89	03/31/89	$9.0 \times 10^{-18}$	$5.4 \times 10^{-18}$
Area 3, ah/at South	04/01/89	04/30/89	$-3.9 \times 10^{-18}$	$5.4 \times 10^{-18}$
Area 3, ah/at South	05/01/89	05/31/89	$1.4 \times 10^{-18}$	$5.2 \times 10^{-18}$
Area 3, ah/at South	06/03/89	07/07/89	$-6.4 \times 10^{-18}$	$6.7 \times 10^{-18}$
Area 3, ah/at South	07/05/89	07/31/89	$-7.6 \times 10^{-19}$	$6.5 \times 10^{-18}$
Area 3, ah/at South	07/31/89	09/06/89	$8.1 \times 10^{-18}$	$5.7 \times 10^{-18}$
Area 3, ah/at South	09/06/89	10/02/89	$4.4 \times 10^{-18}$	$6.0 \times 10^{-18}$
Area 3, ah/at South	10/02/89	10/31/89	$2.6 \times 10^{-18}$	$6.1 \times 10^{-18}$
Area 3, ah/at South	10/30/89	11/28/89	$1.1 \times 10^{-17}$	$6.2 \times 10^{-18}$
Area 3, ah/at South	11/28/89	01/02/90	$6.6 \times 10^{-18}$	$6.5 \times 10^{-18}$
Area 3, ah/at West	01/01/89	01/31/89	$1.8 \times 10^{-17}$	$9.0 \times 10^{-18}$
Area 3, ah/at West	02/01/89	02/28/89	$9.0 \times 10^{-18}$	$4.3 \times 10^{-18}$
Area 3, ah/at West	03/01/89	03/31/89	$5.8 \times 10^{-18}$	$5.2 \times 10^{-18}$
Area 3, ah/at West	04/01/89	04/30/89	$3.4 \times 10^{-18}$	$4.8 \times 10^{-18}$
Area 3, ah/at West	05/01/89	05/31/89	$9.7 \times 10^{-18}$	$5.6 \times 10^{-18}$
Area 3, ah/at West	06/03/89	07/07/89	$-4.5 \times 10^{-18}$	$6.2 \times 10^{-18}$

Table A.1 (<sup>238</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		μCi/mL	
	Start	End	Concentration	Standard Deviation (s)
Area 3, ah/at West	07/05/89	07/31/89	2.8 x 10 <sup>-17</sup>	1.0 x 10 <sup>-17</sup>
Area 3, ah/at West	07/31/89	09/06/89	3.9 x 10 <sup>-18</sup>	8.5 x 10 <sup>-18</sup>
Area 3, ah/at West	09/06/89	10/02/89	1.7 x 10 <sup>-18</sup>	6.1 x 10 <sup>-18</sup>
Area 3, ah/at West	10/02/89	10/31/89	3.9 x 10 <sup>-18</sup>	6.1 x 10 <sup>-18</sup>
Area 3, ah/at West	10/30/89	11/28/89	-1.5 x 10 <sup>-18</sup>	7.0 x 10 <sup>-18</sup>
Area 3, ah/at West	11/28/89	01/02/90	-1.3 x 10 <sup>-17</sup>	8.2 x 10 <sup>-18</sup>
Area 3, Complex No. 2	01/01/89	01/31/89	1.6 x 10 <sup>-17</sup>	5.5 x 10 <sup>-18</sup>
Area 3, Complex No. 2	02/01/89	02/28/89	8.1 x 10 <sup>-18</sup>	5.3 x 10 <sup>-18</sup>
Area 3, Complex No. 2	03/01/89	03/31/89	1.7 x 10 <sup>-17</sup>	6.7 x 10 <sup>-18</sup>
Area 3, Complex No. 2	04/01/89	04/30/89	4.0 x 10 <sup>-18</sup>	9.6 x 10 <sup>-18</sup>
Area 3, Complex No. 2	05/01/89	05/31/89	-6.3 x 10 <sup>-18</sup>	5.3 x 10 <sup>-18</sup>
Area 3, Complex No. 2	07/05/89	07/31/89	2.3 x 10 <sup>-17</sup>	1.1 x 10 <sup>-17</sup>
Area 3, Complex No. 2	07/31/89	09/06/89	2.8 x 10 <sup>-18</sup>	5.3 x 10 <sup>-18</sup>
Area 3, Complex No. 2	09/06/89	10/02/89	3.1 x 10 <sup>-18</sup>	7.0 x 10 <sup>-18</sup>
Area 3, Complex No. 2	10/02/89	10/31/89	4.5 x 10 <sup>-18</sup>	7.1 x 10 <sup>-18</sup>
Area 3, Complex No. 2	10/30/89	11/28/89	9.4 x 10 <sup>-18</sup>	8.0 x 10 <sup>-18</sup>
Area 3, Complex No. 2	11/28/89	01/02/90	-4.4 x 10 <sup>-18</sup>	5.6 x 10 <sup>-18</sup>
Area 3, Compound	01/01/89	01/31/89	8.2 x 10 <sup>-18</sup>	4.6 x 10 <sup>-18</sup>
Area 3, Compound	02/01/89	02/28/89	4.4 x 10 <sup>-18</sup>	3.9 x 10 <sup>-18</sup>
Area 3, Compound	03/01/89	03/31/89	3.0 x 10 <sup>-18</sup>	6.0 x 10 <sup>-18</sup>
Area 3, Compound	04/01/89	04/30/89	-3.2 x 10 <sup>-18</sup>	7.4 x 10 <sup>-18</sup>
Area 3, Compound	05/01/89	05/31/89	9.1 x 10 <sup>-18</sup>	8.8 x 10 <sup>-18</sup>
Area 3, Compound	06/03/89	07/07/89	-6.9 x 10 <sup>-20</sup>	5.2 x 10 <sup>-18</sup>
Area 3, Compound	07/31/89	09/06/89	-5.0 x 10 <sup>-18</sup>	6.0 x 10 <sup>-18</sup>
Area 3, Compound	09/06/89	10/02/89	1.7 x 10 <sup>-18</sup>	6.3 x 10 <sup>-18</sup>
Area 3, Compound	10/02/89	10/31/89	6.9 x 10 <sup>-18</sup>	8.6 x 10 <sup>-18</sup>
Area 3, Compound	10/30/89	11/28/89	-6.6 x 10 <sup>-18</sup>	6.5 x 10 <sup>-18</sup>
Area 3, Compound	11/28/89	01/02/90	-4.0 x 10 <sup>-18</sup>	6.6 x 10 <sup>-18</sup>
Area 5, DOD Yard	01/01/89	01/31/89	1.3 x 10 <sup>-17</sup>	4.7 x 10 <sup>-18</sup>
Area 5, DOD Yard	02/01/89	02/28/89	1.2 x 10 <sup>-17</sup>	4.5 x 10 <sup>-18</sup>
Area 5, DOD Yard	03/01/89	03/31/89	2.2 x 10 <sup>-18</sup>	3.7 x 10 <sup>-18</sup>
Area 5, DOD Yard	04/01/89	04/30/89	1.7 x 10 <sup>-18</sup>	7.9 x 10 <sup>-18</sup>
Area 5, DOD Yard	05/01/89	05/31/89	-2.3 x 10 <sup>-19</sup>	4.9 x 10 <sup>-18</sup>
Area 5, DOD Yard	06/03/89	07/07/89	-1.2 x 10 <sup>-18</sup>	4.5 x 10 <sup>-18</sup>
Area 5, DOD Yard	07/05/89	07/31/89	9.5 x 10 <sup>-18</sup>	6.7 x 10 <sup>-18</sup>
Area 5, DOD Yard	07/31/89	09/06/89	1.0 x 10 <sup>-18</sup>	5.2 x 10 <sup>-18</sup>
Area 5, DOD Yard	09/06/89	10/02/89	2.2 x 10 <sup>-18</sup>	5.5 x 10 <sup>-18</sup>
Area 5, DOD Yard	10/02/89	10/31/89	5.9 x 10 <sup>-18</sup>	8.0 x 10 <sup>-18</sup>
Area 5, DOD Yard	10/30/89	11/28/89	8.3 x 10 <sup>-18</sup>	5.6 x 10 <sup>-18</sup>
Area 5, DOD Yard	11/28/89	01/02/90	1.1 x 10 <sup>-18</sup>	6.0 x 10 <sup>-18</sup>
Area 5, Gate 200	01/01/89	01/31/89	2.3 x 10 <sup>-17</sup>	5.8 x 10 <sup>-18</sup>
Area 5, Gate 200	02/01/89	02/28/89	-5.2 x 10 <sup>-19</sup>	4.9 x 10 <sup>-18</sup>
Area 5, Gate 200	03/01/89	03/31/89	-9.6 x 10 <sup>-18</sup>	5.9 x 10 <sup>-18</sup>
Area 5, Gate 200	04/01/89	04/30/89	7.1 x 10 <sup>-18</sup>	4.9 x 10 <sup>-18</sup>
Area 5, Gate 200	05/01/89	05/31/89	1.6 x 10 <sup>-18</sup>	4.3 x 10 <sup>-18</sup>
Area 5, Gate 200	06/03/89	07/07/89	-8.8 x 10 <sup>-19</sup>	7.6 x 10 <sup>-18</sup>
Area 5, Gate 200	07/05/89	07/31/89	-7.8 x 10 <sup>-18</sup>	6.0 x 10 <sup>-18</sup>
Area 5, Gate 200	07/31/89	09/06/89	1.9 x 10 <sup>-18</sup>	5.5 x 10 <sup>-18</sup>
Area 5, Gate 200	09/06/89	10/02/89	9.3 x 10 <sup>-18</sup>	6.9 x 10 <sup>-18</sup>
Area 5, Gate 200	10/02/89	10/31/89	1.1 x 10 <sup>-18</sup>	6.0 x 10 <sup>-18</sup>

Table A.1 (<sup>238</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		μCi/mL	
	Start	End	Concentration	Standard Deviation (s)
Area 5, Gate 200	10/30/89	11/28/89	-3.0 x 10 <sup>-18</sup>	5.5 x 10 <sup>-18</sup>
Area 5, Gate 200	11/28/89	01/02/90	-8.9 x 10 <sup>-18</sup>	1.4 x 10 <sup>-17</sup>
Area 5, RWMS No. 1	01/01/89	01/31/89	1.8 x 10 <sup>-17</sup>	6.6 x 10 <sup>-18</sup>
Area 5, RWMS No. 1	02/01/89	02/28/89	7.0 x 10 <sup>-18</sup>	4.6 x 10 <sup>-18</sup>
Area 5, RWMS No. 1	03/01/89	03/31/89	-5.2 x 10 <sup>-18</sup>	4.1 x 10 <sup>-18</sup>
Area 5, RWMS No. 1	04/01/89	04/30/89	-7.1 x 10 <sup>-18</sup>	5.5 x 10 <sup>-18</sup>
Area 5, RWMS No. 1	05/01/89	05/31/89	-2.4 x 10 <sup>-19</sup>	4.5 x 10 <sup>-18</sup>
Area 5, RWMS No. 1	06/03/89	07/07/89	-1.4 x 10 <sup>-18</sup>	5.8 x 10 <sup>-18</sup>
Area 5, RWMS No. 1	07/05/89	07/31/89	4.6 x 10 <sup>-19</sup>	6.6 x 10 <sup>-18</sup>
Area 5, RWMS No. 1	07/31/89	09/06/89	-2.6 x 10 <sup>-18</sup>	4.9 x 10 <sup>-18</sup>
Area 5, RWMS No. 1	09/06/89	10/02/89	-2.6 x 10 <sup>-18</sup>	7.9 x 10 <sup>-18</sup>
Area 5, RWMS No. 1	10/30/89	11/28/89	-6.7 x 10 <sup>-19</sup>	7.8 x 10 <sup>-18</sup>
Area 5, RWMS No. 1	11/28/89	01/02/90	4.7 x 10 <sup>-18</sup>	7.3 x 10 <sup>-18</sup>
Area 5, RWMS No. 2	01/01/89	01/31/89	8.1 x 10 <sup>-18</sup>	4.4 x 10 <sup>-18</sup>
Area 5, RWMS No. 2	02/01/89	02/28/89	9.2 x 10 <sup>-18</sup>	6.8 x 10 <sup>-18</sup>
Area 5, RWMS No. 2	03/01/89	03/31/89	8.3 x 10 <sup>-19</sup>	4.3 x 10 <sup>-18</sup>
Area 5, RWMS No. 2	04/01/89	04/30/89	-1.2 x 10 <sup>-18</sup>	7.6 x 10 <sup>-18</sup>
Area 5, RWMS No. 2	05/01/89	05/31/89	-2.9 x 10 <sup>-18</sup>	5.0 x 10 <sup>-18</sup>
Area 5, RWMS No. 2	06/03/89	07/07/89	-1.8 x 10 <sup>-18</sup>	5.1 x 10 <sup>-18</sup>
Area 5, RWMS No. 2	07/05/89	07/31/89	-8.6 x 10 <sup>-18</sup>	9.2 x 10 <sup>-18</sup>
Area 5, RWMS No. 2	07/31/89	09/06/89	-3.6 x 10 <sup>-18</sup>	4.0 x 10 <sup>-18</sup>
Area 5, RWMS No. 2	09/06/89	10/02/89	-2.7 x 10 <sup>-18</sup>	6.3 x 10 <sup>-18</sup>
Area 5, RWMS No. 2	10/02/89	10/31/89	-1.4 x 10 <sup>-17</sup>	1.0 x 10 <sup>-17</sup>
Area 5, RWMS No. 2	10/30/89	11/28/89	-2.2 x 10 <sup>-18</sup>	5.8 x 10 <sup>-18</sup>
Area 5, RWMS No. 2	11/28/89	01/02/90	4.4 x 10 <sup>-18</sup>	4.9 x 10 <sup>-18</sup>
Area 5, RWMS No. 3	01/01/89	01/31/89	2.1 x 10 <sup>-17</sup>	6.1 x 10 <sup>-18</sup>
Area 5, RWMS No. 3	02/01/89	02/28/89	9.1 x 10 <sup>-18</sup>	6.1 x 10 <sup>-18</sup>
Area 5, RWMS No. 3	03/01/89	03/31/89	7.4 x 10 <sup>-18</sup>	7.6 x 10 <sup>-18</sup>
Area 5, RWMS No. 3	04/01/89	04/30/89	-1.5 x 10 <sup>-18</sup>	7.0 x 10 <sup>-18</sup>
Area 5, RWMS No. 3	05/01/89	05/31/89	1.5 x 10 <sup>-17</sup>	6.5 x 10 <sup>-18</sup>
Area 5, RWMS No. 3	06/03/89	07/07/89	-5.0 x 10 <sup>-18</sup>	6.6 x 10 <sup>-18</sup>
Area 5, RWMS No. 3	07/05/89	07/31/89	2.0 x 10 <sup>-18</sup>	1.7 x 10 <sup>-17</sup>
Area 5, RWMS No. 3	07/31/89	09/06/89	6.4 x 10 <sup>-18</sup>	9.1 x 10 <sup>-18</sup>
Area 5, RWMS No. 3	09/06/89	10/02/89	-1.2 x 10 <sup>-17</sup>	5.2 x 10 <sup>-18</sup>
Area 5, RWMS No. 3	10/02/89	10/31/89	8.2 x 10 <sup>-18</sup>	7.5 x 10 <sup>-18</sup>
Area 5, RWMS No. 3	10/30/89	11/28/89	3.0 x 10 <sup>-18</sup>	5.5 x 10 <sup>-18</sup>
Area 5, RWMS No. 3	11/28/89	01/02/90	4.3 x 10 <sup>-18</sup>	5.6 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	01/01/89	01/31/89	1.5 x 10 <sup>-17</sup>	6.2 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	02/01/89	02/28/89	2.2 x 10 <sup>-17</sup>	7.2 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	03/01/89	03/31/89	1.2 x 10 <sup>-17</sup>	5.4 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	04/01/89	04/30/89	9.1 x 10 <sup>-19</sup>	6.2 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	05/01/89	05/31/89	1.0 x 10 <sup>-17</sup>	6.5 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	06/03/89	07/07/89	1.0 x 10 <sup>-18</sup>	7.1 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	07/05/89	07/31/89	8.6 x 10 <sup>-19</sup>	5.9 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	09/06/89	10/02/89	1.4 x 10 <sup>-17</sup>	1.4 x 10 <sup>-17</sup>
Area 5, RWMS No. 4	10/02/89	10/31/89	-3.2 x 10 <sup>-19</sup>	5.9 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	10/30/89	11/28/89	-2.0 x 10 <sup>-18</sup>	8.5 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	11/28/89	01/02/90	4.4 x 10 <sup>-18</sup>	7.4 x 10 <sup>-18</sup>
Area 5, RWMS No. 5	01/01/89	01/31/89	1.4 x 10 <sup>-17</sup>	5.7 x 10 <sup>-18</sup>
Area 5, RWMS No. 5	02/01/89	02/28/89	1.5 x 10 <sup>-17</sup>	6.6 x 10 <sup>-18</sup>

Table A.1 ( $^{238}\text{Pu}$  in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 5	03/01/89	03/31/89	$1.3 \times 10^{-17}$	$6.0 \times 10^{-18}$
Area 5, RWMS No. 5	04/01/89	04/30/89	$-1.2 \times 10^{-17}$	$4.7 \times 10^{-18}$
Area 5, RWMS No. 5	05/01/89	05/31/89	$-4.3 \times 10^{-18}$	$5.0 \times 10^{-18}$
Area 5, RWMS No. 5	06/03/89	07/07/89	$2.2 \times 10^{-17}$	$1.4 \times 10^{-17}$
Area 5, RWMS No. 5	07/05/89	07/31/89	$5.1 \times 10^{-18}$	$7.1 \times 10^{-18}$
Area 5, RWMS No. 5	07/31/89	09/06/89	$-2.7 \times 10^{-18}$	$6.1 \times 10^{-18}$
Area 5, RWMS No. 5	09/06/89	10/02/89	$1.0 \times 10^{-17}$	$7.1 \times 10^{-18}$
Area 5, RWMS No. 5	10/02/89	10/31/89	$2.5 \times 10^{-18}$	$6.0 \times 10^{-18}$
Area 5, RWMS No. 5	10/30/89	11/28/89	$-1.8 \times 10^{-18}$	$8.9 \times 10^{-18}$
Area 5, RWMS No. 5	11/28/89	01/02/90	$-7.4 \times 10^{-18}$	$6.7 \times 10^{-18}$
Area 5, RWMS No. 6	01/01/89	01/31/89	$9.2 \times 10^{-18}$	$4.7 \times 10^{-18}$
Area 5, RWMS No. 6	02/01/89	02/28/89	$7.9 \times 10^{-18}$	$5.0 \times 10^{-18}$
Area 5, RWMS No. 6	03/01/89	03/31/89	$-4.0 \times 10^{-19}$	$3.8 \times 10^{-18}$
Area 5, RWMS No. 6	04/01/89	04/30/89	$-1.8 \times 10^{-18}$	$5.3 \times 10^{-18}$
Area 5, RWMS No. 6	05/01/89	05/31/89	$-3.1 \times 10^{-18}$	$5.1 \times 10^{-18}$
Area 5, RWMS No. 6	06/03/89	07/07/89	$-5.9 \times 10^{-18}$	$8.8 \times 10^{-18}$
Area 5, RWMS No. 6	07/05/89	07/31/89	$-9.1 \times 10^{-18}$	$4.9 \times 10^{-18}$
Area 5, RWMS No. 6	07/31/89	09/06/89	$7.4 \times 10^{-18}$	$7.0 \times 10^{-18}$
Area 5, RWMS No. 6	09/06/89	10/02/89	$1.6 \times 10^{-17}$	$7.6 \times 10^{-18}$
Area 5, RWMS No. 6	10/02/89	10/31/89	$-5.5 \times 10^{-20}$	$1.0 \times 10^{-18}$
Area 5, RWMS No. 6	10/30/89	11/28/89	$-3.6 \times 10^{-18}$	$5.3 \times 10^{-18}$
Area 5, RWMS No. 6	11/28/89	01/02/90	$-2.4 \times 10^{-18}$	$4.0 \times 10^{-18}$
Area 5, RWMS No. 7	01/01/89	01/31/89	$7.4 \times 10^{-18}$	$4.2 \times 10^{-18}$
Area 5, RWMS No. 7	02/01/89	02/28/89	$4.4 \times 10^{-19}$	$4.4 \times 10^{-18}$
Area 5, RWMS No. 7	03/01/89	03/31/89	$4.8 \times 10^{-18}$	$4.5 \times 10^{-18}$
Area 5, RWMS No. 7	04/01/89	04/30/89	$-4.8 \times 10^{-18}$	$4.4 \times 10^{-18}$
Area 5, RWMS No. 7	05/01/89	05/31/89	$8.0 \times 10^{-19}$	$4.9 \times 10^{-18}$
Area 5, RWMS No. 7	06/03/89	07/07/89	$5.6 \times 10^{-18}$	$1.1 \times 10^{-17}$
Area 5, RWMS No. 7	07/05/89	07/31/89	$-6.8 \times 10^{-18}$	$4.6 \times 10^{-18}$
Area 5, RWMS No. 7	07/31/89	09/06/89	$4.9 \times 10^{-18}$	$5.5 \times 10^{-18}$
Area 5, RWMS No. 7	09/06/89	10/02/89	$-6.8 \times 10^{-18}$	$5.2 \times 10^{-18}$
Area 5, RWMS No. 7	10/02/89	10/31/89	$-3.1 \times 10^{-19}$	$5.7 \times 10^{-18}$
Area 5, RWMS No. 7	10/30/89	11/28/89	$7.5 \times 10^{-19}$	$6.1 \times 10^{-18}$
Area 5, RWMS No. 7	11/28/89	01/02/90	$-5.2 \times 10^{-18}$	$5.8 \times 10^{-18}$
Area 5, RWMS No. 8	01/01/89	01/31/89	$9.5 \times 10^{-18}$	$6.3 \times 10^{-18}$
Area 5, RWMS No. 8	02/01/89	02/28/89	$6.8 \times 10^{-18}$	$4.6 \times 10^{-18}$
Area 5, RWMS No. 8	03/01/89	03/31/89	$8.5 \times 10^{-18}$	$4.6 \times 10^{-18}$
Area 5, RWMS No. 8	04/01/89	04/30/89	$1.7 \times 10^{-18}$	$5.7 \times 10^{-18}$
Area 5, RWMS No. 8	05/01/89	05/31/89	$-2.3 \times 10^{-20}$	$4.6 \times 10^{-18}$
Area 5, RWMS No. 8	06/03/89	07/07/89	$-1.2 \times 10^{-17}$	$6.2 \times 10^{-18}$
Area 5, RWMS No. 8	07/05/89	07/31/89	$-6.3 \times 10^{-18}$	$5.8 \times 10^{-18}$
Area 5, RWMS No. 8	07/31/89	09/06/89	$-5.7 \times 10^{-18}$	$3.9 \times 10^{-18}$
Area 5, RWMS No. 8	09/06/89	10/02/89	$3.8 \times 10^{-18}$	$6.1 \times 10^{-18}$
Area 5, RWMS No. 8	10/02/89	10/31/89	$1.2 \times 10^{-18}$	$6.2 \times 10^{-18}$
Area 5, RWMS No. 8	10/30/89	11/28/89	$1.5 \times 10^{-17}$	$6.8 \times 10^{-18}$
Area 5, RWMS No. 8	11/28/89	01/02/90	$2.9 \times 10^{-20}$	$5.0 \times 10^{-18}$
Area 5, RWMS No. 9	01/01/89	01/31/89	$1.3 \times 10^{-17}$	$6.4 \times 10^{-18}$
Area 5, RWMS No. 9	02/01/89	02/28/89	$3.8 \times 10^{-18}$	$4.9 \times 10^{-18}$
Area 5, RWMS No. 9	03/01/89	03/31/89	$3.9 \times 10^{-18}$	$3.9 \times 10^{-18}$
Area 5, RWMS No. 9	04/01/89	04/30/89	$4.4 \times 10^{-18}$	$6.4 \times 10^{-18}$

Table A.1 (<sup>238</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 9	05/01/89	05/31/89	$7.8 \times 10^{-18}$	$6.2 \times 10^{-18}$
Area 5, RWMS No. 9	06/03/89	07/07/89	$-1.3 \times 10^{-18}$	$6.8 \times 10^{-18}$
Area 5, RWMS No. 9	07/05/89	07/31/89	$-1.5 \times 10^{-17}$	$6.7 \times 10^{-18}$
Area 5, RWMS No. 9	07/31/89	09/06/89	$-5.8 \times 10^{-18}$	$5.1 \times 10^{-18}$
Area 5, RWMS No. 9	09/06/89	10/02/89	$1.1 \times 10^{-18}$	$6.9 \times 10^{-18}$
Area 5, RWMS No. 9	10/02/89	10/31/89	$-3.0 \times 10^{-19}$	$5.8 \times 10^{-18}$
Area 5, RWMS No. 9	10/30/89	11/28/89	$-5.7 \times 10^{-19}$	$5.3 \times 10^{-18}$
Area 5, RWMS No. 9	11/28/89	01/02/90	$-1.8 \times 10^{-17}$	$9.4 \times 10^{-18}$
Area 5, RWMS Pit No. 3	01/01/89	01/31/89	$1.9 \times 10^{-17}$	$6.4 \times 10^{-18}$
Area 5, RWMS Pit No. 3	02/01/89	02/28/89	$1.1 \times 10^{-17}$	$5.0 \times 10^{-18}$
Area 5, RWMS Pit No. 3	03/01/89	03/31/89	$6.6 \times 10^{-18}$	$4.2 \times 10^{-18}$
Area 5, RWMS Pit No. 3	04/01/89	04/30/89	$-6.8 \times 10^{-18}$	$6.3 \times 10^{-18}$
Area 5, RWMS Pit No. 3	05/01/89	05/31/89	$1.1 \times 10^{-18}$	$4.5 \times 10^{-18}$
Area 5, RWMS Pit No. 3	06/03/89	07/07/89	$-4.1 \times 10^{-18}$	$5.5 \times 10^{-18}$
Area 5, RWMS Pit No. 3	07/05/89	07/31/89	$2.0 \times 10^{-18}$	$6.7 \times 10^{-18}$
Area 5, RWMS Pit No. 3	07/31/89	09/06/89	$7.8 \times 10^{-18}$	$5.8 \times 10^{-18}$
Area 5, RWMS Pit No. 3	09/06/89	10/02/89	$5.5 \times 10^{-18}$	$8.2 \times 10^{-18}$
Area 5, RWMS Pit No. 3	10/02/89	10/31/89	$-2.6 \times 10^{-18}$	$1.4 \times 10^{-17}$
Area 5, RWMS Pit No. 3	10/30/89	11/28/89	$2.1 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 5, RWMS Pit No. 3	11/28/89	01/02/90	$3.1 \times 10^{-18}$	$5.6 \times 10^{-18}$
Area 5, RWMS Pit No. 4	04/01/89	04/30/89	$-3.3 \times 10^{-17}$	$2.8 \times 10^{-17}$
Area 5, RWMS Pit No. 4	05/01/89	05/31/89	$1.9 \times 10^{-18}$	$5.4 \times 10^{-18}$
Area 5, RWMS Pit No. 4	06/03/89	07/07/89	$-4.1 \times 10^{-18}$	$7.1 \times 10^{-18}$
Area 5, RWMS Pit No. 4	07/05/89	07/31/89	$-5.7 \times 10^{-19}$	$6.1 \times 10^{-18}$
Area 5, RWMS Pit No. 4	07/31/89	09/06/89	$4.7 \times 10^{-18}$	$4.7 \times 10^{-18}$
Area 5, RWMS Pit No. 4	09/06/89	10/02/89	$-8.8 \times 10^{-19}$	$4.7 \times 10^{-18}$
Area 5, RWMS Pit No. 4	10/02/89	10/31/89	$1.4 \times 10^{-18}$	$7.3 \times 10^{-18}$
Area 5, RWMS Pit No. 4	10/30/89	11/28/89	$6.7 \times 10^{-18}$	$7.8 \times 10^{-18}$
Area 5, RWMS Pit No. 4	11/28/89	01/02/90	$5.4 \times 10^{-18}$	$5.9 \times 10^{-18}$
Area 5, RWMS T. P. North	02/01/89	02/28/89	$-9.1 \times 10^{-18}$	$7.4 \times 10^{-18}$
Area 5, RWMS T. P. North	03/01/89	03/31/89	$3.8 \times 10^{-18}$	$4.1 \times 10^{-18}$
Area 5, RWMS T. P. North	04/01/89	04/30/89	$-7.5 \times 10^{-18}$	$5.6 \times 10^{-18}$
Area 5, RWMS T. P. North	05/01/89	05/31/89	$5.6 \times 10^{-18}$	$5.6 \times 10^{-18}$
Area 5, RWMS T. P. North	06/03/89	07/07/89	$-4.5 \times 10^{-18}$	$7.5 \times 10^{-18}$
Area 5, RWMS T. P. North	07/05/89	07/31/89	$7.2 \times 10^{-18}$	$7.0 \times 10^{-18}$
Area 5, RWMS T. P. North	07/31/89	09/06/89	$-2.2 \times 10^{-18}$	$5.2 \times 10^{-18}$
Area 5, RWMS T. P. North	09/06/89	10/02/89	$-5.2 \times 10^{-19}$	$6.8 \times 10^{-18}$
Area 5, RWMS T. P. North	10/02/89	10/31/89	$-3.0 \times 10^{-19}$	$5.5 \times 10^{-18}$
Area 5, RWMS T. P. North	10/30/89	11/28/89	$4.0 \times 10^{-18}$	$6.1 \times 10^{-18}$
Area 5, RWMS T. P. North	11/28/89	01/02/90	$-1.3 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 5, RWMS T. P. Northeast	02/01/89	02/28/89	$-3.6 \times 10^{-18}$	$1.4 \times 10^{-17}$
Area 5, RWMS T. P. Northeast	03/01/89	03/31/89	$8.7 \times 10^{-18}$	$6.2 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	04/01/89	04/30/89	$-3.2 \times 10^{-18}$	$5.8 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	05/01/89	05/31/89	$-3.3 \times 10^{-18}$	$4.0 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	06/03/89	07/07/89	$5.9 \times 10^{-18}$	$9.8 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	07/05/89	07/31/89	$2.1 \times 10^{-18}$	$5.1 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	07/31/89	09/06/89	$7.7 \times 10^{-18}$	$6.7 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	09/06/89	10/02/89	$-5.4 \times 10^{-18}$	$4.9 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	10/02/89	10/31/89	$-3.0 \times 10^{-19}$	$5.5 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	10/30/89	11/28/89	$-3.5 \times 10^{-19}$	$5.1 \times 10^{-18}$

Table A.1 (<sup>238</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS T. P. Northeast	11/28/89	01/02/90	$-3.5 \times 10^{-18}$	$4.6 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	02/01/89	02/28/89	$-3.3 \times 10^{-18}$	$1.2 \times 10^{-17}$
Area 5, RWMS T. P. Northwest	03/01/89	03/31/89	$3.3 \times 10^{-18}$	$4.1 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	04/01/89	04/30/89	$-1.1 \times 10^{-17}$	$6.5 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	05/01/89	05/31/89	$-2.6 \times 10^{-18}$	$5.1 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	06/03/89	07/07/89	$-5.5 \times 10^{-18}$	$6.4 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	07/05/89	07/31/89	$-7.0 \times 10^{-18}$	$4.7 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	09/06/89	10/02/89	$1.0 \times 10^{-17}$	$1.0 \times 10^{-17}$
Area 5, RWMS T. P. Northwest	10/02/89	10/31/89	$1.1 \times 10^{-18}$	$5.7 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	10/30/89	11/28/89	$3.6 \times 10^{-19}$	$7.3 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	11/28/89	01/02/90	$-2.1 \times 10^{-17}$	$9.1 \times 10^{-18}$
Area 5, RWMS T. P. South	02/01/89	02/28/89	$3.6 \times 10^{-18}$	$8.1 \times 10^{-18}$
Area 5, RWMS T. P. South	03/01/89	03/31/89	$4.7 \times 10^{-18}$	$5.3 \times 10^{-18}$
Area 5, RWMS T. P. South	04/01/89	04/30/89	$-1.0 \times 10^{-18}$	$4.4 \times 10^{-18}$
Area 5, RWMS T. P. South	05/01/89	05/31/89	$6.8 \times 10^{-18}$	$5.4 \times 10^{-18}$
Area 5, RWMS T. P. South	06/03/89	07/07/89	$2.9 \times 10^{-19}$	$7.7 \times 10^{-18}$
Area 5, RWMS T. P. South	07/05/89	07/31/89	$-3.5 \times 10^{-18}$	$8.0 \times 10^{-18}$
Area 5, RWMS T. P. South	07/31/89	09/06/89	$3.3 \times 10^{-18}$	$7.8 \times 10^{-18}$
Area 5, RWMS T. P. South	09/06/89	10/02/89	$-3.8 \times 10^{-18}$	$9.6 \times 10^{-18}$
Area 5, RWMS T. P. South	10/02/89	10/31/89	$-3.3 \times 10^{-19}$	$6.2 \times 10^{-18}$
Area 5, RWMS T. P. South	10/30/89	11/28/89	$7.8 \times 10^{-18}$	$1.2 \times 10^{-17}$
Area 5, RWMS T. P. South	11/28/89	01/02/90	$-1.0 \times 10^{-17}$	$4.6 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	02/01/89	02/28/89	$1.5 \times 10^{-17}$	$9.1 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	03/01/89	03/31/89	$6.5 \times 10^{-18}$	$4.9 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	04/01/89	04/30/89	$-2.5 \times 10^{-18}$	$4.5 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	05/01/89	05/31/89	$-2.0 \times 10^{-18}$	$5.5 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	06/03/89	07/07/89	$9.4 \times 10^{-18}$	$7.7 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	07/05/89	07/31/89	$2.6 \times 10^{-18}$	$6.8 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	07/31/89	09/06/89	$3.4 \times 10^{-18}$	$4.6 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	09/06/89	10/02/89	$2.5 \times 10^{-18}$	$7.1 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	10/02/89	10/31/89	$-3.3 \times 10^{-19}$	$6.1 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	10/30/89	11/28/89	$3.7 \times 10^{-19}$	$5.3 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	11/28/89	01/02/90	$-6.1 \times 10^{-18}$	$5.8 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	02/01/89	02/28/89	$-2.6 \times 10^{-18}$	$7.6 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	03/01/89	03/31/89	$6.4 \times 10^{-18}$	$5.0 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	04/01/89	04/30/89	$9.2 \times 10^{-19}$	$4.1 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	05/01/89	05/31/89	$-1.1 \times 10^{-18}$	$4.3 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	06/03/89	07/07/89	$-4.4 \times 10^{-18}$	$6.9 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	07/05/89	07/31/89	$-3.6 \times 10^{-18}$	$5.5 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	07/31/89	09/06/89	$3.1 \times 10^{-19}$	$4.4 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	09/06/89	10/02/89	$1.5 \times 10^{-17}$	$8.1 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	10/02/89	10/31/89	$1.1 \times 10^{-18}$	$5.8 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	10/30/89	11/28/89	$1.1 \times 10^{-18}$	$8.2 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	11/28/89	01/02/90	$-2.9 \times 10^{-18}$	$5.1 \times 10^{-18}$
Area 5, Well 5B	01/01/89	01/31/89	$5.0 \times 10^{-18}$	$4.2 \times 10^{-18}$
Area 5, Well 5B	02/01/89	02/28/89	$3.4 \times 10^{-18}$	$3.3 \times 10^{-18}$
Area 5, Well 5B	03/01/89	03/31/89	$1.0 \times 10^{-19}$	$3.1 \times 10^{-18}$
Area 5, Well 5B	04/01/89	04/30/89	$-2.2 \times 10^{-19}$	$5.6 \times 10^{-18}$
Area 5, Well 5B	05/01/89	05/31/89	$-3.9 \times 10^{-18}$	$4.8 \times 10^{-18}$
Area 5, Well 5B	06/03/89	07/07/89	$-1.9 \times 10^{-18}$	$4.3 \times 10^{-18}$

Table A.1 (<sup>238</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		μCi/mL	
	Start	End	Concentration	Standard Deviation (s)
Area 5, Well 5B	07/05/89	07/31/89	9.1 x 10 <sup>-18</sup>	7.6 x 10 <sup>-18</sup>
Area 5, Well 5B	07/31/89	09/06/89	-2.8 x 10 <sup>-18</sup>	5.5 x 10 <sup>-18</sup>
Area 5, Well 5B	09/06/89	10/02/89	-3.2 x 10 <sup>-18</sup>	5.9 x 10 <sup>-18</sup>
Area 5, Well 5B	10/02/89	10/31/89	1.5 x 10 <sup>-17</sup>	1.0 x 10 <sup>-17</sup>
Area 5, Well 5B	10/30/89	11/28/89	7.1 x 10 <sup>-18</sup>	7.3 x 10 <sup>-18</sup>
Area 5, Well 5B	11/28/89	01/02/90	3.0 x 10 <sup>-18</sup>	5.5 x 10 <sup>-18</sup>
Area 6, Building CP-6	01/01/89	01/31/89	1.1 x 10 <sup>-17</sup>	5.2 x 10 <sup>-18</sup>
Area 6, Building CP-6	02/01/89	02/28/89	1.3 x 10 <sup>-17</sup>	5.8 x 10 <sup>-18</sup>
Area 6, Building CP-6	03/01/89	03/31/89	3.1 x 10 <sup>-18</sup>	4.1 x 10 <sup>-18</sup>
Area 6, Building CP-6	04/01/89	04/30/89	3.9 x 10 <sup>-18</sup>	7.0 x 10 <sup>-18</sup>
Area 6, Building CP-6	05/01/89	05/31/89	1.3 x 10 <sup>-18</sup>	4.2 x 10 <sup>-18</sup>
Area 6, Building CP-6	06/03/89	07/07/89	5.1 x 10 <sup>-18</sup>	4.9 x 10 <sup>-18</sup>
Area 6, Building CP-6	07/05/89	07/31/89	8.2 x 10 <sup>-20</sup>	5.5 x 10 <sup>-18</sup>
Area 6, Building CP-6	07/31/89	09/06/89	1.3 x 10 <sup>-18</sup>	4.4 x 10 <sup>-18</sup>
Area 6, Building CP-6	09/06/89	10/02/89	3.0 x 10 <sup>-18</sup>	6.1 x 10 <sup>-18</sup>
Area 6, Building CP-6	10/02/89	10/31/89	-3.8 x 10 <sup>-18</sup>	5.2 x 10 <sup>-18</sup>
Area 6, Building CP-6	10/30/89	11/28/89	-1.7 x 10 <sup>-18</sup>	5.3 x 10 <sup>-18</sup>
Area 6, Building CP-6	11/28/89	01/02/90	3.6 x 10 <sup>-18</sup>	6.1 x 10 <sup>-18</sup>
Area 6, Well 3	01/01/89	01/31/89	1.4 x 10 <sup>-17</sup>	5.7 x 10 <sup>-18</sup>
Area 6, Well 3	02/01/89	02/28/89	1.1 x 10 <sup>-17</sup>	6.1 x 10 <sup>-18</sup>
Area 6, Well 3	03/01/89	03/31/89	7.1 x 10 <sup>-18</sup>	6.7 x 10 <sup>-18</sup>
Area 6, Well 3	04/01/89	04/30/89	-6.7 x 10 <sup>-18</sup>	7.8 x 10 <sup>-18</sup>
Area 6, Well 3	05/01/89	05/31/89	6.2 x 10 <sup>-18</sup>	5.3 x 10 <sup>-18</sup>
Area 6, Well 3	06/03/89	07/07/89	-1.9 x 10 <sup>-18</sup>	5.4 x 10 <sup>-18</sup>
Area 6, Well 3	07/05/89	07/31/89	7.6 x 10 <sup>-18</sup>	7.3 x 10 <sup>-18</sup>
Area 6, Well 3	07/31/89	09/06/89	4.9 x 10 <sup>-19</sup>	6.3 x 10 <sup>-18</sup>
Area 6, Well 3	09/06/89	10/02/89	6.1 x 10 <sup>-18</sup>	6.4 x 10 <sup>-18</sup>
Area 6, Well 3	10/02/89	10/31/89	8.6 x 10 <sup>-18</sup>	7.9 x 10 <sup>-18</sup>
Area 6, Well 3	10/30/89	11/28/89	6.1 x 10 <sup>-18</sup>	6.2 x 10 <sup>-18</sup>
Area 6, Well 3	11/28/89	01/02/90	3.0 x 10 <sup>-18</sup>	6.4 x 10 <sup>-18</sup>
Area 6, Yucca Complex	01/01/89	01/31/89	3.5 x 10 <sup>-18</sup>	6.6 x 10 <sup>-18</sup>
Area 6, Yucca Complex	02/01/89	02/28/89	9.2 x 10 <sup>-18</sup>	4.9 x 10 <sup>-18</sup>
Area 6, Yucca Complex	03/01/89	03/31/89	1.4 x 10 <sup>-19</sup>	3.8 x 10 <sup>-18</sup>
Area 6, Yucca Complex	04/01/89	04/30/89	-6.4 x 10 <sup>-18</sup>	7.1 x 10 <sup>-18</sup>
Area 6, Yucca Complex	05/01/89	05/31/89	-3.3 x 10 <sup>-18</sup>	4.2 x 10 <sup>-18</sup>
Area 6, Yucca Complex	06/03/89	07/07/89	6.2 x 10 <sup>-19</sup>	5.5 x 10 <sup>-18</sup>
Area 6, Yucca Complex	07/05/89	07/31/89	9.4 x 10 <sup>-18</sup>	8.0 x 10 <sup>-18</sup>
Area 6, Yucca Complex	07/31/89	09/06/89	8.0 x 10 <sup>-19</sup>	4.6 x 10 <sup>-18</sup>
Area 6, Yucca Complex	09/06/89	10/02/89	2.6 x 10 <sup>-18</sup>	6.0 x 10 <sup>-18</sup>
Area 6, Yucca Complex	10/02/89	10/31/89	-4.6 x 10 <sup>-18</sup>	6.7 x 10 <sup>-18</sup>
Area 6, Yucca Complex	10/30/89	11/28/89	-7.7 x 10 <sup>-18</sup>	4.3 x 10 <sup>-18</sup>
Area 6, Yucca Complex	11/28/89	01/02/90	-3.4 x 10 <sup>-18</sup>	5.5 x 10 <sup>-18</sup>
Area 7, Ue7ns	01/01/89	01/31/89	2.0 x 10 <sup>-17</sup>	6.5 x 10 <sup>-18</sup>
Area 7, Ue7ns	02/01/89	02/28/89	2.6 x 10 <sup>-17</sup>	1.2 x 10 <sup>-17</sup>
Area 7, Ue7ns	03/01/89	03/31/89	1.5 x 10 <sup>-18</sup>	4.3 x 10 <sup>-18</sup>
Area 7, Ue7ns	04/01/89	04/30/89	-5.6 x 10 <sup>-17</sup>	8.3 x 10 <sup>-17</sup>
Area 7, Ue7ns	05/01/89	05/31/89	-1.6 x 10 <sup>-18</sup>	4.4 x 10 <sup>-18</sup>
Area 7, Ue7ns	06/03/89	07/07/89	4.0 x 10 <sup>-18</sup>	6.5 x 10 <sup>-18</sup>
Area 7, Ue7ns	07/05/89	07/31/89	7.8 x 10 <sup>-18</sup>	6.7 x 10 <sup>-18</sup>
Area 7, Ue7ns	07/31/89	09/06/89	1.3 x 10 <sup>-17</sup>	6.9 x 10 <sup>-18</sup>

Table A.1 (<sup>238</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 7, Ue7ns	09/06/89	10/02/89	$-1.6 \times 10^{-18}$	$6.1 \times 10^{-18}$
Area 7, Ue7ns	10/02/89	10/31/89	$-3.2 \times 10^{-19}$	$6.0 \times 10^{-18}$
Area 7, Ue7ns	10/30/89	11/28/89	$-6.6 \times 10^{-18}$	$6.0 \times 10^{-18}$
Area 7, Ue7ns	11/28/89	01/02/90	$-8.8 \times 10^{-18}$	$5.8 \times 10^{-18}$
Area 9, 9-300 Bunker	01/01/89	01/31/89	$9.6 \times 10^{-18}$	$5.1 \times 10^{-18}$
Area 9, 9-300 Bunker	02/01/89	02/28/89	$1.6 \times 10^{-17}$	$6.7 \times 10^{-18}$
Area 9, 9-300 Bunker	03/01/89	03/31/89	$6.2 \times 10^{-18}$	$4.7 \times 10^{-18}$
Area 9, 9-300 Bunker	04/01/89	04/30/89	$-1.2 \times 10^{-17}$	$1.0 \times 10^{-17}$
Area 9, 9-300 Bunker	05/01/89	05/31/89	$5.4 \times 10^{-18}$	$5.5 \times 10^{-18}$
Area 9, 9-300 Bunker	06/03/89	07/07/89	$1.3 \times 10^{-17}$	$6.8 \times 10^{-18}$
Area 9, 9-300 Bunker	07/05/89	07/31/89	$1.3 \times 10^{-17}$	$7.5 \times 10^{-18}$
Area 9, 9-300 Bunker	07/31/89	09/06/89	$3.7 \times 10^{-18}$	$5.7 \times 10^{-18}$
Area 9, 9-300 Bunker	09/06/89	10/02/89	$4.6 \times 10^{-18}$	$6.1 \times 10^{-18}$
Area 9, 9-300 Bunker	10/02/89	10/31/89	$6.9 \times 10^{-18}$	$9.5 \times 10^{-18}$
Area 9, 9-300 Bunker	10/30/89	11/28/89	$-3.3 \times 10^{-18}$	$1.4 \times 10^{-17}$
Area 9, 9-300 Bunker	11/28/89	01/02/90	$-1.0 \times 10^{-17}$	$5.7 \times 10^{-18}$
Area 11, Gate 293	01/01/89	01/31/89	$1.2 \times 10^{-17}$	$5.4 \times 10^{-18}$
Area 11, Gate 293	02/01/89	02/28/89	$1.4 \times 10^{-17}$	$6.8 \times 10^{-18}$
Area 11, Gate 293	03/01/89	03/31/89	$3.7 \times 10^{-19}$	$4.4 \times 10^{-18}$
Area 11, Gate 293	04/01/89	04/30/89	$-5.4 \times 10^{-18}$	$6.6 \times 10^{-18}$
Area 11, Gate 293	05/01/89	05/31/89	$3.9 \times 10^{-18}$	$4.5 \times 10^{-18}$
Area 11, Gate 293	06/03/89	07/07/89	$-6.8 \times 10^{-18}$	$3.4 \times 10^{-18}$
Area 11, Gate 293	07/05/89	07/31/89	$9.9 \times 10^{-18}$	$7.1 \times 10^{-18}$
Area 11, Gate 293	07/31/89	09/06/89	$1.4 \times 10^{-18}$	$5.4 \times 10^{-18}$
Area 11, Gate 293	09/06/89	10/02/89	$-2.6 \times 10^{-18}$	$5.5 \times 10^{-18}$
Area 11, Gate 293	10/02/89	10/31/89	$5.3 \times 10^{-18}$	$8.0 \times 10^{-18}$
Area 11, Gate 293	10/30/89	11/28/89	$-1.2 \times 10^{-17}$	$6.7 \times 10^{-18}$
Area 11, Gate 293	11/28/89	01/02/90	$2.9 \times 10^{-18}$	$4.5 \times 10^{-18}$
Area 12, Complex	01/01/89	01/31/89	$7.7 \times 10^{-18}$	$4.4 \times 10^{-18}$
Area 12, Complex	02/01/89	02/28/89	$7.4 \times 10^{-18}$	$4.1 \times 10^{-18}$
Area 12, Complex	03/01/89	03/31/89	$-9.9 \times 10^{-18}$	$5.0 \times 10^{-18}$
Area 12, Complex	04/01/89	04/30/89	$2.0 \times 10^{-17}$	$1.2 \times 10^{-17}$
Area 12, Complex	05/01/89	05/31/89	$-7.9 \times 10^{-18}$	$4.1 \times 10^{-18}$
Area 12, Complex	06/03/89	07/07/89	$-1.2 \times 10^{-18}$	$4.7 \times 10^{-18}$
Area 12, Complex	07/05/89	07/31/89	$-1.2 \times 10^{-18}$	$5.2 \times 10^{-18}$
Area 12, Complex	07/31/89	09/06/89	$-4.7 \times 10^{-19}$	$4.3 \times 10^{-18}$
Area 12, Complex	09/06/89	10/02/89	$-6.7 \times 10^{-18}$	$5.7 \times 10^{-18}$
Area 12, Complex	10/02/89	10/31/89	$1.5 \times 10^{-17}$	$1.2 \times 10^{-17}$
Area 12, Complex	10/30/89	11/28/89	$7.2 \times 10^{-18}$	$6.4 \times 10^{-18}$
Area 12, Complex	11/28/89	01/02/90	$-6.4 \times 10^{-18}$	$3.9 \times 10^{-18}$
Area 15, EPA Farm	01/01/89	01/31/89	$1.9 \times 10^{-17}$	$5.5 \times 10^{-18}$
Area 15, EPA Farm	02/01/89	02/28/89	$1.0 \times 10^{-17}$	$5.6 \times 10^{-18}$
Area 15, EPA Farm	03/01/89	03/31/89	$4.9 \times 10^{-18}$	$4.4 \times 10^{-18}$
Area 15, EPA Farm	04/01/89	04/30/89	$7.6 \times 10^{-19}$	$5.7 \times 10^{-18}$
Area 15, EPA Farm	05/01/89	05/31/89	$1.5 \times 10^{-19}$	$4.6 \times 10^{-18}$
Area 15, EPA Farm	06/03/89	07/07/89	$2.0 \times 10^{-17}$	$1.3 \times 10^{-17}$
Area 15, EPA Farm	07/05/89	07/31/89	$6.5 \times 10^{-18}$	$8.4 \times 10^{-18}$
Area 15, EPA Farm	07/31/89	09/06/89	$-9.2 \times 10^{-19}$	$5.1 \times 10^{-18}$
Area 15, EPA Farm	09/06/89	10/02/89	$-7.7 \times 10^{-18}$	$4.7 \times 10^{-18}$
Area 15, EPA Farm	10/02/89	10/31/89	$-3.2 \times 10^{-19}$	$6.0 \times 10^{-18}$



Table A.1 ( $^{238}\text{Pu}$  in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 15, EPA Farm	10/30/89	11/28/89	$-6.7 \times 10^{-18}$	$4.6 \times 10^{-18}$
Area 15, EPA Farm	11/28/89	01/02/90	$1.1 \times 10^{-18}$	$5.7 \times 10^{-18}$
Area 15, Gate 700 South	01/01/89	01/31/89	$1.5 \times 10^{-17}$	$6.3 \times 10^{-18}$
Area 15, Gate 700 South	02/01/89	02/28/89	$1.7 \times 10^{-17}$	$6.2 \times 10^{-18}$
Area 15, Gate 700 South	03/01/89	03/31/89	$2.7 \times 10^{-18}$	$4.4 \times 10^{-18}$
Area 15, Gate 700 South	04/01/89	04/30/89	$-7.4 \times 10^{-18}$	$6.7 \times 10^{-18}$
Area 15, Gate 700 South	05/01/89	05/31/89	$2.3 \times 10^{-18}$	$4.6 \times 10^{-18}$
Area 15, Gate 700 South	06/03/89	07/07/89	$-4.5 \times 10^{-18}$	$4.6 \times 10^{-18}$
Area 15, Gate 700 South	07/05/89	07/31/89	$6.9 \times 10^{-18}$	$6.6 \times 10^{-18}$
Area 15, Gate 700 South	07/31/89	09/06/89	$9.9 \times 10^{-19}$	$4.9 \times 10^{-18}$
Area 15, Gate 700 South	09/06/89	10/02/89	$8.2 \times 10^{-18}$	$5.6 \times 10^{-18}$
Area 15, Gate 700 South	10/02/89	10/31/89	$-2.8 \times 10^{-19}$	$5.6 \times 10^{-18}$
Area 15, Gate 700 South	10/30/89	11/28/89	$9.8 \times 10^{-18}$	$5.9 \times 10^{-18}$
Area 15, PILE DRIVER	01/01/89	01/31/89	$2.5 \times 10^{-17}$	$6.4 \times 10^{-18}$
Area 15, PILE DRIVER	02/01/89	02/28/89	$1.1 \times 10^{-17}$	$7.1 \times 10^{-18}$
Area 15, PILE DRIVER	03/01/89	03/31/89	$-5.0 \times 10^{-19}$	$3.7 \times 10^{-18}$
Area 15, PILE DRIVER	04/01/89	04/30/89	$-9.8 \times 10^{-18}$	$8.5 \times 10^{-18}$
Area 15, PILE DRIVER	05/01/89	05/31/89	$-4.9 \times 10^{-18}$	$5.2 \times 10^{-18}$
Area 15, PILE DRIVER	06/03/89	07/07/89	$1.0 \times 10^{-17}$	$7.4 \times 10^{-18}$
Area 15, PILE DRIVER	07/05/89	07/31/89	$-6.0 \times 10^{-21}$	$5.5 \times 10^{-18}$
Area 15, PILE DRIVER	07/31/89	09/06/89	$4.2 \times 10^{-19}$	$4.6 \times 10^{-18}$
Area 15, PILE DRIVER	09/06/89	10/02/89	$3.4 \times 10^{-18}$	$5.6 \times 10^{-18}$
Area 15, PILE DRIVER	10/02/89	10/31/89	$-3.2 \times 10^{-19}$	$5.9 \times 10^{-18}$
Area 15, PILE DRIVER	10/30/89	11/28/89	$-2.2 \times 10^{-18}$	$8.1 \times 10^{-18}$
Area 15, PILE DRIVER	11/28/89	01/02/90	$4.8 \times 10^{-18}$	$7.1 \times 10^{-18}$
Area 16, Substation	01/01/89	01/31/89	$2.7 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 16, Substation	02/01/89	02/28/89	$3.9 \times 10^{-17}$	$1.4 \times 10^{-17}$
Area 16, Substation	03/01/89	03/31/89	$6.6 \times 10^{-18}$	$6.0 \times 10^{-18}$
Area 16, Substation	04/01/89	04/30/89	$4.6 \times 10^{-18}$	$7.5 \times 10^{-18}$
Area 16, Substation	05/01/89	05/31/89	$-1.6 \times 10^{-18}$	$6.8 \times 10^{-18}$
Area 16, Substation	06/03/89	07/07/89	$-2.5 \times 10^{-18}$	$4.9 \times 10^{-18}$
Area 16, Substation	07/05/89	07/31/89	$1.6 \times 10^{-18}$	$1.3 \times 10^{-18}$
Area 16, Substation	07/31/89	09/06/89	$4.4 \times 10^{-18}$	$5.9 \times 10^{-18}$
Area 16, Substation	09/06/89	10/02/89	$-5.3 \times 10^{-18}$	$4.7 \times 10^{-18}$
Area 16, Substation	10/02/89	10/31/89	$3.5 \times 10^{-18}$	$1.2 \times 10^{-17}$
Area 16, Substation	10/30/89	11/28/89	$-6.3 \times 10^{-19}$	$7.3 \times 10^{-18}$
Area 16, Substation	11/28/89	01/02/90	$4.7 \times 10^{-18}$	$5.9 \times 10^{-18}$
Area 19, Echo Peak	01/01/89	01/31/89	$1.4 \times 10^{-17}$	$5.4 \times 10^{-18}$
Area 19, Echo Peak	02/01/89	02/28/89	$1.2 \times 10^{-17}$	$4.5 \times 10^{-18}$
Area 19, Echo Peak	03/01/89	03/31/89	$3.1 \times 10^{-18}$	$6.0 \times 10^{-18}$
Area 19, Echo Peak	04/01/89	04/30/89	$-1.2 \times 10^{-17}$	$1.3 \times 10^{-17}$
Area 19, Echo Peak	05/01/89	05/31/89	$-4.9 \times 10^{-18}$	$4.1 \times 10^{-18}$
Area 19, Echo Peak	06/03/89	07/07/89	$2.4 \times 10^{-18}$	$5.6 \times 10^{-18}$
Area 19, Echo Peak	07/05/89	07/31/89	$-7.6 \times 10^{-18}$	$5.0 \times 10^{-18}$
Area 19, Echo Peak	07/31/89	09/06/89	$-1.4 \times 10^{-20}$	$6.3 \times 10^{-18}$
Area 19, Echo Peak	09/06/89	10/02/89	$-2.4 \times 10^{-18}$	$6.8 \times 10^{-18}$
Area 19, Echo Peak	10/02/89	10/31/89	$-2.2 \times 10^{-18}$	$8.9 \times 10^{-18}$
Area 19, Echo Peak	10/30/89	11/28/89	$-1.7 \times 10^{-18}$	$4.5 \times 10^{-18}$
Area 19, Echo Peak	11/28/89	01/02/90	$-1.5 \times 10^{-18}$	$6.8 \times 10^{-18}$
Area 19, Substation	01/01/89	01/31/89	$1.6 \times 10^{-17}$	$8.5 \times 10^{-18}$

Table A.1 (<sup>238</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		μCi/mL	
	Start	End	Concentration	Standard Deviation (s)
Area 19, Substation	02/01/89	02/28/89	2.0 x 10 <sup>-17</sup>	6.7 x 10 <sup>-18</sup>
Area 19, Substation	03/01/89	03/31/89	2.5 x 10 <sup>-18</sup>	3.3 x 10 <sup>-18</sup>
Area 19, Substation	04/01/89	04/30/89	-1.4 x 10 <sup>-17</sup>	7.8 x 10 <sup>-18</sup>
Area 19, Substation	05/01/89	05/31/89	-2.8 x 10 <sup>-18</sup>	6.7 x 10 <sup>-18</sup>
Area 19, Substation	06/03/89	07/07/89	-8.0 x 10 <sup>-19</sup>	6.2 x 10 <sup>-18</sup>
Area 19, Substation	07/05/89	07/31/89	9.0 x 10 <sup>-19</sup>	5.7 x 10 <sup>-18</sup>
Area 19, Substation	07/31/89	09/06/89	-6.8 x 10 <sup>-18</sup>	4.7 x 10 <sup>-18</sup>
Area 19, Substation	09/06/89	10/02/89	-6.2 x 10 <sup>-18</sup>	5.0 x 10 <sup>-18</sup>
Area 19, Substation	10/02/89	10/31/89	1.8 x 10 <sup>-17</sup>	1.1 x 10 <sup>-17</sup>
Area 19, Substation	10/30/89	11/28/89	-6.8 x 10 <sup>-19</sup>	4.5 x 10 <sup>-18</sup>
Area 19, Substation	11/28/89	01/02/90	2.1 x 10 <sup>-17</sup>	9.4 x 10 <sup>-18</sup>
Area 20, Dispensary	01/01/89	01/31/89	1.6 x 10 <sup>-17</sup>	5.8 x 10 <sup>-18</sup>
Area 20, Dispensary	02/01/89	02/28/89	1.8 x 10 <sup>-17</sup>	7.0 x 10 <sup>-18</sup>
Area 20, Dispensary	03/01/89	03/31/89	3.6 x 10 <sup>-19</sup>	3.5 x 10 <sup>-18</sup>
Area 20, Dispensary	04/01/89	04/30/89	-5.8 x 10 <sup>-19</sup>	7.5 x 10 <sup>-18</sup>
Area 20, Dispensary	05/01/89	05/31/89	2.5 x 10 <sup>-19</sup>	5.0 x 10 <sup>-18</sup>
Area 20, Dispensary	07/05/89	07/31/89	4.4 x 10 <sup>-18</sup>	5.2 x 10 <sup>-18</sup>
Area 20, Dispensary	07/31/89	09/06/89	2.5 x 10 <sup>-18</sup>	1.6 x 10 <sup>-18</sup>
Area 20, Dispensary	09/06/89	10/02/89	-5.3 x 10 <sup>-18</sup>	6.1 x 10 <sup>-18</sup>
Area 20, Dispensary	10/02/89	10/31/89	1.4 x 10 <sup>-18</sup>	7.6 x 10 <sup>-18</sup>
Area 20, Dispensary	10/30/89	11/28/89	-8.6 x 10 <sup>-18</sup>	6.6 x 10 <sup>-18</sup>
Area 20, Dispensary	11/28/89	01/02/90	7.4 x 10 <sup>-18</sup>	5.5 x 10 <sup>-18</sup>
Area 23, Building 790	01/01/89	01/31/89	1.4 x 10 <sup>-17</sup>	5.6 x 10 <sup>-18</sup>
Area 23, Building 790	02/01/89	02/28/89	1.4 x 10 <sup>-17</sup>	4.7 x 10 <sup>-18</sup>
Area 23, Building 790	03/01/89	03/31/89	-2.5 x 10 <sup>-18</sup>	3.9 x 10 <sup>-18</sup>
Area 23, Building 790	04/01/89	04/30/89	-6.1 x 10 <sup>-18</sup>	8.3 x 10 <sup>-18</sup>
Area 23, Building 790	05/01/89	05/31/89	2.8 x 10 <sup>-18</sup>	6.0 x 10 <sup>-18</sup>
Area 23, Building 790	06/03/89	07/07/89	-2.7 x 10 <sup>-18</sup>	4.0 x 10 <sup>-18</sup>
Area 23, Building 790	07/05/89	07/31/89	4.9 x 10 <sup>-18</sup>	9.1 x 10 <sup>-18</sup>
Area 23, Building 790	07/31/89	09/06/89	-3.3 x 10 <sup>-18</sup>	5.7 x 10 <sup>-18</sup>
Area 23, Building 790	09/06/89	10/02/89	4.7 x 10 <sup>-18</sup>	6.3 x 10 <sup>-18</sup>
Area 23, Building 790	10/02/89	10/31/89	1.7 x 10 <sup>-18</sup>	6.7 x 10 <sup>-18</sup>
Area 23, Building 790	10/30/89	11/28/89	4.8 x 10 <sup>-18</sup>	5.9 x 10 <sup>-18</sup>
Area 23, Building 790	11/28/89	01/02/90	-8.1 x 10 <sup>-19</sup>	4.6 x 10 <sup>-18</sup>
Area 23, Building 790 No. 2	01/01/89	01/31/89	1.0 x 10 <sup>-17</sup>	4.2 x 10 <sup>-18</sup>
Area 23, Building 790 No. 2	02/01/89	02/28/89	1.2 x 10 <sup>-17</sup>	4.5 x 10 <sup>-18</sup>
Area 23, Building 790 No. 2	03/01/89	03/31/89	1.3 x 10 <sup>-17</sup>	5.6 x 10 <sup>-18</sup>
Area 23, Building 790 No. 2	04/01/89	04/30/89	-4.4 x 10 <sup>-18</sup>	7.1 x 10 <sup>-18</sup>
Area 23, Building 790 No. 2	05/01/89	05/31/89	6.2 x 10 <sup>-19</sup>	5.1 x 10 <sup>-18</sup>
Area 23, Building 790 No. 2	06/03/89	07/07/89	3.6 x 10 <sup>-18</sup>	4.7 x 10 <sup>-18</sup>
Area 23, Building 790 No. 2	07/05/89	07/31/89	1.7 x 10 <sup>-17</sup>	1.2 x 10 <sup>-17</sup>
Area 23, Building 790 No. 2	07/31/89	09/06/89	-3.0 x 10 <sup>-18</sup>	4.4 x 10 <sup>-18</sup>
Area 23, Building 790 No. 2	09/06/89	10/02/89	1.2 x 10 <sup>-18</sup>	5.5 x 10 <sup>-18</sup>
Area 23, Building 790 No. 2	10/02/89	10/31/89	1.1 x 10 <sup>-17</sup>	7.9 x 10 <sup>-18</sup>
Area 23, Building 790 No. 2	10/30/89	11/28/89	3.6 x 10 <sup>-18</sup>	5.5 x 10 <sup>-18</sup>
Area 23, Building 790 No. 2	11/28/89	01/02/90	-4.1 x 10 <sup>-18</sup>	3.8 x 10 <sup>-18</sup>
Area 23, East Boundary	01/01/89	01/31/89	1.1 x 10 <sup>-17</sup>	4.4 x 10 <sup>-18</sup>
Area 23, East Boundary	02/01/89	02/28/89	8.8 x 10 <sup>-18</sup>	4.6 x 10 <sup>-18</sup>
Area 23, East Boundary	03/01/89	03/31/89	4.8 x 10 <sup>-19</sup>	3.5 x 10 <sup>-18</sup>
Area 23, East Boundary	04/01/89	04/30/89	-2.2 x 10 <sup>-18</sup>	9.5 x 10 <sup>-18</sup>

Table A.1 (<sup>238</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 23, East Boundary	05/01/89	05/31/89	$1.8 \times 10^{-18}$	$5.6 \times 10^{-18}$
Area 23, East Boundary	07/05/89	07/31/89	$3.9 \times 10^{-18}$	$7.6 \times 10^{-18}$
Area 23, East Boundary	07/31/89	09/06/89	$7.0 \times 10^{-18}$	$5.0 \times 10^{-18}$
Area 23, East Boundary	09/06/89	10/02/89	$4.7 \times 10^{-19}$	$5.7 \times 10^{-18}$
Area 23, East Boundary	10/02/89	10/31/89	$-3.0 \times 10^{-19}$	$5.5 \times 10^{-18}$
Area 23, East Boundary	10/30/89	11/28/89	$1.2 \times 10^{-17}$	$7.9 \times 10^{-18}$
Area 23, East Boundary	11/28/89	01/02/90	$-2.9 \times 10^{-18}$	$5.1 \times 10^{-18}$
Area 23, H&S Roof	01/01/89	01/31/89	$3.9 \times 10^{-18}$	$4.2 \times 10^{-18}$
Area 23, H&S Roof	02/01/89	02/28/89	$1.0 \times 10^{-17}$	$5.6 \times 10^{-18}$
Area 23, H&S Roof	03/01/89	03/31/89	$-1.0 \times 10^{-18}$	$3.2 \times 10^{-18}$
Area 23, H&S Roof	04/01/89	04/30/89	$1.5 \times 10^{-17}$	$1.3 \times 10^{-17}$
Area 23, H&S Roof	05/01/89	05/31/89	$4.5 \times 10^{-18}$	$7.1 \times 10^{-18}$
Area 23, H&S Roof	06/03/89	07/07/89	$-4.6 \times 10^{-18}$	$3.4 \times 10^{-18}$
Area 23, H&S Roof	07/05/89	07/31/89	$-1.2 \times 10^{-18}$	$5.1 \times 10^{-18}$
Area 23, H&S Roof	07/31/89	09/06/89	$-7.5 \times 10^{-18}$	$3.6 \times 10^{-18}$
Area 23, H&S Roof	09/06/89	10/02/89	$1.3 \times 10^{-18}$	$1.2 \times 10^{-18}$
Area 23, H&S Roof	10/02/89	10/31/89	$-2.8 \times 10^{-18}$	$6.5 \times 10^{-18}$
Area 23, H&S Roof	10/30/89	11/28/89	$4.6 \times 10^{-18}$	$4.9 \times 10^{-18}$
Area 23, H&S Roof	11/28/89	01/02/90	$-4.1 \times 10^{-18}$	$4.4 \times 10^{-18}$
Area 25, E-MAD South	01/01/89	01/31/89	$1.8 \times 10^{-17}$	$6.5 \times 10^{-18}$
Area 25, E-MAD South	02/01/89	02/28/89	$-3.3 \times 10^{-18}$	$2.0 \times 10^{-18}$
Area 25, E-MAD South	03/01/89	03/31/89	$2.5 \times 10^{-18}$	$4.2 \times 10^{-18}$
Area 25, E-MAD South	04/01/89	04/30/89	$2.8 \times 10^{-18}$	$5.9 \times 10^{-18}$
Area 25, E-MAD South	05/01/89	05/31/89	$-8.3 \times 10^{-20}$	$4.4 \times 10^{-18}$
Area 25, E-MAD South	06/03/89	07/07/89	$1.5 \times 10^{-18}$	$6.4 \times 10^{-18}$
Area 25, E-MAD South	07/05/89	07/31/89	$1.8 \times 10^{-19}$	$6.6 \times 10^{-18}$
Area 25, E-MAD South	07/31/89	09/06/89	$9.8 \times 10^{-19}$	$6.2 \times 10^{-18}$
Area 25, E-MAD South	09/06/89	10/02/89	$-5.1 \times 10^{-18}$	$6.0 \times 10^{-18}$
Area 25, E-MAD South	10/02/89	10/31/89	$4.3 \times 10^{-17}$	$1.5 \times 10^{-17}$
Area 25, E-MAD South	10/30/89	11/28/89	$3.3 \times 10^{-18}$	$5.8 \times 10^{-18}$
Area 25, E-MAD South	11/28/89	01/02/90	$2.3 \times 10^{-18}$	$5.0 \times 10^{-18}$
Area 25, NRDS Warehouse	01/01/89	01/31/89	$1.5 \times 10^{-17}$	$5.1 \times 10^{-18}$
Area 25, NRDS Warehouse	02/01/89	02/28/89	$9.8 \times 10^{-18}$	$4.5 \times 10^{-18}$
Area 25, NRDS Warehouse	03/01/89	03/31/89	$-1.0 \times 10^{-17}$	$5.5 \times 10^{-18}$
Area 25, NRDS Warehouse	04/01/89	04/30/89	$-1.2 \times 10^{-18}$	$8.8 \times 10^{-18}$
Area 25, NRDS Warehouse	05/01/89	05/31/89	$-6.2 \times 10^{-18}$	$5.8 \times 10^{-18}$
Area 25, NRDS Warehouse	06/03/89	07/07/89	$-8.7 \times 10^{-18}$	$5.3 \times 10^{-18}$
Area 25, NRDS Warehouse	07/05/89	07/31/89	$5.6 \times 10^{-18}$	$9.1 \times 10^{-18}$
Area 25, NRDS Warehouse	07/31/89	09/06/89	$-2.1 \times 10^{-18}$	$6.0 \times 10^{-18}$
Area 25, NRDS Warehouse	09/06/89	10/02/89	$6.0 \times 10^{-18}$	$8.3 \times 10^{-18}$
Area 25, NRDS Warehouse	10/02/89	10/31/89	$8.6 \times 10^{-18}$	$9.5 \times 10^{-18}$
Area 25, NRDS Warehouse	10/30/89	11/28/89	$6.7 \times 10^{-18}$	$6.1 \times 10^{-18}$
Area 25, NRDS Warehouse	11/28/89	01/02/90	$1.2 \times 10^{-18}$	$6.1 \times 10^{-18}$
Area 27, Cafeteria	01/01/89	01/31/89	$8.0 \times 10^{-18}$	$4.1 \times 10^{-18}$
Area 27, Cafeteria	02/01/89	02/28/89	$2.2 \times 10^{-17}$	$7.7 \times 10^{-18}$
Area 27, Cafeteria	03/01/89	03/31/89	$2.1 \times 10^{-18}$	$7.1 \times 10^{-18}$
Area 27, Cafeteria	04/01/89	04/30/89	$-6.2 \times 10^{-19}$	$1.1 \times 10^{-17}$
Area 27, Cafeteria	05/01/89	05/31/89	$5.4 \times 10^{-18}$	$6.0 \times 10^{-18}$
Area 27, Cafeteria	06/03/89	07/07/89	$-2.9 \times 10^{-18}$	$4.3 \times 10^{-18}$
Area 27, Cafeteria	07/05/89	07/31/89	$8.5 \times 10^{-18}$	$8.3 \times 10^{-18}$

Table A.1 (<sup>238</sup>Pu in Air, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>		<u>μCi/mL</u>	
	<u>Start</u>	<u>End</u>	<u>Concentration</u>	<u>Standard</u>
				<u>Deviation (s)</u>
Area 27, Cafeteria	07/31/89	09/06/89	-1.0 x 10 <sup>-17</sup>	4.6 x 10 <sup>-18</sup>
Area 27, Cafeteria	09/06/89	10/02/89	1.3 x 10 <sup>-17</sup>	7.4 x 10 <sup>-18</sup>
Area 27, Cafeteria	10/02/89	10/31/89	7.5 x 10 <sup>-18</sup>	8.1 x 10 <sup>-18</sup>
Area 27, Cafeteria	10/30/89	11/28/89	-3.6 x 10 <sup>-18</sup>	5.8 x 10 <sup>-18</sup>
Area 27, Cafeteria	11/28/89	01/02/90	7.4 x 10 <sup>-18</sup>	5.8 x 10 <sup>-18</sup>

Table A.2 <sup>239</sup>Pu in Air

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 1, BJJ	01/01/89	01/31/89	$1.0 \times 10^{-16}$	$1.7 \times 10^{-17}$
Area 1, BJJ	02/01/89	02/28/89	$5.4 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 1, BJJ	03/01/89	03/31/89	$9.7 \times 10^{-17}$	$1.5 \times 10^{-17}$
Area 1, BJJ	04/01/89	04/30/89	$3.3 \times 10^{-17}$	$8.6 \times 10^{-18}$
Area 1, BJJ	05/01/89	05/31/89	$1.0 \times 10^{-17}$	$4.3 \times 10^{-18}$
Area 1, BJJ	06/03/89	07/07/89	$6.5 \times 10^{-18}$	$3.7 \times 10^{-18}$
Area 1, BJJ	07/05/89	07/31/89	$3.7 \times 10^{-17}$	$1.3 \times 10^{-17}$
Area 1, BJJ	07/31/89	09/06/89	$4.1 \times 10^{-17}$	$9.3 \times 10^{-18}$
Area 1, BJJ	09/06/89	10/02/89	$7.0 \times 10^{-17}$	$1.3 \times 10^{-17}$
Area 1, BJJ	10/02/89	10/31/89	$5.6 \times 10^{-17}$	$1.0 \times 10^{-17}$
Area 1, BJJ	10/30/89	11/28/89	$5.0 \times 10^{-17}$	$1.0 \times 10^{-17}$
Area 1, BJJ	11/28/89	01/02/90	$1.2 \times 10^{-15}$	$1.1 \times 10^{-16}$
Area 1, Gravel Pit	01/01/89	01/31/89	0	0
Area 1, Gravel Pit	02/01/89	02/28/89	$4.0 \times 10^{-17}$	$2.9 \times 10^{-17}$
Area 1, Gravel Pit	03/01/89	03/31/89	0	0
Area 1, Gravel Pit	04/01/89	04/30/89	$7.7 \times 10^{-19}$	$1.6 \times 10^{-18}$
Area 1, Gravel Pit	05/01/89	05/31/89	$-5.6 \times 10^{-19}$	$6.5 \times 10^{-19}$
Area 1, Gravel Pit	06/03/89	07/07/89	$5.1 \times 10^{-16}$	$5.1 \times 10^{-17}$
Area 1, Gravel Pit	07/05/89	07/31/89	$1.3 \times 10^{-18}$	$2.2 \times 10^{-18}$
Area 1, Gravel Pit	07/31/89	09/06/89	$-5.4 \times 10^{-19}$	$4.3 \times 10^{-19}$
Area 1, Gravel Pit	09/06/89	10/02/89	$7.0 \times 10^{-17}$	$1.2 \times 10^{-17}$
Area 1, Gravel Pit	10/02/89	10/31/89	$1.3 \times 10^{-17}$	$7.0 \times 10^{-18}$
Area 1, Gravel Pit	10/30/89	11/28/89	$4.4 \times 10^{-18}$	$3.0 \times 10^{-18}$
Area 1, Gravel Pit	11/28/89	01/02/90	$6.2 \times 10^{-18}$	$3.0 \times 10^{-18}$
Area 2, 2-1 Substation	01/01/89	01/31/89	$5.8 \times 10^{-18}$	$2.6 \times 10^{-18}$
Area 2, 2-1 Substation	02/01/89	02/28/89	$4.1 \times 10^{-18}$	$2.1 \times 10^{-18}$
Area 2, 2-1 Substation	03/01/89	03/31/89	$3.9 \times 10^{-18}$	$2.3 \times 10^{-18}$
Area 2, 2-1 Substation	04/01/89	04/30/89	$4.8 \times 10^{-18}$	$3.3 \times 10^{-18}$
Area 2, 2-1 Substation	05/01/89	05/31/89	$2.5 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 2, 2-1 Substation	06/03/89	07/07/89	$3.6 \times 10^{-18}$	$2.5 \times 10^{-18}$
Area 2, 2-1 Substation	07/05/89	07/31/89	$8.2 \times 10^{-18}$	$4.6 \times 10^{-18}$
Area 2, 2-1 Substation	07/31/89	09/06/89	$1.6 \times 10^{-17}$	$7.8 \times 10^{-18}$
Area 2, 2-1 Substation	09/06/89	10/02/89	$2.6 \times 10^{-18}$	$2.5 \times 10^{-18}$
Area 2, 2-1 Substation	10/02/89	10/31/89	$1.6 \times 10^{-17}$	$8.1 \times 10^{-18}$
Area 2, 2-1 Substation	10/30/89	11/28/89	$1.8 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 2, 2-1 Substation	11/28/89	01/02/90	$2.3 \times 10^{-18}$	$2.1 \times 10^{-18}$
Area 2, Complex	01/01/89	01/31/89	$6.7 \times 10^{-18}$	$3.4 \times 10^{-18}$
Area 2, Complex	02/01/89	02/28/89	$1.3 \times 10^{-17}$	$4.0 \times 10^{-18}$
Area 2, Complex	03/01/89	03/31/89	$1.0 \times 10^{-17}$	$3.3 \times 10^{-18}$
Area 2, Complex	04/01/89	04/30/89	$1.4 \times 10^{-17}$	$6.9 \times 10^{-18}$
Area 2, Complex	05/01/89	05/31/89	$1.1 \times 10^{-17}$	$5.0 \times 10^{-18}$
Area 2, Complex	06/03/89	07/07/89	$5.9 \times 10^{-18}$	$2.7 \times 10^{-18}$
Area 2, Complex	07/05/89	07/31/89	$9.7 \times 10^{-18}$	$3.8 \times 10^{-18}$
Area 2, Complex	07/31/89	09/06/89	$3.8 \times 10^{-18}$	$3.2 \times 10^{-18}$
Area 2, Complex	09/06/89	10/02/89	$5.8 \times 10^{-17}$	$9.4 \times 10^{-18}$
Area 2, Complex	10/02/89	10/31/89	$2.7 \times 10^{-18}$	$5.2 \times 10^{-18}$
Area 2, Complex	10/30/89	11/28/89	$3.8 \times 10^{-18}$	$2.3 \times 10^{-18}$
Area 2, Complex	11/28/89	01/02/90	$2.0 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 3, 3-300 Bunker	01/01/89	01/31/89	$7.8 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 3, 3-300 Bunker	02/01/89	02/28/89	$1.1 \times 10^{-16}$	$1.5 \times 10^{-17}$

Table A.2 (<sup>239</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 3, 3-300 Bunker	03/01/89	03/31/89	$7.3 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 3, 3-300 Bunker	04/01/89	04/30/89	$1.4 \times 10^{-16}$	$2.2 \times 10^{-17}$
Area 3, 3-300 Bunker	05/01/89	05/31/89	$5.8 \times 10^{-18}$	$3.3 \times 10^{-18}$
Area 3, 3-300 Bunker	06/03/89	07/07/89	$5.5 \times 10^{-18}$	$3.1 \times 10^{-18}$
Area 3, 3-300 Bunker	07/05/89	07/31/89	$7.6 \times 10^{-17}$	$1.2 \times 10^{-17}$
Area 3, 3-300 Bunker	07/31/89	09/06/89	$2.0 \times 10^{-16}$	$2.7 \times 10^{-17}$
Area 3, 3-300 Bunker	09/06/89	10/02/89	$1.2 \times 10^{-16}$	$1.5 \times 10^{-17}$
Area 3, 3-300 Bunker	10/02/89	10/31/89	$1.3 \times 10^{-16}$	$2.0 \times 10^{-17}$
Area 3, 3-300 Bunker	10/30/89	11/28/89	$1.7 \times 10^{-16}$	$2.5 \times 10^{-17}$
Area 3, 3-300 Bunker	11/28/89	01/02/90	$2.4 \times 10^{-16}$	$2.9 \times 10^{-17}$
Area 3, ah/at East	01/01/89	01/31/89	$5.3 \times 10^{-17}$	$1.3 \times 10^{-17}$
Area 3, ah/at East	02/01/89	02/28/89	$1.3 \times 10^{-16}$	$1.7 \times 10^{-17}$
Area 3, ah/at East	03/01/89	03/31/89	$1.2 \times 10^{-16}$	$1.6 \times 10^{-17}$
Area 3, ah/at East	04/01/89	04/30/89	$8.3 \times 10^{-16}$	$4.0 \times 10^{-17}$
Area 3, ah/at East	05/01/89	05/31/89	$5.2 \times 10^{-17}$	$6.9 \times 10^{-18}$
Area 3, ah/at East	06/03/89	07/07/89	$8.1 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 3, ah/at East	07/05/89	07/31/89	$8.5 \times 10^{-17}$	$1.4 \times 10^{-17}$
Area 3, ah/at East	07/31/89	09/06/89	$1.3 \times 10^{-16}$	$2.0 \times 10^{-17}$
Area 3, ah/at East	09/06/89	10/02/89	$5.9 \times 10^{-17}$	$9.1 \times 10^{-18}$
Area 3, ah/at East	10/02/89	10/31/89	$6.7 \times 10^{-17}$	$2.3 \times 10^{-17}$
Area 3, ah/at East	10/30/89	11/28/89	$3.7 \times 10^{-17}$	$7.8 \times 10^{-18}$
Area 3, ah/at East	11/28/89	01/02/90	$8.5 \times 10^{-17}$	$1.4 \times 10^{-17}$
Area 3, ah/at North	01/01/89	01/31/89	$4.7 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 3, ah/at North	02/01/89	02/28/89	$3.1 \times 10^{-16}$	$2.9 \times 10^{-17}$
Area 3, ah/at North	03/01/89	03/31/89	$4.4 \times 10^{-16}$	$4.3 \times 10^{-17}$
Area 3, ah/at North	04/01/89	04/30/89	$5.3 \times 10^{-16}$	$2.7 \times 10^{-17}$
Area 3, ah/at North	05/01/89	05/31/89	$2.8 \times 10^{-16}$	$2.8 \times 10^{-17}$
Area 3, ah/at North	06/03/89	07/07/89	$3.4 \times 10^{-16}$	$2.4 \times 10^{-17}$
Area 3, ah/at North	07/05/89	07/31/89	$1.5 \times 10^{-16}$	$2.2 \times 10^{-17}$
Area 3, ah/at North	07/31/89	09/06/89	$4.8 \times 10^{-16}$	$4.9 \times 10^{-17}$
Area 3, ah/at North	09/06/89	10/02/89	$1.9 \times 10^{-16}$	$2.3 \times 10^{-17}$
Area 3, ah/at North	10/02/89	10/31/89	$7.8 \times 10^{-17}$	$1.2 \times 10^{-17}$
Area 3, ah/at North	10/30/89	11/28/89	$8.7 \times 10^{-17}$	$3.0 \times 10^{-17}$
Area 3, ah/at North	11/28/89	01/02/90	$1.4 \times 10^{-16}$	$1.7 \times 10^{-17}$
Area 3, ah/at South	01/01/89	01/31/89	$1.8 \times 10^{-18}$	$1.3 \times 10^{-18}$
Area 3, ah/at South	02/01/89	02/28/89	$1.5 \times 10^{-16}$	$2.4 \times 10^{-17}$
Area 3, ah/at South	03/01/89	03/31/89	$2.6 \times 10^{-16}$	$2.8 \times 10^{-17}$
Area 3, ah/at South	04/01/89	04/30/89	$6.9 \times 10^{-18}$	$2.6 \times 10^{-18}$
Area 3, ah/at South	05/01/89	05/31/89	$2.0 \times 10^{-16}$	$2.1 \times 10^{-17}$
Area 3, ah/at South	06/03/89	07/07/89	$8.2 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 3, ah/at South	07/05/89	07/31/89	$6.9 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 3, ah/at South	07/31/89	09/06/89	$1.2 \times 10^{-16}$	$1.6 \times 10^{-17}$
Area 3, ah/at South	09/06/89	10/02/89	$7.2 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 3, ah/at South	10/02/89	10/31/89	$5.8 \times 10^{-17}$	$1.0 \times 10^{-17}$
Area 3, ah/at South	10/30/89	11/28/89	$2.6 \times 10^{-16}$	$2.6 \times 10^{-17}$
Area 3, ah/at South	11/28/89	01/02/90	$1.2 \times 10^{-16}$	$1.7 \times 10^{-17}$
Area 3, ah/at West	01/01/89	01/31/89	$2.6 \times 10^{-16}$	$4.2 \times 10^{-17}$
Area 3, ah/at West	02/01/89	02/28/89	$1.8 \times 10^{-18}$	$1.6 \times 10^{-17}$
Area 3, ah/at West	03/01/89	03/31/89	$4.6 \times 10^{-16}$	$4.8 \times 10^{-17}$
Area 3, ah/at West	04/01/89	04/30/89	$4.5 \times 10^{-16}$	$2.5 \times 10^{-17}$

Table A.2 (<sup>239</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		μCi/mL	
	Start	End	Concentration	Standard Deviation (s)
Area 3, ah/at West	05/01/89	05/31/89	4.2 x 10 <sup>-16</sup>	3.6 x 10 <sup>-17</sup>
Area 3, ah/at West	06/03/89	07/07/89	1.4 x 10 <sup>-16</sup>	1.4 x 10 <sup>-17</sup>
Area 3, ah/at West	07/05/89	07/31/89	5.0 x 10 <sup>-16</sup>	5.5 x 10 <sup>-17</sup>
Area 3, ah/at West	07/31/89	09/06/89	9.4 x 10 <sup>-16</sup>	1.3 x 10 <sup>-16</sup>
Area 3, ah/at West	09/06/89	10/02/89	2.3 x 10 <sup>-16</sup>	2.7 x 10 <sup>-17</sup>
Area 3, ah/at West	10/02/89	10/31/89	1.6 x 10 <sup>-16</sup>	2.0 x 10 <sup>-17</sup>
Area 3, ah/at West	10/30/89	11/28/89	1.1 x 10 <sup>-16</sup>	1.9 x 10 <sup>-17</sup>
Area 3, ah/at West	11/28/89	01/02/90	2.0 x 10 <sup>-16</sup>	2.7 x 10 <sup>-17</sup>
Area 3, Complex	01/01/89	01/31/89	5.2 x 10 <sup>-17</sup>	1.0 x 10 <sup>-17</sup>
Area 3, Complex	02/01/89	02/28/89	4.3 x 10 <sup>-17</sup>	9.3 x 10 <sup>-18</sup>
Area 3, Complex	03/01/89	03/31/89	4.2 x 10 <sup>-17</sup>	9.2 x 10 <sup>-18</sup>
Area 3, Complex	04/01/89	04/30/89	4.3 x 10 <sup>-17</sup>	9.3 x 10 <sup>-18</sup>
Area 3, Complex	05/01/89	05/31/89	1.8 x 10 <sup>-17</sup>	6.1 x 10 <sup>-18</sup>
Area 3, Complex	06/03/89	07/07/89	2.4 x 10 <sup>-17</sup>	5.3 x 10 <sup>-18</sup>
Area 3, Complex	07/05/89	07/31/89	3.1 x 10 <sup>-17</sup>	1.7 x 10 <sup>-17</sup>
Area 3, Complex	07/31/89	09/06/89	3.0 x 10 <sup>-17</sup>	8.9 x 10 <sup>-18</sup>
Area 3, Complex	09/06/89	10/02/89	5.2 x 10 <sup>-17</sup>	8.7 x 10 <sup>-18</sup>
Area 3, Complex	10/02/89	10/31/89	6.3 x 10 <sup>-17</sup>	1.3 x 10 <sup>-17</sup>
Area 3, Complex	10/30/89	11/28/89	4.5 x 10 <sup>-17</sup>	8.8 x 10 <sup>-18</sup>
Area 3, Complex	11/28/89	01/02/90	5.1 x 10 <sup>-16</sup>	5.0 x 10 <sup>-17</sup>
Area 3, Complex No. 2	01/01/89	01/31/89	1.1 x 10 <sup>-16</sup>	1.5 x 10 <sup>-17</sup>
Area 3, Complex No. 2	02/01/89	02/28/89	3.8 x 10 <sup>-17</sup>	7.0 x 10 <sup>-18</sup>
Area 3, Complex No. 2	03/01/89	03/31/89	1.0 x 10 <sup>-16</sup>	1.5 x 10 <sup>-17</sup>
Area 3, Complex No. 2	04/01/89	04/30/89	6.6 x 10 <sup>-17</sup>	1.5 x 10 <sup>-17</sup>
Area 3, Complex No. 2	05/01/89	05/31/89	5.3 x 10 <sup>-17</sup>	1.0 x 10 <sup>-17</sup>
Area 3, Complex No. 2	06/03/89	07/07/89	0	0
Area 3, Complex No. 2	07/05/89	07/31/89	8.3 x 10 <sup>-17</sup>	1.4 x 10 <sup>-17</sup>
Area 3, Complex No. 2	07/31/89	09/06/89	8.7 x 10 <sup>-17</sup>	1.2 x 10 <sup>-17</sup>
Area 3, Complex No. 2	09/06/89	10/02/89	6.7 x 10 <sup>-17</sup>	1.1 x 10 <sup>-17</sup>
Area 3, Complex No. 2	10/02/89	10/31/89	1.6 x 10 <sup>-16</sup>	2.1 x 10 <sup>-17</sup>
Area 3, Complex No. 2	10/30/89	11/28/89	1.2 x 10 <sup>-16</sup>	1.7 x 10 <sup>-17</sup>
Area 3, Complex No. 2	11/28/89	01/02/90	1.0 x 10 <sup>-16</sup>	1.4 x 10 <sup>-17</sup>
Area 5, DOD Yard	01/01/89	01/31/89	2.3 x 10 <sup>-18</sup>	1.7 x 10 <sup>-18</sup>
Area 5, DOD Yard	02/01/89	02/28/89	1.1 x 10 <sup>-18</sup>	1.1 x 10 <sup>-18</sup>
Area 5, DOD Yard	03/01/89	03/31/89	1.9 x 10 <sup>-18</sup>	1.3 x 10 <sup>-18</sup>
Area 5, DOD Yard	04/01/89	04/30/89	8.6 x 10 <sup>-18</sup>	4.2 x 10 <sup>-18</sup>
Area 5, DOD Yard	05/01/89	05/31/89	1.3 x 10 <sup>-18</sup>	1.3 x 10 <sup>-18</sup>
Area 5, DOD Yard	06/03/89	07/07/89	2.9 x 10 <sup>-19</sup>	9.7 x 10 <sup>-19</sup>
Area 5, DOD Yard	07/05/89	07/31/89	2.0 x 10 <sup>-18</sup>	1.9 x 10 <sup>-18</sup>
Area 5, DOD Yard	07/31/89	09/06/89	-4.5 x 10 <sup>-19</sup>	4.8 x 10 <sup>-19</sup>
Area 5, DOD Yard	09/06/89	10/02/89	-6.4 x 10 <sup>-19</sup>	4.9 x 10 <sup>-19</sup>
Area 5, DOD Yard	10/02/89	10/31/89	3.3 x 10 <sup>-18</sup>	2.9 x 10 <sup>-18</sup>
Area 5, DOD Yard	10/30/89	11/28/89	7.6 x 10 <sup>-18</sup>	3.0 x 10 <sup>-18</sup>
Area 5, DOD Yard	11/28/89	01/02/90	2.2 x 10 <sup>-18</sup>	2.0 x 10 <sup>-18</sup>
Area 5, Gate 200	01/01/89	01/31/89	7.9 x 10 <sup>-16</sup>	6.5 x 10 <sup>-17</sup>
Area 5, Gate 200	02/01/89	02/28/89	1.3 x 10 <sup>-18</sup>	1.3 x 10 <sup>-18</sup>
Area 5, Gate 200	03/01/89	03/31/89	3.6 x 10 <sup>-18</sup>	2.1 x 10 <sup>-18</sup>
Area 5, Gate 200	04/01/89	04/30/89	3.5 x 10 <sup>-16</sup>	2.2 x 10 <sup>-17</sup>
Area 5, Gate 200	05/01/89	05/31/89	2.9 x 10 <sup>-18</sup>	1.8 x 10 <sup>-18</sup>
Area 5, Gate 200	06/03/89	07/07/89	4.9 x 10 <sup>-18</sup>	2.9 x 10 <sup>-18</sup>

Table A.2 (<sup>239</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, Gate 200	07/05/89	07/31/89	$2.0 \times 10^{-18}$	$2.0 \times 10^{-18}$
Area 5, Gate 200	07/31/89	09/06/89	$1.5 \times 10^{-17}$	$5.1 \times 10^{-18}$
Area 5, Gate 200	09/06/89	10/02/89	$-6.8 \times 10^{-19}$	$5.6 \times 10^{-19}$
Area 5, Gate 200	10/02/89	10/31/89	$8.1 \times 10^{-18}$	$3.7 \times 10^{-18}$
Area 5, Gate 200	10/30/89	11/28/89	$2.8 \times 10^{-18}$	$2.0 \times 10^{-18}$
Area 5, Gate 200	11/28/89	01/02/90	$7.6 \times 10^{-17}$	$1.6 \times 10^{-17}$
Area 5, RWMS No. 1	01/01/89	01/31/89	$4.8 \times 10^{-18}$	$2.8 \times 10^{-18}$
Area 5, RWMS No. 1	02/01/89	02/28/89	$1.4 \times 10^{-18}$	$1.4 \times 10^{-18}$
Area 5, RWMS No. 1	03/01/89	03/31/89	$7.5 \times 10^{-18}$	$3.1 \times 10^{-18}$
Area 5, RWMS No. 1	04/01/89	04/30/89	$9.7 \times 10^{-18}$	$4.1 \times 10^{-18}$
Area 5, RWMS No. 1	05/01/89	05/31/89	$4.2 \times 10^{-18}$	$2.2 \times 10^{-18}$
Area 5, RWMS No. 1	06/03/89	07/07/89	$3.2 \times 10^{-18}$	$2.3 \times 10^{-18}$
Area 5, RWMS No. 1	07/05/89	07/31/89	$7.9 \times 10^{-19}$	$1.7 \times 10^{-18}$
Area 5, RWMS No. 1	07/31/89	09/06/89	$1.6 \times 10^{-17}$	$4.5 \times 10^{-18}$
Area 5, RWMS No. 1	09/06/89	10/02/89	$4.4 \times 10^{-18}$	$3.7 \times 10^{-18}$
Area 5, RWMS No. 1	10/02/89	10/31/89	$-1.2 \times 10^{-17}$	$1.2 \times 10^{-17}$
Area 5, RWMS No. 1	10/30/89	11/28/89	$6.9 \times 10^{-18}$	$4.5 \times 10^{-18}$
Area 5, RWMS No. 1	11/28/89	01/02/90	$8.6 \times 10^{-18}$	$3.8 \times 10^{-18}$
Area 5, RWMS No. 2	01/01/89	01/31/89	$1.3 \times 10^{-18}$	$1.3 \times 10^{-18}$
Area 5, RWMS No. 2	02/01/89	02/28/89	$6.4 \times 10^{-18}$	$4.6 \times 10^{-18}$
Area 5, RWMS No. 2	03/01/89	03/31/89	$1.4 \times 10^{-18}$	$1.4 \times 10^{-18}$
Area 5, RWMS No. 2	04/01/89	04/30/89	$3.5 \times 10^{-18}$	$3.0 \times 10^{-18}$
Area 5, RWMS No. 2	05/01/89	05/31/89	$-5.3 \times 10^{-19}$	$4.7 \times 10^{-19}$
Area 5, RWMS No. 2	06/03/89	07/07/89	$5.0 \times 10^{-18}$	$2.6 \times 10^{-18}$
Area 5, RWMS No. 2	07/05/89	07/31/89	$9.5 \times 10^{-18}$	$4.7 \times 10^{-18}$
Area 5, RWMS No. 2	07/31/89	09/06/89	$4.5 \times 10^{-18}$	$2.3 \times 10^{-18}$
Area 5, RWMS No. 2	09/06/89	10/02/89	$4.0 \times 10^{-18}$	$2.8 \times 10^{-18}$
Area 5, RWMS No. 2	10/02/89	10/31/89	$1.4 \times 10^{-17}$	$7.4 \times 10^{-18}$
Area 5, RWMS No. 2	10/30/89	11/28/89	$8.2 \times 10^{-19}$	$1.5 \times 10^{-18}$
Area 5, RWMS No. 2	11/28/89	01/02/90	$8.0 \times 10^{-18}$	$3.1 \times 10^{-18}$
Area 5, RWMS No. 3	01/01/89	01/31/89	$1.2 \times 10^{-18}$	$1.2 \times 10^{-18}$
Area 5, RWMS No. 3	02/01/89	02/28/89	0	0
Area 5, RWMS No. 3	03/01/89	03/31/89	0	0
Area 5, RWMS No. 3	04/01/89	04/30/89	$1.3 \times 10^{-18}$	$2.1 \times 10^{-18}$
Area 5, RWMS No. 3	05/01/89	05/31/89	$3.6 \times 10^{-18}$	$2.1 \times 10^{-18}$
Area 5, RWMS No. 3	06/03/89	07/07/89	$1.2 \times 10^{-17}$	$4.3 \times 10^{-18}$
Area 5, RWMS No. 3	07/05/89	07/31/89	$-1.6 \times 10^{-18}$	$1.6 \times 10^{-18}$
Area 5, RWMS No. 3	07/31/89	09/06/89	$1.3 \times 10^{-18}$	$2.3 \times 10^{-18}$
Area 5, RWMS No. 3	09/06/89	10/02/89	$1.3 \times 10^{-17}$	$5.0 \times 10^{-18}$
Area 5, RWMS No. 3	10/02/89	10/31/89	$7.7 \times 10^{-18}$	$3.8 \times 10^{-18}$
Area 5, RWMS No. 3	10/30/89	11/28/89	$1.2 \times 10^{-17}$	$4.0 \times 10^{-18}$
Area 5, RWMS No. 3	11/28/89	01/02/90	$4.1 \times 10^{-18}$	$2.3 \times 10^{-18}$
Area 5, RWMS No. 4	01/01/89	01/31/89	$7.4 \times 10^{-18}$	$3.8 \times 10^{-18}$
Area 5, RWMS No. 4	02/01/89	02/28/89	$3.5 \times 10^{-18}$	$2.5 \times 10^{-18}$
Area 5, RWMS No. 4	03/01/89	03/31/89	$4.8 \times 10^{-18}$	$2.5 \times 10^{-18}$
Area 5, RWMS No. 4	04/01/89	04/30/89	$1.8 \times 10^{-18}$	$1.8 \times 10^{-18}$
Area 5, RWMS No. 4	05/01/89	05/31/89	$1.5 \times 10^{-17}$	$4.4 \times 10^{-18}$
Area 5, RWMS No. 4	06/03/89	07/07/89	$7.2 \times 10^{-19}$	$1.5 \times 10^{-18}$
Area 5, RWMS No. 4	07/05/89	07/31/89	$6.5 \times 10^{-19}$	$1.4 \times 10^{-18}$
Area 5, RWMS No. 4	07/31/89	09/06/89	$5.2 \times 10^{-18}$	$9.1 \times 10^{-18}$



Table A.2 (<sup>239</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		μCi/mL	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 4	09/06/89	10/02/89	3.0 x 10 <sup>-18</sup>	4.0 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	10/02/89	10/31/89	8.2 x 10 <sup>-18</sup>	3.7 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	10/30/89	11/28/89	1.0 x 10 <sup>-17</sup>	4.6 x 10 <sup>-18</sup>
Area 5, RWMS No. 4	11/28/89	01/02/90	-5.1 x 10 <sup>-19</sup>	5.8 x 10 <sup>-19</sup>
Area 5, RWMS No. 5	01/01/89	01/31/89	0	
Area 5, RWMS No. 5	02/01/89	02/28/89	3.9 x 10 <sup>-18</sup>	2.8 x 10 <sup>-18</sup>
Area 5, RWMS No. 5	03/01/89	03/31/89	2.6 x 10 <sup>-18</sup>	1.9 x 10 <sup>-18</sup>
Area 5, RWMS No. 5	04/01/89	04/30/89	2.7 x 10 <sup>-18</sup>	2.0 x 10 <sup>-18</sup>
Area 5, RWMS No. 5	05/01/89	05/31/89	4.2 x 10 <sup>-18</sup>	2.2 x 10 <sup>-18</sup>
Area 5, RWMS No. 5	06/03/89	07/07/89	6.1 x 10 <sup>-17</sup>	1.4 x 10 <sup>-17</sup>
Area 5, RWMS No. 5	07/05/89	07/31/89	3.6 x 10 <sup>-18</sup>	2.6 x 10 <sup>-18</sup>
Area 5, RWMS No. 5	07/31/89	09/06/89	1.1 x 10 <sup>-18</sup>	1.7 x 10 <sup>-18</sup>
Area 5, RWMS No. 5	09/06/89	10/02/89	9.7 x 10 <sup>-18</sup>	3.8 x 10 <sup>-18</sup>
Area 5, RWMS No. 5	10/02/89	10/31/89	3.6 x 10 <sup>-18</sup>	2.5 x 10 <sup>-18</sup>
Area 5, RWMS No. 5	10/30/89	11/28/89	3.7 x 10 <sup>-18</sup>	3.1 x 10 <sup>-18</sup>
Area 5, RWMS No. 5	11/28/89	01/02/90	7.6 x 10 <sup>-19</sup>	1.3 x 10 <sup>-18</sup>
Area 5, RWMS No. 6	01/01/89	01/31/89	5.8 x 10 <sup>-18</sup>	3.0 x 10 <sup>-18</sup>
Area 5, RWMS No. 6	02/01/89	02/28/89	1.9 x 10 <sup>-18</sup>	1.9 x 10 <sup>-18</sup>
Area 5, RWMS No. 6	03/01/89	03/31/89	3.1 x 10 <sup>-18</sup>	1.8 x 10 <sup>-18</sup>
Area 5, RWMS No. 6	04/01/89	04/30/89	4.0 x 10 <sup>-18</sup>	2.4 x 10 <sup>-18</sup>
Area 5, RWMS No. 6	05/01/89	05/31/89	3.3 x 10 <sup>-18</sup>	2.3 x 10 <sup>-18</sup>
Area 5, RWMS No. 6	06/03/89	07/07/89	3.4 x 10 <sup>-18</sup>	3.4 x 10 <sup>-17</sup>
Area 5, RWMS No. 6	07/05/89	07/31/89	4.4 x 10 <sup>-18</sup>	2.3 x 10 <sup>-18</sup>
Area 5, RWMS No. 6	07/31/89	09/06/89	9.6 x 10 <sup>-18</sup>	4.3 x 10 <sup>-18</sup>
Area 5, RWMS No. 6	09/06/89	10/02/89	2.8 x 10 <sup>-17</sup>	6.5 x 10 <sup>-18</sup>
Area 5, RWMS No. 6	10/02/89	10/31/89	1.4 x 10 <sup>-18</sup>	6.5 x 10 <sup>-19</sup>
Area 5, RWMS No. 6	10/30/89	11/28/89	2.0 x 10 <sup>-18</sup>	2.0 x 10 <sup>-18</sup>
Area 5, RWMS No. 6	11/28/89	01/02/90	2.0 x 10 <sup>-18</sup>	1.5 x 10 <sup>-18</sup>
Area 5, RWMS No. 7	01/01/89	01/31/89	3.9 x 10 <sup>-18</sup>	2.3 x 10 <sup>-18</sup>
Area 5, RWMS No. 7	02/01/89	02/28/89	2.7 x 10 <sup>-18</sup>	2.7 x 10 <sup>-18</sup>
Area 5, RWMS No. 7	03/01/89	03/31/89	1.2 x 10 <sup>-18</sup>	1.2 x 10 <sup>-18</sup>
Area 5, RWMS No. 7	04/01/89	04/30/89	3.1 x 10 <sup>-18</sup>	2.0 x 10 <sup>-18</sup>
Area 5, RWMS No. 7	05/01/89	05/31/89	8.5 x 10 <sup>-18</sup>	3.3 x 10 <sup>-18</sup>
Area 5, RWMS No. 7	06/03/89	07/07/89	3.1 x 10 <sup>-18</sup>	3.2 x 10 <sup>-18</sup>
Area 5, RWMS No. 7	07/05/89	07/31/89	6.3 x 10 <sup>-18</sup>	2.9 x 10 <sup>-18</sup>
Area 5, RWMS No. 7	07/31/89	09/06/89	6.4 x 10 <sup>-18</sup>	3.1 x 10 <sup>-18</sup>
Area 5, RWMS No. 7	09/06/89	10/02/89	3.1 x 10 <sup>-18</sup>	2.3 x 10 <sup>-18</sup>
Area 5, RWMS No. 7	10/02/89	10/31/89	6.5 x 10 <sup>-18</sup>	3.3 x 10 <sup>-18</sup>
Area 5, RWMS No. 7	10/30/89	11/28/89	-6.0 x 10 <sup>-19</sup>	5.3 x 10 <sup>-19</sup>
Area 5, RWMS No. 7	11/28/89	01/02/90	2.7 x 10 <sup>-17</sup>	6.9 x 10 <sup>-18</sup>
Area 5, RWMS No. 8	01/01/89	01/31/89	5.3 x 10 <sup>-18</sup>	3.8 x 10 <sup>-18</sup>
Area 5, RWMS No. 8	02/01/89	02/28/89	0	0
Area 5, RWMS No. 8	03/01/89	03/31/89	2.0 x 10 <sup>-18</sup>	1.4 x 10 <sup>-18</sup>
Area 5, RWMS No. 8	04/01/89	04/30/89	4.0 x 10 <sup>-18</sup>	2.4 x 10 <sup>-18</sup>
Area 5, RWMS No. 8	05/01/89	05/31/89	2.5 x 10 <sup>-18</sup>	1.9 x 10 <sup>-18</sup>
Area 5, RWMS No. 8	06/03/89	07/07/89	3.0 x 10 <sup>-18</sup>	2.2 x 10 <sup>-18</sup>
Area 5, RWMS No. 8	07/05/89	07/31/89	1.5 x 10 <sup>-17</sup>	4.4 x 10 <sup>-18</sup>
Area 5, RWMS No. 8	07/31/89	09/06/89	1.6 x 10 <sup>-18</sup>	1.6 x 10 <sup>-18</sup>
Area 5, RWMS No. 8	09/06/89	10/02/89	3.0 x 10 <sup>-18</sup>	2.2 x 10 <sup>-18</sup>
Area 5, RWMS No. 8	10/02/89	10/31/89	5.3 x 10 <sup>-18</sup>	3.0 x 10 <sup>-18</sup>

Table A.2 (<sup>239</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 8	10/30/89	11/28/89	$4.0 \times 10^{-18}$	$2.4 \times 10^{-18}$
Area 5, RWMS No. 8	11/28/89	01/02/90	$7.9 \times 10^{-19}$	$1.4 \times 10^{-18}$
Area 5, RWMS No. 9	01/01/89	01/31/89	$1.9 \times 10^{-17}$	$6.7 \times 10^{-18}$
Area 5, RWMS No. 9	02/01/89	02/28/89	$1.6 \times 10^{-17}$	$6.1 \times 10^{-18}$
Area 5, RWMS No. 9	03/01/89	03/31/89	$8.5 \times 10^{-18}$	$2.9 \times 10^{-18}$
Area 5, RWMS No. 9	04/01/89	04/30/89	$1.3 \times 10^{-17}$	$4.5 \times 10^{-18}$
Area 5, RWMS No. 9	05/01/89	05/31/89	$2.2 \times 10^{-18}$	$2.0 \times 10^{-18}$
Area 5, RWMS No. 9	06/03/89	07/07/89	$7.1 \times 10^{-18}$	$3.0 \times 10^{-18}$
Area 5, RWMS No. 9	07/05/89	07/31/89	$5.9 \times 10^{-18}$	$3.0 \times 10^{-18}$
Area 5, RWMS No. 9	07/31/89	09/06/89	$7.7 \times 10^{-18}$	$4.2 \times 10^{-18}$
Area 5, RWMS No. 9	09/06/89	10/02/89	$1.5 \times 10^{-17}$	$5.3 \times 10^{-18}$
Area 5, RWMS No. 9	10/02/89	10/31/89	$1.1 \times 10^{-17}$	$4.2 \times 10^{-18}$
Area 5, RWMS No. 9	10/30/89	11/28/89	$1.9 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 5, RWMS No. 9	11/28/89	01/02/90	$3.1 \times 10^{-17}$	$8.8 \times 10^{-18}$
Area 5, RWMS Pit No. 3	01/01/89	01/31/89	$4.6 \times 10^{-18}$	$2.7 \times 10^{-18}$
Area 5, RWMS Pit No. 3	02/01/89	02/28/89	$1.5 \times 10^{-18}$	$1.5 \times 10^{-18}$
Area 5, RWMS Pit No. 3	03/01/89	03/31/89	$8.6 \times 10^{-19}$	$8.7 \times 10^{-19}$
Area 5, RWMS Pit No. 3	04/01/89	04/30/89	$1.1 \times 10^{-18}$	$2.0 \times 10^{-18}$
Area 5, RWMS Pit No. 3	05/01/89	05/31/89	$1.2 \times 10^{-18}$	$1.3 \times 10^{-18}$
Area 5, RWMS Pit No. 3	06/03/89	07/07/89	$-6.5 \times 10^{-19}$	$5.1 \times 10^{-19}$
Area 5, RWMS Pit No. 3	07/05/89	07/31/89	$9.5 \times 10^{-19}$	$1.7 \times 10^{-18}$
Area 5, RWMS Pit No. 3	07/31/89	09/06/89	$1.9 \times 10^{-18}$	$1.8 \times 10^{-18}$
Area 5, RWMS Pit No. 3	09/06/89	10/02/89	$4.2 \times 10^{-18}$	$3.1 \times 10^{-18}$
Area 5, RWMS Pit No. 3	10/02/89	10/31/89	$1.6 \times 10^{-17}$	$9.0 \times 10^{-18}$
Area 5, RWMS Pit No. 3	10/30/89	11/28/89	$3.4 \times 10^{-18}$	$3.1 \times 10^{-18}$
Area 5, RWMS Pit No. 3	11/28/89	01/02/90	$2.2 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 5, RWMS Pit No. 4	04/01/89	04/30/89	$-3.8 \times 10^{-18}$	$3.0 \times 10^{-18}$
Area 5, RWMS Pit No. 4	05/01/89	05/31/89	$2.7 \times 10^{-16}$	$3.0 \times 10^{-17}$
Area 5, RWMS Pit No. 4	06/03/89	07/07/89	$3.8 \times 10^{-18}$	$2.4 \times 10^{-18}$
Area 5, RWMS Pit No. 4	07/05/89	07/31/89	$8.4 \times 10^{-18}$	$3.8 \times 10^{-18}$
Area 5, RWMS Pit No. 4	07/31/89	09/06/89	$7.2 \times 10^{-18}$	$2.8 \times 10^{-18}$
Area 5, RWMS Pit No. 4	09/06/89	10/02/89	$1.0 \times 10^{-18}$	$1.3 \times 10^{-18}$
Area 5, RWMS Pit No. 4	10/02/89	10/31/89	$9.9 \times 10^{-19}$	$1.9 \times 10^{-18}$
Area 5, RWMS Pit No. 4	10/30/89	11/28/89	$4.3 \times 10^{-18}$	$3.0 \times 10^{-18}$
Area 5, RWMS Pit No. 4	11/28/89	01/02/90	$4.8 \times 10^{-18}$	$2.7 \times 10^{-18}$
Area 5, RWMS T. P. North	02/01/89	02/28/89	$1.7 \times 10^{-18}$	$1.7 \times 10^{-18}$
Area 5, RWMS T. P. North	03/01/89	03/31/89	$6.6 \times 10^{-18}$	$2.5 \times 10^{-18}$
Area 5, RWMS T. P. North	04/01/89	04/30/89	$5.6 \times 10^{-18}$	$3.3 \times 10^{-18}$
Area 5, RWMS T. P. North	05/01/89	05/31/89	$1.5 \times 10^{-16}$	$1.8 \times 10^{-17}$
Area 5, RWMS T. P. North	06/03/89	07/07/89	$1.3 \times 10^{-17}$	$4.2 \times 10^{-18}$
Area 5, RWMS T. P. North	07/05/89	07/31/89	$2.4 \times 10^{-17}$	$6.1 \times 10^{-18}$
Area 5, RWMS T. P. North	07/31/89	09/06/89	$1.0 \times 10^{-18}$	$1.6 \times 10^{-18}$
Area 5, RWMS T. P. North	09/06/89	10/02/89	$1.0 \times 10^{-18}$	$1.8 \times 10^{-18}$
Area 5, RWMS T. P. North	10/02/89	10/31/89	$7.7 \times 10^{-18}$	$3.5 \times 10^{-18}$
Area 5, RWMS T. P. North	10/30/89	11/28/89	$5.2 \times 10^{-18}$	$3.0 \times 10^{-18}$
Area 5, RWMS T. P. North	11/28/89	01/02/90	$3.7 \times 10^{-17}$	$8.8 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	02/01/89	02/28/89	0	0
Area 5, RWMS T. P. Northeast	03/01/89	03/31/89	$4.7 \times 10^{-18}$	$2.8 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	04/01/89	04/30/89	$6.6 \times 10^{-18}$	$3.1 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	05/01/89	05/31/89	$4.7 \times 10^{-17}$	$7.6 \times 10^{-18}$

Table A.2 (<sup>239</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS T. P. Northeast	06/03/89	07/07/89	$4.0 \times 10^{-18}$	$2.9 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	07/05/89	07/31/89	$4.8 \times 10^{-18}$	$2.5 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	07/31/89	09/06/89	$9.1 \times 10^{-18}$	$4.0 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	09/06/89	10/02/89	$3.1 \times 10^{-18}$	$2.3 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	10/02/89	10/31/89	$3.5 \times 10^{-18}$	$2.4 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	10/30/89	11/28/89	$1.9 \times 10^{-18}$	$1.8 \times 10^{-18}$
Area 5, RWMS T. P. Northeast	11/28/89	01/02/90	$5.0 \times 10^{-18}$	$2.4 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	02/01/89	02/28/89	$3.3 \times 10^{-18}$	$3.3 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	03/01/89	03/31/89	$2.3 \times 10^{-18}$	$1.6 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	04/01/89	04/30/89	$4.1 \times 10^{-18}$	$2.9 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	05/01/89	05/31/89	$4.0 \times 10^{-18}$	$2.7 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	06/03/89	07/07/89	$8.3 \times 10^{-19}$	$1.6 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	07/05/89	07/31/89	$5.9 \times 10^{-18}$	$2.8 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	07/31/89	09/06/89	$-1.6 \times 10^{-18}$	$1.2 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	09/06/89	10/02/89	$8.2 \times 10^{-18}$	$5.3 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	10/02/89	10/31/89	$3.5 \times 10^{-18}$	$2.5 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	10/30/89	11/28/89	$3.3 \times 10^{-18}$	$2.9 \times 10^{-18}$
Area 5, RWMS T. P. Northwest	11/28/89	01/02/90	$1.8 \times 10^{-17}$	$5.4 \times 10^{-18}$
Area 5, RWMS T. P. South	02/01/89	02/28/89	$2.0 \times 10^{-18}$	$2.0 \times 10^{-18}$
Area 5, RWMS T. P. South	03/01/89	03/31/89	$7.8 \times 10^{-18}$	$3.3 \times 10^{-18}$
Area 5, RWMS T. P. South	04/01/89	04/30/89	$2.4 \times 10^{-18}$	$1.5 \times 10^{-18}$
Area 5, RWMS T. P. South	05/01/89	05/31/89	$2.3 \times 10^{-18}$	$1.7 \times 10^{-18}$
Area 5, RWMS T. P. South	06/03/89	07/07/89	$1.4 \times 10^{-17}$	$4.1 \times 10^{-18}$
Area 5, RWMS T. P. South	07/05/89	07/31/89	$1.1 \times 10^{-17}$	$4.5 \times 10^{-18}$
Area 5, RWMS T. P. South	07/31/89	09/06/89	$9.7 \times 10^{-18}$	$4.8 \times 10^{-18}$
Area 5, RWMS T. P. South	09/06/89	10/02/89	$1.3 \times 10^{-17}$	$5.6 \times 10^{-18}$
Area 5, RWMS T. P. South	10/02/89	10/31/89	$1.0 \times 10^{-17}$	$4.2 \times 10^{-18}$
Area 5, RWMS T. P. South	10/30/89	11/28/89	$8.1 \times 10^{-18}$	$6.3 \times 10^{-18}$
Area 5, RWMS T. P. South	11/28/89	01/02/90	$5.9 \times 10^{-18}$	$2.7 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	02/01/89	02/28/89	$3.7 \times 10^{-18}$	$2.6 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	03/01/89	03/31/89	$1.0 \times 10^{-17}$	$3.7 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	04/01/89	04/30/89	$3.0 \times 10^{-18}$	$1.7 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	05/01/89	05/31/89	$1.8 \times 10^{-18}$	$1.7 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	06/03/89	07/07/89	$8.9 \times 10^{-19}$	$1.6 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	07/05/89	07/31/89	$1.6 \times 10^{-17}$	$5.7 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	07/31/89	09/06/89	$4.7 \times 10^{-19}$	$1.0 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	09/06/89	10/02/89	$1.2 \times 10^{-18}$	$2.0 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	10/02/89	10/31/89	$7.0 \times 10^{-18}$	$3.5 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	10/30/89	11/28/89	$2.0 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 5, RWMS T. P. Southeast	11/28/89	01/02/90	$-4.7 \times 10^{-19}$	$5.0 \times 10^{-19}$
Area 5, RWMS T. P. Southwest	02/01/89	02/28/89	$8.2 \times 10^{-18}$	$4.2 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	03/01/89	03/31/89	$2.4 \times 10^{-17}$	$6.0 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	04/01/89	04/30/89	$1.4 \times 10^{-16}$	$9.4 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	05/01/89	05/31/89	$5.2 \times 10^{-18}$	$2.4 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	06/03/89	07/07/89	$2.4 \times 10^{-17}$	$5.5 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	07/05/89	07/31/89	$1.5 \times 10^{-17}$	$4.8 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	07/31/89	09/06/89	$3.8 \times 10^{-18}$	$2.2 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	09/06/89	10/02/89	$2.6 \times 10^{-18}$	$2.4 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	10/02/89	10/31/89	$2.6 \times 10^{-17}$	$6.5 \times 10^{-18}$
Area 5, RWMS T. P. Southwest	10/30/89	11/28/89	$-8.1 \times 10^{-19}$	$7.6 \times 10^{-19}$

Table A.2 (<sup>239</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		μCi/mL	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS T. P. Southwest	11/28/89	01/02/90	8.6 x 10 <sup>-18</sup>	3.6 x 10 <sup>-18</sup>
Area 5, Well 5B	01/01/89	01/31/89	0	0
Area 5, Well 5B	02/01/89	02/28/89	0	0
Area 5, Well 5B	03/01/89	03/31/89	2.2 x 10 <sup>-18</sup>	1.3 x 10 <sup>-18</sup>
Area 5, Well 5B	04/01/89	04/30/89	4.1 x 10 <sup>-18</sup>	2.5 x 10 <sup>-18</sup>
Area 5, Well 5B	05/01/89	05/31/89	3.6 x 10 <sup>-18</sup>	2.1 x 10 <sup>-18</sup>
Area 5, Well 5B	06/03/89	07/07/89	2.0 x 10 <sup>-18</sup>	1.6 x 10 <sup>-18</sup>
Area 5, Well 5B	07/05/89	07/31/89	4.5 x 10 <sup>-18</sup>	3.0 x 10 <sup>-18</sup>
Area 5, Well 5B	07/31/89	09/06/89	1.6 x 10 <sup>-18</sup>	2.1 x 10 <sup>-18</sup>
Area 5, Well 5B	09/06/89	10/02/89	4.1 x 10 <sup>-18</sup>	2.8 x 10 <sup>-18</sup>
Area 5, Well 5B	10/02/89	10/31/89	4.9 x 10 <sup>-18</sup>	4.0 x 10 <sup>-18</sup>
Area 5, Well 5B	10/30/89	11/28/89	1.2 x 10 <sup>-17</sup>	4.8 x 10 <sup>-18</sup>
Area 5, Well 5B	11/28/89	01/02/90	6.1 x 10 <sup>-18</sup>	3.0 x 10 <sup>-18</sup>
Area 6, CP-6 Complex	01/01/89	01/31/89	4.6 x 10 <sup>-18</sup>	2.7 x 10 <sup>-18</sup>
Area 6, CP-6 Complex	02/01/89	02/28/89	4.9 x 10 <sup>-18</sup>	2.9 x 10 <sup>-18</sup>
Area 6, CP-6 Complex	03/01/89	03/31/89	4.6 x 10 <sup>-18</sup>	2.1 x 10 <sup>-18</sup>
Area 6, CP-6 Complex	04/01/89	04/30/89	7.6 x 10 <sup>-18</sup>	3.8 x 10 <sup>-18</sup>
Area 6, CP-6 Complex	05/01/89	05/31/89	5.2 x 10 <sup>-18</sup>	2.2 x 10 <sup>-18</sup>
Area 6, CP-6 Complex	06/03/89	07/07/89	1.1 x 10 <sup>-18</sup>	1.3 x 10 <sup>-18</sup>
Area 6, CP-6 Complex	07/05/89	07/31/89	2.9 x 10 <sup>-18</sup>	2.1 x 10 <sup>-18</sup>
Area 6, CP-6 Complex	07/31/89	09/06/89	3.6 x 10 <sup>-18</sup>	2.1 x 10 <sup>-18</sup>
Area 6, CP-6 Complex	09/06/89	10/02/89	6.7 x 10 <sup>-18</sup>	3.1 x 10 <sup>-18</sup>
Area 6, CP-6 Complex	10/02/89	10/31/89	3.5 x 10 <sup>-18</sup>	2.4 x 10 <sup>-18</sup>
Area 6, CP-6 Complex	10/30/89	11/28/89	9.0 x 10 <sup>-18</sup>	3.7 x 10 <sup>-18</sup>
Area 6, CP-6 Complex	11/28/89	01/02/90	1.4 x 10 <sup>-17</sup>	4.9 x 10 <sup>-18</sup>
Area 6, Well 3 Complex	01/01/89	01/31/89	7.7 x 10 <sup>-18</sup>	3.5 x 10 <sup>-18</sup>
Area 6, Well 3 Complex	02/01/89	02/28/89	4.3 x 10 <sup>-18</sup>	3.1 x 10 <sup>-18</sup>
Area 6, Well 3 Complex	03/01/89	03/31/89	2.3 x 10 <sup>-18</sup>	2.3 x 10 <sup>-18</sup>
Area 6, Well 3 Complex	04/01/89	04/30/89	2.5 x 10 <sup>-18</sup>	3.3 x 10 <sup>-18</sup>
Area 6, Well 3 Complex	05/01/89	05/31/89	3.3 x 10 <sup>-18</sup>	2.0 x 10 <sup>-18</sup>
Area 6, Well 3 Complex	06/03/89	07/07/89	1.5 x 10 <sup>-17</sup>	4.7 x 10 <sup>-18</sup>
Area 6, Well 3 Complex	07/05/89	07/31/89	6.7 x 10 <sup>-18</sup>	3.4 x 10 <sup>-18</sup>
Area 6, Well 3 Complex	07/31/89	09/06/89	5.7 x 10 <sup>-18</sup>	3.7 x 10 <sup>-18</sup>
Area 6, Well 3 Complex	09/06/89	10/02/89	8.5 x 10 <sup>-18</sup>	3.5 x 10 <sup>-18</sup>
Area 6, Well 3 Complex	10/02/89	10/31/89	1.1 x 10 <sup>-17</sup>	4.8 x 10 <sup>-18</sup>
Area 6, Well 3 Complex	10/30/89	11/28/89	3.3 x 10 <sup>-18</sup>	2.3 x 10 <sup>-18</sup>
Area 6, Well 3 Complex	11/28/89	01/02/90	4.2 x 10 <sup>-18</sup>	2.8 x 10 <sup>-18</sup>
Area 6, Yucca Complex	01/01/89	01/31/89	3.0 x 10 <sup>-17</sup>	1.2 x 10 <sup>-17</sup>
Area 6, Yucca Complex	02/01/89	02/28/89	1.2 x 10 <sup>-17</sup>	4.3 x 10 <sup>-18</sup>
Area 6, Yucca Complex	03/01/89	03/31/89	3.2 x 10 <sup>-17</sup>	6.1 x 10 <sup>-18</sup>
Area 6, Yucca Complex	04/01/89	04/30/89	2.3 x 10 <sup>-17</sup>	6.5 x 10 <sup>-18</sup>
Area 6, Yucca Complex	05/01/89	05/31/89	1.5 x 10 <sup>-17</sup>	4.1 x 10 <sup>-18</sup>
Area 6, Yucca Complex	06/03/89	07/07/89	2.5 x 10 <sup>-17</sup>	5.6 x 10 <sup>-18</sup>
Area 6, Yucca Complex	07/05/89	07/31/89	2.0 x 10 <sup>-17</sup>	6.2 x 10 <sup>-18</sup>
Area 6, Yucca Complex	07/31/89	09/06/89	1.9 x 10 <sup>-17</sup>	5.1 x 10 <sup>-18</sup>
Area 6, Yucca Complex	09/06/89	10/02/89	1.8 x 10 <sup>-17</sup>	5.2 x 10 <sup>-18</sup>
Area 6, Yucca Complex	10/02/89	10/31/89	2.2 x 10 <sup>-17</sup>	7.8 x 10 <sup>-18</sup>
Area 6, Yucca Complex	10/30/89	11/28/89	2.8 x 10 <sup>-17</sup>	6.2 x 10 <sup>-18</sup>
Area 6, Yucca Complex	11/28/89	01/02/90	1.2 x 10 <sup>-17</sup>	4.5 x 10 <sup>-18</sup>
Area 7, Ue7ns	01/01/89	01/31/89	7.8 x 10 <sup>-18</sup>	3.6 x 10 <sup>-18</sup>

Table A.2 (<sup>239</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 7, Ue7ns	02/01/89	02/28/89	$3.7 \times 10^{-18}$	$3.7 \times 10^{-18}$
Area 7, Ue7ns	03/01/89	03/31/89	$2.3 \times 10^{-17}$	$5.6 \times 10^{-18}$
Area 7, Ue7ns	04/01/89	04/30/89	$2.7 \times 10^{-16}$	$7.9 \times 10^{-17}$
Area 7, Ue7ns	05/01/89	05/31/89	$7.9 \times 10^{-17}$	$9.6 \times 10^{-18}$
Area 7, Ue7ns	06/03/89	07/07/89	$1.7 \times 10^{-17}$	$4.0 \times 10^{-18}$
Area 7, Ue7ns	07/05/89	07/31/89	$1.5 \times 10^{-17}$	$4.8 \times 10^{-18}$
Area 7, Ue7ns	07/31/89	09/06/89	$2.0 \times 10^{-17}$	$5.8 \times 10^{-18}$
Area 7, Ue7ns	09/06/89	10/02/89	$5.1 \times 10^{-17}$	$9.6 \times 10^{-18}$
Area 7, Ue7ns	10/02/89	10/31/89	$1.3 \times 10^{-17}$	$4.6 \times 10^{-18}$
Area 7, Ue7ns	10/30/89	11/28/89	$1.8 \times 10^{-17}$	$6.1 \times 10^{-18}$
Area 7, Ue7ns	11/28/89	01/02/90	$4.6 \times 10^{-17}$	$8.8 \times 10^{-18}$
Area 9, 9-300 Bunker	01/01/89	01/31/89	$1.3 \times 10^{-16}$	$1.9 \times 10^{-17}$
Area 9, 9-300 Bunker	02/01/89	02/28/89	$1.3 \times 10^{-16}$	$2.0 \times 10^{-17}$
Area 9, 9-300 Bunker	03/01/89	03/31/89	$2.3 \times 10^{-16}$	$2.5 \times 10^{-17}$
Area 9, 9-300 Bunker	04/01/89	04/30/89	$9.6 \times 10^{-17}$	$2.1 \times 10^{-17}$
Area 9, 9-300 Bunker	05/01/89	05/31/89	$4.3 \times 10^{-17}$	$7.5 \times 10^{-18}$
Area 9, 9-300 Bunker	06/03/89	07/07/89	$3.5 \times 10^{-16}$	$3.1 \times 10^{-17}$
Area 9, 9-300 Bunker	07/05/89	07/31/89	$6.4 \times 10^{-17}$	$1.0 \times 10^{-17}$
Area 9, 9-300 Bunker	07/31/89	09/06/89	$1.4 \times 10^{-16}$	$1.9 \times 10^{-17}$
Area 9, 9-300 Bunker	09/06/89	10/02/89	$1.2 \times 10^{-16}$	$1.4 \times 10^{-17}$
Area 9, 9-300 Bunker	10/02/89	10/31/89	$3.2 \times 10^{-16}$	$4.1 \times 10^{-17}$
Area 9, 9-300 Bunker	10/30/89	11/28/89	$4.9 \times 10^{-17}$	$1.4 \times 10^{-17}$
Area 9, 9-300 Bunker	11/28/89	01/02/90	$2.3 \times 10^{-18}$	$2.1 \times 10^{-18}$
Area 11, Gate 293	01/01/89	01/31/89	$4.6 \times 10^{-18}$	$2.7 \times 10^{-18}$
Area 11, Gate 293	02/01/89	02/28/89	$2.1 \times 10^{-18}$	$2.1 \times 10^{-18}$
Area 11, Gate 293	03/01/89	03/31/89	$5.4 \times 10^{-16}$	$6.2 \times 10^{-17}$
Area 11, Gate 293	04/01/89	04/30/89	$1.2 \times 10^{-17}$	$4.5 \times 10^{-18}$
Area 11, Gate 293	05/01/89	05/31/89	$1.4 \times 10^{-16}$	$1.5 \times 10^{-17}$
Area 11, Gate 293	06/03/89	07/07/89	$8.4 \times 10^{-18}$	$2.5 \times 10^{-18}$
Area 11, Gate 293	07/05/89	07/31/89	$7.9 \times 10^{-18}$	$3.6 \times 10^{-18}$
Area 11, Gate 293	07/31/89	09/06/89	$4.6 \times 10^{-18}$	$2.6 \times 10^{-18}$
Area 11, Gate 293	09/06/89	10/02/89	$5.0 \times 10^{-18}$	$2.6 \times 10^{-18}$
Area 11, Gate 293	10/02/89	10/31/89	$3.3 \times 10^{-17}$	$9.6 \times 10^{-18}$
Area 11, Gate 293	10/30/89	11/28/89	$2.0 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 11, Gate 293	11/28/89	01/02/90	$4.5 \times 10^{-19}$	$9.9 \times 10^{-19}$
Area 12, Complex	01/01/89	01/31/89	$2.6 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 12, Complex	02/01/89	02/28/89	$2.5 \times 10^{-18}$	$1.8 \times 10^{-18}$
Area 12, Complex	03/01/89	03/31/89	$2.5 \times 10^{-18}$	$1.7 \times 10^{-18}$
Area 12, Complex	04/01/89	04/30/89	$4.4 \times 10^{-18}$	$3.7 \times 10^{-18}$
Area 12, Complex	05/01/89	05/31/89	$-5.5 \times 10^{-19}$	$4.8 \times 10^{-19}$
Area 12, Complex	06/03/89	07/07/89	$6.8 \times 10^{-18}$	$2.7 \times 10^{-18}$
Area 12, Complex	07/05/89	07/31/89	$2.5 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 12, Complex	07/31/89	09/06/89	$5.4 \times 10^{-19}$	$1.1 \times 10^{-18}$
Area 12, Complex	09/06/89	10/02/89	$3.1 \times 10^{-18}$	$2.2 \times 10^{-18}$
Area 12, Complex	10/02/89	10/31/89	$2.1 \times 10^{-18}$	$3.1 \times 10^{-18}$
Area 12, Complex	10/30/89	11/28/89	$5.7 \times 10^{-18}$	$2.9 \times 10^{-18}$
Area 12, Complex	11/28/89	01/02/90	$-4.8 \times 10^{-19}$	$4.2 \times 10^{-19}$
Area 15, EPA Farm	01/01/89	01/31/89	$9.2 \times 10^{-18}$	$3.3 \times 10^{-18}$
Area 15, EPA Farm	02/01/89	02/28/89	$5.5 \times 10^{-18}$	$3.3 \times 10^{-18}$
Area 15, EPA Farm	03/01/89	03/31/89	$1.2 \times 10^{-17}$	$3.8 \times 10^{-18}$

Table A.2 (<sup>239</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		μCi/mL	
	Start	End	Concentration	Standard Deviation (s)
Area 15, EPA Farm	04/01/89	04/30/89	2.8 x 10 <sup>-17</sup>	6.1 x 10 <sup>-18</sup>
Area 15, EPA Farm	05/01/89	05/31/89	4.4 x 10 <sup>-18</sup>	2.3 x 10 <sup>-18</sup>
Area 15, EPA Farm	06/03/89	07/07/89	-1.3 x 10 <sup>-18</sup>	1.0 x 10 <sup>-18</sup>
Area 15, EPA Farm	07/05/89	07/31/89	1.6 x 10 <sup>-17</sup>	5.4 x 10 <sup>-18</sup>
Area 15, EPA Farm	07/31/89	09/06/89	3.6 x 10 <sup>-17</sup>	7.6 x 10 <sup>-18</sup>
Area 15, EPA Farm	09/06/89	10/02/89	1.6 x 10 <sup>-17</sup>	4.4 x 10 <sup>-18</sup>
Area 15, EPA Farm	10/02/89	10/31/89	3.8 x 10 <sup>-17</sup>	8.3 x 10 <sup>-18</sup>
Area 15, EPA Farm	10/30/89	11/28/89	3.9 x 10 <sup>-17</sup>	7.6 x 10 <sup>-18</sup>
Area 15, EPA Farm	11/28/89	01/02/90	1.3 x 10 <sup>-17</sup>	4.5 x 10 <sup>-18</sup>
Area 15, Gate 700 South	01/01/89	01/31/89	3.4 x 10 <sup>-18</sup>	2.4 x 10 <sup>-18</sup>
Area 15, Gate 700 South	02/01/89	02/28/89	7.8 x 10 <sup>-18</sup>	3.5 x 10 <sup>-18</sup>
Area 15, Gate 700 South	03/01/89	03/31/89	3.0 x 10 <sup>-17</sup>	5.6 x 10 <sup>-18</sup>
Area 15, Gate 700 South	04/01/89	04/30/89	2.6 x 10 <sup>-17</sup>	8.4 x 10 <sup>-18</sup>
Area 15, Gate 700 South	05/01/89	05/31/89	1.5 x 10 <sup>-17</sup>	4.1 x 10 <sup>-18</sup>
Area 15, Gate 700 South	06/03/89	07/07/89	5.5 x 10 <sup>-18</sup>	2.6 x 10 <sup>-18</sup>
Area 15, Gate 700 South	07/05/89	07/31/89	2.1 x 10 <sup>-17</sup>	5.3 x 10 <sup>-18</sup>
Area 15, Gate 700 South	07/31/89	09/06/89	8.6 x 10 <sup>-18</sup>	3.6 x 10 <sup>-18</sup>
Area 15, Gate 700 South	09/06/89	10/02/89	6.9 x 10 <sup>-18</sup>	2.8 x 10 <sup>-18</sup>
Area 15, Gate 700 South	10/02/89	10/31/89	2.2 x 10 <sup>-17</sup>	5.8 x 10 <sup>-18</sup>
Area 15, Gate 700 South	10/30/89	11/28/89	7.7 x 10 <sup>-18</sup>	3.0 x 10 <sup>-18</sup>
Area 15, Gate 700 South	11/28/89	01/02/90	1.7 x 10 <sup>-18</sup>	1.9 x 10 <sup>-18</sup>
Area 15, PILE DRIVER	01/01/89	01/31/89	2.4 x 10 <sup>-18</sup>	1.7 x 10 <sup>-18</sup>
Area 15, PILE DRIVER	02/01/89	02/28/89	5.0 x 10 <sup>-18</sup>	3.6 x 10 <sup>-18</sup>
Area 15, PILE DRIVER	03/01/89	03/31/89	1.9 x 10 <sup>-18</sup>	1.4 x 10 <sup>-18</sup>
Area 15, PILE DRIVER	04/01/89	04/30/89	2.0 x 10 <sup>-17</sup>	7.2 x 10 <sup>-18</sup>
Area 15, PILE DRIVER	05/01/89	05/31/89	2.3 x 10 <sup>-17</sup>	5.8 x 10 <sup>-18</sup>
Area 15, PILE DRIVER	06/03/89	07/07/89	7.5 x 10 <sup>-18</sup>	3.0 x 10 <sup>-18</sup>
Area 15, PILE DRIVER	07/05/89	07/31/89	-6.8 x 10 <sup>-19</sup>	5.2 x 10 <sup>-19</sup>
Area 15, PILE DRIVER	07/31/89	09/06/89	1.0 x 10 <sup>-16</sup>	1.3 x 10 <sup>-17</sup>
Area 15, PILE DRIVER	09/06/89	10/02/89	4.8 x 10 <sup>-18</sup>	2.5 x 10 <sup>-18</sup>
Area 15, PILE DRIVER	10/02/89	10/31/89	6.7 x 10 <sup>-18</sup>	3.4 x 10 <sup>-18</sup>
Area 15, PILE DRIVER	10/30/89	11/28/89	8.6 x 10 <sup>-19</sup>	2.0 x 10 <sup>-18</sup>
Area 15, PILE DRIVER	11/28/89	01/02/90	5.9 x 10 <sup>-19</sup>	1.5 x 10 <sup>-18</sup>
Area 16, Substation	01/01/89	01/31/89	1.1 x 10 <sup>-17</sup>	5.6 x 10 <sup>-18</sup>
Area 16, Substation	02/01/89	02/28/89	0	0
Area 16, Substation	03/01/89	03/31/89	1.4 x 10 <sup>-18</sup>	1.4 x 10 <sup>-18</sup>
Area 16, Substation	04/01/89	04/30/89	4.6 x 10 <sup>-18</sup>	3.2 x 10 <sup>-18</sup>
Area 16, Substation	05/01/89	05/31/89	1.8 x 10 <sup>-18</sup>	2.5 x 10 <sup>-18</sup>
Area 16, Substation	06/03/89	07/07/89	1.7 x 10 <sup>-18</sup>	1.7 x 10 <sup>-18</sup>
Area 16, Substation	07/05/89	07/31/89	4.4 x 10 <sup>-19</sup>	4.1 x 10 <sup>-19</sup>
Area 16, Substation	07/31/89	09/06/89	2.4 x 10 <sup>-18</sup>	2.1 x 10 <sup>-18</sup>
Area 16, Substation	09/06/89	10/02/89	4.6 x 10 <sup>-19</sup>	1.2 x 10 <sup>-18</sup>
Area 16, Substation	10/02/89	10/31/89	3.1 x 10 <sup>-18</sup>	4.1 x 10 <sup>-18</sup>
Area 16, Substation	10/30/89	11/28/89	-8.2 x 10 <sup>-19</sup>	6.9 x 10 <sup>-19</sup>
Area 16, Substation	11/28/89	01/02/90	2.4 x 10 <sup>-18</sup>	2.2 x 10 <sup>-18</sup>
Area 19, Echo Peak	01/01/89	01/31/89	0	0
Area 19, Echo Peak	02/01/89	02/28/89	0	0
Area 19, Echo Peak	03/01/89	03/31/89	3.1 x 10 <sup>-18</sup>	2.2 x 10 <sup>-18</sup>
Area 19, Echo Peak	04/01/89	04/30/89	2.0 x 10 <sup>-18</sup>	3.7 x 10 <sup>-18</sup>
Area 19, Echo Peak	05/01/89	05/31/89	3.2 x 10 <sup>-18</sup>	1.9 x 10 <sup>-18</sup>

Table A.2 (<sup>239</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 19, Echo Peak	06/03/89	07/07/89	$1.6 \times 10^{-18}$	$1.7 \times 10^{-18}$
Area 19, Echo Peak	07/05/89	07/31/89	$1.7 \times 10^{-18}$	$1.8 \times 10^{-18}$
Area 19, Echo Peak	07/31/89	09/06/89	$1.3 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 19, Echo Peak	09/06/89	10/02/89	$6.1 \times 10^{-19}$	$1.6 \times 10^{-18}$
Area 19, Echo Peak	10/02/89	10/31/89	$-8.4 \times 10^{-19}$	$8.7 \times 10^{-19}$
Area 19, Echo Peak	10/30/89	11/28/89	$3.7 \times 10^{-18}$	$2.2 \times 10^{-18}$
Area 19, Echo Peak	11/28/89	01/02/90	$-6.1 \times 10^{-19}$	$5.6 \times 10^{-19}$
Area 19, Substation	01/01/89	01/31/89	$2.6 \times 10^{-18}$	$2.6 \times 10^{-18}$
Area 19, Substation	02/01/89	02/28/89	$3.0 \times 10^{-18}$	$2.1 \times 10^{-18}$
Area 19, Substation	03/01/89	03/31/89	$2.4 \times 10^{-18}$	$1.4 \times 10^{-18}$
Area 19, Substation	04/01/89	04/30/89	$9.0 \times 10^{-18}$	$4.4 \times 10^{-18}$
Area 19, Substation	05/01/89	05/31/89	$4.5 \times 10^{-18}$	$3.7 \times 10^{-18}$
Area 19, Substation	06/03/89	07/07/89	$2.3 \times 10^{-18}$	$2.2 \times 10^{-18}$
Area 19, Substation	07/05/89	07/31/89	$4.1 \times 10^{-18}$	$2.5 \times 10^{-18}$
Area 19, Substation	07/31/89	09/06/89	$2.1 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 19, Substation	09/06/89	10/02/89	$4.1 \times 10^{-18}$	$2.4 \times 10^{-18}$
Area 19, Substation	10/02/89	10/31/89	$6.6 \times 10^{-18}$	$4.4 \times 10^{-18}$
Area 19, Substation	10/30/89	11/28/89	$2.5 \times 10^{-18}$	$1.8 \times 10^{-18}$
Area 19, Substation	11/28/89	01/02/90	$-7.1 \times 10^{-19}$	$6.5 \times 10^{-19}$
Area 20, Dispensary	01/01/89	01/31/89	$5.1 \times 10^{-18}$	$2.6 \times 10^{-18}$
Area 20, Dispensary	02/01/89	02/28/89	$2.0 \times 10^{-18}$	$2.0 \times 10^{-18}$
Area 20, Dispensary	03/01/89	03/31/89	$4.0 \times 10^{-18}$	$2.0 \times 10^{-18}$
Area 20, Dispensary	04/01/89	04/30/89	$6.2 \times 10^{-18}$	$4.1 \times 10^{-18}$
Area 20, Dispensary	05/01/89	05/31/89	$9.5 \times 10^{-18}$	$3.5 \times 10^{-18}$
Area 20, Dispensary	06/03/89	07/07/89	$1.1 \times 10^{-16}$	$4.3 \times 10^{-17}$
Area 20, Dispensary	07/05/89	07/31/89	$2.2 \times 10^{-18}$	$1.7 \times 10^{-18}$
Area 20, Dispensary	07/31/89	09/06/89	$8.9 \times 10^{-19}$	$6.0 \times 10^{-19}$
Area 20, Dispensary	09/06/89	10/02/89	$2.8 \times 10^{-18}$	$2.2 \times 10^{-18}$
Area 20, Dispensary	10/02/89	10/31/89	$2.9 \times 10^{-18}$	$2.7 \times 10^{-18}$
Area 20, Dispensary	10/30/89	11/28/89	$7.8 \times 10^{-18}$	$4.4 \times 10^{-18}$
Area 20, Dispensary	11/28/89	01/02/90	$3.0 \times 10^{-18}$	$2.1 \times 10^{-18}$
Area 23, Building 790	01/01/89	01/31/89	$1.5 \times 10^{-18}$	$1.5 \times 10^{-18}$
Area 23, Building 790	02/01/89	02/28/89	$1.1 \times 10^{-18}$	$1.2 \times 10^{-18}$
Area 23, Building 790	03/01/89	03/31/89	$4.9 \times 10^{-18}$	$2.2 \times 10^{-18}$
Area 23, Building 790	04/01/89	04/30/89	$1.2 \times 10^{-17}$	$6.0 \times 10^{-18}$
Area 23, Building 790	05/01/89	05/31/89	$8.7 \times 10^{-17}$	$1.4 \times 10^{-17}$
Area 23, Building 790	06/03/89	07/07/89	$1.5 \times 10^{-19}$	$8.7 \times 10^{-19}$
Area 23, Building 790	07/05/89	07/31/89	$-9.0 \times 10^{-19}$	$8.1 \times 10^{-19}$
Area 23, Building 790	07/31/89	09/06/89	$3.4 \times 10^{-18}$	$2.4 \times 10^{-18}$
Area 23, Building 790	09/06/89	10/02/89	$2.0 \times 10^{-18}$	$2.0 \times 10^{-18}$
Area 23, Building 790	10/02/89	10/31/89	$4.3 \times 10^{-17}$	$9.3 \times 10^{-18}$
Area 23, Building 790	10/30/89	11/28/89	$1.8 \times 10^{-18}$	$1.8 \times 10^{-18}$
Area 23, Building 790	11/28/89	01/02/90	$2.6 \times 10^{-18}$	$1.8 \times 10^{-18}$
Area 23, Building 790 No. 2	01/01/89	01/31/89	0	0
Area 23, Building 790 No. 2	02/01/89	02/28/89	0	0
Area 23, Building 790 No. 2	03/01/89	03/31/89	$3.5 \times 10^{-18}$	$2.1 \times 10^{-18}$
Area 23, Building 790 No. 2	04/01/89	04/30/89	$1.0 \times 10^{-18}$	$1.8 \times 10^{-18}$
Area 23, Building 790 No. 2	05/01/89	05/31/89	$8.6 \times 10^{-18}$	$3.3 \times 10^{-18}$
Area 23, Building 790 No. 2	06/03/89	07/07/89	$2.0 \times 10^{-19}$	$8.9 \times 10^{-19}$
Area 23, Building 790 No. 2	07/05/89	07/31/89	$7.2 \times 10^{-18}$	$4.3 \times 10^{-18}$

Table A.2 (<sup>239</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 23, Building 790 No. 2	07/31/89	09/06/89	$8.2 \times 10^{-19}$	$1.4 \times 10^{-18}$
Area 23, Building 790 No. 2	09/06/89	10/02/89	$1.4 \times 10^{-18}$	$1.6 \times 10^{-18}$
Area 23, Building 790 No. 2	10/02/89	10/31/89	$1.2 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 23, Building 790 No. 2	10/30/89	11/28/89	$1.7 \times 10^{-18}$	$1.7 \times 10^{-18}$
Area 23, Building 790 No. 2	11/28/89	01/02/90	$1.4 \times 10^{-18}$	$1.4 \times 10^{-18}$
Area 23, East Boundary	01/01/89	01/31/89	$2.3 \times 10^{-18}$	$1.6 \times 10^{-18}$
Area 23, East Boundary	02/01/89	02/28/89	$3.1 \times 10^{-18}$	$2.2 \times 10^{-18}$
Area 23, East Boundary	03/01/89	03/31/89	$2.7 \times 10^{-18}$	$1.6 \times 10^{-18}$
Area 23, East Boundary	04/01/89	04/30/89	$3.6 \times 10^{-16}$	$6.2 \times 10^{-17}$
Area 23, East Boundary	05/01/89	05/31/89	$7.6 \times 10^{-17}$	$1.1 \times 10^{-17}$
Area 23, East Boundary	06/03/89	07/07/89	0	0
Area 23, East Boundary	07/05/89	07/31/89	$2.4 \times 10^{-18}$	$2.4 \times 10^{-18}$
Area 23, East Boundary	07/31/89	09/06/89	$5.9 \times 10^{-19}$	$1.1 \times 10^{-18}$
Area 23, East Boundary	09/06/89	10/02/89	$-6.4 \times 10^{-19}$	$5.1 \times 10^{-19}$
Area 23, East Boundary	10/02/89	10/31/89	$4.9 \times 10^{-18}$	$2.8 \times 10^{-18}$
Area 23, East Boundary	10/30/89	11/28/89	$2.7 \times 10^{-18}$	$2.4 \times 10^{-18}$
Area 23, East Boundary	11/28/89	01/02/90	$3.5 \times 10^{-18}$	$2.4 \times 10^{-18}$
Area 23, H&S Building Roof	01/01/89	01/31/89	0	0
Area 23, H&S Building Roof	02/01/89	02/28/89	$4.0 \times 10^{-18}$	$2.8 \times 10^{-18}$
Area 23, H&S Building Roof	03/01/89	03/31/89	$1.6 \times 10^{-18}$	$1.1 \times 10^{-18}$
Area 23, H&S Building Roof	04/01/89	04/30/89	$4.2 \times 10^{-18}$	$3.8 \times 10^{-18}$
Area 23, H&S Building Roof	05/01/89	05/31/89	$1.3 \times 10^{-17}$	$4.9 \times 10^{-18}$
Area 23, H&S Building Roof	06/03/89	07/07/89	$6.4 \times 10^{-18}$	$2.1 \times 10^{-18}$
Area 23, H&S Building Roof	07/05/89	07/31/89	$2.6 \times 10^{-18}$	$2.0 \times 10^{-18}$
Area 23, H&S Building Roof	07/31/89	09/06/89	$1.4 \times 10^{-18}$	$1.4 \times 10^{-18}$
Area 23, H&S Building Roof	09/06/89	10/02/89	$7.7 \times 10^{-19}$	$4.6 \times 10^{-19}$
Area 23, H&S Building Roof	10/02/89	10/31/89	$-6.2 \times 10^{-19}$	$6.6 \times 10^{-19}$
Area 23, H&S Building Roof	10/30/89	11/28/89	$1.2 \times 10^{-18}$	$1.3 \times 10^{-18}$
Area 23, H&S Building Roof	11/28/89	01/02/90	$5.1 \times 10^{-18}$	$2.3 \times 10^{-18}$
Area 25, E-MAD South	01/01/89	01/31/89	$1.5 \times 10^{-18}$	$1.5 \times 10^{-18}$
Area 25, E-MAD South	02/01/89	02/28/89	0	0
Area 25, E-MAD South	03/01/89	03/31/89	$1.2 \times 10^{-18}$	$1.2 \times 10^{-18}$
Area 25, E-MAD South	04/01/89	04/30/89	$1.7 \times 10^{-18}$	$1.8 \times 10^{-18}$
Area 25, E-MAD South	05/01/89	05/31/89	$4.1 \times 10^{-19}$	$1.0 \times 10^{-18}$
Area 25, E-MAD South	06/03/89	07/07/89	$2.0 \times 10^{-18}$	$1.8 \times 10^{-18}$
Area 25, E-MAD South	07/05/89	07/31/89	$8.6 \times 10^{-19}$	$1.6 \times 10^{-18}$
Area 25, E-MAD South	07/31/89	09/06/89	$-4.8 \times 10^{-19}$	$5.7 \times 10^{-19}$
Area 25, E-MAD South	09/06/89	10/02/89	$3.8 \times 10^{-18}$	$2.7 \times 10^{-18}$
Area 25, E-MAD South	10/02/89	10/31/89	$2.3 \times 10^{-18}$	$3.1 \times 10^{-18}$
Area 25, E-MAD South	10/30/89	11/28/89	$-6.8 \times 10^{-19}$	$5.2 \times 10^{-19}$
Area 25, E-MAD South	11/28/89	01/02/90	$6.9 \times 10^{-18}$	$3.4 \times 10^{-18}$
Area 25, NRDS Warehouse	01/01/89	01/31/89	$2.4 \times 10^{-18}$	$1.7 \times 10^{-18}$
Area 25, NRDS Warehouse	02/01/89	02/28/89	$3.9 \times 10^{-18}$	$2.2 \times 10^{-18}$
Area 25, NRDS Warehouse	03/01/89	03/31/89	$2.4 \times 10^{-18}$	$1.7 \times 10^{-18}$
Area 25, NRDS Warehouse	04/01/89	04/30/89	$1.2 \times 10^{-17}$	$5.8 \times 10^{-18}$
Area 25, NRDS Warehouse	05/01/89	05/31/89	$1.8 \times 10^{-18}$	$1.9 \times 10^{-18}$
Area 25, NRDS Warehouse	06/03/89	07/07/89	$4.6 \times 10^{-19}$	$1.3 \times 10^{-18}$
Area 25, NRDS Warehouse	07/05/89	07/31/89	$1.4 \times 10^{-18}$	$2.4 \times 10^{-18}$
Area 25, NRDS Warehouse	07/31/89	09/06/89	$4.8 \times 10^{-18}$	$3.2 \times 10^{-18}$
Area 25, NRDS Warehouse	09/06/89	10/02/89	$8.5 \times 10^{-19}$	$1.8 \times 10^{-18}$



Table A.2 (<sup>239</sup>Pu in Air, cont.)

Sampling Location	Sampling Dates		μCi/mL	
	Start	End	Concentration	Standard Deviation (s)
Area 25, NRDS Warehouse	10/02/89	10/31/89	1.7 x 10 <sup>-18</sup>	2.6 x 10 <sup>-18</sup>
Area 25, NRDS Warehouse	10/30/89	11/28/89	3.0 x 10 <sup>-18</sup>	2.2 x 10 <sup>-18</sup>
Area 25, NRDS Warehouse	11/28/89	01/02/90	8.0 x 10 <sup>-18</sup>	3.6 x 10 <sup>-18</sup>
Area 27, Cafeteria	01/01/89	01/31/89	2.5 x 10 <sup>-18</sup>	1.7 x 10 <sup>-18</sup>
Area 27, Cafeteria	02/01/89	02/28/89	1.8 x 10 <sup>-18</sup>	1.8 x 10 <sup>-18</sup>
Area 27, Cafeteria	03/01/89	03/31/89	0	0
Area 27, Cafeteria	04/01/89	04/30/89	1.7 x 10 <sup>-18</sup>	2.8 x 10 <sup>-18</sup>
Area 27, Cafeteria	05/01/89	05/31/89	4.8 x 10 <sup>-18</sup>	2.8 x 10 <sup>-18</sup>
Area 27, Cafeteria	06/03/89	07/07/89	1.8 x 10 <sup>-18</sup>	1.5 x 10 <sup>-18</sup>
Area 27, Cafeteria	07/05/89	07/31/89	1.2 x 10 <sup>-18</sup>	2.0 x 10 <sup>-18</sup>
Area 27, Cafeteria	07/31/89	09/06/89	4.4 x 10 <sup>-18</sup>	2.5 x 10 <sup>-18</sup>
Area 27, Cafeteria	09/06/89	10/02/89	1.8 x 10 <sup>-18</sup>	1.9 x 10 <sup>-18</sup>
Area 27, Cafeteria	10/02/89	10/31/89	4.6 x 10 <sup>-18</sup>	3.1 x 10 <sup>-18</sup>
Area 27, Cafeteria	10/30/89	11/28/89	2.0 x 10 <sup>-18</sup>	2.0 x 10 <sup>-18</sup>
Area 27, Cafeteria	11/28/89	01/02/90	-5.6 x 10 <sup>-19</sup>	4.5 x 10 <sup>-19</sup>

Table A.3 Gamma-Emitting Radionuclides in Air

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$		Radio-nuclide
	Start	End	Concen-tration	Standard Deviation (s)	
Area 1, BJY	07/17/89	07/25/89	$7.6 \times 10^{-14}$	$2.4 \times 10^{-14}$	$^{40}\text{K}$
Area 1, BJY	10/23/89	10/31/89	$5.9 \times 10^{-14}$	$2.2 \times 10^{-14}$	$^{40}\text{K}$
Area 1, BJY	11/21/89	11/28/89	$4.9 \times 10^{-14}$	$1.6 \times 10^{-14}$	$^{238}\text{U}$
Area 1, Gravel Pit	01/03/89	01/09/89	$5.9 \times 10^{-14}$	$2.1 \times 10^{-14}$	$^{40}\text{K}$
Area 1, Gravel Pit	07/31/89	08/07/89	$3.7 \times 10^{-15}$	$1.3 \times 10^{-15}$	$^{101}\text{Rh}$
Area 1, Gravel Pit	07/31/89	08/07/89	$6.8 \times 10^{-15}$	$1.9 \times 10^{-15}$	$^{235}\text{U}$
Area 1, Gravel Pit	08/15/89	08/21/89	$1.3 \times 10^{-13}$	$4.2 \times 10^{-14}$	$^{231}\text{Pa}$
Area 1, Gravel Pit	08/15/89	08/21/89	$8.6 \times 10^{-15}$	$3.4 \times 10^{-15}$	$^{106}\text{Ru}$
Area 1, Gravel Pit	12/26/89	01/02/90	$9.1 \times 10^{-14}$	$2.5 \times 10^{-14}$	$^{40}\text{K}$
Area 2, 2-1 Substation	04/10/89	04/18/89	$1.1 \times 10^{-13}$	$3.9 \times 10^{-14}$	$^{40}\text{K}$
Area 2, 2-1 Substation	12/11/89	12/18/89	$6.6 \times 10^{-14}$	$3.4 \times 10^{-14}$	$^{40}\text{K}$
Area 2, Complex	02/06/89	02/13/89	$5.0 \times 10^{-14}$	$1.8 \times 10^{-14}$	$^{40}\text{K}$
Area 3, 3-300 Bunker	01/17/89	01/23/89	$6.0 \times 10^{-14}$	$2.0 \times 10^{-14}$	$^{40}\text{K}$
Area 3, 3-300 Bunker	10/30/89	11/06/89	$5.2 \times 10^{-14}$	$1.9 \times 10^{-14}$	$^{40}\text{K}$
Area 3, ah/at East	03/14/89	03/20/89	$3.4 \times 10^{-14}$	$1.7 \times 10^{-14}$	$^{40}\text{K}$
Area 3, ah/at East	07/17/89	07/25/89	$3.9 \times 10^{-14}$	$1.7 \times 10^{-14}$	$^{40}\text{K}$
Area 3, ah/at East	07/31/89	08/07/89	$6.0 \times 10^{-15}$	$1.7 \times 10^{-15}$	$^{57}\text{Co}$
Area 3, ah/at North	05/01/89	05/08/89	$3.0 \times 10^{-14}$	$1.7 \times 10^{-14}$	$^{241}\text{Am}$
Area 3, ah/at South	04/03/89	04/10/89	$9.3 \times 10^{-14}$	$3.8 \times 10^{-14}$	$^{40}\text{K}$
Area 3, ah/at South	07/17/89	07/25/89	$3.7 \times 10^{-14}$	$1.6 \times 10^{-14}$	$^{40}\text{K}$
Area 3, ah/at South	11/13/89	11/21/89	$6.2 \times 10^{-14}$	$1.9 \times 10^{-14}$	$^{40}\text{K}$
Area 3, ah/at West	11/06/89	11/13/89	$2.4 \times 10^{-13}$	$1.3 \times 10^{-13}$	$^{238}\text{U}$
Area 3, Complex	02/27/89	03/06/89	$3.5 \times 10^{-14}$	$1.7 \times 10^{-14}$	$^{40}\text{K}$
Area 3, Complex	06/05/89	06/13/89	$4.2 \times 10^{-15}$	$2.4 \times 10^{-15}$	$^{57}\text{Co}$
Area 3, Complex	07/05/89	07/11/89	$5.9 \times 10^{-14}$	$2.6 \times 10^{-14}$	$^{40}\text{K}$
Area 3, Complex	08/21/89	08/29/89	$4.4 \times 10^{-14}$	$1.8 \times 10^{-14}$	$^{232}\text{Th}$
Area 3, Complex	12/26/89	01/02/90	$8.7 \times 10^{-14}$	$4.0 \times 10^{-14}$	$^{238}\text{U}$
Area 5, DOD Yard	03/20/89	03/27/89	$5.0 \times 10^{-14}$	$1.6 \times 10^{-14}$	$^{40}\text{K}$
Area 5, DOD Yard	04/19/89	04/24/89	$6.0 \times 10^{-14}$	$2.1 \times 10^{-14}$	$^{40}\text{K}$
Area 5, DOD Yard	11/28/89	12/05/89	$8.3 \times 10^{-14}$	$2.3 \times 10^{-14}$	$^{40}\text{K}$
Area 5, DOD Yard	12/18/89	12/26/89	$2.1 \times 10^{-14}$	$9.5 \times 10^{-15}$	$^{144}\text{Ce}$
Area 5, Gate 200	05/08/89	05/15/89	$3.6 \times 10^{-14}$	$1.4 \times 10^{-14}$	$^{40}\text{K}$
Area 5, Gate 200	11/20/89	11/28/89	$4.8 \times 10^{-14}$	$1.8 \times 10^{-14}$	$^{40}\text{K}$
Area 5, Gate 200	12/26/89	01/02/90	$4.7 \times 10^{-14}$	$1.9 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 1	03/20/89	03/27/89	$3.0 \times 10^{-14}$	$1.5 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 1	06/05/89	06/12/89	$2.6 \times 10^{-14}$	$7.8 \times 10^{-15}$	$^{106}\text{Ru}$
Area 5, RWMS No. 1	09/18/89	09/28/89	$3.5 \times 10^{-15}$	$1.7 \times 10^{-15}$	$^{243}\text{Am}$
Area 5, RWMS No. 2	01/09/89	01/17/89	$8.0 \times 10^{-14}$	$1.9 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 2	02/13/89	02/22/89	$3.4 \times 10^{-14}$	$1.2 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 2	05/01/89	05/08/89	$2.8 \times 10^{-14}$	$1.4 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 2	07/31/89	08/07/89	$6.3 \times 10^{-14}$	$2.1 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 3	05/30/89	06/05/89	$1.8 \times 10^{-13}$	$6.4 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 3	06/05/89	06/12/89	$2.8 \times 10^{-14}$	$1.0 \times 10^{-14}$	$^{232}\text{Th}$
Area 5, RWMS No. 4	10/09/89	10/16/89	$2.2 \times 10^{-14}$	$1.3 \times 10^{-14}$	$^{232}\text{Th}$
Area 5, RWMS No. 4	10/16/89	10/23/89	$5.6 \times 10^{-14}$	$3.4 \times 10^{-14}$	$^{232}\text{Th}$
Area 5, RWMS No. 5	01/17/89	01/23/89	$3.7 \times 10^{-14}$	$1.8 \times 10^{-14}$	$^{238}\text{U}$
Area 5, RWMS No. 5	02/13/89	02/22/89	$3.4 \times 10^{-15}$	$1.8 \times 10^{-15}$	$^{137}\text{Cs}$
Area 5, RWMS No. 5	03/07/89	03/13/89	$3.6 \times 10^{-14}$	$1.8 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 5	06/19/89	06/26/89	$3.8 \times 10^{-14}$	$1.7 \times 10^{-14}$	$^{241}\text{Am}$
Area 5, RWMS No. 5	07/31/89	08/07/89	$5.7 \times 10^{-14}$	$2.2 \times 10^{-14}$	$^{40}\text{K}$

Table A.3 (Gamma Emitters in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$		Radio-nuclide
	Start	End	Concentration	Standard Deviation (s)	
Area 5, RWMS No. 5	11/20/89	11/28/89	$1.4 \times 10^{-13}$	$4.5 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 8	02/13/89	02/22/89	$4.0 \times 10^{-14}$	$1.3 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 8	02/22/89	03/01/89	$2.9 \times 10^{-14}$	$1.4 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 8	04/24/89	05/01/89	$6.5 \times 10^{-14}$	$3.0 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 8	10/09/89	10/16/89	$5.3 \times 10^{-14}$	$2.0 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 9	04/11/89	04/19/89	$5.9 \times 10^{-14}$	$1.6 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS No. 9	06/05/89	06/12/89	$2.2 \times 10^{-14}$	$6.8 \times 10^{-15}$	$^{106}\text{Ru}$
Area 5, RWMS Pit No. 3	05/30/89	06/05/89	$2.0 \times 10^{-14}$	$5.6 \times 10^{-15}$	$^{243}\text{Am}$
Area 5, RWMS T. P. North	03/13/89	03/20/89	$2.8 \times 10^{-14}$	$1.4 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS T. P. North	10/23/89	10/30/89	$1.6 \times 10^{-13}$	$3.5 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS T. P. Northeast	03/13/89	03/20/89	$4.3 \times 10^{-14}$	$1.6 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS T. P. Northeast	06/19/89	06/26/89	$6.3 \times 10^{-14}$	$3.1 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS T. P. Northeast	08/14/89	08/21/89	$2.6 \times 10^{-14}$	$1.5 \times 10^{-14}$	$^{232}\text{Th}$
Area 5, RWMS T. P. Northwest	03/13/89	03/20/89	$2.0 \times 10^{-14}$	$9.7 \times 10^{-15}$	$^{232}\text{Th}$
Area 5, RWMS T. P. South	08/07/89	08/14/89	$3.4 \times 10^{-14}$	$1.7 \times 10^{-14}$	$^{232}\text{Th}$
Area 5, RWMS T. P. South	12/11/89	12/18/89	$3.8 \times 10^{-14}$	$1.8 \times 10^{-14}$	$^{40}\text{K}$
Area 5, RWMS T. P. South	12/26/89	01/02/90	$3.7 \times 10^{-14}$	$1.1 \times 10^{-14}$	$^{40}\text{K}$
Area 5, Well 5B	01/23/89	01/31/89	$5.3 \times 10^{-14}$	$2.7 \times 10^{-14}$	$^{40}\text{K}$
Area 5, Well 5B	03/13/89	03/20/89	$2.7 \times 10^{-14}$	$1.4 \times 10^{-14}$	$^{40}\text{K}$
Area 5, Well 5B	06/12/89	06/19/89	$1.5 \times 10^{-13}$	$3.8 \times 10^{-14}$	$^7\text{Be}$
Area 6, CP-6 Complex	01/09/89	01/17/89	$1.6 \times 10^{-14}$	$8.2 \times 10^{-15}$	$^{232}\text{Th}$
Area 6, CP-6 Complex	03/01/89	03/07/89	$2.5 \times 10^{-14}$	$7.9 \times 10^{-15}$	$^{131}\text{I}$
Area 6, CP-6 Complex	03/01/89	03/07/89	$4.4 \times 10^{-14}$	$1.8 \times 10^{-14}$	$^{40}\text{K}$
Area 6, CP-6 Complex	06/05/89	06/12/89	$5.1 \times 10^{-15}$	$1.8 \times 10^{-15}$	$^{101}\text{Rh}$
Area 6, CP-6 Complex	11/28/89	12/05/89	$8.6 \times 10^{-14}$	$2.3 \times 10^{-14}$	$^{40}\text{K}$
Area 6, CP-6 Complex	12/05/89	12/11/89	$8.9 \times 10^{-14}$	$2.6 \times 10^{-14}$	$^{40}\text{K}$
Area 6, CP-6 Complex	12/26/89	01/02/90	$3.6 \times 10^{-14}$	$1.7 \times 10^{-14}$	$^{40}\text{K}$
Area 6, CP-6 Complex	12/26/89	01/02/90	$2.0 \times 10^{-14}$	$1.3 \times 10^{-14}$	$^{232}\text{Th}$
Area 6, Yucca Complex	01/09/89	01/17/89	$4.0 \times 10^{-14}$	$1.6 \times 10^{-14}$	$^{40}\text{K}$
Area 6, Yucca Complex	01/17/89	01/23/89	$6.3 \times 10^{-14}$	$2.0 \times 10^{-14}$	$^{40}\text{K}$
Area 7, Ue7ns	09/11/89	09/18/89	$7.7 \times 10^{-14}$	$2.5 \times 10^{-14}$	$^{40}\text{K}$
Area 9, 9-300 Bunker	01/03/89	01/09/89	$8.9 \times 10^{-14}$	$3.8 \times 10^{-14}$	$^{40}\text{K}$
Area 9, 9-300 Bunker	03/14/89	03/20/89	$7.2 \times 10^{-14}$	$2.2 \times 10^{-14}$	$^{40}\text{K}$
Area 9, 9-300 Bunker	05/15/89	05/22/89	$2.4 \times 10^{-14}$	$1.3 \times 10^{-14}$	$^{144}\text{Ce}$
Area 9, 9-300 Bunker	10/16/89	10/23/89	$1.8 \times 10^{-14}$	$1.2 \times 10^{-14}$	$^{232}\text{Th}$
Area 11, Gate 293	07/24/89	07/31/89	$5.7 \times 10^{-14}$	$2.8 \times 10^{-14}$	$^{40}\text{K}$
Area 11, Gate 293	12/18/89	12/26/89	$7.5 \times 10^{-14}$	$1.9 \times 10^{-14}$	$^{40}\text{K}$
Area 12, Complex	12/06/89	12/11/89	$5.3 \times 10^{-14}$	$2.5 \times 10^{-14}$	$^{40}\text{K}$
Area 12, Complex	12/26/89	01/02/90	$1.0 \times 10^{-13}$	$2.6 \times 10^{-14}$	$^{40}\text{K}$
Area 15, EPA Farm	05/30/89	06/05/89	$7.6 \times 10^{-14}$	$3.7 \times 10^{-14}$	$^{40}\text{K}$
Area 15, EPA Farm	08/21/89	08/29/89	$8.6 \times 10^{-15}$	$3.2 \times 10^{-15}$	$^{238}\text{U}$
Area 15, EPA Farm	12/11/89	12/18/89	$1.1 \times 10^{-13}$	$4.3 \times 10^{-14}$	$^{40}\text{K}$
Area 15, Gate 700	05/30/89	06/05/89	$2.0 \times 10^{-13}$	$4.9 \times 10^{-14}$	$^{40}\text{K}$
Area 15, Gate 700	07/11/89	07/17/89	$4.6 \times 10^{-14}$	$2.1 \times 10^{-14}$	$^{40}\text{K}$
Area 15, Gate 700	07/31/89	08/07/89	$8.3 \times 10^{-14}$	$3.3 \times 10^{-14}$	$^{40}\text{K}$
Area 15, Gate 700	08/21/89	08/29/89	$7.9 \times 10^{-15}$	$3.9 \times 10^{-15}$	$^{243}\text{Am}$
Area 15, Gate 700	10/16/89	10/23/89	$5.2 \times 10^{-14}$	$1.9 \times 10^{-14}$	$^{40}\text{K}$
Area 15, PILE DRIVER	11/13/89	11/21/89	$5.6 \times 10^{-14}$	$2.5 \times 10^{-14}$	$^{238}\text{U}$
Area 16, Substation	02/06/89	02/13/89	$1.4 \times 10^{-13}$	$6.0 \times 10^{-14}$	$^{40}\text{K}$
Area 16, Substation	05/30/89	06/05/89	$1.0 \times 10^{-13}$	$3.2 \times 10^{-14}$	$^{40}\text{K}$

Table A.3 (Gamma Emitters in Air, cont.)

Sampling Location	Sampling Dates		μCi/mL		Radio-nuclide
	Start	End	Concen-tration	Standard Deviation (s)	
Area 16, Substation	06/05/89	06/13/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-14}$	<sup>241</sup> Am
Area 16, Substation	06/05/89	06/13/89	$2.2 \times 10^{-14}$	$6.8 \times 10^{-15}$	<sup>106</sup> Ru
Area 16, Substation	06/13/89	06/19/89	$4.8 \times 10^{-14}$	$2.3 \times 10^{-14}$	<sup>40</sup> K
Area 16, Substation	07/31/89	08/07/89	$1.6 \times 10^{-13}$	$5.7 \times 10^{-14}$	<sup>40</sup> K
Area 19, Echo Peak	01/23/89	01/30/89	$7.4 \times 10^{-14}$	$3.1 \times 10^{-14}$	<sup>40</sup> K
Area 19, Echo Peak	06/05/89	06/13/89	$3.8 \times 10^{-14}$	$1.4 \times 10^{-14}$	<sup>144</sup> Ce
Area 19, Echo Peak	06/05/89	06/13/89	$1.8 \times 10^{-14}$	$5.7 \times 10^{-15}$	<sup>106</sup> Ru
Area 19, Echo Peak	08/15/89	08/21/89	$7.5 \times 10^{-14}$	$3.7 \times 10^{-14}$	<sup>40</sup> K
Area 19, Substation	01/30/89	02/06/89	$2.8 \times 10^{-14}$	$1.3 \times 10^{-14}$	<sup>40</sup> K
Area 19, Substation	06/05/89	06/13/89	$3.4 \times 10^{-15}$	$1.8 \times 10^{-15}$	<sup>243</sup> Am
Area 19, Substation	12/11/89	12/18/89	$6.3 \times 10^{-14}$	$2.9 \times 10^{-14}$	<sup>232</sup> Th
Area 20, Dispensary	01/30/89	02/06/89	$9.0 \times 10^{-14}$	$2.2 \times 10^{-14}$	<sup>40</sup> K
Area 20, Dispensary	04/18/89	04/24/89	$7.3 \times 10^{-14}$	$3.3 \times 10^{-14}$	<sup>40</sup> K
Area 20, Dispensary	08/15/89	08/21/89	$1.9 \times 10^{-14}$	$6.9 \times 10^{-15}$	<sup>238</sup> U
Area 20, Dispensary	11/13/89	11/21/89	$1.4 \times 10^{-13}$	$3.5 \times 10^{-14}$	<sup>7</sup> Be
Area 23, Building 790	01/03/89	01/09/89	$1.1 \times 10^{-13}$	$4.6 \times 10^{-14}$	<sup>40</sup> K
Area 23, Building 790	02/06/89	02/13/89	$7.9 \times 10^{-14}$	$2.0 \times 10^{-14}$	<sup>40</sup> K
Area 23, Building 790	02/13/89	02/22/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-14}$	<sup>40</sup> K
Area 23, Building 790	07/05/89	07/11/89	$6.2 \times 10^{-14}$	$2.3 \times 10^{-14}$	<sup>40</sup> K
Area 23, Building 790 No. 2	07/31/89	08/07/89	$8.6 \times 10^{-14}$	$2.5 \times 10^{-14}$	<sup>40</sup> K
Area 23, H&S Building Roof	01/31/89	02/06/89	$5.3 \times 10^{-14}$	$1.9 \times 10^{-14}$	<sup>40</sup> K
Area 23, H&S Building Roof	10/30/89	11/06/89	$7.0 \times 10^{-15}$	$2.3 \times 10^{-15}$	<sup>243</sup> Am
Area 25, E-MAD South	01/09/89	01/17/89	$7.6 \times 10^{-14}$	$2.0 \times 10^{-14}$	<sup>40</sup> K
Area 25, E-MAD South	02/13/89	02/22/89	$7.1 \times 10^{-14}$	$1.8 \times 10^{-14}$	<sup>40</sup> K
Area 25, E-MAD South	06/12/89	06/19/89	$1.4 \times 10^{-13}$	$4.3 \times 10^{-14}$	<sup>7</sup> Be
Area 25, NRDS Warehouse	01/31/89	02/06/89	$8.0 \times 10^{-14}$	$2.3 \times 10^{-14}$	<sup>40</sup> K
Area 25, NRDS Warehouse	04/03/89	04/11/89	$2.7 \times 10^{-14}$	$1.2 \times 10^{-14}$	<sup>232</sup> Th
Area 25, NRDS Warehouse	06/05/89	06/12/89	$5.7 \times 10^{-15}$	$2.5 \times 10^{-15}$	<sup>243</sup> Am
Area 25, NRDS Warehouse	07/05/89	07/11/89	$1.6 \times 10^{-13}$	$4.3 \times 10^{-14}$	<sup>40</sup> K

Table A.4 Gross Beta in Air

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 1, BJY	01/03/89	01/09/89	$2.4 \times 10^{-14}$	$1.8 \times 10^{-15}$
Area 1, BJY	01/09/89	01/17/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 1, BJY	01/17/89	01/23/89	$4.3 \times 10^{-14}$	$1.7 \times 10^{-15}$
Area 1, BJY	01/23/89	01/30/89	$2.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 1, BJY	01/30/89	02/06/89	$2.5 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 1, BJY	02/06/89	02/13/89	$2.6 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 1, BJY	02/13/89	02/23/89	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 1, BJY	02/23/89	02/27/89	$1.8 \times 10^{-14}$	$1.8 \times 10^{-15}$
Area 1, BJY	02/27/89	03/06/89	$1.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 1, BJY	03/06/89	03/14/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 1, BJY	03/14/89	03/20/89	$1.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, BJY	03/20/89	03/27/89	$1.0 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 1, BJY	03/27/89	04/03/89	$1.2 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 1, BJY	04/03/89	04/10/89	$1.5 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 1, BJY	04/10/89	04/18/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 1, BJY	04/18/89	04/24/89	$1.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 1, BJY	04/24/89	05/01/89	$1.0 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 1, BJY	05/01/89	05/08/89	$1.4 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 1, BJY	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 1, BJY	05/15/89	05/22/89	$1.4 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 1, BJY	05/22/89	05/30/89	$1.3 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 1, BJY	05/30/89	06/05/89	$1.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, BJY	06/05/89	06/13/89	$1.4 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 1, BJY	06/13/89	06/19/89	$1.8 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 1, BJY	06/19/89	06/26/89	$1.2 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 1, BJY	06/26/89	07/05/89	$1.5 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 1, BJY	07/05/89	07/11/89	$1.6 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 1, BJY	07/11/89	07/17/89	$2.7 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 1, BJY	07/17/89	07/25/89	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 1, BJY	07/25/89	07/31/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 1, BJY	07/31/89	08/07/89	$1.1 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 1, BJY	08/07/89	08/15/89	$1.3 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 1, BJY	08/15/89	08/21/89	$1.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, BJY	08/21/89	08/29/89	$1.7 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 1, BJY	08/29/89	09/05/89	$1.8 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 1, BJY	09/05/89	09/11/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 1, BJY	09/11/89	09/18/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, BJY	09/18/89	09/25/89	$1.8 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 1, BJY	09/25/89	10/02/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 1, BJY	10/02/89	10/09/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, BJY	10/09/89	10/16/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 1, BJY	10/16/89	10/23/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, BJY	10/23/89	10/31/89	$7.6 \times 10^{-15}$	$7.8 \times 10^{-16}$
Area 1, BJY	10/30/89	11/06/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, BJY	11/06/89	11/13/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, BJY	11/13/89	11/21/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 1, BJY	11/21/89	11/28/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 1, BJY	11/28/89	12/06/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 1, BJY	12/06/89	12/11/89	$1.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 1, BJY	12/11/89	12/18/89	$1.4 \times 10^{-14}$	$8.7 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 1, BJY	12/18/89	12/26/89	$1.9 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 1, BJY	12/26/89	01/02/90	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, Gravel Pit	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, Gravel Pit	01/09/89	01/17/89	$4.3 \times 10^{-15}$	$1.9 \times 10^{-16}$
Area 1, Gravel Pit	01/17/89	01/23/89	$3.3 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 1, Gravel Pit	01/23/89	01/30/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, Gravel Pit	01/30/89	02/06/89	$1.8 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 1, Gravel Pit	02/06/89	02/13/89	$2.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 1, Gravel Pit	02/13/89	02/23/89	$2.1 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 1, Gravel Pit	02/23/89	02/27/89	$2.0 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 1, Gravel Pit	02/27/89	03/06/89	$1.6 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 1, Gravel Pit	03/06/89	03/14/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 1, Gravel Pit	03/14/89	03/20/89	$1.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 1, Gravel Pit	03/20/89	03/27/89	$1.2 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 1, Gravel Pit	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 1, Gravel Pit	04/03/89	04/10/89	$1.8 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 1, Gravel Pit	04/10/89	04/18/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, Gravel Pit	04/18/89	04/24/89	$1.7 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 1, Gravel Pit	04/24/89	05/01/89	$1.1 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 1, Gravel Pit	05/01/89	05/08/89	$1.7 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 1, Gravel Pit	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 1, Gravel Pit	05/15/89	05/22/89	$1.5 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 1, Gravel Pit	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 1, Gravel Pit	05/30/89	06/05/89	$1.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, Gravel Pit	06/05/89	06/13/89	$1.8 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 1, Gravel Pit	06/13/89	06/19/89	$1.3 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 1, Gravel Pit	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 1, Gravel Pit	06/26/89	07/05/89	$1.7 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 1, Gravel Pit	07/05/89	07/11/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, Gravel Pit	07/11/89	07/17/89	$2.6 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 1, Gravel Pit	07/17/89	07/25/89	$1.7 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 1, Gravel Pit	07/25/89	07/31/89	$2.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 1, Gravel Pit	07/31/89	08/07/89	$1.2 \times 10^{-14}$	$7.1 \times 10^{-16}$
Area 1, Gravel Pit	08/07/89	08/15/89	$1.6 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 1, Gravel Pit	08/15/89	08/21/89	$9.0 \times 10^{-15}$	$5.6 \times 10^{-16}$
Area 1, Gravel Pit	08/29/89	09/05/89	$1.8 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 1, Gravel Pit	09/05/89	09/11/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 1, Gravel Pit	09/11/89	09/18/89	$2.1 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 1, Gravel Pit	09/18/89	09/25/89	$1.7 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 1, Gravel Pit	09/25/89	10/02/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, Gravel Pit	10/02/89	10/09/89	$2.3 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 1, Gravel Pit	10/09/89	10/16/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, Gravel Pit	10/16/89	10/23/89	$1.8 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 1, Gravel Pit	10/23/89	10/31/89	$9.0 \times 10^{-15}$	$7.5 \times 10^{-16}$
Area 1, Gravel Pit	10/30/89	11/06/89	$2.2 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 1, Gravel Pit	11/06/89	11/13/89	$2.0 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 1, Gravel Pit	11/13/89	11/21/89	$1.8 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 1, Gravel Pit	11/21/89	11/28/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 1, Gravel Pit	11/28/89	12/06/89	$1.8 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 1, Gravel Pit	12/06/89	12/11/89	$1.4 \times 10^{-14}$	$1.1 \times 10^{-15}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 1, Gravel Pit	12/11/89	12/18/89	$2.9 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 1, Gravel Pit	12/18/89	12/26/89	$9.9 \times 10^{-15}$	$4.5 \times 10^{-16}$
Area 1, Gravel Pit	12/26/89	01/02/90	$2.1 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 2, 2-1 Substation	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 2, 2-1 Substation	01/09/89	01/17/89	$1.8 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 2, 2-1 Substation	01/17/89	01/23/89	$3.0 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 2, 2-1 Substation	01/23/89	01/30/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, 2-1 Substation	01/30/89	02/06/89	$1.6 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 2, 2-1 Substation	02/06/89	02/13/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, 2-1 Substation	02/13/89	02/23/89	$1.8 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 2, 2-1 Substation	02/23/89	02/27/89	$1.8 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 2, 2-1 Substation	02/27/89	03/06/89	$1.3 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 2, 2-1 Substation	03/06/89	03/14/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 2, 2-1 Substation	03/14/89	03/20/89	$1.1 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 2, 2-1 Substation	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 2, 2-1 Substation	03/27/89	04/03/89	$1.6 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 2, 2-1 Substation	04/03/89	04/10/89	$1.6 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 2, 2-1 Substation	04/10/89	04/18/89	$2.5 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 2, 2-1 Substation	04/18/89	04/24/89	$1.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, 2-1 Substation	04/24/89	05/01/89	$1.3 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 2, 2-1 Substation	05/01/89	05/08/89	$1.8 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 2, 2-1 Substation	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 2, 2-1 Substation	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 2, 2-1 Substation	05/22/89	05/30/89	$1.7 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 2, 2-1 Substation	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, 2-1 Substation	06/05/89	06/13/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 2, 2-1 Substation	06/13/89	06/19/89	$1.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, 2-1 Substation	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 2, 2-1 Substation	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 2, 2-1 Substation	07/05/89	07/11/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, 2-1 Substation	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, 2-1 Substation	07/17/89	07/25/89	$2.3 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 2, 2-1 Substation	07/25/89	07/31/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, 2-1 Substation	07/31/89	08/07/89	$1.5 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 2, 2-1 Substation	08/07/89	08/15/89	$1.7 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 2, 2-1 Substation	08/15/89	08/21/89	$1.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, 2-1 Substation	08/21/89	08/29/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 2, 2-1 Substation	08/29/89	09/05/89	$1.8 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 2, 2-1 Substation	09/05/89	09/11/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, 2-1 Substation	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, 2-1 Substation	09/18/89	09/25/89	$1.7 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 2, 2-1 Substation	09/25/89	10/02/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, 2-1 Substation	10/02/89	10/09/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, 2-1 Substation	10/09/89	10/16/89	$3.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, 2-1 Substation	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 2, 2-1 Substation	10/23/89	10/31/89	$9.2 \times 10^{-15}$	$7.9 \times 10^{-16}$
Area 2, 2-1 Substation	10/30/89	11/06/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, 2-1 Substation	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, 2-1 Substation	11/13/89	11/21/89	$1.9 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 2, 2-1 Substation	11/21/89	11/28/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 2, 2-1 Substation	11/28/89	12/06/89	$1.9 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 2, 2-1 Substation	12/06/89	12/11/89	$1.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, 2-1 Substation	12/11/89	12/18/89	$1.8 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 2, 2-1 Substation	12/18/89	12/26/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 2, 2-1 Substation	12/26/89	01/02/90	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, Complex	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 2, Complex	01/09/89	01/17/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 2, Complex	01/17/89	01/23/89	$3.0 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 2, Complex	01/23/89	01/30/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, Complex	01/30/89	02/06/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 2, Complex	02/06/89	02/13/89	$2.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, Complex	02/13/89	02/23/89	$1.5 \times 10^{-14}$	$6.5 \times 10^{-16}$
Area 2, Complex	02/23/89	02/27/89	$2.8 \times 10^{-14}$	$2.3 \times 10^{-15}$
Area 2, Complex	02/27/89	03/06/89	$1.3 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 2, Complex	03/06/89	03/14/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 2, Complex	03/14/89	03/20/89	$1.0 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 2, Complex	03/20/89	03/27/89	$1.1 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 2, Complex	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 2, Complex	04/03/89	04/10/89	$1.9 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 2, Complex	04/10/89	04/18/89	$2.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, Complex	04/18/89	04/24/89	$1.6 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 2, Complex	04/24/89	05/01/89	$1.2 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 2, Complex	05/01/89	05/08/89	$1.3 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 2, Complex	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 2, Complex	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$2.1 \times 10^{-15}$
Area 2, Complex	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, Complex	06/05/89	06/13/89	$1.8 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 2, Complex	06/13/89	06/19/89	$1.6 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 2, Complex	06/19/89	06/26/89	$1.3 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 2, Complex	06/26/89	07/05/89	$1.6 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 2, Complex	07/05/89	07/11/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, Complex	07/11/89	07/17/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, Complex	07/17/89	07/25/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, Complex	07/25/89	07/31/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 2, Complex	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 2, Complex	08/07/89	08/15/89	$1.5 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 2, Complex	08/15/89	08/21/89	$1.5 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 2, Complex	08/21/89	08/29/89	$2.0 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 2, Complex	08/29/89	09/05/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 2, Complex	09/05/89	09/11/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, Complex	09/11/89	09/18/89	$2.2 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 2, Complex	09/18/89	09/25/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 2, Complex	09/25/89	10/02/89	$2.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, Complex	10/02/89	10/09/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 2, Complex	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, Complex	10/16/89	10/23/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 2, Complex	10/23/89	10/31/89	$8.4 \times 10^{-15}$	$7.4 \times 10^{-16}$
Area 2, Complex	10/30/89	11/06/89	$2.2 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 2, Complex	11/06/89	11/13/89	$2.0 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 2, Complex	11/13/89	11/21/89	$1.8 \times 10^{-14}$	$8.3 \times 10^{-16}$



Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 2, Complex	11/21/89	11/28/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 2, Complex	11/28/89	12/06/89	$1.7 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 2, Complex	12/06/89	12/11/89	$1.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 2, Complex	12/11/89	12/18/89	$1.7 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 2, Complex	12/18/89	12/26/89	$1.9 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 2, Complex	12/26/89	01/02/90	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, 3-300 Bunker	01/03/89	01/09/89	$1.7 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, 3-300 Bunker	01/09/89	01/17/89	$1.7 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 3, 3-300 Bunker	01/17/89	01/23/89	$3.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, 3-300 Bunker	01/23/89	01/30/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 3, 3-300 Bunker	01/30/89	02/06/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 3, 3-300 Bunker	02/06/89	02/13/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 3, 3-300 Bunker	02/13/89	02/23/89	$1.9 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 3, 3-300 Bunker	02/23/89	02/27/89	$1.9 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 3, 3-300 Bunker	02/27/89	03/06/89	$1.5 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 3, 3-300 Bunker	03/06/89	03/14/89	$1.6 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 3, 3-300 Bunker	03/14/89	03/20/89	$1.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, 3-300 Bunker	03/20/89	03/27/89	$1.2 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 3, 3-300 Bunker	03/27/89	04/03/89	$1.3 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 3, 3-300 Bunker	04/03/89	04/10/89	$1.6 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 3, 3-300 Bunker	04/10/89	04/18/89	$2.6 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, 3-300 Bunker	04/18/89	04/24/89	$1.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, 3-300 Bunker	04/24/89	05/01/89	$1.3 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 3, 3-300 Bunker	05/01/89	05/08/89	$1.8 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 3, 3-300 Bunker	05/08/89	05/15/89	$1.4 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, 3-300 Bunker	05/15/89	05/22/89	$1.6 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 3, 3-300 Bunker	05/22/89	05/30/89	$1.4 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 3, 3-300 Bunker	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, 3-300 Bunker	06/05/89	06/13/89	$1.7 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 3, 3-300 Bunker	06/13/89	06/19/89	$1.7 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, 3-300 Bunker	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 3, 3-300 Bunker	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 3, 3-300 Bunker	07/05/89	07/11/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, 3-300 Bunker	07/11/89	07/17/89	$1.7 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, 3-300 Bunker	07/17/89	07/25/89	$1.9 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, 3-300 Bunker	07/25/89	07/31/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, 3-300 Bunker	07/31/89	08/07/89	$1.3 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 3, 3-300 Bunker	08/07/89	08/15/89	$1.6 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 3, 3-300 Bunker	08/15/89	08/21/89	$8.4 \times 10^{-15}$	$4.9 \times 10^{-16}$
Area 3, 3-300 Bunker	08/21/89	08/29/89	$1.2 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 3, 3-300 Bunker	08/29/89	09/05/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 3, 3-300 Bunker	09/05/89	09/11/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, 3-300 Bunker	09/11/89	09/18/89	$2.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, 3-300 Bunker	09/18/89	09/25/89	$1.7 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 3, 3-300 Bunker	09/25/89	10/02/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, 3-300 Bunker	10/02/89	10/09/89	$2.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, 3-300 Bunker	10/09/89	10/16/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, 3-300 Bunker	10/16/89	10/23/89	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, 3-300 Bunker	10/23/89	10/31/89	$1.1 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 3, 3-300 Bunker	10/30/89	11/06/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 3, 3-300 Bunker	11/06/89	11/13/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, 3-300 Bunker	11/13/89	11/21/89	$2.1 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 3, 3-300 Bunker	11/21/89	11/28/89	$2.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, 3-300 Bunker	11/28/89	12/06/89	$1.2 \times 10^{-14}$	$2.7 \times 10^{-15}$
Area 3, 3-300 Bunker	12/06/89	12/11/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, 3-300 Bunker	12/11/89	12/18/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, 3-300 Bunker	12/18/89	12/26/89	$2.2 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 3, 3-300 Bunker	12/26/89	01/02/90	$2.2 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, ah/at East	01/03/89	01/09/89	$1.4 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 3, ah/at East	01/09/89	01/17/89	$1.7 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 3, ah/at East	01/17/89	01/23/89	$2.3 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 3, ah/at East	01/23/89	01/30/89	$3.6 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 3, ah/at East	01/30/89	02/06/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 3, ah/at East	02/06/89	02/13/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 3, ah/at East	02/13/89	02/23/89	$1.8 \times 10^{-14}$	$7.0 \times 10^{-16}$
Area 3, ah/at East	02/23/89	02/27/89	$2.0 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 3, ah/at East	02/27/89	03/06/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 3, ah/at East	03/06/89	03/14/89	$1.6 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 3, ah/at East	03/14/89	03/20/89	$1.6 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, ah/at East	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 3, ah/at East	03/27/89	04/03/89	$3.2 \times 10^{-15}$	$1.8 \times 10^{-16}$
Area 3, ah/at East	04/03/89	04/10/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 3, ah/at East	04/10/89	04/18/89	$2.7 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 3, ah/at East	04/18/89	04/24/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at East	04/24/89	05/01/89	$1.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, ah/at East	05/01/89	05/08/89	$1.4 \times 10^{-14}$	$7.0 \times 10^{-16}$
Area 3, ah/at East	05/08/89	05/15/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 3, ah/at East	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 3, ah/at East	05/22/89	05/30/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 3, ah/at East	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, ah/at East	06/05/89	06/13/89	$1.9 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, ah/at East	06/19/89	06/26/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, ah/at East	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 3, ah/at East	07/05/89	07/11/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at East	07/11/89	07/17/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, ah/at East	07/17/89	07/25/89	$2.1 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 3, ah/at East	07/25/89	07/31/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at East	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, ah/at East	08/15/89	08/21/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, ah/at East	08/21/89	08/29/89	$9.7 \times 10^{-15}$	$6.9 \times 10^{-16}$
Area 3, ah/at East	08/29/89	09/05/89	$2.2 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, ah/at East	09/05/89	09/11/89	$1.1 \times 10^{-14}$	$5.2 \times 10^{-16}$
Area 3, ah/at East	09/11/89	09/18/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 3, ah/at East	09/18/89	09/25/89	$9.4 \times 10^{-16}$	$4.7 \times 10^{-17}$
Area 3, ah/at East	09/25/89	10/02/89	$2.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, ah/at East	10/09/89	10/16/89	$3.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 3, ah/at East	10/30/89	11/06/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at East	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, ah/at East	11/13/89	11/21/89	$2.2 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 3, ah/at East	11/21/89	11/28/89	$2.9 \times 10^{-14}$	$1.1 \times 10^{-15}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 3, ah/at East	11/28/89	12/06/89	$1.9 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 3, ah/at East	12/06/89	12/11/89	$2.3 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 3, ah/at East	12/11/89	12/18/89	$1.8 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 3, ah/at East	12/18/89	12/26/89	$2.4 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 3, ah/at East	12/26/89	01/02/90	$2.2 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, ah/at North	01/03/89	01/09/89	$2.0 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, ah/at North	01/09/89	01/17/89	$1.7 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 3, ah/at North	01/17/89	01/23/89	$3.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, ah/at North	01/23/89	01/30/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, ah/at North	01/30/89	02/06/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 3, ah/at North	02/06/89	02/13/89	$2.3 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 3, ah/at North	02/13/89	02/23/89	$1.7 \times 10^{-14}$	$6.9 \times 10^{-16}$
Area 3, ah/at North	02/23/89	02/27/89	$1.9 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 3, ah/at North	02/27/89	03/06/89	$1.5 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 3, ah/at North	03/06/89	03/14/89	$1.7 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 3, ah/at North	03/14/89	03/20/89	$1.2 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 3, ah/at North	03/20/89	03/27/89	$1.4 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 3, ah/at North	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 3, ah/at North	04/03/89	04/10/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, ah/at North	04/10/89	04/18/89	$2.7 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 3, ah/at North	04/18/89	04/24/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at North	04/24/89	05/01/89	$1.2 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 3, ah/at North	05/01/89	05/08/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 3, ah/at North	05/08/89	05/15/89	$1.5 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 3, ah/at North	05/15/89	05/22/89	$2.0 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, ah/at North	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 3, ah/at North	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, ah/at North	06/05/89	06/13/89	$1.7 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 3, ah/at North	06/13/89	06/19/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at North	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 3, ah/at North	06/26/89	07/05/89	$1.6 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 3, ah/at North	07/05/89	07/11/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, ah/at North	07/11/89	07/17/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, ah/at North	07/17/89	07/25/89	$2.1 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 3, ah/at North	07/25/89	07/31/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at North	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, ah/at North	08/07/89	08/15/89	$1.6 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 3, ah/at North	08/15/89	08/21/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at North	08/21/89	08/29/89	$2.4 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, ah/at North	08/29/89	09/05/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 3, ah/at North	09/05/89	09/11/89	$2.7 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, ah/at North	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, ah/at North	09/18/89	09/25/89	$1.6 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 3, ah/at North	09/25/89	10/02/89	$2.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, ah/at North	10/02/89	10/09/89	$2.5 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, ah/at North	10/09/89	10/16/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at North	10/16/89	10/23/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 3, ah/at North	10/23/89	10/31/89	$8.4 \times 10^{-15}$	$7.1 \times 10^{-16}$
Area 3, ah/at North	10/30/89	11/06/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 3, ah/at North	11/06/89	11/13/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 3, ah/at North	11/13/89	11/21/89	$1.8 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 3, ah/at North	11/21/89	11/28/89	$2.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at North	11/28/89	12/06/89	$1.9 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 3, ah/at North	12/06/89	12/11/89	$1.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, ah/at North	12/11/89	12/18/89	$1.8 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 3, ah/at North	12/18/89	12/26/89	$2.4 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 3, ah/at North	12/26/89	01/02/90	$2.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, ah/at South	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 3, ah/at South	01/09/89	01/17/89	$1.7 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 3, ah/at South	01/17/89	01/23/89	$3.1 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, ah/at South	01/23/89	01/30/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, ah/at South	01/30/89	02/06/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 3, ah/at South	02/06/89	02/13/89	$2.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, ah/at South	02/13/89	02/23/89	$1.7 \times 10^{-14}$	$7.0 \times 10^{-16}$
Area 3, ah/at South	02/23/89	02/27/89	$1.8 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 3, ah/at South	02/27/89	03/06/89	$1.5 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 3, ah/at South	03/06/89	03/14/89	$1.6 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 3, ah/at South	03/14/89	03/20/89	$1.0 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 3, ah/at South	03/20/89	03/27/89	$1.4 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 3, ah/at South	03/27/89	04/03/89	$1.6 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 3, ah/at South	04/03/89	04/10/89	$1.9 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 3, ah/at South	04/10/89	04/18/89	$2.5 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, ah/at South	04/18/89	04/24/89	$1.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, ah/at South	04/24/89	05/01/89	$1.7 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, ah/at South	05/01/89	05/08/89	$1.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, ah/at South	05/08/89	05/15/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, ah/at South	05/15/89	05/22/89	$2.3 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 3, ah/at South	05/22/89	05/30/89	$1.3 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 3, ah/at South	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, ah/at South	06/05/89	06/13/89	$1.8 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 3, ah/at South	06/13/89	06/19/89	$1.5 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 3, ah/at South	06/19/89	06/26/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 3, ah/at South	06/26/89	07/05/89	$1.6 \times 10^{-14}$	$7.1 \times 10^{-16}$
Area 3, ah/at South	07/05/89	07/11/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at South	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at South	07/17/89	07/25/89	$2.0 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 3, ah/at South	07/25/89	07/31/89	$2.0 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, ah/at South	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 3, ah/at South	08/07/89	08/15/89	$1.9 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 3, ah/at South	08/15/89	08/21/89	$1.5 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, ah/at South	08/21/89	08/29/89	$1.8 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 3, ah/at South	08/29/89	09/05/89	$1.8 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 3, ah/at South	09/05/89	09/11/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, ah/at South	09/11/89	09/18/89	$2.1 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, ah/at South	09/18/89	09/25/89	$1.7 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, ah/at South	09/25/89	10/02/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, ah/at South	10/02/89	10/09/89	$2.1 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, ah/at South	10/09/89	10/16/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at South	10/16/89	10/23/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 3, ah/at South	10/23/89	10/31/89	$8.6 \times 10^{-15}$	$7.0 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 3, ah/at South	10/30/89	11/06/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 3, ah/at South	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 3, ah/at South	11/13/89	11/21/89	$1.9 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 3, ah/at South	11/21/89	11/28/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at South	11/28/89	12/06/89	$1.9 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 3, ah/at South	12/06/89	12/11/89	$1.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, ah/at South	12/11/89	12/18/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 3, ah/at South	12/18/89	12/26/89	$2.2 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 3, ah/at South	12/26/89	01/02/90	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 3, ah/at West	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 3, ah/at West	01/09/89	01/17/89	$1.7 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 3, ah/at West	01/17/89	01/23/89	$3.4 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 3, ah/at West	01/23/89	01/30/89	$2.5 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, ah/at West	01/30/89	02/06/89	$2.0 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 3, ah/at West	02/06/89	02/13/89	$2.3 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 3, ah/at West	02/13/89	02/23/89	$1.8 \times 10^{-14}$	$6.9 \times 10^{-16}$
Area 3, ah/at West	02/23/89	02/27/89	$1.8 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 3, ah/at West	02/27/89	03/06/89	$1.6 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 3, ah/at West	03/06/89	03/14/89	$1.6 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 3, ah/at West	03/14/89	03/20/89	$9.9 \times 10^{-15}$	$8.5 \times 10^{-16}$
Area 3, ah/at West	03/20/89	03/27/89	$1.6 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 3, ah/at West	03/27/89	04/03/89	$1.3 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 3, ah/at West	04/03/89	04/10/89	$1.7 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 3, ah/at West	04/10/89	04/18/89	$2.6 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 3, ah/at West	04/18/89	04/24/89	$1.7 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 3, ah/at West	04/24/89	05/01/89	$1.5 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 3, ah/at West	05/01/89	05/08/89	$1.8 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 3, ah/at West	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 3, ah/at West	05/15/89	05/22/89	$1.7 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 3, ah/at West	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 3, ah/at West	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 3, ah/at West	06/05/89	06/13/89	$1.8 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 3, ah/at West	06/13/89	06/19/89	$1.6 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, ah/at West	06/19/89	06/26/89	$1.3 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 3, ah/at West	06/26/89	07/05/89	$1.6 \times 10^{-14}$	$7.0 \times 10^{-16}$
Area 3, ah/at West	07/05/89	07/11/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at West	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at West	07/17/89	07/25/89	$2.0 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 3, ah/at West	07/25/89	07/31/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at West	07/31/89	08/07/89	$1.5 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 3, ah/at West	08/07/89	08/15/89	$1.6 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 3, ah/at West	08/15/89	08/21/89	$1.6 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 3, ah/at West	08/21/89	08/29/89	$2.1 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, ah/at West	08/29/89	09/05/89	$1.9 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 3, ah/at West	09/05/89	09/11/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, ah/at West	09/11/89	09/18/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, ah/at West	09/18/89	09/25/89	$1.7 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 3, ah/at West	09/25/89	10/02/89	$2.4 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, ah/at West	10/02/89	10/09/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 3, ah/at West	10/09/89	10/16/89	$2.9 \times 10^{-14}$	$1.0 \times 10^{-15}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 3, ah/at West	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 3, ah/at West	10/23/89	10/31/89	$7.2 \times 10^{-15}$	$6.7 \times 10^{-16}$
Area 3, ah/at West	10/30/89	11/06/89	$2.3 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 3, ah/at West	11/06/89	11/13/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 3, ah/at West	11/13/89	11/21/89	$2.1 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, ah/at West	11/21/89	11/28/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, ah/at West	11/28/89	12/06/89	$1.8 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 3, ah/at West	12/06/89	12/11/89	$1.9 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 3, ah/at West	12/11/89	12/18/89	$1.8 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 3, ah/at West	12/18/89	12/26/89	$2.4 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, ah/at West	12/26/89	01/02/90	$1.2 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 3, Complex	01/03/89	01/09/89	$1.0 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 3, Complex	01/09/89	01/17/89	$1.8 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, Complex	01/17/89	01/23/89	$2.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex	01/23/89	01/30/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, Complex	01/30/89	02/06/89	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, Complex	02/06/89	02/13/89	$2.0 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 3, Complex	02/13/89	02/23/89	$2.0 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 3, Complex	02/23/89	02/27/89	$1.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, Complex	02/27/89	03/06/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex	03/06/89	03/14/89	$1.6 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 3, Complex	03/14/89	03/20/89	$1.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, Complex	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 3, Complex	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 3, Complex	04/03/89	04/10/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, Complex	04/10/89	04/18/89	$2.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, Complex	04/18/89	04/24/89	$1.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex	04/24/89	05/01/89	$1.5 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, Complex	05/01/89	05/08/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, Complex	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex	05/22/89	05/30/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 3, Complex	06/05/89	06/13/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 3, Complex	06/13/89	06/19/89	$1.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex	06/19/89	06/26/89	$1.6 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 3, Complex	06/26/89	07/05/89	$2.0 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 3, Complex	07/05/89	07/11/89	$2.5 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, Complex	07/11/89	07/17/89	$2.5 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, Complex	07/17/89	07/25/89	$2.4 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, Complex	07/25/89	07/31/89	$2.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, Complex	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, Complex	08/07/89	08/15/89	$1.6 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 3, Complex	08/15/89	08/21/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex	08/21/89	08/29/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, Complex	08/29/89	09/05/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, Complex	09/05/89	09/11/89	$2.6 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, Complex	09/11/89	09/18/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex	09/18/89	09/25/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, Complex	09/25/89	10/02/89	$3.2 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, Complex	10/02/89	10/09/89	$2.5 \times 10^{-14}$	$1.1 \times 10^{-15}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 3, Complex	10/09/89	10/16/89	$3.6 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, Complex	10/16/89	10/23/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex	10/23/89	10/31/89	$1.1 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 3, Complex	10/30/89	11/06/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex	11/06/89	11/13/89	$2.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex	11/13/89	11/21/89	$2.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 3, Complex	11/21/89	11/28/89	$3.1 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, Complex	11/28/89	12/06/89	$2.3 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, Complex	12/06/89	12/11/89	$1.5 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, Complex	12/11/89	12/18/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex	12/18/89	12/26/89	$3.2 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, Complex	12/26/89	01/02/90	$5.4 \times 10^{-14}$	$2.7 \times 10^{-15}$
Area 3, Complex No. 2	01/03/89	01/09/89	$1.4 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, Complex No. 2	01/09/89	01/17/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 3, Complex No. 2	01/17/89	01/23/89	$3.4 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 3, Complex No. 2	01/23/89	01/30/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, Complex No. 2	01/30/89	02/06/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, Complex No. 2	02/06/89	02/13/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, Complex No. 2	02/13/89	02/23/89	$1.9 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 3, Complex No. 2	02/23/89	02/27/89	$2.1 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 3, Complex No. 2	02/27/89	03/06/89	$1.7 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, Complex No. 2	03/06/89	03/14/89	$1.6 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 3, Complex No. 2	03/14/89	03/20/89	$1.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, Complex No. 2	03/20/89	03/27/89	$1.5 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, Complex No. 2	03/27/89	04/03/89	$1.7 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, Complex No. 2	04/03/89	04/10/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, Complex No. 2	04/10/89	04/18/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex No. 2	04/18/89	04/24/89	$1.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex No. 2	04/24/89	05/01/89	$1.4 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 3, Complex No. 2	05/01/89	05/08/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, Complex No. 2	05/08/89	05/15/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex No. 2	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 3, Complex No. 2	05/22/89	05/30/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 3, Complex No. 2	05/30/89	06/05/89	$2.2 \times 10^{-14}$	$1.6 \times 10^{-15}$
Area 3, Complex No. 2	06/05/89	06/13/89	$2.1 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 3, Complex No. 2	06/13/89	06/19/89	$2.0 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, Complex No. 2	06/19/89	06/26/89	$1.1 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 3, Complex No. 2	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 3, Complex No. 2	07/05/89	07/11/89	$1.6 \times 10^{-14}$	$6.9 \times 10^{-15}$
Area 3, Complex No. 2	07/11/89	07/17/89	$2.4 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 3, Complex No. 2	07/17/89	07/25/89	$2.4 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 3, Complex No. 2	07/25/89	07/31/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex No. 2	07/31/89	08/07/89	$1.3 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 3, Complex No. 2	08/07/89	08/15/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 3, Complex No. 2	08/15/89	08/21/89	$1.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex No. 2	08/21/89	08/29/89	$2.1 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 3, Complex No. 2	08/29/89	09/05/89	$2.1 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, Complex No. 2	09/05/89	09/11/89	$2.7 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, Complex No. 2	09/11/89	09/18/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex No. 2	09/18/89	09/25/89	$2.0 \times 10^{-14}$	$9.7 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 3, Complex No. 2	09/25/89	10/02/89	$2.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex No. 2	10/02/89	10/09/89	$2.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex No. 2	10/09/89	10/16/89	$2.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex No. 2	10/16/89	10/23/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, Complex No. 2	10/23/89	10/31/89	$9.7 \times 10^{-15}$	$8.0 \times 10^{-16}$
Area 3, Complex No. 2	10/30/89	11/06/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 3, Complex No. 2	11/06/89	11/13/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex No. 2	11/13/89	11/21/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex No. 2	11/21/89	11/28/89	$3.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 3, Complex No. 2	11/28/89	12/06/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 3, Complex No. 2	12/06/89	12/11/89	$1.8 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 3, Complex No. 2	12/11/89	12/18/89	$2.0 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 3, Complex No. 2	12/18/89	12/26/89	$2.4 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 3, Complex No. 2	12/26/89	01/02/90	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, DOD Yard	01/03/89	01/09/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, DOD Yard	01/09/89	01/17/89	$1.8 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, DOD Yard	01/17/89	01/23/89	$3.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, DOD Yard	01/23/89	01/31/89	$2.3 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, DOD Yard	01/31/89	02/06/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, DOD Yard	02/06/89	02/13/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, DOD Yard	02/13/89	02/22/89	$2.2 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, DOD Yard	02/22/89	03/01/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, DOD Yard	03/01/89	03/07/89	$1.3 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, DOD Yard	03/07/89	03/13/89	$1.7 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, DOD Yard	03/13/89	03/20/89	$1.1 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, DOD Yard	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, DOD Yard	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, DOD Yard	04/03/89	04/11/89	$1.6 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, DOD Yard	04/11/89	04/19/89	$2.6 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, DOD Yard	04/19/89	04/24/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, DOD Yard	04/24/89	05/01/89	$1.1 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, DOD Yard	05/01/89	05/08/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, DOD Yard	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, DOD Yard	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, DOD Yard	05/22/89	05/30/89	$1.4 \times 10^{-14}$	$7.3 \times 10^{-16}$
Area 5, DOD Yard	05/30/89	06/05/89	$1.4 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, DOD Yard	06/05/89	06/12/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, DOD Yard	06/12/89	06/19/89	$1.7 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, DOD Yard	06/19/89	06/26/89	$1.2 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, DOD Yard	06/26/89	07/05/89	$1.7 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 5, DOD Yard	07/05/89	07/11/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, DOD Yard	07/11/89	07/17/89	$2.0 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, DOD Yard	07/17/89	07/25/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, DOD Yard	07/24/89	07/31/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, DOD Yard	07/31/89	08/07/89	$1.3 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, DOD Yard	08/07/89	08/14/89	$2.5 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, DOD Yard	08/14/89	08/21/89	$1.6 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, DOD Yard	08/21/89	08/28/89	$1.9 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, DOD Yard	08/28/89	09/06/89	$2.0 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, DOD Yard	09/06/89	09/11/89	$2.4 \times 10^{-14}$	$1.2 \times 10^{-15}$



Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, DOD Yard	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, DOD Yard	09/18/89	09/28/89	$1.7 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, DOD Yard	09/26/89	10/02/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, DOD Yard	10/02/89	10/09/89	$2.4 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, DOD Yard	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, DOD Yard	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, DOD Yard	10/23/89	10/30/89	$9.7 \times 10^{-15}$	$7.1 \times 10^{-16}$
Area 5, DOD Yard	10/30/89	11/06/89	$2.4 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, DOD Yard	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, DOD Yard	11/13/89	11/20/89	$2.1 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, DOD Yard	11/20/89	11/28/89	$2.6 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, DOD Yard	11/28/89	12/05/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, DOD Yard	12/05/89	12/11/89	$1.6 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, DOD Yard	12/11/89	12/18/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, DOD Yard	12/18/89	12/26/89	$3.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, DOD Yard	12/26/89	01/02/90	$2.5 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, Gate 200	01/03/89	01/09/89	$6.2 \times 10^{-14}$	$1.8 \times 10^{-15}$
Area 5, Gate 200	01/09/89	01/17/89	$4.6 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, Gate 200	01/17/89	01/23/89	$3.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Gate 200	01/23/89	01/31/89	$6.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, Gate 200	01/31/89	02/05/89	$3.6 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, Gate 200	02/06/89	02/13/89	$2.6 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, Gate 200	02/13/89	02/22/89	$1.3 \times 10^{-13}$	$1.7 \times 10^{-15}$
Area 5, Gate 200	02/22/89	03/01/89	$5.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, Gate 200	03/01/89	03/07/89	$1.4 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, Gate 200	03/07/89	03/13/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, Gate 200	03/13/89	03/20/89	$5.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, Gate 200	03/20/89	03/27/89	$4.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, Gate 200	03/27/89	04/03/89	$6.6 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 5, Gate 200	04/03/89	04/11/89	$4.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Gate 200	04/11/89	04/19/89	$4.7 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, Gate 200	04/19/89	04/24/89	$5.0 \times 10^{-14}$	$1.6 \times 10^{-15}$
Area 5, Gate 200	04/24/89	05/01/89	$4.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Gate 200	05/01/89	05/08/89	$3.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Gate 200	05/08/89	05/15/89	$3.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Gate 200	05/15/89	05/22/89	$3.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Gate 200	05/22/89	05/30/89	$3.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Gate 200	05/30/89	06/05/89	$5.0 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 5, Gate 200	06/05/89	06/12/89	$2.5 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, Gate 200	06/12/89	06/19/89	$3.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Gate 200	06/19/89	06/26/89	$1.7 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, Gate 200	06/26/89	07/05/89	$4.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Gate 200	07/05/89	07/11/89	$4.6 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 5, Gate 200	07/11/89	07/17/89	$5.4 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 5, Gate 200	07/17/89	07/24/89	$3.9 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, Gate 200	07/24/89	07/31/89	$4.1 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, Gate 200	07/31/89	08/07/89	$3.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Gate 200	08/07/89	08/14/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, Gate 200	08/14/89	08/21/89	$2.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, Gate 200	08/21/89	08/28/89	$2.3 \times 10^{-14}$	$9.8 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, Gate 200	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, Gate 200	09/06/89	09/11/89	$3.4 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 5, Gate 200	09/11/89	09/18/89	$3.9 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, Gate 200	09/18/89	09/26/89	$4.8 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, Gate 200	09/26/89	10/02/89	$6.6 \times 10^{-14}$	$1.6 \times 10^{-15}$
Area 5, Gate 200	10/02/89	10/09/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, Gate 200	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Gate 200	10/16/89	10/23/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, Gate 200	10/23/89	10/30/89	$8.6 \times 10^{-15}$	$7.2 \times 10^{-16}$
Area 5, Gate 200	10/30/89	11/06/89	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, Gate 200	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, Gate 200	11/13/89	11/20/89	$4.0 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, Gate 200	11/20/89	11/28/89	$2.3 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, Gate 200	11/28/89	12/05/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, Gate 200	12/05/89	12/11/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, Gate 200	12/11/89	12/18/89	$9.4 \times 10^{-14}$	$1.7 \times 10^{-15}$
Area 5, Gate 200	12/18/89	12/26/89	$7.5 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 5, Gate 200	12/26/89	01/02/90	$2.3 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 1	01/03/89	01/09/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 1	01/09/89	01/17/89	$1.9 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 1	01/17/89	01/23/89	$4.3 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 5, RWMS No. 1	01/23/89	01/31/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 1	01/31/89	02/06/89	$2.2 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 1	02/06/89	02/13/89	$3.1 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 1	02/13/89	02/22/89	$2.5 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 1	02/22/89	03/01/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 1	03/01/89	03/07/89	$1.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 1	03/07/89	03/13/89	$1.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 1	03/13/89	03/20/89	$1.2 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, RWMS No. 1	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS No. 1	03/27/89	04/03/89	$1.3 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS No. 1	04/03/89	04/11/89	$1.6 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS No. 1	04/11/89	04/19/89	$2.7 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 1	04/19/89	04/24/89	$1.8 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 1	05/01/89	05/08/89	$1.9 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 1	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, RWMS No. 1	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS No. 1	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 1	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 1	06/05/89	06/12/89	$1.9 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS No. 1	06/12/89	06/19/89	$1.7 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 1	06/19/89	06/26/89	$1.6 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 1	06/26/89	07/05/89	$1.9 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS No. 1	07/05/89	07/11/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 1	07/11/89	07/17/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 1	07/17/89	07/25/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 1	07/24/89	07/31/89	$2.1 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 1	07/31/89	08/07/89	$1.5 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS No. 1	08/07/89	08/14/89	$1.5 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS No. 1	08/14/89	08/21/89	$1.6 \times 10^{-14}$	$8.9 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 1	08/21/89	08/28/89	$2.0 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 1	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 1	09/06/89	09/11/89	$2.3 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS No. 1	09/11/89	09/18/89	$2.1 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 1	09/18/89	09/28/89	$2.8 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 1	09/26/89	10/02/89	$2.5 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 1	10/02/89	10/09/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 1	10/09/89	10/16/89	$3.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 1	10/16/89	10/23/89	$2.0 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 1	10/23/89	10/30/89	$1.1 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 1	10/30/89	11/06/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 1	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 1	11/13/89	11/20/89	$2.2 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 1	11/20/89	11/28/89	$2.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 1	11/28/89	12/05/89	$2.2 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 1	12/05/89	12/11/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 1	12/11/89	12/18/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 1	12/26/89	01/02/90	$2.5 \times 10^{-14}$	$6.1 \times 10^{-16}$
Area 5, RWMS No. 2	01/03/89	01/09/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 2	01/09/89	01/17/89	$1.8 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS No. 2	01/17/89	01/23/89	$3.5 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 2	01/23/89	01/31/89	$2.3 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS No. 2	01/31/89	02/06/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 2	02/06/89	02/13/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 2	02/13/89	02/22/89	$2.0 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS No. 2	02/22/89	03/01/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 2	03/01/89	03/07/89	$1.4 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 2	03/07/89	03/13/89	$1.6 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 2	03/13/89	03/20/89	$1.2 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS No. 2	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 2	03/27/89	04/03/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 2	04/03/89	04/11/89	$1.7 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 2	04/11/89	04/19/89	$2.6 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS No. 2	04/19/89	04/24/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 2	04/24/89	05/01/89	$1.2 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS No. 2	05/01/89	05/08/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS No. 2	05/08/89	05/15/89	$1.4 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 2	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS No. 2	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS No. 2	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 2	06/05/89	06/12/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 2	06/12/89	06/19/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS No. 2	06/19/89	06/26/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS No. 2	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 5, RWMS No. 2	07/05/89	07/11/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 2	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 2	07/17/89	07/24/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 2	07/24/89	07/31/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 2	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS No. 2	08/07/89	08/14/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 2	08/14/89	08/21/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS No. 2	08/21/89	08/28/89	$2.0 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 2	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS No. 2	09/06/89	09/11/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 2	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 2	09/18/89	09/29/89	$1.8 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 2	09/26/89	10/02/89	$2.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 2	10/02/89	10/09/89	$2.1 \times 10^{-14}$	$1.7 \times 10^{-15}$
Area 5, RWMS No. 2	10/09/89	10/16/89	$3.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 2	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 2	10/23/89	10/30/89	$9.7 \times 10^{-15}$	$7.4 \times 10^{-16}$
Area 5, RWMS No. 2	10/30/89	11/06/89	$2.4 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 2	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 2	11/13/89	11/20/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS No. 2	11/20/89	11/28/89	$2.7 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 2	11/28/89	12/05/89	$2.1 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 2	12/05/89	12/11/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 2	12/11/89	12/18/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS No. 2	12/18/89	12/26/89	$2.7 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 2	12/26/89	01/02/90	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 3	01/03/89	01/09/89	$1.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 3	01/09/89	01/17/89	$1.8 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS No. 3	01/17/89	01/23/89	$3.6 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS No. 3	01/23/89	01/31/89	$2.4 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 3	01/31/89	02/06/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 3	02/06/89	02/13/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 3	02/13/89	02/22/89	$2.2 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, RWMS No. 3	02/22/89	03/01/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 3	03/01/89	03/07/89	$1.5 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 3	03/07/89	03/13/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 3	03/13/89	03/20/89	$1.2 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 3	03/20/89	03/27/89	$1.2 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 3	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS No. 3	04/03/89	04/11/89	$1.7 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 3	04/11/89	04/19/89	$2.4 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS No. 3	04/19/89	04/24/89	$1.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 3	04/24/89	05/01/89	$1.3 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS No. 3	05/01/89	05/08/89	$1.7 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS No. 3	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 3	05/15/89	05/22/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS No. 3	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS No. 3	05/30/89	06/05/89	$1.4 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 3	06/05/89	06/12/89	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 3	06/12/89	06/19/89	$1.7 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 3	06/19/89	06/26/89	$1.7 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS No. 3	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.6 \times 10^{-15}$
Area 5, RWMS No. 3	07/17/89	07/24/89	$2.4 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 5, RWMS No. 3	07/24/89	07/31/89	$2.1 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 5, RWMS No. 3	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS No. 3	08/07/89	08/14/89	$2.2 \times 10^{-14}$	$1.5 \times 10^{-15}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 3	08/14/89	08/21/89	$1.6 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS No. 3	08/21/89	08/28/89	$2.4 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 5, RWMS No. 3	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 3	09/06/89	09/11/89	$2.9 \times 10^{-14}$	$1.6 \times 10^{-15}$
Area 5, RWMS No. 3	09/11/89	09/18/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 3	09/18/89	09/29/89	$1.6 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS No. 3	09/26/89	10/02/89	$2.9 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 3	10/02/89	10/09/89	$3.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 3	10/09/89	10/16/89	$3.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 3	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS No. 3	10/23/89	10/30/89	$9.1 \times 10^{-15}$	$7.5 \times 10^{-16}$
Area 5, RWMS No. 3	10/30/89	11/06/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 3	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 3	11/13/89	11/20/89	$2.2 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 3	11/20/89	11/28/89	$2.6 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 3	11/28/89	12/05/89	$2.1 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 3	12/05/89	12/11/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 3	12/11/89	12/18/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 3	12/18/89	12/26/89	$2.8 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS No. 3	12/26/89	01/02/90	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 4	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS No. 4	01/09/89	01/17/89	$1.8 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 4	01/17/89	01/23/89	$3.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 4	01/23/89	01/31/89	$2.3 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS No. 4	01/31/89	02/06/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 4	02/06/89	02/13/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 4	02/13/89	02/22/89	$1.1 \times 10^{-14}$	$6.5 \times 10^{-16}$
Area 5, RWMS No. 4	02/22/89	03/01/89	$2.0 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS No. 4	03/01/89	03/07/89	$1.6 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 4	03/07/89	03/13/89	$1.6 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 4	03/13/89	03/20/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 4	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 4	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 4	04/03/89	04/11/89	$1.7 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS No. 4	04/11/89	04/19/89	$2.7 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 4	04/19/89	04/24/89	$1.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 4	04/24/89	05/01/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 4	05/01/89	05/08/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS No. 4	05/08/89	05/15/89	$8.5 \times 10^{-15}$	$5.2 \times 10^{-16}$
Area 5, RWMS No. 4	05/15/89	05/22/89	$1.7 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS No. 4	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, RWMS No. 4	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 4	06/05/89	06/12/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS No. 4	06/12/89	06/19/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 4	06/19/89	06/26/89	$1.5 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS No. 4	06/26/89	07/05/89	$2.0 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS No. 4	07/05/89	07/11/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 4	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 4	07/17/89	07/24/89	$6.0 \times 10^{-13}$	$4.1 \times 10^{-15}$
Area 5, RWMS No. 4	07/24/89	07/31/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 4	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS No. 4	08/07/89	08/14/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 4	08/14/89	08/21/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS No. 4	08/21/89	08/28/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS No. 4	08/28/89	09/06/89	$1.7 \times 10^{-14}$	$7.3 \times 10^{-16}$
Area 5, RWMS No. 4	09/06/89	09/11/89	$3.9 \times 10^{-14}$	$2.7 \times 10^{-15}$
Area 5, RWMS No. 4	09/11/89	09/18/89	$1.2 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 4	09/18/89	09/29/89	$2.1 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS No. 4	09/26/89	10/02/89	$3.2 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 4	10/02/89	10/09/89	$2.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 4	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 4	10/16/89	10/23/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 4	10/23/89	10/30/89	$9.2 \times 10^{-15}$	$7.6 \times 10^{-16}$
Area 5, RWMS No. 4	10/30/89	11/06/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 4	11/06/89	11/13/89	$2.3 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 4	11/13/89	11/20/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 4	11/20/89	11/28/89	$2.8 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 4	11/28/89	12/05/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 4	12/05/89	12/11/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 4	12/11/89	12/18/89	$2.1 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 4	12/26/89	01/02/90	$2.8 \times 10^{-14}$	$6.8 \times 10^{-16}$
Area 5, RWMS No. 5	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 5	01/09/89	01/17/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS No. 5	01/17/89	01/23/89	$3.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS No. 5	01/23/89	01/31/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 5	01/31/89	02/06/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 5	02/06/89	02/13/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 5	02/13/89	02/22/89	$2.4 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 5	02/22/89	03/01/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 5	03/01/89	03/07/89	$1.4 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 5	03/07/89	03/13/89	$1.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 5	03/13/89	03/20/89	$1.2 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS No. 5	03/20/89	03/27/89	$1.4 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 5	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 5	04/03/89	04/11/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS No. 5	04/11/89	04/19/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 5	04/19/89	04/24/89	$1.5 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 5	04/24/89	05/01/89	$1.4 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS No. 5	05/01/89	05/08/89	$1.9 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 5	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS No. 5	05/15/89	05/22/89	$1.7 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 5	05/22/89	05/30/89	$1.7 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS No. 5	05/30/89	06/05/89	$1.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 5	06/05/89	06/12/89	$1.9 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 5	06/12/89	06/19/89	$1.5 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS No. 5	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS No. 5	06/26/89	07/05/89	$1.9 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 5	07/05/89	07/11/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 5	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 5	07/17/89	07/24/89	$7.1 \times 10^{-13}$	$4.6 \times 10^{-15}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 5	07/24/89	07/31/89	$2.2 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 5	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 5	08/07/89	08/14/89	$2.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 5	08/14/89	08/21/89	$1.6 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 5	08/21/89	08/28/89	$2.0 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 5	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS No. 5	09/06/89	09/11/89	$2.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS No. 5	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 5	09/18/89	09/29/89	$1.6 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, RWMS No. 5	09/26/89	10/02/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 5	10/02/89	10/09/89	$2.5 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 5	10/09/89	10/16/89	$3.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 5	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 5	10/23/89	10/30/89	$9.9 \times 10^{-15}$	$7.3 \times 10^{-16}$
Area 5, RWMS No. 5	10/30/89	11/06/89	$2.4 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 5	11/06/89	11/13/89	$2.3 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 5	11/13/89	11/20/89	$2.4 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 5	11/20/89	11/28/89	$2.7 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 5	11/28/89	12/05/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 5	12/05/89	12/11/89	$1.3 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 5	12/11/89	12/18/89	$1.9 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS No. 5	12/26/89	01/02/90	$2.7 \times 10^{-14}$	$6.7 \times 10^{-16}$
Area 5, RWMS No. 6	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS No. 6	01/09/89	01/17/89	$1.7 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 6	01/17/89	01/23/89	$3.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 6	01/23/89	01/31/89	$2.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 6	01/31/89	02/06/89	$1.5 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 6	02/06/89	02/13/89	$2.4 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 6	02/13/89	02/22/89	$2.1 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS No. 6	02/22/89	03/01/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 6	03/01/89	03/07/89	$1.5 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 6	03/07/89	03/13/89	$1.8 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 6	03/13/89	03/20/89	$1.3 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS No. 6	03/20/89	03/27/89	$1.2 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 6	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS No. 6	04/03/89	04/11/89	$1.9 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS No. 6	04/11/89	04/19/89	$2.4 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS No. 6	04/19/89	04/24/89	$1.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 6	04/24/89	05/01/89	$1.5 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS No. 6	05/01/89	05/08/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 6	05/08/89	05/15/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS No. 6	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS No. 6	05/22/89	05/30/89	$1.6 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS No. 6	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 6	06/05/89	06/12/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 6	06/12/89	06/19/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 6	06/19/89	06/26/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS No. 6	06/26/89	07/05/89	$1.9 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, RWMS No. 6	07/05/89	07/11/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 6	07/11/89	07/17/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 6	07/17/89	07/24/89	$4.2 \times 10^{-13}$	$2.8 \times 10^{-15}$
Area 5, RWMS No. 6	07/24/89	07/31/89	$2.2 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 6	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS No. 6	08/07/89	08/14/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 6	08/14/89	08/21/89	$1.6 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS No. 6	08/21/89	08/28/89	$2.3 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 6	08/28/89	09/06/89	$9.7 \times 10^{-15}$	$6.4 \times 10^{-16}$
Area 5, RWMS No. 6	09/06/89	09/11/89	$2.6 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS No. 6	09/11/89	09/18/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 6	09/18/89	09/29/89	$1.9 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS No. 6	09/26/89	10/02/89	$3.0 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 6	10/02/89	10/09/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 6	10/09/89	10/16/89	$9.8 \times 10^{-15}$	$3.7 \times 10^{-16}$
Area 5, RWMS No. 6	10/16/89	10/23/89	$1.1 \times 10^{-15}$	$5.0 \times 10^{-17}$
Area 5, RWMS No. 6	10/23/89	10/30/89	$1.3 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, RWMS No. 6	10/30/89	11/06/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 6	11/06/89	11/13/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 6	11/13/89	11/20/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 6	11/20/89	11/28/89	$2.7 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 6	11/28/89	12/05/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 6	12/05/89	12/11/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 6	12/11/89	12/18/89	$2.2 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 6	12/18/89	12/26/89	$4.5 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 5, RWMS No. 6	12/26/89	01/02/90	$2.0 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS No. 7	01/03/89	01/09/89	$1.4 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 7	01/09/89	01/17/89	$1.8 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS No. 7	01/17/89	01/23/89	$3.5 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 7	01/23/89	01/31/89	$2.2 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS No. 7	01/31/89	02/06/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 7	02/06/89	02/13/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 7	02/13/89	02/22/89	$2.3 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS No. 7	02/22/89	03/01/89	$2.0 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 7	03/01/89	03/07/89	$1.5 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 7	03/07/89	03/13/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 7	03/13/89	03/20/89	$1.1 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS No. 7	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 7	03/27/89	04/03/89	$1.1 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS No. 7	04/03/89	04/11/89	$1.6 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS No. 7	04/11/89	04/19/89	$2.7 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 7	04/24/89	04/24/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 7	04/24/89	05/01/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 7	05/01/89	05/08/89	$1.6 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, RWMS No. 7	05/08/89	05/15/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 7	05/15/89	05/22/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS No. 7	05/22/89	05/30/89	$1.4 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 5, RWMS No. 7	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 7	06/05/89	06/12/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 7	06/12/89	06/19/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS No. 7	06/19/89	06/26/89	$1.5 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, RWMS No. 7	06/26/89	07/05/89	$1.9 \times 10^{-14}$	$7.6 \times 10^{-16}$



Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 7	07/05/89	07/11/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 7	07/11/89	07/17/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 7	07/17/89	07/25/89	$6.4 \times 10^{-13}$	$4.2 \times 10^{-15}$
Area 5, RWMS No. 7	07/24/89	07/31/89	$2.3 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 7	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS No. 7	08/07/89	08/14/89	$2.0 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 7	08/14/89	08/21/89	$1.7 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS No. 7	08/21/89	08/28/89	$2.0 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS No. 7	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS No. 7	09/06/89	09/11/89	$2.5 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 7	09/11/89	09/18/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 7	09/18/89	09/28/89	$1.8 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 7	09/26/89	10/02/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 7	10/02/89	10/09/89	$2.6 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 7	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 7	10/16/89	10/23/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 7	10/23/89	10/30/89	$1.0 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 5, RWMS No. 7	10/30/89	11/06/89	$2.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 7	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 7	11/13/89	11/20/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 7	11/20/89	11/28/89	$2.6 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 7	11/28/89	12/05/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 7	12/05/89	12/11/89	$1.8 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 7	12/11/89	12/18/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 7	12/18/89	12/26/89	$2.9 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 7	12/26/89	01/02/90	$2.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 8	01/03/89	01/09/89	$1.4 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 8	01/09/89	01/17/89	$1.7 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 8	01/17/89	01/23/89	$3.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 8	01/23/89	01/31/89	$2.4 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS No. 8	01/31/89	02/06/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 8	02/06/89	02/13/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 8	02/13/89	02/22/89	$2.2 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 8	02/22/89	03/01/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 8	03/01/89	03/07/89	$1.5 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 8	03/07/89	03/13/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 8	03/13/89	03/20/89	$1.2 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 8	03/20/89	03/27/89	$1.4 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS No. 8	03/27/89	04/03/89	$1.3 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS No. 8	04/03/89	04/11/89	$1.6 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 8	04/11/89	04/19/89	$2.7 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 8	04/24/89	04/24/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 8	04/24/89	05/01/89	$1.5 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS No. 8	05/01/89	05/08/89	$1.8 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS No. 8	05/08/89	05/15/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS No. 8	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 8	05/22/89	05/30/89	$1.6 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS No. 8	05/30/89	06/05/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 8	06/05/89	06/12/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS No. 8	06/12/89	06/19/89	$1.9 \times 10^{-14}$	$9.3 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 8	06/19/89	06/26/89	$1.5 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS No. 8	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, RWMS No. 8	07/05/89	07/11/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 8	07/11/89	07/17/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 8	07/17/89	07/25/89	$6.5 \times 10^{-13}$	$4.3 \times 10^{-15}$
Area 5, RWMS No. 8	07/24/89	07/31/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 8	07/31/89	08/07/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS No. 8	08/07/89	08/14/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 8	08/14/89	08/21/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS No. 8	08/21/89	08/28/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 8	08/28/89	09/06/89	$1.7 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS No. 8	09/06/89	09/11/89	$2.6 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS No. 8	09/11/89	09/18/89	$2.1 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 8	09/18/89	09/28/89	$2.1 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS No. 8	09/26/89	10/02/89	$2.9 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 8	10/02/89	10/09/89	$2.4 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 8	10/09/89	10/16/89	$3.6 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS No. 8	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 8	10/23/89	10/30/89	$1.0 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS No. 8	10/30/89	11/06/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 8	11/06/89	11/13/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 8	11/13/89	11/20/89	$2.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 8	11/20/89	11/28/89	$2.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 8	11/28/89	12/05/89	$2.2 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 8	12/05/89	12/11/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 8	12/11/89	12/18/89	$2.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 8	12/18/89	12/26/89	$3.0 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 8	12/26/89	01/02/90	$2.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 9	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 9	01/09/89	01/17/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 9	01/17/89	01/23/89	$3.8 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 5, RWMS No. 9	01/23/89	01/31/89	$2.5 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS No. 9	01/31/89	02/06/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 9	02/06/89	02/13/89	$2.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 9	02/13/89	02/22/89	$2.4 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS No. 9	02/22/89	03/01/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 9	03/01/89	03/07/89	$1.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS No. 9	03/07/89	03/13/89	$1.8 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 9	03/13/89	03/20/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 9	03/20/89	03/27/89	$1.5 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS No. 9	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS No. 9	04/03/89	04/11/89	$1.8 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS No. 9	04/11/89	04/19/89	$2.7 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 9	04/24/89	04/24/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 9	04/24/89	05/01/89	$1.4 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS No. 9	05/01/89	05/08/89	$1.8 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS No. 9	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS No. 9	05/15/89	05/22/89	$1.5 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS No. 9	05/22/89	05/30/89	$1.4 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 5, RWMS No. 9	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$9.4 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 9	06/05/89	06/12/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS No. 9	06/12/89	06/19/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS No. 9	06/19/89	06/26/89	$1.5 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, RWMS No. 9	06/26/89	07/05/89	$1.9 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS No. 9	07/05/89	07/11/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 9	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 9	07/17/89	07/25/89	$6.8 \times 10^{-13}$	$4.5 \times 10^{-15}$
Area 5, RWMS No. 9	07/24/89	07/31/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS No. 9	07/31/89	08/07/89	$1.5 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS No. 9	08/07/89	08/14/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS No. 9	08/14/89	08/21/89	$1.8 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS No. 9	08/21/89	08/28/89	$2.1 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS No. 9	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 9	09/06/89	09/11/89	$2.6 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS No. 9	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 9	09/18/89	09/28/89	$1.8 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS No. 9	09/26/89	10/02/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 9	10/02/89	10/09/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 9	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 9	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS No. 9	10/23/89	10/30/89	$1.1 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS No. 9	10/30/89	11/06/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS No. 9	11/06/89	11/13/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 9	11/13/89	11/20/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 9	11/20/89	11/28/89	$2.7 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS No. 9	11/28/89	12/05/89	$2.0 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS No. 9	12/05/89	12/11/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS No. 9	12/11/89	12/18/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS No. 9	12/18/89	12/26/89	$3.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS Pit No. 3	01/03/89	01/09/89	$1.5 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS Pit No. 3	01/09/89	01/17/89	$1.9 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS Pit No. 3	01/17/89	01/23/89	$3.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS Pit No. 3	01/23/89	01/31/89	$2.4 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS Pit No. 3	01/31/89	02/06/89	$1.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS Pit No. 3	02/06/89	02/13/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS Pit No. 3	02/13/89	02/22/89	$2.2 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, RWMS Pit No. 3	02/22/89	03/01/89	$1.1 \times 10^{-14}$	$5.8 \times 10^{-16}$
Area 5, RWMS Pit No. 3	03/01/89	03/07/89	$1.5 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS Pit No. 3	03/07/89	03/13/89	$1.7 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS Pit No. 3	03/13/89	03/20/89	$1.2 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS Pit No. 3	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS Pit No. 3	03/27/89	04/03/89	$1.3 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS Pit No. 3	04/03/89	04/11/89	$1.4 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS Pit No. 3	04/11/89	04/19/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS Pit No. 3	04/19/89	04/24/89	$1.8 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS Pit No. 3	04/24/89	05/01/89	$1.4 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS Pit No. 3	04/24/89	05/01/89	$1.4 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS Pit No. 3	05/01/89	05/08/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS Pit No. 3	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS Pit No. 3	05/15/89	05/22/89	$1.7 \times 10^{-14}$	$8.9 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS Pit No. 3	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS Pit No. 3	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS Pit No. 3	06/05/89	06/12/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS Pit No. 3	06/12/89	06/19/89	$1.7 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS Pit No. 3	06/19/89	06/26/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS Pit No. 3	06/26/89	07/05/89	$1.7 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS Pit No. 3	07/05/89	07/11/89	$2.2 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS Pit No. 3	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS Pit No. 3	07/17/89	07/24/89	$2.1 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS Pit No. 3	07/24/89	07/31/89	$2.1 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS Pit No. 3	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS Pit No. 3	08/07/89	08/14/89	$2.5 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 5, RWMS Pit No. 3	08/14/89	08/21/89	$1.5 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, RWMS Pit No. 3	08/21/89	08/28/89	$1.9 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS Pit No. 3	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS Pit No. 3	09/06/89	09/11/89	$2.2 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 5, RWMS Pit No. 3	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS Pit No. 3	09/18/89	09/29/89	$1.7 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS Pit No. 3	09/26/89	10/02/89	$2.7 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 5, RWMS Pit No. 3	10/02/89	10/09/89	$1.8 \times 10^{-14}$	$2.7 \times 10^{-15}$
Area 5, RWMS Pit No. 3	10/09/89	10/16/89	$3.2 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS Pit No. 3	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS Pit No. 3	10/23/89	10/30/89	$1.1 \times 10^{-14}$	$2.3 \times 10^{-15}$
Area 5, RWMS Pit No. 3	10/30/89	11/06/89	$1.7 \times 10^{-14}$	$2.3 \times 10^{-15}$
Area 5, RWMS Pit No. 3	11/06/89	11/13/89	$2.1 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 5, RWMS Pit No. 3	11/13/89	11/20/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS Pit No. 3	11/20/89	11/28/89	$2.6 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS Pit No. 3	11/28/89	12/05/89	$1.9 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS Pit No. 3	12/05/89	12/11/89	$1.7 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS Pit No. 3	12/11/89	12/18/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS Pit No. 3	12/26/89	01/02/90	$2.6 \times 10^{-14}$	$6.3 \times 10^{-16}$
Area 5, RWMS Pit No. 4	04/24/89	05/01/89	$1.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS Pit No. 4	05/01/89	05/08/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS Pit No. 4	05/08/89	05/15/89	$1.5 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS Pit No. 4	05/15/89	05/22/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS Pit No. 4	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS Pit No. 4	05/30/89	06/05/89	$1.7 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS Pit No. 4	06/05/89	06/12/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS Pit No. 4	06/12/89	06/19/89	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS Pit No. 4	06/19/89	06/26/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS Pit No. 4	06/26/89	07/05/89	$1.7 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 5, RWMS Pit No. 4	07/05/89	07/11/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS Pit No. 4	07/11/89	07/17/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS Pit No. 4	07/17/89	07/24/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS Pit No. 4	07/24/89	07/31/89	$2.1 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS Pit No. 4	07/31/89	08/07/89	$1.9 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS Pit No. 4	08/07/89	08/14/89	$3.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS Pit No. 4	08/14/89	08/21/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS Pit No. 4	08/21/89	08/28/89	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS Pit No. 4	08/28/89	09/06/89	$2.1 \times 10^{-14}$	$8.1 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS Pit No. 4	09/06/89	09/11/89	$2.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS Pit No. 4	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS Pit No. 4	09/18/89	09/29/89	$1.6 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS Pit No. 4	09/26/89	10/02/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS Pit No. 4	10/02/89	10/09/89	$2.6 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS Pit No. 4	10/09/89	10/16/89	$3.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS Pit No. 4	10/16/89	10/23/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS Pit No. 4	10/23/89	10/30/89	$1.8 \times 10^{-14}$	$2.4 \times 10^{-15}$
Area 5, RWMS Pit No. 4	10/30/89	11/06/89	$2.6 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS Pit No. 4	11/06/89	11/13/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS Pit No. 4	11/13/89	11/20/89	$1.8 \times 10^{-14}$	$1.6 \times 10^{-15}$
Area 5, RWMS Pit No. 4	11/20/89	11/28/89	$2.4 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS Pit No. 4	11/28/89	12/05/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS Pit No. 4	12/05/89	12/11/89	$1.6 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS Pit No. 4	12/11/89	12/18/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS Pit No. 4	12/26/89	01/02/90	$2.5 \times 10^{-14}$	$6.2 \times 10^{-16}$
Area 5, RWMS T. P. North	02/13/89	02/22/89	$2.1 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS T. P. North	02/22/89	03/01/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS T. P. North	03/01/89	03/07/89	$1.6 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS T. P. North	03/07/89	03/13/89	$1.9 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS T. P. North	03/13/89	03/20/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS T. P. North	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS T. P. North	03/27/89	04/03/89	$1.8 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS T. P. North	04/03/89	04/11/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS T. P. North	04/11/89	04/19/89	$2.7 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS T. P. North	04/19/89	04/24/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. North	04/24/89	05/01/89	$1.3 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS T. P. North	05/01/89	05/08/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS T. P. North	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS T. P. North	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS T. P. North	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS T. P. North	05/30/89	06/05/89	$1.4 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS T. P. North	06/05/89	06/12/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS T. P. North	06/12/89	06/19/89	$1.7 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS T. P. North	06/19/89	06/26/89	$1.5 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS T. P. North	06/26/89	07/05/89	$1.7 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 5, RWMS T. P. North	07/05/89	07/11/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. North	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. North	07/17/89	07/24/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS T. P. North	07/24/89	07/31/89	$2.1 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS T. P. North	07/31/89	08/07/89	$1.1 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS T. P. North	08/07/89	08/14/89	$2.1 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS T. P. North	08/14/89	08/21/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS T. P. North	08/21/89	08/28/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS T. P. North	08/28/89	09/06/89	$1.6 \times 10^{-14}$	$7.1 \times 10^{-16}$
Area 5, RWMS T. P. North	09/06/89	09/11/89	$2.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS T. P. North	09/11/89	09/18/89	$2.3 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS T. P. North	09/18/89	09/29/89	$1.9 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS T. P. North	09/26/89	10/02/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. North	10/02/89	10/09/89	$2.4 \times 10^{-14}$	$9.4 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS T. P. North	10/09/89	10/16/89	$3.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. North	10/16/89	10/23/89	$2.2 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS T. P. North	10/23/89	10/30/89	$1.1 \times 10^{-14}$	$7.3 \times 10^{-16}$
Area 5, RWMS T. P. North	10/30/89	11/06/89	$2.3 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS T. P. North	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS T. P. North	11/13/89	11/20/89	$2.4 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS T. P. North	11/20/89	11/28/89	$2.6 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS T. P. North	11/28/89	12/05/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS T. P. North	12/05/89	12/11/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS T. P. North	12/11/89	12/18/89	$2.0 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS T. P. North	12/26/89	01/02/90	$2.7 \times 10^{-14}$	$6.2 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	02/13/89	02/22/89	$2.2 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	03/01/89	03/07/89	$1.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. Northeast	03/07/89	03/13/89	$1.7 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	03/13/89	03/20/89	$1.2 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	03/20/89	03/27/89	$1.5 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	03/27/89	04/03/89	$1.6 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	04/03/89	04/11/89	$1.5 \times 10^{-14}$	$6.8 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	04/11/89	04/19/89	$3.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. Northeast	04/24/89	05/01/89	$1.1 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	05/01/89	05/08/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	05/15/89	05/22/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	05/22/89	05/30/89	$1.6 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	06/05/89	06/12/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	06/12/89	06/19/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	06/19/89	06/26/89	$1.5 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	06/26/89	07/05/89	$1.7 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	07/05/89	07/11/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. Northeast	07/11/89	07/17/89	$1.4 \times 10^{-14}$	$6.5 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	07/17/89	07/24/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	07/24/89	07/31/89	$2.0 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	07/31/89	08/07/89	$1.7 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	08/07/89	08/14/89	$1.6 \times 10^{-14}$	$1.9 \times 10^{-15}$
Area 5, RWMS T. P. Northeast	08/14/89	08/21/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	08/21/89	08/28/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	09/06/89	09/11/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS T. P. Northeast	09/11/89	09/18/89	$2.5 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	09/18/89	09/29/89	$1.7 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	09/26/89	10/02/89	$2.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. Northeast	10/02/89	10/09/89	$2.7 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	10/09/89	10/16/89	$3.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. Northeast	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	10/23/89	10/30/89	$9.7 \times 10^{-15}$	$7.1 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	10/30/89	11/06/89	$2.6 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	11/13/89	11/20/89	$2.2 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	11/20/89	11/28/89	$2.8 \times 10^{-14}$	$9.4 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS T. P. Northeast	11/28/89	12/05/89	$2.1 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	12/05/89	12/11/89	$1.9 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	12/11/89	12/18/89	$2.2 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS T. P. Northeast	12/26/89	01/02/90	$2.7 \times 10^{-14}$	$6.3 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	02/13/89	02/22/89	$2.1 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	03/01/89	03/07/89	$1.8 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	03/07/89	03/13/89	$1.6 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	03/13/89	03/20/89	$1.1 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	03/20/89	03/27/89	$1.4 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	03/27/89	04/03/89	$1.3 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	04/03/89	04/11/89	$1.6 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	04/11/89	04/19/89	$2.6 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	04/24/89	05/01/89	$1.1 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	05/01/89	05/08/89	$1.9 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	05/15/89	05/22/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	05/22/89	05/30/89	$1.6 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	06/05/89	06/12/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	06/12/89	06/19/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.3 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	07/05/89	07/11/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. Northwest	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. Northwest	07/17/89	07/24/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	07/24/89	07/31/89	$1.9 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	07/31/89	08/07/89	$1.8 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	08/07/89	08/14/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	08/14/89	08/21/89	$1.5 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	08/21/89	08/28/89	$1.9 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	08/28/89	09/06/89	$1.8 \times 10^{-14}$	$7.3 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	09/06/89	09/11/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS T. P. Northwest	09/11/89	09/18/89	$2.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. Northwest	09/18/89	09/29/89	$1.8 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	09/26/89	10/02/89	$1.1 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	10/02/89	10/09/89	$2.7 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	10/09/89	10/16/89	$3.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. Northwest	10/16/89	10/23/89	$2.0 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	10/23/89	10/30/89	$9.9 \times 10^{-15}$	$7.2 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	10/30/89	11/06/89	$2.6 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	11/06/89	11/13/89	$2.3 \times 10^{-14}$	$1.7 \times 10^{-15}$
Area 5, RWMS T. P. Northwest	11/13/89	11/20/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	11/20/89	11/28/89	$2.7 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	11/28/89	12/05/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	12/05/89	12/11/89	$1.8 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	12/11/89	12/18/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS T. P. Northwest	12/26/89	01/02/90	$2.7 \times 10^{-14}$	$6.5 \times 10^{-16}$
Area 5, RWMS T. P. South	02/13/89	02/22/89	$2.4 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS T. P. South	02/22/89	03/01/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	03/01/89	03/07/89	$1.7 \times 10^{-14}$	$1.0 \times 10^{-15}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS T. P. South	03/07/89	03/13/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. South	03/13/89	03/20/89	$1.4 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS T. P. South	03/20/89	03/27/89	$1.5 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS T. P. South	03/27/89	04/03/89	$1.7 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS T. P. South	04/03/89	04/11/89	$1.9 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS T. P. South	04/11/89	04/19/89	$3.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. South	04/19/89	04/24/89	$1.6 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS T. P. South	04/24/89	05/01/89	$1.4 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS T. P. South	05/01/89	05/08/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	05/08/89	05/15/89	$1.9 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS T. P. South	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, RWMS T. P. South	05/22/89	05/30/89	$1.6 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS T. P. South	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. South	06/05/89	06/12/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	06/12/89	06/19/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	06/19/89	06/26/89	$1.7 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS T. P. South	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS T. P. South	07/05/89	07/11/89	$2.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS T. P. South	07/11/89	07/17/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS T. P. South	07/17/89	07/24/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	07/24/89	07/31/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS T. P. South	08/07/89	08/14/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	08/14/89	08/21/89	$1.8 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS T. P. South	08/21/89	08/28/89	$2.1 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS T. P. South	08/28/89	09/06/89	$2.2 \times 10^{-14}$	$2.1 \times 10^{-15}$
Area 5, RWMS T. P. South	09/06/89	09/11/89	$2.2 \times 10^{-14}$	$3.7 \times 10^{-15}$
Area 5, RWMS T. P. South	09/11/89	09/18/89	$2.3 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 5, RWMS T. P. South	09/18/89	09/28/89	$1.8 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, RWMS T. P. South	10/02/89	10/09/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	10/09/89	10/16/89	$3.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. South	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS T. P. South	10/23/89	10/30/89	$1.2 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 5, RWMS T. P. South	10/30/89	11/06/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	11/13/89	11/20/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	11/20/89	11/28/89	$3.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	11/28/89	12/05/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. South	12/05/89	12/11/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. South	12/11/89	12/18/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS T. P. South	12/26/89	01/02/90	$2.8 \times 10^{-14}$	$6.7 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	02/13/89	02/22/89	$2.1 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	02/22/89	03/01/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	03/01/89	03/07/89	$1.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. Southeast	03/07/89	03/13/89	$1.4 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	03/13/89	03/20/89	$1.2 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	03/27/89	04/03/89	$1.3 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	04/03/89	04/11/89	$1.7 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	04/11/89	04/19/89	$2.5 \times 10^{-14}$	$8.9 \times 10^{-16}$



Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS T. P. Southeast	04/19/89	04/24/89	$1.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. Southeast	04/24/89	05/01/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	05/01/89	05/08/89	$1.6 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	05/15/89	05/22/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	05/22/89	05/30/89	$1.4 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	05/30/89	06/05/89	$1.4 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	06/05/89	06/12/89	$1.8 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	06/12/89	06/19/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.1 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	07/05/89	07/11/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. Southeast	07/11/89	07/17/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. Southeast	07/17/89	07/24/89	$1.9 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	07/24/89	07/31/89	$2.1 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	08/07/89	08/14/89	$2.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	08/14/89	08/21/89	$1.6 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	08/21/89	08/28/89	$2.0 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	08/28/89	09/06/89	$1.8 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	09/06/89	09/11/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, RWMS T. P. Southeast	09/11/89	09/18/89	$2.3 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	09/18/89	09/28/89	$1.8 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	09/26/89	10/02/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. Southeast	10/02/89	10/09/89	$2.4 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	10/09/89	10/16/89	$3.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. Southeast	10/16/89	10/23/89	$2.3 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 5, RWMS T. P. Southeast	10/23/89	10/30/89	$9.7 \times 10^{-15}$	$7.2 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	10/30/89	11/06/89	$2.2 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	11/06/89	11/13/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	11/13/89	11/20/89	$2.3 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	11/20/89	11/28/89	$2.6 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	11/28/89	12/05/89	$2.1 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	12/05/89	12/11/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	12/11/89	12/18/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS T. P. Southeast	12/26/89	01/02/90	$2.5 \times 10^{-14}$	$6.2 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	02/13/89	02/22/89	$2.1 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	02/22/89	03/01/89	$2.0 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	03/01/89	03/07/89	$1.7 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	03/07/89	03/13/89	$1.8 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	03/13/89	03/20/89	$1.4 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	03/20/89	03/27/89	$1.4 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	03/27/89	04/03/89	$1.5 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	04/03/89	04/11/89	$1.8 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	04/11/89	04/19/89	$2.5 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	04/19/89	04/24/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. Southwest	04/24/89	05/01/89	$1.5 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	05/01/89	05/08/89	$2.0 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	05/15/89	05/22/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS T. P. Southwest	05/22/89	05/30/89	$1.6 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	06/05/89	06/12/89	$1.8 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	06/12/89	06/19/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	06/26/89	07/05/89	$1.7 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	07/05/89	07/11/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. Southwest	07/11/89	07/17/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. Southwest	07/17/89	07/25/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	07/24/89	07/31/89	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	08/07/89	08/14/89	$2.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. Southwest	08/14/89	08/21/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	08/21/89	08/28/89	$2.0 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	09/06/89	09/11/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. Southwest	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	09/18/89	09/28/89	$1.8 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	09/26/89	10/02/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. Southwest	10/02/89	10/09/89	$2.4 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	10/09/89	10/16/89	$3.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, RWMS T. P. Southwest	10/16/89	10/23/89	$1.9 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	10/23/89	10/30/89	$9.6 \times 10^{-15}$	$7.2 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	10/30/89	11/06/89	$2.4 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	11/13/89	11/20/89	$2.2 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	11/20/89	11/28/89	$3.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, RWMS T. P. Southwest	11/28/89	12/05/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	12/05/89	12/11/89	$1.8 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	12/11/89	12/18/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, RWMS T. P. Southwest	12/26/89	01/02/90	$2.6 \times 10^{-14}$	$6.3 \times 10^{-16}$
Area 5, Well 5B	01/03/89	01/09/89	$1.5 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, Well 5B	01/09/89	01/17/89	$1.8 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, Well 5B	01/17/89	01/23/89	$3.6 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, Well 5B	01/23/89	01/31/89	$2.4 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 5, Well 5B	01/31/89	02/06/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, Well 5B	02/06/89	02/13/89	$2.6 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, Well 5B	02/13/89	02/22/89	$2.2 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, Well 5B	02/22/89	03/01/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, Well 5B	03/01/89	03/07/89	$1.5 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, Well 5B	03/07/89	03/13/89	$1.8 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, Well 5B	03/13/89	03/20/89	$9.7 \times 10^{-15}$	$7.4 \times 10^{-16}$
Area 5, Well 5B	03/20/89	03/27/89	$1.4 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, Well 5B	03/27/89	04/03/89	$1.6 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 5, Well 5B	04/03/89	04/11/89	$1.9 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 5, Well 5B	04/11/89	04/19/89	$2.7 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 5, Well 5B	04/19/89	04/24/89	$1.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Well 5B	04/24/89	05/01/89	$1.2 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 5, Well 5B	05/01/89	05/08/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, Well 5B	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 5, Well 5B	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, Well 5B	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, Well 5B	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, Well 5B	06/05/89	06/12/89	$1.9 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, Well 5B	06/12/89	06/19/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, Well 5B	06/19/89	06/26/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 5, Well 5B	06/26/89	07/05/89	$1.9 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, Well 5B	07/05/89	07/11/89	$2.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Well 5B	07/11/89	07/17/89	$2.0 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 5, Well 5B	07/17/89	07/24/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, Well 5B	07/24/89	07/31/89	$2.1 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 5, Well 5B	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, Well 5B	08/07/89	08/14/89	$2.0 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 5, Well 5B	08/14/89	08/21/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 5, Well 5B	08/21/89	08/28/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, Well 5B	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 5, Well 5B	09/06/89	09/11/89	$2.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, Well 5B	09/11/89	09/18/89	$2.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, Well 5B	09/18/89	09/29/89	$2.1 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 5, Well 5B	09/26/89	10/02/89	$3.1 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 5, Well 5B	10/02/89	10/09/89	$2.6 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, Well 5B	10/09/89	10/16/89	$3.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Well 5B	10/16/89	10/23/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 5, Well 5B	10/23/89	10/30/89	$9.4 \times 10^{-15}$	$7.3 \times 10^{-16}$
Area 5, Well 5B	10/30/89	11/06/89	$2.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 5, Well 5B	11/06/89	11/13/89	$2.5 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, Well 5B	11/13/89	11/20/89	$2.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 5, Well 5B	11/20/89	11/28/89	$3.0 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, Well 5B	11/28/89	12/05/89	$2.1 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 5, Well 5B	12/05/89	12/11/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 5, Well 5B	12/11/89	12/18/89	$2.4 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 5, Well 5B	12/18/89	12/26/89	$3.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 5, Well 5B	12/26/89	01/02/90	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, CP-6 Complex	01/03/89	01/09/89	$1.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 6, CP-6 Complex	01/09/89	01/17/89	$1.7 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 6, CP-6 Complex	01/17/89	01/23/89	$3.2 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 6, CP-6 Complex	01/23/89	01/31/89	$2.1 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 6, CP-6 Complex	01/31/89	02/06/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, CP-6 Complex	02/06/89	02/13/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, CP-6 Complex	02/13/89	02/22/89	$1.9 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 6, CP-6 Complex	02/22/89	03/01/89	$1.9 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 6, CP-6 Complex	03/01/89	03/07/89	$1.3 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 6, CP-6 Complex	03/07/89	03/13/89	$1.6 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 6, CP-6 Complex	03/13/89	03/20/89	$1.0 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 6, CP-6 Complex	03/20/89	03/27/89	$8.6 \times 10^{-16}$	$5.2 \times 10^{-17}$
Area 6, CP-6 Complex	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 6, CP-6 Complex	04/03/89	04/11/89	$1.6 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 6, CP-6 Complex	04/11/89	04/19/89	$2.6 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 6, CP-6 Complex	04/19/89	04/24/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, CP-6 Complex	04/24/89	05/01/89	$1.2 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 6, CP-6 Complex	05/01/89	05/08/89	$1.8 \times 10^{-14}$	$9.0 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 6, CP-6 Complex	05/08/89	05/15/89	$1.8 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 6, CP-6 Complex	05/15/89	05/22/89	$1.7 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 6, CP-6 Complex	05/22/89	05/30/89	$1.3 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 6, CP-6 Complex	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 6, CP-6 Complex	06/05/89	06/12/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 6, CP-6 Complex	06/12/89	06/19/89	$1.7 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 6, CP-6 Complex	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 6, CP-6 Complex	06/26/89	07/05/89	$1.9 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 6, CP-6 Complex	07/05/89	07/11/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, CP-6 Complex	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, CP-6 Complex	07/17/89	07/25/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 6, CP-6 Complex	07/24/89	07/31/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 6, CP-6 Complex	07/31/89	08/07/89	$1.5 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 6, CP-6 Complex	08/07/89	08/14/89	$1.8 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 6, CP-6 Complex	08/14/89	08/21/89	$1.5 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 6, CP-6 Complex	08/21/89	08/28/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 6, CP-6 Complex	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 6, CP-6 Complex	09/06/89	09/11/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 6, CP-6 Complex	09/11/89	09/18/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 6, CP-6 Complex	09/18/89	09/28/89	$1.9 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 6, CP-6 Complex	09/26/89	10/02/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, CP-6 Complex	10/02/89	10/09/89	$2.5 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 6, CP-6 Complex	10/09/89	10/16/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, CP-6 Complex	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 6, CP-6 Complex	10/23/89	10/30/89	$8.3 \times 10^{-15}$	$7.0 \times 10^{-16}$
Area 6, CP-6 Complex	10/30/89	11/06/89	$2.4 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 6, CP-6 Complex	11/06/89	11/13/89	$2.0 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 6, CP-6 Complex	11/13/89	11/20/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 6, CP-6 Complex	11/20/89	11/28/89	$2.7 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 6, CP-6 Complex	11/28/89	12/05/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 6, CP-6 Complex	12/05/89	12/11/89	$1.6 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 6, CP-6 Complex	12/11/89	12/18/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 6, CP-6 Complex	12/18/89	12/26/89	$2.5 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 6, CP-6 Complex	12/26/89	01/02/90	$6.2 \times 10^{-15}$	$6.7 \times 10^{-16}$
Area 6, Well 3 Complex	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 6, Well 3 Complex	01/09/89	01/17/89	$1.7 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 6, Well 3 Complex	01/17/89	01/23/89	$3.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 6, Well 3 Complex	01/23/89	01/30/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 6, Well 3 Complex	01/30/89	02/06/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 6, Well 3 Complex	02/06/89	02/13/89	$2.2 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 6, Well 3 Complex	02/13/89	02/23/89	$1.8 \times 10^{-14}$	$7.1 \times 10^{-16}$
Area 6, Well 3 Complex	02/23/89	02/27/89	$2.0 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 6, Well 3 Complex	02/27/89	03/06/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 6, Well 3 Complex	03/06/89	03/14/89	$1.6 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 6, Well 3 Complex	03/14/89	03/20/89	$1.0 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 6, Well 3 Complex	03/20/89	03/27/89	$1.0 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 6, Well 3 Complex	03/27/89	04/03/89	$1.3 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 6, Well 3 Complex	04/03/89	04/10/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 6, Well 3 Complex	04/10/89	04/18/89	$2.4 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 6, Well 3 Complex	04/18/89	04/24/89	$1.6 \times 10^{-14}$	$9.7 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 6, Well 3 Complex	04/24/89	05/01/89	$1.2 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 6, Well 3 Complex	05/01/89	05/08/89	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 6, Well 3 Complex	05/08/89	05/15/89	$2.1 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 6, Well 3 Complex	05/15/89	05/22/89	$1.7 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 6, Well 3 Complex	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 6, Well 3 Complex	05/30/89	06/05/89	$1.7 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 6, Well 3 Complex	06/05/89	06/13/89	$1.8 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 6, Well 3 Complex	06/13/89	06/19/89	$1.6 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 6, Well 3 Complex	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 6, Well 3 Complex	06/26/89	07/05/89	$2.5 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 6, Well 3 Complex	07/05/89	07/11/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, Well 3 Complex	07/11/89	07/17/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, Well 3 Complex	07/17/89	07/25/89	$2.0 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 6, Well 3 Complex	07/25/89	07/31/89	$2.2 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 6, Well 3 Complex	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 6, Well 3 Complex	08/07/89	08/15/89	$1.5 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 6, Well 3 Complex	08/15/89	08/21/89	$1.5 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 6, Well 3 Complex	08/21/89	08/29/89	$2.1 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 6, Well 3 Complex	08/29/89	09/05/89	$1.7 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 6, Well 3 Complex	09/05/89	09/11/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, Well 3 Complex	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, Well 3 Complex	09/18/89	09/25/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 6, Well 3 Complex	09/25/89	10/02/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, Well 3 Complex	10/02/89	10/09/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 6, Well 3 Complex	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, Well 3 Complex	10/16/89	10/23/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 6, Well 3 Complex	10/23/89	10/31/89	$9.4 \times 10^{-15}$	$7.4 \times 10^{-16}$
Area 6, Well 3 Complex	10/30/89	11/06/89	$2.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 6, Well 3 Complex	11/06/89	11/13/89	$2.0 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 6, Well 3 Complex	11/13/89	11/21/89	$2.0 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 6, Well 3 Complex	11/21/89	11/28/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, Well 3 Complex	11/28/89	12/06/89	$1.8 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 6, Well 3 Complex	12/06/89	12/11/89	$1.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, Well 3 Complex	12/11/89	12/18/89	$1.8 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 6, Well 3 Complex	12/18/89	12/26/89	$2.2 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 6, Well 3 Complex	12/26/89	01/02/90	$2.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 6, Yucca Complex	01/03/89	01/09/89	$1.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, Yucca Complex	01/09/89	01/17/89	$1.9 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 6, Yucca Complex	01/17/89	01/23/89	$3.2 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 6, Yucca Complex	01/23/89	01/31/89	$2.4 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 6, Yucca Complex	01/31/89	02/06/89	$1.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, Yucca Complex	02/06/89	02/13/89	$2.1 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 6, Yucca Complex	02/13/89	02/22/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, Yucca Complex	02/22/89	03/01/89	$1.9 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 6, Yucca Complex	03/01/89	03/07/89	$1.5 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 6, Yucca Complex	03/07/89	03/13/89	$1.7 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 6, Yucca Complex	03/13/89	03/20/89	$1.3 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 6, Yucca Complex	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 6, Yucca Complex	03/27/89	04/03/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 6, Yucca Complex	04/03/89	04/11/89	$1.7 \times 10^{-14}$	$8.0 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 6, Yucca Complex	04/11/89	04/19/89	$2.6 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 6, Yucca Complex	04/19/89	04/24/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, Yucca Complex	04/24/89	05/01/89	$1.2 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 6, Yucca Complex	05/01/89	05/08/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 6, Yucca Complex	05/08/89	05/15/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 6, Yucca Complex	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 6, Yucca Complex	05/22/89	05/30/89	$1.4 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 6, Yucca Complex	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 6, Yucca Complex	06/05/89	06/12/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 6, Yucca Complex	06/12/89	06/19/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 6, Yucca Complex	06/19/89	06/26/89	$1.5 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 6, Yucca Complex	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 6, Yucca Complex	07/05/89	07/11/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, Yucca Complex	07/11/89	07/17/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, Yucca Complex	07/17/89	07/24/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 6, Yucca Complex	07/24/89	07/31/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 6, Yucca Complex	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 6, Yucca Complex	08/07/89	08/14/89	$1.6 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 6, Yucca Complex	08/14/89	08/21/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 6, Yucca Complex	08/21/89	08/28/89	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 6, Yucca Complex	08/28/89	09/06/89	$2.0 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 6, Yucca Complex	09/06/89	09/11/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 6, Yucca Complex	09/11/89	09/18/89	$2.3 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 6, Yucca Complex	09/18/89	09/28/89	$1.9 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 6, Yucca Complex	09/26/89	10/02/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 6, Yucca Complex	10/02/89	10/09/89	$2.5 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 6, Yucca Complex	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, Yucca Complex	10/16/89	10/23/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 6, Yucca Complex	10/23/89	10/30/89	$1.2 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 6, Yucca Complex	10/30/89	11/06/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, Yucca Complex	11/06/89	11/13/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, Yucca Complex	11/13/89	11/20/89	$1.9 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 6, Yucca Complex	11/20/89	11/28/89	$2.8 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 6, Yucca Complex	11/28/89	12/05/89	$1.5 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 6, Yucca Complex	12/05/89	12/11/89	$1.7 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 6, Yucca Complex	12/11/89	12/18/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 6, Yucca Complex	12/18/89	12/26/89	$2.3 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 6, Yucca Complex	12/26/89	01/02/90	$3.3 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 7, Ue7ns	01/03/89	01/09/89	$1.4 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 7, Ue7ns	01/09/89	01/17/89	$1.4 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 7, Ue7ns	01/17/89	01/23/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 7, Ue7ns	01/23/89	01/30/89	$1.9 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 7, Ue7ns	01/30/89	02/06/89	$1.8 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 7, Ue7ns	02/06/89	02/13/89	$2.2 \times 10^{-14}$	$2.7 \times 10^{-15}$
Area 7, Ue7ns	02/13/89	02/23/89	$1.6 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 7, Ue7ns	02/23/89	02/27/89	$1.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 7, Ue7ns	02/27/89	03/06/89	$1.4 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 7, Ue7ns	03/06/89	03/14/89	$1.7 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 7, Ue7ns	03/14/89	03/20/89	$1.1 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 7, Ue7ns	03/20/89	03/27/89	$1.0 \times 10^{-14}$	$7.1 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 7, Ue7ns	03/27/89	04/03/89	$1.1 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 7, Ue7ns	04/03/89	04/10/89	$1.4 \times 10^{-14}$	$2.2 \times 10^{-15}$
Area 7, Ue7ns	04/24/89	05/01/89	$1.6 \times 10^{-14}$	$4.3 \times 10^{-16}$
Area 7, Ue7ns	05/01/89	05/08/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 7, Ue7ns	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 7, Ue7ns	05/15/89	05/22/89	$1.6 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 7, Ue7ns	05/22/89	05/30/89	$1.4 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 7, Ue7ns	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 7, Ue7ns	06/05/89	06/13/89	$1.5 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 7, Ue7ns	06/13/89	06/19/89	$1.6 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 7, Ue7ns	06/19/89	06/26/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 7, Ue7ns	06/26/89	07/05/89	$1.6 \times 10^{-14}$	$7.3 \times 10^{-16}$
Area 7, Ue7ns	07/05/89	07/11/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 7, Ue7ns	07/11/89	07/17/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 7, Ue7ns	07/17/89	07/25/89	$5.8 \times 10^{-13}$	$3.8 \times 10^{-15}$
Area 7, Ue7ns	07/25/89	07/31/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 7, Ue7ns	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 7, Ue7ns	08/07/89	08/15/89	$1.3 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 7, Ue7ns	08/15/89	08/21/89	$1.6 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 7, Ue7ns	08/21/89	09/05/89	$1.7 \times 10^{-14}$	$5.4 \times 10^{-16}$
Area 7, Ue7ns	09/05/89	09/11/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 7, Ue7ns	09/11/89	09/18/89	$2.1 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 7, Ue7ns	09/18/89	09/25/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 7, Ue7ns	09/25/89	10/02/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 7, Ue7ns	10/02/89	10/09/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 7, Ue7ns	10/09/89	10/16/89	$2.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 7, Ue7ns	10/16/89	10/23/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 7, Ue7ns	10/23/89	10/31/89	$9.2 \times 10^{-15}$	$7.3 \times 10^{-16}$
Area 7, Ue7ns	10/30/89	11/06/89	$2.1 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 7, Ue7ns	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 7, Ue7ns	11/13/89	11/21/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 7, Ue7ns	11/21/89	11/28/89	$2.0 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 7, Ue7ns	11/28/89	12/06/89	$1.9 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 7, Ue7ns	12/06/89	12/11/89	$1.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 7, Ue7ns	12/11/89	12/18/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 7, Ue7ns	12/18/89	12/26/89	$2.4 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 7, Ue7ns	12/26/89	01/02/90	$2.0 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 9, 9-300 Bunker	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 9, 9-300 Bunker	01/09/89	01/17/89	$1.8 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 9, 9-300 Bunker	01/17/89	01/23/89	$3.1 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 9, 9-300 Bunker	01/23/89	01/30/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 9, 9-300 Bunker	01/30/89	02/06/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 9, 9-300 Bunker	02/06/89	02/13/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 9, 9-300 Bunker	02/13/89	02/23/89	$1.8 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 9, 9-300 Bunker	02/23/89	02/27/89	$6.8 \times 10^{-16}$	$4.5 \times 10^{-17}$
Area 9, 9-300 Bunker	02/27/89	03/06/89	$1.4 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 9, 9-300 Bunker	03/06/89	03/14/89	$1.7 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 9, 9-300 Bunker	03/14/89	03/20/89	$9.8 \times 10^{-15}$	$8.8 \times 10^{-16}$
Area 9, 9-300 Bunker	03/20/89	03/27/89	$1.4 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 9, 9-300 Bunker	03/27/89	04/03/89	$1.6 \times 10^{-14}$	$8.9 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 9, 9-300 Bunker	04/03/89	04/10/89	$1.8 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 9, 9-300 Bunker	04/18/89	04/24/89	$6.7 \times 10^{-14}$	$2.1 \times 10^{-15}$
Area 9, 9-300 Bunker	04/24/89	05/01/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 9, 9-300 Bunker	05/01/89	05/08/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 9, 9-300 Bunker	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 9, 9-300 Bunker	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 9, 9-300 Bunker	05/22/89	05/30/89	$1.6 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 9, 9-300 Bunker	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 9, 9-300 Bunker	06/05/89	06/13/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 9, 9-300 Bunker	06/13/89	06/19/89	$1.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 9, 9-300 Bunker	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 9, 9-300 Bunker	06/26/89	07/05/89	$2.1 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 9, 9-300 Bunker	07/05/89	07/11/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 9, 9-300 Bunker	07/11/89	07/17/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 9, 9-300 Bunker	07/17/89	07/25/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 9, 9-300 Bunker	07/25/89	07/31/89	$2.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 9, 9-300 Bunker	07/31/89	08/07/89	$1.7 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 9, 9-300 Bunker	08/07/89	08/15/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 9, 9-300 Bunker	08/15/89	08/21/89	$1.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 9, 9-300 Bunker	08/21/89	08/29/89	$2.2 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 9, 9-300 Bunker	08/29/89	09/05/89	$1.8 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 9, 9-300 Bunker	09/05/89	09/11/89	$2.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 9, 9-300 Bunker	09/11/89	09/18/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 9, 9-300 Bunker	09/18/89	09/25/89	$1.9 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 9, 9-300 Bunker	09/25/89	10/02/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 9, 9-300 Bunker	10/02/89	10/09/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 9, 9-300 Bunker	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 9, 9-300 Bunker	10/16/89	10/23/89	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 9, 9-300 Bunker	10/23/89	10/31/89	$1.1 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 9, 9-300 Bunker	10/30/89	11/06/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 9, 9-300 Bunker	11/06/89	11/13/89	$2.9 \times 10^{-14}$	$2.1 \times 10^{-15}$
Area 9, 9-300 Bunker	11/13/89	11/21/89	$1.7 \times 10^{-14}$	$2.5 \times 10^{-15}$
Area 9, 9-300 Bunker	11/28/89	12/06/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 9, 9-300 Bunker	12/06/89	12/11/89	$1.7 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 9, 9-300 Bunker	12/11/89	12/18/89	$2.0 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 9, 9-300 Bunker	12/18/89	12/26/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 9, 9-300 Bunker	12/26/89	01/02/90	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 11, Gate 293	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 11, Gate 293	01/09/89	01/17/89	$1.7 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 11, Gate 293	01/17/89	01/23/89	$3.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 11, Gate 293	01/23/89	01/31/89	$2.0 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 11, Gate 293	01/31/89	02/06/89	$1.8 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 11, Gate 293	02/06/89	02/13/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 11, Gate 293	02/13/89	02/22/89	$2.0 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 11, Gate 293	02/22/89	03/01/89	$1.9 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 11, Gate 293	03/01/89	03/07/89	$1.3 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 11, Gate 293	03/07/89	03/13/89	$1.7 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 11, Gate 293	03/13/89	03/20/89	$1.1 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 11, Gate 293	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 11, Gate 293	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$8.0 \times 10^{-16}$



Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 11, Gate 293	04/03/89	04/11/89	$1.5 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 11, Gate 293	04/11/89	04/19/89	$2.5 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 11, Gate 293	04/19/89	04/24/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 11, Gate 293	04/24/89	05/01/89	$1.3 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 11, Gate 293	05/01/89	05/08/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 11, Gate 293	05/08/89	05/15/89	$1.5 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 11, Gate 293	05/15/89	05/22/89	$1.6 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 11, Gate 293	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 11, Gate 293	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 11, Gate 293	06/05/89	06/12/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 11, Gate 293	06/12/89	06/19/89	$1.5 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 11, Gate 293	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 11, Gate 293	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 11, Gate 293	07/05/89	07/11/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 11, Gate 293	07/11/89	07/17/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 11, Gate 293	07/17/89	07/24/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 11, Gate 293	07/24/89	07/31/89	$2.0 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 11, Gate 293	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 11, Gate 293	08/07/89	08/14/89	$1.3 \times 10^{-14}$	$6.7 \times 10^{-16}$
Area 11, Gate 293	08/14/89	08/21/89	$1.6 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 11, Gate 293	08/21/89	08/28/89	$1.8 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 11, Gate 293	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 11, Gate 293	09/06/89	09/11/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 11, Gate 293	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 11, Gate 293	09/18/89	09/28/89	$1.7 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 11, Gate 293	09/26/89	10/02/89	$3.2 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 11, Gate 293	10/02/89	10/09/89	$3.3 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 11, Gate 293	10/09/89	10/16/89	$2.2 \times 10^{-14}$	$7.3 \times 10^{-16}$
Area 11, Gate 293	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 11, Gate 293	10/23/89	10/30/89	$8.6 \times 10^{-15}$	$6.9 \times 10^{-16}$
Area 11, Gate 293	10/30/89	11/06/89	$2.3 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 11, Gate 293	11/06/89	11/13/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 11, Gate 293	11/13/89	11/20/89	$2.1 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 11, Gate 293	11/20/89	11/28/89	$2.5 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 11, Gate 293	11/28/89	12/05/89	$1.6 \times 10^{-14}$	$7.0 \times 10^{-16}$
Area 11, Gate 293	12/05/89	12/11/89	$2.2 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 11, Gate 293	12/11/89	12/18/89	$1.8 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 11, Gate 293	12/18/89	12/26/89	$2.7 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 11, Gate 293	12/26/89	01/02/90	$2.3 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 12, Complex	01/03/89	01/09/89	$1.2 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 12, Complex	01/09/89	01/17/89	$1.6 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 12, Complex	01/17/89	01/23/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 12, Complex	01/23/89	01/30/89	$1.9 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 12, Complex	01/30/89	02/06/89	$1.3 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 12, Complex	02/06/89	02/13/89	$2.1 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 12, Complex	02/13/89	02/23/89	$1.7 \times 10^{-14}$	$7.1 \times 10^{-16}$
Area 12, Complex	02/23/89	02/27/89	$1.9 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 12, Complex	02/27/89	03/06/89	$1.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 12, Complex	03/06/89	03/14/89	$1.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 12, Complex	03/14/89	03/20/89	$8.0 \times 10^{-15}$	$1.5 \times 10^{-15}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 12, Complex	03/20/89	03/27/89	$1.0 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 12, Complex	03/27/89	04/03/89	$1.2 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 12, Complex	04/03/89	04/10/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 12, Complex	04/10/89	04/18/89	$2.3 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 12, Complex	04/18/89	04/24/89	$1.6 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 12, Complex	04/24/89	05/01/89	$9.8 \times 10^{-15}$	$7.7 \times 10^{-16}$
Area 12, Complex	05/01/89	05/08/89	$1.7 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 12, Complex	05/08/89	05/15/89	$1.1 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 12, Complex	05/15/89	05/22/89	$1.5 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 12, Complex	05/22/89	05/30/89	$1.4 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 12, Complex	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 12, Complex	06/05/89	06/13/89	$2.0 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 12, Complex	06/13/89	06/19/89	$1.5 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 12, Complex	06/19/89	06/26/89	$1.4 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 12, Complex	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 12, Complex	07/05/89	07/11/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 12, Complex	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 12, Complex	07/17/89	07/25/89	$1.9 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 12, Complex	07/25/89	07/31/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 12, Complex	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 12, Complex	08/07/89	08/15/89	$1.7 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 12, Complex	08/15/89	08/21/89	$1.7 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 12, Complex	08/21/89	08/29/89	$1.7 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 12, Complex	08/29/89	09/05/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 12, Complex	09/05/89	09/11/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 12, Complex	09/11/89	09/18/89	$2.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 12, Complex	09/18/89	09/25/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 12, Complex	09/25/89	10/02/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 12, Complex	10/02/89	10/09/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 12, Complex	10/09/89	10/16/89	$2.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 12, Complex	10/16/89	10/23/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 12, Complex	10/30/89	11/06/89	$2.1 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 12, Complex	11/06/89	11/13/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 12, Complex	11/13/89	11/21/89	$1.7 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 12, Complex	11/21/89	11/28/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 12, Complex	11/28/89	12/06/89	$1.3 \times 10^{-14}$	$6.7 \times 10^{-16}$
Area 12, Complex	12/06/89	12/11/89	$1.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 12, Complex	12/11/89	12/18/89	$1.6 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 12, Complex	12/18/89	12/26/89	$8.7 \times 10^{-14}$	$1.6 \times 10^{-15}$
Area 12, Complex	12/26/89	01/02/90	$2.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 15, EPA Farm	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 15, EPA Farm	01/09/89	01/17/89	$1.5 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 15, EPA Farm	01/17/89	01/23/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 15, EPA Farm	01/23/89	01/30/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 15, EPA Farm	01/30/89	02/06/89	$1.5 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 15, EPA Farm	02/06/89	02/13/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 15, EPA Farm	02/13/89	02/23/89	$1.7 \times 10^{-14}$	$6.8 \times 10^{-16}$
Area 15, EPA Farm	02/23/89	02/27/89	$1.7 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 15, EPA Farm	02/27/89	03/06/89	$1.3 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 15, EPA Farm	03/06/89	03/14/89	$1.6 \times 10^{-14}$	$7.7 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 15, EPA Farm	03/14/89	03/20/89	$1.0 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 15, EPA Farm	03/20/89	03/27/89	$1.2 \times 10^{-14}$	$7.3 \times 10^{-16}$
Area 15, EPA Farm	03/27/89	04/03/89	$1.1 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 15, EPA Farm	04/03/89	04/10/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 15, EPA Farm	04/10/89	04/18/89	$2.5 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 15, EPA Farm	04/18/89	04/24/89	$1.6 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 15, EPA Farm	04/24/89	05/01/89	$1.3 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 15, EPA Farm	05/01/89	05/08/89	$1.6 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 15, EPA Farm	05/08/89	05/15/89	$1.4 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 15, EPA Farm	05/15/89	05/22/89	$1.9 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 15, EPA Farm	05/22/89	05/30/89	$1.3 \times 10^{-14}$	$7.3 \times 10^{-16}$
Area 15, EPA Farm	05/30/89	06/05/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, EPA Farm	06/05/89	06/13/89	$1.8 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 15, EPA Farm	06/13/89	06/19/89	$2.0 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 15, EPA Farm	06/19/89	06/26/89	$1.1 \times 10^{-14}$	$7.0 \times 10^{-16}$
Area 15, EPA Farm	06/26/89	07/05/89	$1.7 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 15, EPA Farm	07/05/89	07/11/89	$1.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 15, EPA Farm	07/17/89	07/25/89	$6.8 \times 10^{-13}$	$4.5 \times 10^{-15}$
Area 15, EPA Farm	07/25/89	07/31/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, EPA Farm	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 15, EPA Farm	08/07/89	08/15/89	$1.4 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 15, EPA Farm	08/15/89	08/21/89	$1.5 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 15, EPA Farm	08/21/89	08/29/89	$2.1 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 15, EPA Farm	08/29/89	09/05/89	$1.7 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 15, EPA Farm	09/05/89	09/11/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 15, EPA Farm	09/11/89	09/18/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, EPA Farm	09/18/89	09/25/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 15, EPA Farm	09/25/89	10/02/89	$2.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 15, EPA Farm	10/02/89	10/09/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, EPA Farm	10/09/89	10/16/89	$3.7 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 15, EPA Farm	10/16/89	10/23/89	$1.7 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 15, EPA Farm	10/23/89	10/31/89	$7.4 \times 10^{-15}$	$7.2 \times 10^{-16}$
Area 15, EPA Farm	10/30/89	11/06/89	$2.2 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 15, EPA Farm	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 15, EPA Farm	11/13/89	11/21/89	$1.8 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 15, EPA Farm	11/21/89	11/28/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, EPA Farm	11/28/89	12/06/89	$1.8 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 15, EPA Farm	12/06/89	12/11/89	$1.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 15, EPA Farm	12/11/89	12/18/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 15, EPA Farm	12/18/89	12/26/89	$1.9 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 15, EPA Farm	12/26/89	01/02/90	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, Gate 700 South	01/09/89	01/17/89	$1.9 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 15, Gate 700 South	01/17/89	01/23/89	$3.4 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 15, Gate 700 South	01/23/89	01/30/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 15, Gate 700 South	01/30/89	02/06/89	$1.8 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 15, Gate 700 South	02/06/89	02/13/89	$2.4 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 15, Gate 700 South	02/13/89	02/23/89	$1.9 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 15, Gate 700 South	02/23/89	02/27/89	$5.8 \times 10^{-14}$	$3.9 \times 10^{-15}$
Area 15, Gate 700 South	02/27/89	03/06/89	$1.5 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 15, Gate 700 South	03/06/89	03/14/89	$1.5 \times 10^{-14}$	$7.7 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 15, Gate 700 South	03/14/89	03/20/89	$1.0 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 15, Gate 700 South	03/20/89	03/27/89	$1.2 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 15, Gate 700 South	03/27/89	04/03/89	$1.0 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 15, Gate 700 South	04/03/89	04/10/89	$1.7 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 15, Gate 700 South	04/10/89	04/18/89	$2.4 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 15, Gate 700 South	04/18/89	04/24/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, Gate 700 South	04/24/89	05/01/89	$1.4 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 15, Gate 700 South	05/01/89	05/08/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 15, Gate 700 South	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 15, Gate 700 South	05/15/89	05/22/89	$1.7 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 15, Gate 700 South	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 15, Gate 700 South	05/30/89	06/05/89	$1.4 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 15, Gate 700 South	06/05/89	06/13/89	$1.7 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 15, Gate 700 South	06/13/89	06/19/89	$1.5 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 15, Gate 700 South	06/19/89	06/26/89	$1.2 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 15, Gate 700 South	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 15, Gate 700 South	07/05/89	07/11/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 15, Gate 700 South	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 15, Gate 700 South	07/17/89	07/25/89	$2.0 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 15, Gate 700 South	07/25/89	07/31/89	$2.6 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 15, Gate 700 South	07/31/89	08/07/89	$1.2 \times 10^{-14}$	$7.0 \times 10^{-16}$
Area 15, Gate 700 South	08/07/89	08/15/89	$1.4 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 15, Gate 700 South	08/15/89	08/21/89	$1.5 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 15, Gate 700 South	08/21/89	08/29/89	$1.9 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 15, Gate 700 South	08/29/89	09/05/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 15, Gate 700 South	09/05/89	09/11/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 15, Gate 700 South	09/11/89	09/18/89	$2.2 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 15, Gate 700 South	09/18/89	09/25/89	$1.5 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 15, Gate 700 South	09/25/89	10/02/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 15, Gate 700 South	10/02/89	10/09/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 15, Gate 700 South	10/09/89	10/16/89	$2.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, Gate 700 South	10/16/89	10/23/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 15, Gate 700 South	10/23/89	10/31/89	$7.7 \times 10^{-15}$	$7.0 \times 10^{-16}$
Area 15, Gate 700 South	10/30/89	11/06/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 15, Gate 700 South	11/06/89	11/13/89	$1.9 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 15, Gate 700 South	11/13/89	11/21/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 15, Gate 700 South	11/21/89	11/28/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 15, Gate 700 South	11/28/89	12/06/89	$1.9 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 15, Gate 700 South	12/06/89	12/11/89	$1.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, Gate 700 South	12/11/89	12/18/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 15, Gate 700 South	12/18/89	12/26/89	$2.2 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 15, Gate 700 South	12/26/89	01/02/90	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 15, PILE DRIVER	01/03/89	01/09/89	$1.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 15, PILE DRIVER	01/09/89	01/17/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, PILE DRIVER	01/17/89	01/23/89	$2.7 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 15, PILE DRIVER	01/23/89	01/30/89	$2.2 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 15, PILE DRIVER	01/30/89	02/06/89	$1.8 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 15, PILE DRIVER	02/06/89	02/13/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, PILE DRIVER	02/13/89	02/23/89	$1.8 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 15, PILE DRIVER	02/23/89	02/27/89	$2.0 \times 10^{-14}$	$1.4 \times 10^{-15}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 15, PILE DRIVER	02/27/89	03/06/89	$1.5 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 15, PILE DRIVER	03/06/89	03/14/89	$1.7 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 15, PILE DRIVER	03/14/89	03/20/89	$1.0 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 15, PILE DRIVER	03/20/89	03/27/89	$1.2 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 15, PILE DRIVER	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 15, PILE DRIVER	04/03/89	04/10/89	$1.8 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 15, PILE DRIVER	04/10/89	04/18/89	$2.6 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 15, PILE DRIVER	04/18/89	04/24/89	$1.6 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 15, PILE DRIVER	04/24/89	05/01/89	$1.2 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 15, PILE DRIVER	05/01/89	05/08/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 15, PILE DRIVER	05/08/89	05/15/89	$1.1 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 15, PILE DRIVER	05/15/89	05/22/89	$1.6 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 15, PILE DRIVER	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 15, PILE DRIVER	05/30/89	06/05/89	$1.4 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 15, PILE DRIVER	06/05/89	06/13/89	$1.7 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 15, PILE DRIVER	06/13/89	06/19/89	$1.6 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 15, PILE DRIVER	06/19/89	06/26/89	$1.3 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 15, PILE DRIVER	06/26/89	07/05/89	$1.9 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 15, PILE DRIVER	07/05/89	07/11/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, PILE DRIVER	07/11/89	07/17/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, PILE DRIVER	07/17/89	07/25/89	$5.6 \times 10^{-13}$	$3.8 \times 10^{-15}$
Area 15, PILE DRIVER	07/25/89	07/31/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, PILE DRIVER	07/31/89	08/07/89	$1.5 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 15, PILE DRIVER	08/07/89	08/15/89	$1.6 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 15, PILE DRIVER	08/15/89	08/21/89	$1.6 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 15, PILE DRIVER	08/21/89	08/29/89	$2.1 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 15, PILE DRIVER	08/29/89	09/05/89	$1.8 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 15, PILE DRIVER	09/05/89	09/11/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, PILE DRIVER	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 15, PILE DRIVER	09/18/89	09/25/89	$1.6 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 15, PILE DRIVER	09/25/89	10/02/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 15, PILE DRIVER	10/02/89	10/09/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 15, PILE DRIVER	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 15, PILE DRIVER	10/16/89	10/23/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 15, PILE DRIVER	10/23/89	10/31/89	$8.1 \times 10^{-15}$	$7.3 \times 10^{-16}$
Area 15, PILE DRIVER	10/30/89	11/06/89	$2.1 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 15, PILE DRIVER	11/06/89	11/13/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 15, PILE DRIVER	11/13/89	11/21/89	$2.2 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 15, PILE DRIVER	12/11/89	12/18/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 15, PILE DRIVER	12/18/89	12/26/89	$1.6 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 15, PILE DRIVER	12/26/89	01/02/90	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 16, Substation	01/03/89	01/09/89	$1.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 16, Substation	01/09/89	01/17/89	$1.6 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 16, Substation	01/17/89	01/23/89	$2.9 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 16, Substation	01/23/89	01/30/89	$2.1 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 16, Substation	01/30/89	02/06/89	$1.8 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 16, Substation	02/06/89	02/13/89	$2.1 \times 10^{-14}$	$2.7 \times 10^{-15}$
Area 16, Substation	03/06/89	03/14/89	$1.5 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 16, Substation	03/14/89	03/20/89	$1.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 16, Substation	03/20/89	03/27/89	$1.2 \times 10^{-14}$	$8.4 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 16, Substation	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 16, Substation	04/03/89	04/10/89	$1.6 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 16, Substation	04/10/89	04/18/89	$2.4 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 16, Substation	04/18/89	04/24/89	$1.4 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 16, Substation	04/24/89	05/01/89	$1.1 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 16, Substation	05/01/89	05/08/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 16, Substation	05/08/89	05/30/89	$1.5 \times 10^{-14}$	$4.1 \times 10^{-16}$
Area 16, Substation	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 16, Substation	06/05/89	06/13/89	$1.8 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 16, Substation	06/13/89	06/19/89	$1.5 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 16, Substation	06/19/89	07/05/89	$1.5 \times 10^{-14}$	$5.0 \times 10^{-16}$
Area 16, Substation	07/05/89	07/11/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 16, Substation	07/11/89	07/17/89	$9.1 \times 10^{-16}$	$4.9 \times 10^{-17}$
Area 16, Substation	07/17/89	07/25/89	$2.1 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 16, Substation	07/25/89	07/31/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 16, Substation	07/31/89	08/07/89	$1.3 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 16, Substation	08/07/89	08/15/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 16, Substation	08/15/89	08/21/89	$1.6 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 16, Substation	08/22/89	08/29/89	$2.0 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 16, Substation	08/29/89	09/05/89	$1.7 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 16, Substation	09/05/89	09/18/89	$1.8 \times 10^{-14}$	$6.1 \times 10^{-16}$
Area 16, Substation	09/18/89	09/25/89	$1.7 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 16, Substation	09/25/89	10/02/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 16, Substation	10/02/89	10/09/89	$2.1 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 16, Substation	10/09/89	10/16/89	$2.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 16, Substation	10/16/89	10/23/89	$1.8 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 16, Substation	10/23/89	11/06/89	$1.4 \times 10^{-14}$	$5.3 \times 10^{-16}$
Area 16, Substation	11/13/89	11/21/89	$1.9 \times 10^{-14}$	$5.7 \times 10^{-16}$
Area 16, Substation	11/21/89	11/28/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 16, Substation	11/28/89	12/11/89	$1.6 \times 10^{-14}$	$5.8 \times 10^{-16}$
Area 16, Substation	12/11/89	12/18/89	$1.0 \times 10^{-14}$	$4.9 \times 10^{-16}$
Area 16, Substation	12/18/89	12/26/89	$1.1 \times 10^{-13}$	$5.3 \times 10^{-15}$
Area 16, Substation	12/26/89	01/02/90	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 19, Echo Peak	01/03/89	01/09/89	$8.5 \times 10^{-15}$	$8.4 \times 10^{-16}$
Area 19, Echo Peak	01/09/89	01/17/89	$1.2 \times 10^{-14}$	$7.1 \times 10^{-16}$
Area 19, Echo Peak	01/17/89	01/23/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Echo Peak	01/23/89	01/30/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 19, Echo Peak	01/30/89	02/06/89	$1.5 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 19, Echo Peak	02/06/89	02/13/89	$1.5 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 19, Echo Peak	02/13/89	02/23/89	$1.5 \times 10^{-14}$	$6.5 \times 10^{-16}$
Area 19, Echo Peak	02/23/89	02/27/89	$1.1 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 19, Echo Peak	02/27/89	03/06/89	$2.0 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 19, Echo Peak	03/06/89	03/14/89	$1.3 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 19, Echo Peak	03/20/89	03/27/89	$8.6 \times 10^{-15}$	$5.0 \times 10^{-16}$
Area 19, Echo Peak	04/03/89	04/10/89	$1.4 \times 10^{-14}$	$2.3 \times 10^{-15}$
Area 19, Echo Peak	04/18/89	04/24/89	$1.2 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 19, Echo Peak	04/24/89	05/01/89	$1.1 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 19, Echo Peak	05/01/89	05/08/89	$1.1 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 19, Echo Peak	05/08/89	05/15/89	$1.4 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 19, Echo Peak	05/15/89	05/22/89	$1.4 \times 10^{-14}$	$8.3 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 19, Echo Peak	05/22/89	05/30/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 19, Echo Peak	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 19, Echo Peak	06/05/89	06/13/89	$1.6 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 19, Echo Peak	06/13/89	06/19/89	$1.4 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 19, Echo Peak	06/19/89	06/26/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 19, Echo Peak	06/26/89	07/05/89	$1.7 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 19, Echo Peak	07/05/89	07/11/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Echo Peak	07/11/89	07/17/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Echo Peak	07/17/89	07/25/89	$1.8 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 19, Echo Peak	07/25/89	07/31/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Echo Peak	07/31/89	08/07/89	$1.3 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 19, Echo Peak	08/07/89	08/15/89	$1.5 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 19, Echo Peak	08/15/89	08/21/89	$1.5 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 19, Echo Peak	08/21/89	08/29/89	$1.8 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 19, Echo Peak	08/29/89	09/05/89	$1.6 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 19, Echo Peak	09/05/89	09/11/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Echo Peak	09/11/89	09/18/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 19, Echo Peak	09/18/89	09/25/89	$1.6 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 19, Echo Peak	10/02/89	10/09/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 19, Echo Peak	10/09/89	10/16/89	$2.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Echo Peak	10/16/89	10/23/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 19, Echo Peak	10/23/89	11/06/89	$1.5 \times 10^{-14}$	$5.3 \times 10^{-16}$
Area 19, Echo Peak	11/06/89	11/13/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 19, Echo Peak	11/13/89	11/21/89	$1.6 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 19, Echo Peak	11/21/89	11/28/89	$2.1 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 19, Echo Peak	11/28/89	12/06/89	$1.5 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 19, Echo Peak	12/06/89	12/11/89	$1.1 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 19, Echo Peak	12/11/89	12/26/89	$3.9 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 19, Echo Peak	12/26/89	01/08/90	$1.7 \times 10^{-14}$	$6.7 \times 10^{-16}$
Area 19, Substation	01/03/89	01/09/89	$9.3 \times 10^{-15}$	$7.3 \times 10^{-16}$
Area 19, Substation	01/09/89	01/17/89	$1.2 \times 10^{-14}$	$7.1 \times 10^{-16}$
Area 19, Substation	01/17/89	01/23/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Substation	01/23/89	01/30/89	$2.1 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 19, Substation	01/30/89	02/06/89	$1.5 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 19, Substation	02/06/89	02/13/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 19, Substation	02/13/89	02/23/89	$1.4 \times 10^{-14}$	$6.4 \times 10^{-16}$
Area 19, Substation	02/23/89	02/27/89	$1.6 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 19, Substation	02/27/89	03/06/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 19, Substation	03/06/89	03/14/89	$1.4 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 19, Substation	03/20/89	03/27/89	$9.7 \times 10^{-15}$	$4.8 \times 10^{-16}$
Area 19, Substation	03/27/89	04/03/89	$1.1 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 19, Substation	04/03/89	04/10/89	$1.5 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 19, Substation	04/10/89	04/18/89	$2.0 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 19, Substation	04/18/89	04/24/89	$1.5 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 19, Substation	04/24/89	05/01/89	$1.0 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 19, Substation	05/01/89	05/08/89	$1.5 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 19, Substation	05/08/89	05/15/89	$8.3 \times 10^{-15}$	$7.2 \times 10^{-16}$
Area 19, Substation	05/15/89	05/22/89	$1.6 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 19, Substation	05/22/89	05/30/89	$1.3 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 19, Substation	05/30/89	06/05/89	$1.3 \times 10^{-14}$	$9.4 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 19, Substation	06/05/89	06/13/89	$1.6 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 19, Substation	06/13/89	06/19/89	$1.3 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 19, Substation	06/19/89	06/26/89	$1.2 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 19, Substation	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 19, Substation	07/05/89	07/11/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Substation	07/11/89	07/17/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Substation	07/17/89	07/25/89	$2.0 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 19, Substation	07/25/89	07/31/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Substation	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 19, Substation	08/07/89	08/15/89	$1.5 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 19, Substation	08/15/89	08/21/89	$1.5 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 19, Substation	08/22/89	08/29/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Substation	08/29/89	09/05/89	$1.7 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 19, Substation	09/05/89	09/11/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Substation	09/11/89	09/18/89	$2.2 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 19, Substation	09/18/89	09/25/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 19, Substation	09/25/89	10/02/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Substation	10/02/89	10/09/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 19, Substation	10/09/89	10/16/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 19, Substation	10/16/89	10/23/89	$1.9 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 19, Substation	10/23/89	11/06/89	$1.4 \times 10^{-14}$	$5.2 \times 10^{-16}$
Area 19, Substation	11/06/89	11/13/89	$1.8 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 19, Substation	11/13/89	11/21/89	$1.7 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 19, Substation	11/21/89	11/28/89	$2.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 19, Substation	11/28/89	12/06/89	$1.4 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 19, Substation	12/06/89	12/11/89	$1.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 19, Substation	12/11/89	12/18/89	$2.0 \times 10^{-13}$	$2.5 \times 10^{-15}$
Area 19, Substation	12/18/89	12/26/89	$1.9 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 20, Dispensary	01/09/89	01/17/89	$1.2 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 20, Dispensary	01/17/89	01/23/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 20, Dispensary	01/23/89	01/30/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 20, Dispensary	01/30/89	02/06/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 20, Dispensary	02/06/89	02/13/89	$1.9 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 20, Dispensary	02/13/89	02/23/89	$1.6 \times 10^{-14}$	$6.7 \times 10^{-16}$
Area 20, Dispensary	02/23/89	02/27/89	$1.8 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 20, Dispensary	02/27/89	03/06/89	$1.3 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 20, Dispensary	03/06/89	03/14/89	$1.5 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 20, Dispensary	03/14/89	03/20/89	$1.0 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 20, Dispensary	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 20, Dispensary	03/27/89	04/03/89	$1.2 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 20, Dispensary	04/03/89	04/10/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 20, Dispensary	04/10/89	04/18/89	$2.4 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 20, Dispensary	04/18/89	04/24/89	$1.4 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 20, Dispensary	04/24/89	05/01/89	$1.2 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 20, Dispensary	05/01/89	05/08/89	$1.6 \times 10^{-14}$	$1.7 \times 10^{-15}$
Area 20, Dispensary	05/08/89	05/15/89	$1.1 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 20, Dispensary	05/15/89	05/22/89	$1.1 \times 10^{-14}$	$5.9 \times 10^{-16}$
Area 20, Dispensary	05/22/89	05/30/89	$1.1 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 20, Dispensary	05/30/89	06/05/89	$1.4 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 20, Dispensary	06/05/89	06/13/89	$1.7 \times 10^{-14}$	$7.7 \times 10^{-16}$



Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 20, Dispensary	06/13/89	06/19/89	$1.5 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 20, Dispensary	06/26/89	07/05/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 20, Dispensary	07/05/89	07/11/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 20, Dispensary	07/11/89	07/17/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 20, Dispensary	07/17/89	07/25/89	$2.0 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 20, Dispensary	07/25/89	07/31/89	$1.8 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 20, Dispensary	07/31/89	08/07/89	$1.5 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 20, Dispensary	08/07/89	08/15/89	$1.4 \times 10^{-14}$	$7.1 \times 10^{-16}$
Area 20, Dispensary	08/15/89	08/21/89	$1.4 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 20, Dispensary	08/22/89	08/29/89	$1.4 \times 10^{-15}$	$5.9 \times 10^{-17}$
Area 20, Dispensary	08/29/89	09/05/89	$1.7 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 20, Dispensary	09/05/89	09/11/89	$6.9 \times 10^{-15}$	$3.1 \times 10^{-16}$
Area 20, Dispensary	09/11/89	09/18/89	$3.0 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 20, Dispensary	09/18/89	09/25/89	$1.6 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 20, Dispensary	10/02/89	10/09/89	$2.1 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 20, Dispensary	10/09/89	10/16/89	$2.7 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 20, Dispensary	10/16/89	10/23/89	$1.4 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 20, Dispensary	10/23/89	11/06/89	$1.5 \times 10^{-14}$	$5.2 \times 10^{-16}$
Area 20, Dispensary	11/06/89	11/13/89	$2.0 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 20, Dispensary	11/13/89	11/21/89	$2.0 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 20, Dispensary	11/21/89	11/28/89	$2.0 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 20, Dispensary	11/28/89	12/06/89	$1.6 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 20, Dispensary	12/06/89	12/11/89	$1.5 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 20, Dispensary	12/11/89	12/18/89	$1.4 \times 10^{-13}$	$2.0 \times 10^{-15}$
Area 20, Dispensary	12/18/89	12/26/89	$7.5 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 20, Dispensary	12/26/89	01/02/90	$4.0 \times 10^{-14}$	$1.8 \times 10^{-15}$
Area 23, Building 790	01/03/89	01/09/89	$9.9 \times 10^{-15}$	$1.0 \times 10^{-15}$
Area 23, Building 790	01/09/89	01/17/89	$1.6 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 23, Building 790	01/17/89	01/23/89	$3.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 23, Building 790	01/23/89	01/31/89	$1.9 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 23, Building 790	01/31/89	02/06/89	$1.7 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 23, Building 790	02/06/89	02/13/89	$2.6 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 23, Building 790	02/13/89	02/22/89	$1.9 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 23, Building 790	02/22/89	03/01/89	$1.6 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 23, Building 790	03/01/89	03/07/89	$1.2 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, Building 790	03/07/89	03/13/89	$1.6 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 23, Building 790	03/13/89	03/20/89	$8.0 \times 10^{-15}$	$6.1 \times 10^{-16}$
Area 23, Building 790	03/20/89	03/27/89	$1.2 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 23, Building 790	03/27/89	04/03/89	$1.2 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 23, Building 790	04/03/89	04/11/89	$1.7 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 23, Building 790	04/11/89	04/19/89	$2.5 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 23, Building 790	04/19/89	04/24/89	$5.7 \times 10^{-14}$	$4.1 \times 10^{-15}$
Area 23, Building 790	04/24/89	05/01/89	$1.6 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 23, Building 790	05/01/89	05/08/89	$1.7 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 23, Building 790	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 23, Building 790	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 23, Building 790	05/22/89	05/30/89	$1.4 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 23, Building 790	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 23, Building 790	06/05/89	06/12/89	$1.6 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 23, Building 790	06/12/89	06/19/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 23, Building 790	06/19/89	06/26/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 23, Building 790	06/26/89	07/05/89	$1.7 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 23, Building 790	07/05/89	07/11/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, Building 790	07/11/89	07/17/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, Building 790	07/24/89	07/31/89	$1.9 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 23, Building 790	07/31/89	08/07/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 23, Building 790	08/07/89	08/14/89	$1.5 \times 10^{-14}$	$4.5 \times 10^{-15}$
Area 23, Building 790	08/14/89	08/21/89	$1.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 23, Building 790	08/21/89	08/28/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 23, Building 790	08/28/89	09/06/89	$1.7 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 23, Building 790	09/06/89	09/11/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 23, Building 790	09/11/89	09/18/89	$2.5 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 23, Building 790	09/18/89	09/29/89	$1.6 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 23, Building 790	09/26/89	10/02/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 23, Building 790	10/02/89	10/09/89	$2.3 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 23, Building 790	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, Building 790	10/16/89	10/23/89	$2.1 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 23, Building 790	10/23/89	10/30/89	$7.9 \times 10^{-15}$	$6.8 \times 10^{-16}$
Area 23, Building 790	10/30/89	11/06/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 23, Building 790	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 23, Building 790	11/13/89	11/20/89	$2.1 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 23, Building 790	11/20/89	11/28/89	$2.4 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 23, Building 790	11/28/89	12/05/89	$1.9 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 23, Building 790	12/05/89	12/11/89	$1.6 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 23, Building 790	12/11/89	12/18/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 23, Building 790	12/18/89	12/26/89	$2.6 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 23, Building 790	12/26/89	01/02/90	$2.4 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 23, Building 790 No. 2	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 23, Building 790 No. 2	01/09/89	01/17/89	$1.5 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 23, Building 790 No. 2	01/17/89	01/23/89	$2.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 23, Building 790 No. 2	01/23/89	01/31/89	$2.2 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 23, Building 790 No. 2	01/31/89	02/06/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 23, Building 790 No. 2	02/06/89	02/13/89	$2.4 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 23, Building 790 No. 2	02/13/89	02/22/89	$2.0 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 23, Building 790 No. 2	02/22/89	03/01/89	$1.6 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 23, Building 790 No. 2	03/01/89	03/07/89	$1.5 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 23, Building 790 No. 2	03/07/89	03/13/89	$1.6 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 23, Building 790 No. 2	03/13/89	03/20/89	$1.1 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 23, Building 790 No. 2	03/20/89	03/27/89	$1.1 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 23, Building 790 No. 2	03/27/89	04/03/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 23, Building 790 No. 2	04/03/89	04/11/89	$1.6 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 23, Building 790 No. 2	04/11/89	04/19/89	$2.2 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 23, Building 790 No. 2	04/19/89	04/24/89	$6.2 \times 10^{-15}$	$8.8 \times 10^{-16}$
Area 23, Building 790 No. 2	04/24/89	05/01/89	$1.3 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 23, Building 790 No. 2	05/01/89	05/08/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 23, Building 790 No. 2	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 23, Building 790 No. 2	05/15/89	05/22/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, Building 790 No. 2	05/22/89	05/30/89	$1.4 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 23, Building 790 No. 2	05/30/89	06/05/89	$1.4 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 23, Building 790 No. 2	06/05/89	06/12/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		uCi/mL	
	Start	End	Concentration	Standard Deviation (s)
Area 23, Building 790 No. 2	06/12/89	06/19/89	$1.6 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 23, Building 790 No. 2	06/19/89	06/26/89	$1.3 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 23, Building 790 No. 2	06/26/89	07/05/89	$1.6 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 23, Building 790 No. 2	07/05/89	07/11/89	$2.1 \times 10^{-14}$	$3.4 \times 10^{-15}$
Area 23, Building 790 No. 2	07/11/89	07/17/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, Building 790 No. 2	07/17/89	07/24/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 23, Building 790 No. 2	07/24/89	07/31/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 23, Building 790 No. 2	07/31/89	08/07/89	$1.7 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 23, Building 790 No. 2	08/07/89	08/14/89	$1.5 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, Building 790 No. 2	08/14/89	08/21/89	$1.4 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 23, Building 790 No. 2	08/21/89	08/28/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 23, Building 790 No. 2	08/28/89	09/06/89	$1.7 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 23, Building 790 No. 2	09/06/89	09/11/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 23, Building 790 No. 2	09/11/89	09/18/89	$2.2 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 23, Building 790 No. 2	09/18/89	09/29/89	$1.7 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 23, Building 790 No. 2	09/26/89	10/02/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 23, Building 790 No. 2	10/02/89	10/09/89	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, Building 790 No. 2	10/09/89	10/16/89	$3.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 23, Building 790 No. 2	10/16/89	10/23/89	$2.0 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 23, Building 790 No. 2	10/23/89	10/30/89	$9.1 \times 10^{-15}$	$7.3 \times 10^{-16}$
Area 23, Building 790 No. 2	10/30/89	11/06/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 23, Building 790 No. 2	11/06/89	11/13/89	$2.1 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 23, Building 790 No. 2	11/13/89	11/20/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 23, Building 790 No. 2	11/20/89	11/28/89	$6.8 \times 10^{-16}$	$4.9 \times 10^{-16}$
Area 23, Building 790 No. 2	11/28/89	12/05/89	$5.0 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 23, Building 790 No. 2	12/05/89	12/11/89	$1.7 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 23, Building 790 No. 2	12/11/89	12/18/89	$2.0 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 23, Building 790 No. 2	12/18/89	12/26/89	$2.7 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 23, Building 790 No. 2	12/26/89	01/02/90	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 23, East Boundary	01/03/89	01/09/89	$9.8 \times 10^{-15}$	$9.2 \times 10^{-16}$
Area 23, East Boundary	01/09/89	01/17/89	$1.7 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 23, East Boundary	01/17/89	01/23/89	$2.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 23, East Boundary	01/23/89	01/31/89	$2.0 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 23, East Boundary	01/31/89	02/06/89	$1.5 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 23, East Boundary	02/06/89	02/13/89	$2.4 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 23, East Boundary	02/13/89	02/22/89	$2.1 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 23, East Boundary	02/22/89	03/01/89	$1.6 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 23, East Boundary	03/01/89	03/07/89	$1.4 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 23, East Boundary	03/07/89	03/13/89	$1.8 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 23, East Boundary	03/13/89	03/20/89	$1.2 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 23, East Boundary	03/20/89	03/27/89	$1.2 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 23, East Boundary	03/27/89	04/03/89	$1.4 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 23, East Boundary	04/03/89	04/11/89	$1.6 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 23, East Boundary	04/11/89	04/19/89	$2.3 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, East Boundary	04/19/89	04/24/89	$1.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, East Boundary	04/24/89	05/01/89	$1.1 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 23, East Boundary	05/01/89	05/08/89	$1.8 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, East Boundary	05/08/89	05/15/89	$1.2 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 23, East Boundary	05/15/89	05/22/89	$1.6 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 23, East Boundary	05/22/89	05/30/89	$1.4 \times 10^{-14}$	$7.3 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 23, East Boundary	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 23, East Boundary	06/05/89	06/12/89	$1.5 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 23, East Boundary	06/12/89	06/19/89	$1.6 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 23, East Boundary	06/12/89	06/19/89	0	0
Area 23, East Boundary	06/19/89	06/26/89	$1.3 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 23, East Boundary	06/26/89	07/05/89	$1.7 \times 10^{-14}$	$7.0 \times 10^{-16}$
Area 23, East Boundary	07/11/89	07/17/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 23, East Boundary	07/17/89	07/24/89	$6.1 \times 10^{-13}$	$4.1 \times 10^{-15}$
Area 23, East Boundary	07/24/89	07/31/89	$2.0 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 23, East Boundary	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 23, East Boundary	08/07/89	08/14/89	$1.4 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 23, East Boundary	08/14/89	08/21/89	$1.5 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 23, East Boundary	08/21/89	08/28/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, East Boundary	08/28/89	09/06/89	$1.7 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 23, East Boundary	09/06/89	09/11/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 23, East Boundary	09/11/89	09/18/89	$2.3 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 23, East Boundary	09/18/89	09/29/89	$1.5 \times 10^{-14}$	$7.4 \times 10^{-16}$
Area 23, East Boundary	09/26/89	10/02/89	$2.5 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 23, East Boundary	10/02/89	10/09/89	$2.5 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 23, East Boundary	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, East Boundary	10/16/89	10/23/89	$4.1 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 23, East Boundary	10/23/89	10/30/89	$7.8 \times 10^{-15}$	$6.7 \times 10^{-16}$
Area 23, East Boundary	10/30/89	11/06/89	$2.1 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 23, East Boundary	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 23, East Boundary	11/13/89	11/20/89	$2.0 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, East Boundary	11/20/89	11/28/89	$2.5 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 23, East Boundary	11/28/89	12/05/89	$1.8 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, East Boundary	12/05/89	12/11/89	$1.6 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 23, East Boundary	12/11/89	12/18/89	$1.8 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, East Boundary	12/18/89	12/26/89	$2.6 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 23, H&S Building Roof	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 23, H&S Building Roof	01/09/89	01/17/89	$1.6 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 23, H&S Building Roof	01/17/89	01/23/89	$3.0 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 23, H&S Building Roof	01/23/89	01/31/89	$2.0 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, H&S Building Roof	01/31/89	02/06/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, H&S Building Roof	02/06/89	02/13/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, H&S Building Roof	02/13/89	02/22/89	$2.0 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 23, H&S Building Roof	02/22/89	03/01/89	$8.4 \times 10^{-15}$	$4.5 \times 10^{-16}$
Area 23, H&S Building Roof	03/01/89	03/07/89	$1.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, H&S Building Roof	03/07/89	03/13/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, H&S Building Roof	03/13/89	03/20/89	$9.5 \times 10^{-15}$	$7.7 \times 10^{-16}$
Area 23, H&S Building Roof	03/20/89	03/27/89	$5.4 \times 10^{-15}$	$4.4 \times 10^{-16}$
Area 23, H&S Building Roof	03/27/89	04/03/89	$1.2 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 23, H&S Building Roof	04/03/89	04/11/89	$1.7 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 23, H&S Building Roof	04/19/89	04/24/89	$1.5 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 23, H&S Building Roof	05/08/89	05/15/89	$1.1 \times 10^{-14}$	$7.8 \times 10^{-16}$
Area 23, H&S Building Roof	05/15/89	05/22/89	$1.7 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 23, H&S Building Roof	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 23, H&S Building Roof	05/30/89	06/05/89	$1.5 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 23, H&S Building Roof	06/05/89	06/12/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 23, H&S Building Roof	06/12/89	06/19/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, H&S Building Roof	06/19/89	06/26/89	$1.5 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, H&S Building Roof	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.5 \times 10^{-16}$
Area 23, H&S Building Roof	07/05/89	07/11/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, H&S Building Roof	07/11/89	07/17/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, H&S Building Roof	07/17/89	07/24/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 23, H&S Building Roof	07/24/89	07/31/89	$2.2 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 23, H&S Building Roof	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 23, H&S Building Roof	08/07/89	08/14/89	$1.5 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 23, H&S Building Roof	08/14/89	08/21/89	$1.7 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 23, H&S Building Roof	08/21/89	08/28/89	$1.9 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 23, H&S Building Roof	08/28/89	09/06/89	$1.6 \times 10^{-14}$	$7.2 \times 10^{-16}$
Area 23, H&S Building Roof	09/06/89	09/11/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 23, H&S Building Roof	09/11/89	09/18/89	$2.4 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 23, H&S Building Roof	09/18/89	09/29/89	$1.1 \times 10^{-15}$	$5.5 \times 10^{-17}$
Area 23, H&S Building Roof	09/26/89	10/02/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, H&S Building Roof	10/02/89	10/09/89	$2.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 23, H&S Building Roof	10/09/89	10/16/89	$3.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 23, H&S Building Roof	10/16/89	10/23/89	$1.9 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 23, H&S Building Roof	10/23/89	10/30/89	$8.3 \times 10^{-15}$	$6.9 \times 10^{-16}$
Area 23, H&S Building Roof	10/30/89	11/06/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 23, H&S Building Roof	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 23, H&S Building Roof	11/13/89	11/20/89	$2.1 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 23, H&S Building Roof	11/20/89	11/28/89	$2.5 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 23, H&S Building Roof	11/28/89	12/05/89	$1.8 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 23, H&S Building Roof	12/05/89	12/11/89	$1.5 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 23, H&S Building Roof	12/11/89	12/18/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 23, H&S Building Roof	12/18/89	12/26/89	$2.8 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 23, H&S Building Roof	12/26/89	01/02/90	$2.3 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 25, E-MAD South	01/03/89	01/09/89	$1.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, E-MAD South	01/09/89	01/17/89	$1.6 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 25, E-MAD South	01/17/89	01/23/89	$2.9 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 25, E-MAD South	01/23/89	01/31/89	$2.3 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 25, E-MAD South	01/31/89	02/06/89	$9.3 \times 10^{-15}$	$8.3 \times 10^{-16}$
Area 25, E-MAD South	02/06/89	02/13/89	$2.3 \times 10^{-14}$	$9.7 \times 10^{-16}$
Area 25, E-MAD South	02/13/89	02/22/89	$2.2 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 25, E-MAD South	02/22/89	03/01/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 25, E-MAD South	03/01/89	03/07/89	$1.2 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 25, E-MAD South	03/07/89	03/13/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, E-MAD South	03/13/89	03/20/89	$1.2 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 25, E-MAD South	03/20/89	03/27/89	$1.2 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 25, E-MAD South	03/27/89	04/03/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 25, E-MAD South	04/03/89	04/11/89	$1.6 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 25, E-MAD South	04/11/89	04/19/89	$2.3 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 25, E-MAD South	04/19/89	04/24/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, E-MAD South	04/24/89	05/01/89	$1.0 \times 10^{-14}$	$7.6 \times 10^{-16}$
Area 25, E-MAD South	05/01/89	05/08/89	$1.8 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 25, E-MAD South	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$8.1 \times 10^{-16}$
Area 25, E-MAD South	05/15/89	05/22/89	$1.8 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 25, E-MAD South	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$7.7 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 25, E-MAD South	05/30/89	06/05/89	$1.1 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 25, E-MAD South	06/05/89	06/12/89	$1.8 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 25, E-MAD South	06/12/89	06/19/89	$1.7 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 25, E-MAD South	06/19/89	06/26/89	$1.3 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 25, E-MAD South	06/26/89	07/05/89	$2.0 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 25, E-MAD South	07/05/89	07/11/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, E-MAD South	07/11/89	07/17/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, E-MAD South	07/17/89	07/24/89	$1.9 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 25, E-MAD South	07/24/89	07/31/89	$1.9 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 25, E-MAD South	07/31/89	08/07/89	$1.4 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 25, E-MAD South	08/07/89	08/14/89	$1.5 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 25, E-MAD South	08/14/89	08/21/89	$1.7 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 25, E-MAD South	08/21/89	08/28/89	$1.8 \times 10^{-14}$	$9.1 \times 10^{-16}$
Area 25, E-MAD South	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 25, E-MAD South	09/06/89	09/11/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 25, E-MAD South	09/11/89	09/18/89	$2.3 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 25, E-MAD South	09/18/89	09/29/89	$1.7 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 25, E-MAD South	09/26/89	10/02/89	$2.8 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 25, E-MAD South	10/02/89	10/09/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, E-MAD South	10/09/89	10/16/89	$3.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, E-MAD South	10/16/89	10/23/89	$2.2 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 25, E-MAD South	10/23/89	10/30/89	$9.0 \times 10^{-15}$	$7.6 \times 10^{-16}$
Area 25, E-MAD South	10/30/89	11/06/89	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, E-MAD South	11/06/89	11/13/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 25, E-MAD South	11/13/89	11/20/89	$1.9 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 25, E-MAD South	11/20/89	11/28/89	$2.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, E-MAD South	11/28/89	12/05/89	$1.6 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 25, E-MAD South	12/05/89	12/11/89	$2.0 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 25, E-MAD South	12/11/89	12/18/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, E-MAD South	12/18/89	12/26/89	$2.5 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 25, E-MAD South	12/26/89	01/02/90	$2.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, NRDS Warehouse	01/03/89	01/09/89	$1.1 \times 10^{-14}$	$8.9 \times 10^{-16}$
Area 25, NRDS Warehouse	01/09/89	01/17/89	$1.5 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 25, NRDS Warehouse	01/17/89	01/23/89	$2.7 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	01/23/89	01/31/89	$2.0 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 25, NRDS Warehouse	01/31/89	02/06/89	$1.7 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 25, NRDS Warehouse	02/06/89	02/13/89	$2.9 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 25, NRDS Warehouse	02/13/89	02/22/89	$2.3 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 25, NRDS Warehouse	02/22/89	03/01/89	$2.3 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 25, NRDS Warehouse	03/01/89	03/07/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	03/07/89	03/13/89	$1.9 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 25, NRDS Warehouse	03/13/89	03/20/89	$1.3 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 25, NRDS Warehouse	03/20/89	03/27/89	$1.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, NRDS Warehouse	03/27/89	04/03/89	$1.7 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, NRDS Warehouse	04/03/89	04/11/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, NRDS Warehouse	04/11/89	04/19/89	$3.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	04/19/89	04/24/89	$1.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, NRDS Warehouse	04/24/89	05/01/89	$2.0 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 25, NRDS Warehouse	05/01/89	05/08/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	05/08/89	05/15/89	$1.6 \times 10^{-14}$	$1.0 \times 10^{-15}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 25, NRDS Warehouse	05/15/89	05/22/89	$1.9 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	05/22/89	05/30/89	$1.9 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 25, NRDS Warehouse	05/30/89	06/05/89	$1.9 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 25, NRDS Warehouse	06/05/89	06/12/89	$2.2 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	06/12/89	06/19/89	$1.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	06/19/89	06/26/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, NRDS Warehouse	06/26/89	07/05/89	$2.1 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 25, NRDS Warehouse	07/05/89	07/11/89	$2.7 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 25, NRDS Warehouse	07/11/89	07/17/89	$2.5 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 25, NRDS Warehouse	07/17/89	07/24/89	$2.6 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 25, NRDS Warehouse	07/24/89	07/31/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	07/31/89	08/07/89	$1.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, NRDS Warehouse	08/07/89	08/14/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	08/14/89	08/21/89	$1.8 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 25, NRDS Warehouse	08/21/89	08/28/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	08/28/89	09/06/89	$1.9 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 25, NRDS Warehouse	09/06/89	09/11/89	$2.6 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 25, NRDS Warehouse	09/11/89	09/18/89	$2.6 \times 10^{-14}$	$1.2 \times 10^{-15}$
Area 25, NRDS Warehouse	09/18/89	09/29/89	$1.8 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 25, NRDS Warehouse	09/26/89	10/02/89	$3.5 \times 10^{-14}$	$1.4 \times 10^{-15}$
Area 25, NRDS Warehouse	10/02/89	10/09/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	10/09/89	10/16/89	$3.8 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 25, NRDS Warehouse	10/16/89	10/23/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	10/23/89	10/30/89	$8.1 \times 10^{-15}$	$7.3 \times 10^{-16}$
Area 25, NRDS Warehouse	10/30/89	11/06/89	$2.3 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 25, NRDS Warehouse	11/06/89	11/13/89	$2.2 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 25, NRDS Warehouse	11/13/89	11/20/89	$2.2 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 25, NRDS Warehouse	11/20/89	11/28/89	$2.4 \times 10^{-14}$	$9.4 \times 10^{-16}$
Area 25, NRDS Warehouse	11/28/89	12/05/89	$1.8 \times 10^{-14}$	$9.2 \times 10^{-16}$
Area 25, NRDS Warehouse	12/05/89	12/11/89	$1.5 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 25, NRDS Warehouse	12/11/89	12/18/89	$2.3 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 25, NRDS Warehouse	12/18/89	12/26/89	$2.2 \times 10^{-14}$	$8.4 \times 10^{-16}$
Area 25, NRDS Warehouse	12/26/89	01/02/90	$2.6 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 27, Cafeteria	01/03/89	01/09/89	$1.3 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 27, Cafeteria	01/09/89	01/17/89	$1.5 \times 10^{-14}$	$7.7 \times 10^{-16}$
Area 27, Cafeteria	01/17/89	01/23/89	$2.8 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 27, Cafeteria	01/23/89	01/31/89	$1.9 \times 10^{-14}$	$8.2 \times 10^{-16}$
Area 27, Cafeteria	01/31/89	02/06/89	$1.6 \times 10^{-14}$	$9.5 \times 10^{-16}$
Area 27, Cafeteria	02/06/89	02/13/89	$2.4 \times 10^{-14}$	$9.8 \times 10^{-16}$
Area 27, Cafeteria	02/13/89	02/22/89	$2.5 \times 10^{-14}$	$1.7 \times 10^{-15}$
Area 27, Cafeteria	03/07/89	03/13/89	$1.6 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 27, Cafeteria	03/13/89	03/20/89	$1.1 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 27, Cafeteria	03/20/89	03/27/89	$1.3 \times 10^{-14}$	$8.3 \times 10^{-16}$
Area 27, Cafeteria	03/27/89	04/03/89	$1.5 \times 10^{-14}$	$8.7 \times 10^{-16}$
Area 27, Cafeteria	04/03/89	04/11/89	$1.8 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 27, Cafeteria	04/11/89	04/19/89	$2.4 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 27, Cafeteria	04/19/89	04/24/89	$1.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 27, Cafeteria	05/01/89	05/08/89	$1.4 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 27, Cafeteria	05/08/89	05/15/89	$1.3 \times 10^{-14}$	$8.5 \times 10^{-16}$
Area 27, Cafeteria	05/15/89	05/22/89	$1.7 \times 10^{-14}$	$9.2 \times 10^{-16}$

Table A.4 (Gross Beta in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 27, Cafeteria	05/22/89	05/30/89	$1.5 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 27, Cafeteria	05/30/89	06/05/89	$1.6 \times 10^{-14}$	$9.6 \times 10^{-16}$
Area 27, Cafeteria	06/05/89	06/12/89	$2.0 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 27, Cafeteria	06/12/89	06/19/89	$1.6 \times 10^{-14}$	$9.0 \times 10^{-16}$
Area 27, Cafeteria	06/19/89	06/26/89	$1.5 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 27, Cafeteria	06/26/89	07/05/89	$1.8 \times 10^{-14}$	$7.9 \times 10^{-16}$
Area 27, Cafeteria	07/05/89	07/11/89	$2.1 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 27, Cafeteria	07/11/89	07/17/89	$2.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 27, Cafeteria	07/17/89	07/24/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 27, Cafeteria	07/24/89	07/31/89	$2.2 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 27, Cafeteria	07/31/89	08/07/89	$1.3 \times 10^{-14}$	$8.6 \times 10^{-16}$
Area 27, Cafeteria	08/07/89	08/14/89	$1.8 \times 10^{-14}$	$9.3 \times 10^{-16}$
Area 27, Cafeteria	08/14/89	08/21/89	$1.5 \times 10^{-14}$	$8.8 \times 10^{-16}$
Area 27, Cafeteria	08/21/89	08/28/89	$2.1 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 27, Cafeteria	08/28/89	09/06/89	$1.7 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 27, Cafeteria	09/06/89	09/11/89	$2.4 \times 10^{-14}$	$1.3 \times 10^{-15}$
Area 27, Cafeteria	09/11/89	09/18/89	$2.6 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 27, Cafeteria	09/18/89	09/29/89	$1.8 \times 10^{-14}$	$8.0 \times 10^{-16}$
Area 27, Cafeteria	09/26/89	10/02/89	$3.4 \times 10^{-14}$	$1.5 \times 10^{-15}$
Area 27, Cafeteria	10/02/89	10/09/89	$2.4 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 27, Cafeteria	10/09/89	10/16/89	$3.0 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 27, Cafeteria	10/16/89	10/23/89	$2.0 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 27, Cafeteria	10/23/89	10/30/89	$8.4 \times 10^{-15}$	$7.8 \times 10^{-16}$
Area 27, Cafeteria	10/30/89	11/06/89	$2.4 \times 10^{-14}$	$1.1 \times 10^{-15}$
Area 27, Cafeteria	11/06/89	11/13/89	$2.3 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 27, Cafeteria	11/20/89	11/28/89	$2.2 \times 10^{-14}$	$6.4 \times 10^{-16}$
Area 27, Cafeteria	11/28/89	12/05/89	$1.9 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 27, Cafeteria	12/05/89	12/11/89	$1.5 \times 10^{-14}$	$1.0 \times 10^{-15}$
Area 27, Cafeteria	12/11/89	12/18/89	$1.9 \times 10^{-14}$	$9.9 \times 10^{-16}$
Area 27, Cafeteria	12/26/89	01/02/90	$2.3 \times 10^{-14}$	$6.6 \times 10^{-16}$



# APPENDIX B

## ONSITE TRITIUM IN AIR

Lawrence E. Barker

Seventeen samplers for airborne tritiated water vapor were placed at locations in Areas 1, 5, 10, 12, 15, and 25, as described in Volume I. Table B.1 displays the sampling locations, dates of sampling, and either the detection limit for the concentration or the observed concentration and analytic standard deviation, if known.

All measured concentrations except two were between  $1.1 \times 10^{-14}$  (measured at Area 10, Gate 700 South between November 2 and 22) and  $8.2 \times 10^{-11}$   $\mu\text{Ci/mL}$  (measured at the Area 15, EPA Farm Complex between March 16 and 29). Two measured concentrations fell well outside this range and were omitted from the analysis as outliers. These were concentrations of  $1.7 \times 10^{-10}$   $\mu\text{Ci/mL}$  at the Area 1 BJY between April 26 and May 12 and  $-1.6 \times 10^{-15}$   $\mu\text{Ci/mL}$  at the Area 25 E-MAD facility between September 22 and November 2.

Approximately 16 percent of the measurements are reported as a detection limit. Hence, simple averages, although presented here, are misleading. The true average concentration was lower than the simple average of the observations and had to be determined by more sophisticated statistical methods, detailed later.

The simple average of the observed concentrations was  $7.9 \times 10^{-12}$   $\mu\text{Ci/mL}$ . An estimate of the true average, accounting for concentrations less than the lower limit of detection, was  $6.8 \times 10^{-12}$   $\mu\text{Ci/mL}$ . The Derived Concentration Guide for inhaled tritium in water given in DOE Order 5400.5 is  $1.0 \times 10^{-7}$   $\mu\text{Ci/mL}$ . Hence, concentrations of tritiated water in air were well below the DCG.

Because the data contained many detection limits, special statistical procedures, detailed below, were required for analysis. Comparison of observed concentrations among sampling locations and over time revealed measured concentrations at the Area 15 EPA Farm Complex during January, February, and March which were much greater than those elsewhere or at other times. No other differences among sampling locations or times were statistically significant at the five percent level.

Simple averages of observed values yielded respective concentrations of  $2.6 \times 10^{-11}$  and  $6.64 \times 10^{-12}$   $\mu\text{Ci/mL}$  at the EPA Farm Complex and the remainder of the sampling locations. Estimating the averages accounted for some observations being below the lower limit of detection and yielded estimated concentrations of  $2.6 \times 10^{-11}$  and  $3.8 \times 10^{-12}$   $\mu\text{Ci/mL}$ , respectively, for the EPA Farm Complex and the remainder of the sampling locations. This difference is due to elevated concentrations at the EPA Farm Complex during January, February, and March.

The above estimates were derived by noting concentrations had an approximately normal distribution with unknown parameters. Statistical theory shows these parameters are best estimated as the values which maximize the probability of obtaining the sample actually observed<sup>(a)</sup>. Were all observations actual concentrations rather than some being less than

(a) For a more complete explanation of why parameters are estimated by maximizing the probability of obtaining the data actually observed, see, for example, Bickel, Peter J. and Kjell A. Doksum, Mathematical Statistics: Basic Ideas and Selected Topics, (cont.)

the lower limit of detection, the estimated values would have been the sample average and variance. Since this was not the case, maximization had to be done by a computer-intensive numerical routine. Here calculations were carried out using PROC LIFEREG of SAS 6.03, a software package of statistical and mathematical routines.

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[(a) cont.]

1976, Holden-Day Inc., pp. 99-107. An explanation of statistical analysis of data consisting of both observations and detection limits is given in Miller, Rupert G., Survival Analysis, 1981, John Wiley & Sons.

Table B.1 Tritium in Air

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 1, BJJ	01/04/89	01/19/89	$3.0 \times 10^{-12}$	
Area 1, BJJ	01/19/89	02/02/89	$1.2 \times 10^{-12}$	
Area 1, BJJ	02/02/89	02/16/89	$<2.2 \times 10^{-12}$	
Area 1, BJJ	02/16/89	03/03/89	$2.3 \times 10^{-12}$	
Area 1, BJJ	03/29/89	04/13/89	$4.6 \times 10^{-12}$	
Area 1, BJJ	04/12/89	04/26/89	$<2.1 \times 10^{-12}$	
Area 1, BJJ	04/26/89	05/12/89	$1.7 \times 10^{-10}$	
Area 1, BJJ	05/12/89	06/01/89	$<2.0 \times 10^{-12}$	
Area 1, BJJ	06/01/89	06/14/89	$4.9 \times 10^{-12}$	
Area 1, BJJ	06/14/89	06/27/89	$2.8 \times 10^{-12}$	
Area 1, BJJ	06/27/89	07/19/89	$2.3 \times 10^{-11}$	
Area 1, BJJ	09/01/89	09/22/89	$7.1 \times 10^{-12}$	$4.9 \times 10^{-13}$
Area 1, BJJ	09/22/89	11/02/89	$8.7 \times 10^{-13}$	$3.1 \times 10^{-13}$
Area 1, BJJ	11/02/89	11/22/89	$7.2 \times 10^{-14}$	$2.2 \times 10^{-14}$
Area 1, BJJ	11/22/89	12/13/89	$5.9 \times 10^{-12}$	$3.0 \times 10^{-13}$
Area 1, BJJ	12/13/89	01/03/90	$3.1 \times 10^{-12}$	$3.1 \times 10^{-13}$
Area 5, RWMS No. 1 (Office)	01/19/89	02/02/89	$6.1 \times 10^{-12}$	
Area 5, RWMS No. 1 (Office)	01/04/89	01/19/89	$6.0 \times 10^{-12}$	
Area 5, RWMS No. 1 (Office)	02/02/89	02/16/89	$3.8 \times 10^{-12}$	
Area 5, RWMS No. 1 (Office)	02/16/89	03/03/89	$1.1 \times 10^{-11}$	
Area 5, RWMS No. 1 (Office)	03/29/89	04/13/89	$8.5 \times 10^{-12}$	
Area 5, RWMS No. 1 (Office)	03/16/89	03/29/89	$9.7 \times 10^{-12}$	
Area 5, RWMS No. 1 (Office)	03/03/89	03/16/89	$1.3 \times 10^{-11}$	
Area 5, RWMS No. 1 (Office)	04/12/89	04/26/89	$1.0 \times 10^{-11}$	
Area 5, RWMS No. 1 (Office)	04/26/89	05/12/89	$1.0 \times 10^{-11}$	
Area 5, RWMS No. 1 (Office)	05/12/89	06/01/89	$7.5 \times 10^{-12}$	
Area 5, RWMS No. 1 (Office)	06/14/89	06/27/89	$9.5 \times 10^{-12}$	
Area 5, RWMS No. 1 (Office)	06/01/89	06/14/89	$<3.8 \times 10^{-12}$	
Area 5, RWMS No. 1 (Office)	06/27/89	07/19/89	$5.6 \times 10^{-11}$	
Area 5, RWMS No. 1 (Office)	08/10/89	09/01/89	$3.0 \times 10^{-12}$	
Area 5, RWMS No. 1 (Office)	09/22/89	11/02/89	$1.6 \times 10^{-12}$	$8.4 \times 10^{-14}$
Area 5, RWMS No. 1 (Office)	09/01/89	09/22/89	$3.9 \times 10^{-12}$	$2.7 \times 10^{-13}$
Area 5, RWMS No. 1 (Office)	11/22/89	12/13/89	$8.5 \times 10^{-12}$	$2.2 \times 10^{-13}$
Area 5, RWMS No. 1 (Office)	11/02/89	11/22/89	$6.1 \times 10^{-13}$	$2.2 \times 10^{-14}$
Area 5, RWMS No. 1 (Office)	12/13/89	01/03/90	$5.3 \times 10^{-12}$	$2.2 \times 10^{-13}$
Area 5, RWMS No. 2 (Southeast)	01/04/89	01/19/89	$6.2 \times 10^{-12}$	
Area 5, RWMS No. 2 (Southeast)	01/19/89	02/02/89	$8.3 \times 10^{-12}$	
Area 5, RWMS No. 2 (Southeast)	02/02/89	02/16/89	$4.8 \times 10^{-12}$	
Area 5, RWMS No. 2 (Southeast)	02/16/89	03/03/89	$5.0 \times 10^{-12}$	
Area 5, RWMS No. 2 (Southeast)	03/29/89	04/13/89	$1.1 \times 10^{-11}$	
Area 5, RWMS No. 2 (Southeast)	03/16/89	03/29/89	$8.1 \times 10^{-12}$	
Area 5, RWMS No. 2 (Southeast)	03/03/89	03/16/89	$7.5 \times 10^{-12}$	
Area 5, RWMS No. 2 (Southeast)	04/12/89	04/26/89	$1.2 \times 10^{-11}$	
Area 5, RWMS No. 2 (Southeast)	04/12/89	05/12/89	$6.8 \times 10^{-12}$	
Area 5, RWMS No. 2 (Southeast)	05/12/89	06/01/89	$7.4 \times 10^{-12}$	
Area 5, RWMS No. 2 (Southeast)	06/01/89	06/14/89	$4.6 \times 10^{-12}$	
Area 5, RWMS No. 2 (Southeast)	06/27/89	07/19/89	$1.9 \times 10^{-11}$	
Area 5, RWMS No. 2 (Southeast)	09/22/89	11/02/89	$2.3 \times 10^{-12}$	$2.0 \times 10^{-13}$
Area 5, RWMS No. 2 (Southeast)	11/22/89	12/13/89	$6.3 \times 10^{-12}$	$2.7 \times 10^{-13}$
Area 5, RWMS No. 2 (Southeast)	11/02/89	11/22/89	$2.2 \times 10^{-13}$	$1.1 \times 10^{-14}$

Table B.1 (Tritium in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 2 (Southeast)	12/13/89	01/03/90	$6.5 \times 10^{-12}$	$2.9 \times 10^{-13}$
Area 5, RWMS No. 3 (East)	01/19/89	02/02/89	$3.8 \times 10^{-12}$	
Area 5, RWMS No. 3 (East)	01/04/89	01/19/89	$2.0 \times 10^{-11}$	
Area 5, RWMS No. 3 (East)	02/02/89	02/16/89	$5.6 \times 10^{-12}$	
Area 5, RWMS No. 3 (East)	02/16/89	03/03/89	$1.2 \times 10^{-11}$	
Area 5, RWMS No. 3 (East)	03/16/89	03/29/89	$1.3 \times 10^{-11}$	
Area 5, RWMS No. 3 (East)	03/29/89	04/13/89	$1.1 \times 10^{-11}$	
Area 5, RWMS No. 3 (East)	03/03/89	03/19/89	$1.1 \times 10^{-11}$	
Area 5, RWMS No. 3 (East)	04/26/89	05/12/89	$1.4 \times 10^{-11}$	
Area 5, RWMS No. 3 (East)	04/12/89	04/26/89	$1.6 \times 10^{-11}$	
Area 5, RWMS No. 3 (East)	05/12/89	06/01/89	$7.9 \times 10^{-12}$	
Area 5, RWMS No. 3 (East)	06/27/89	07/19/89	$1.4 \times 10^{-11}$	
Area 5, RWMS No. 3 (East)	06/01/89	06/14/89	$1.1 \times 10^{-11}$	
Area 5, RWMS No. 3 (East)	06/14/89	06/27/89	$1.7 \times 10^{-11}$	
Area 5, RWMS No. 3 (East)	09/01/89	09/22/89	$1.1 \times 10^{-11}$	$3.6 \times 10^{-13}$
Area 5, RWMS No. 3 (East)	09/22/89	11/02/89	$4.1 \times 10^{-12}$	$4.5 \times 10^{-13}$
Area 5, RWMS No. 3 (East)	11/02/89	11/22/89	$1.1 \times 10^{-12}$	$5.5 \times 10^{-14}$
Area 5, RWMS No. 3 (East)	11/22/89	12/13/89	$1.1 \times 10^{-11}$	$3.6 \times 10^{-13}$
Area 5, RWMS No. 4 (Northeast)	01/04/89	01/19/89	$9.2 \times 10^{-12}$	
Area 5, RWMS No. 4 (Northeast)	02/02/89	02/16/89	$8.9 \times 10^{-12}$	
Area 5, RWMS No. 4 (Northeast)	02/02/89	02/16/89	$8.9 \times 10^{-12}$	
Area 5, RWMS No. 4 (Northeast)	02/16/89	03/03/89	$6.9 \times 10^{-12}$	
Area 5, RWMS No. 4 (Northeast)	03/03/89	03/16/89	$9.3 \times 10^{-12}$	
Area 5, RWMS No. 4 (Northeast)	03/16/89	03/29/89	$8.3 \times 10^{-12}$	
Area 5, RWMS No. 4 (Northeast)	03/29/89	04/12/89	$6.9 \times 10^{-12}$	
Area 5, RWMS No. 4 (Northeast)	04/12/89	04/26/89	$9.7 \times 10^{-12}$	
Area 5, RWMS No. 4 (Northeast)	04/26/89	05/12/89	$1.7 \times 10^{-11}$	
Area 5, RWMS No. 4 (Northeast)	05/12/89	06/01/89	$8.9 \times 10^{-12}$	
Area 5, RWMS No. 4 (Northeast)	06/14/89	06/27/89	$1.1 \times 10^{-11}$	
Area 5, RWMS No. 4 (Northeast)	06/01/89	06/14/89	$9.2 \times 10^{-12}$	
Area 5, RWMS No. 4 (Northeast)	06/27/89	07/19/89	$2.1 \times 10^{-11}$	
Area 5, RWMS No. 4 (Northeast)	09/22/89	11/02/89	$3.7 \times 10^{-12}$	$2.4 \times 10^{-13}$
Area 5, RWMS No. 4 (Northeast)	09/01/89	09/22/89	$1.6 \times 10^{-11}$	$5.7 \times 10^{-13}$
Area 5, RWMS No. 4 (Northeast)	11/02/89	11/22/89	$1.8 \times 10^{-13}$	$7.6 \times 10^{-15}$
Area 5, RWMS No. 4 (Northeast)	12/13/89	01/03/90	$6.0 \times 10^{-12}$	$2.9 \times 10^{-13}$
Area 5, RWMS No. 5 (Northwest)	01/04/89	01/19/89	$2.8 \times 10^{-12}$	
Area 5, RWMS No. 5 (Northwest)	01/19/89	02/02/89	$3.9 \times 10^{-12}$	
Area 5, RWMS No. 5 (Northwest)	02/16/89	03/03/89	$4.0 \times 10^{-12}$	
Area 5, RWMS No. 5 (Northwest)	02/02/89	02/16/89	$<2.4 \times 10^{-12}$	
Area 5, RWMS No. 5 (Northwest)	03/03/89	03/16/89	$3.5 \times 10^{-12}$	
Area 5, RWMS No. 5 (Northwest)	03/16/89	03/29/89	$4.5 \times 10^{-12}$	
Area 5, RWMS No. 5 (Northwest)	03/29/89	04/13/89	$4.0 \times 10^{-12}$	
Area 5, RWMS No. 5 (Northwest)	04/26/89	05/12/89	$5.4 \times 10^{-12}$	
Area 5, RWMS No. 5 (Northwest)	04/12/89	04/26/89	$5.2 \times 10^{-12}$	
Area 5, RWMS No. 5 (Northwest)	05/12/89	06/01/89	$2.1 \times 10^{-11}$	
Area 5, RWMS No. 5 (Northwest)	06/01/89	06/14/89	$6.1 \times 10^{-12}$	
Area 5, RWMS No. 5 (Northwest)	08/10/89	09/01/89	$1.1 \times 10^{-11}$	
Area 5, RWMS No. 5 (Northwest)	09/01/89	09/22/89	$5.7 \times 10^{-12}$	$6.0 \times 10^{-13}$
Area 5, RWMS No. 5 (Northwest)	09/22/89	11/02/89	$4.0 \times 10^{-12}$	$3.4 \times 10^{-13}$
Area 5, RWMS No. 5 (Northwest)	11/02/89	11/22/89	$2.7 \times 10^{-13}$	$1.6 \times 10^{-14}$

Table B.1 (Tritium in Air, cont.)

Sampling Location	Sampling Dates		μCi/mL	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 5 (Northwest)	12/13/89	01/03/90	4.2 x 10 <sup>-12</sup>	3.4 x 10 <sup>-13</sup>
Area 5, RWMS No. 6 (North)	01/04/89	01/19/89	7.1 x 10 <sup>-12</sup>	
Area 5, RWMS No. 6 (North)	01/19/89	02/02/89	2.3 x 10 <sup>-12</sup>	
Area 5, RWMS No. 6 (North)	02/02/89	02/16/89	5.5 x 10 <sup>-12</sup>	
Area 5, RWMS No. 6 (North)	02/16/89	03/03/89	6.1 x 10 <sup>-12</sup>	
Area 5, RWMS No. 6 (North)	03/29/89	04/13/89	2.0 x 10 <sup>-12</sup>	
Area 5, RWMS No. 6 (North)	03/03/89	03/16/89	9.6 x 10 <sup>-12</sup>	
Area 5, RWMS No. 6 (North)	03/16/89	03/29/89	1.4 x 10 <sup>-12</sup>	
Area 5, RWMS No. 6 (North)	04/12/89	04/26/89	1.0 x 10 <sup>-11</sup>	
Area 5, RWMS No. 6 (North)	04/26/89	05/12/89	2.0 x 10 <sup>-11</sup>	
Area 5, RWMS No. 6 (North)	05/12/89	06/01/89	9.8 x 10 <sup>-12</sup>	
Area 5, RWMS No. 6 (North)	06/01/89	06/14/89	1.5 x 10 <sup>-11</sup>	
Area 5, RWMS No. 6 (North)	06/27/89	07/19/89	2.9 x 10 <sup>-11</sup>	
Area 5, RWMS No. 6 (North)	09/01/89	09/22/89	6.7 x 10 <sup>-12</sup>	4.1 x 10 <sup>-13</sup>
Area 5, RWMS No. 6 (North)	09/22/89	11/02/89	3.5 x 10 <sup>-12</sup>	2.2 x 10 <sup>-13</sup>
Area 5, RWMS No. 6 (North)	11/22/89	12/13/89	9.5 x 10 <sup>-12</sup>	3.8 x 10 <sup>-13</sup>
Area 5, RWMS No. 6 (North)	12/13/89	01/03/90	2.6 x 10 <sup>-12</sup>	2.4 x 10 <sup>-13</sup>
Area 5, RWMS No. 7 (West)	01/19/89	02/02/89	2.3 x 10 <sup>-12</sup>	
Area 5, RWMS No. 7 (West)	02/02/89	02/16/89	2.0 x 10 <sup>-12</sup>	
Area 5, RWMS No. 7 (West)	02/16/89	03/03/89	2.9 x 10 <sup>-12</sup>	
Area 5, RWMS No. 7 (West)	03/29/89	04/13/89	5.4 x 10 <sup>-12</sup>	
Area 5, RWMS No. 7 (West)	03/16/89	03/29/89	5.4 x 10 <sup>-12</sup>	
Area 5, RWMS No. 7 (West)	03/03/89	03/16/89	2.8 x 10 <sup>-12</sup>	
Area 5, RWMS No. 7 (West)	04/26/89	05/12/89	5.5 x 10 <sup>-12</sup>	
Area 5, RWMS No. 7 (West)	04/12/89	04/26/89	1.3 x 10 <sup>-12</sup>	
Area 5, RWMS No. 7 (West)	05/12/89	06/01/89	1.6 x 10 <sup>-12</sup>	
Area 5, RWMS No. 7 (West)	06/01/89	06/14/89	6.1 x 10 <sup>-12</sup>	
Area 5, RWMS No. 7 (West)	06/27/89	07/19/89	1.3 x 10 <sup>-11</sup>	
Area 5, RWMS No. 7 (West)	06/14/89	06/27/89	6.4 x 10 <sup>-12</sup>	
Area 5, RWMS No. 7 (West)	09/01/89	09/22/89	5.7 x 10 <sup>-12</sup>	5.0 x 10 <sup>-13</sup>
Area 5, RWMS No. 7 (West)	09/22/89	11/02/89	3.7 x 10 <sup>-12</sup>	2.8 x 10 <sup>-13</sup>
Area 5, RWMS No. 7 (West)	11/22/89	12/13/89	1.0 x 10 <sup>-11</sup>	3.3 x 10 <sup>-13</sup>
Area 5, RWMS No. 7 (West)	12/13/89	01/03/90	6.5 x 10 <sup>-12</sup>	3.3 x 10 <sup>-13</sup>
Area 5, RWMS No. 8 (Southwest)	01/04/89	01/19/89	4.9 x 10 <sup>-12</sup>	
Area 5, RWMS No. 8 (Southwest)	01/19/89	02/02/89	5.7 x 10 <sup>-12</sup>	
Area 5, RWMS No. 8 (Southwest)	02/02/89	02/16/89	<3.4 x 10 <sup>-12</sup>	
Area 5, RWMS No. 8 (Southwest)	02/16/89	03/03/89	6.3 x 10 <sup>-12</sup>	
Area 5, RWMS No. 8 (Southwest)	03/03/89	03/16/89	8.0 x 10 <sup>-11</sup>	
Area 5, RWMS No. 8 (Southwest)	03/16/89	03/29/89	7.1 x 10 <sup>-12</sup>	
Area 5, RWMS No. 8 (Southwest)	03/29/89	04/13/89	9.6 x 10 <sup>-12</sup>	
Area 5, RWMS No. 8 (Southwest)	04/26/89	05/12/89	5.7 x 10 <sup>-12</sup>	
Area 5, RWMS No. 8 (Southwest)	04/12/89	04/26/89	6.0 x 10 <sup>-12</sup>	
Area 5, RWMS No. 8 (Southwest)	05/12/89	06/01/89	6.5 x 10 <sup>-12</sup>	
Area 5, RWMS No. 8 (Southwest)	06/27/89	07/19/89	9.3 x 10 <sup>-12</sup>	
Area 5, RWMS No. 8 (Southwest)	06/14/89	06/27/89	8.5 x 10 <sup>-12</sup>	
Area 5, RWMS No. 8 (Southwest)	06/01/89	06/14/89	7.2 x 10 <sup>-12</sup>	
Area 5, RWMS No. 8 (Southwest)	09/22/89	11/02/89	1.3 x 10 <sup>-12</sup>	1.6 x 10 <sup>-13</sup>
Area 5, RWMS No. 8 (Southwest)	11/02/89	11/22/89	8.0 x 10 <sup>-13</sup>	4.5 x 10 <sup>-14</sup>
Area 5, RWMS No. 8 (Southwest)	12/13/89	01/03/90	4.6 x 10 <sup>-12</sup>	3.0 x 10 <sup>-13</sup>
Area 5, RWMS No. 9 (South)	01/04/89	01/19/89	1.2 x 10 <sup>-11</sup>	

Table B.1 (Tritium in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 5, RWMS No. 9 (South)	01/19/89	02/02/89	$1.3 \times 10^{-11}$	
Area 5, RWMS No. 9 (South)	02/02/89	02/16/89	$1.2 \times 10^{-11}$	
Area 5, RWMS No. 9 (South)	02/16/89	03/03/89	$1.8 \times 10^{-11}$	
Area 5, RWMS No. 9 (South)	03/03/89	03/16/89	$1.9 \times 10^{-11}$	
Area 5, RWMS No. 9 (South)	03/16/89	03/29/89	$5.6 \times 10^{-12}$	
Area 5, RWMS No. 9 (South)	04/12/89	04/26/89	$2.5 \times 10^{-11}$	
Area 5, RWMS No. 9 (South)	04/26/89	05/12/89	$1.4 \times 10^{-11}$	
Area 5, RWMS No. 9 (South)	05/12/89	06/01/89	$8.8 \times 10^{-12}$	
Area 5, RWMS No. 9 (South)	06/01/89	06/14/89	$1.3 \times 10^{-11}$	
Area 5, RWMS No. 9 (South)	06/14/89	06/27/89	$1.1 \times 10^{-11}$	
Area 5, RWMS No. 9 (South)	06/27/89	07/19/89	$1.6 \times 10^{-11}$	
Area 5, RWMS No. 9 (South)	09/01/89	09/22/89	$8.5 \times 10^{-12}$	$4.1 \times 10^{-13}$
Area 5, RWMS No. 9 (South)	09/22/89	11/02/89	$7.8 \times 10^{-12}$	$3.5 \times 10^{-13}$
Area 5, RWMS No. 9 (South)	11/02/89	11/22/89	$4.5 \times 10^{-13}$	$1.3 \times 10^{-14}$
Area 5, RWMS No. 9 (South)	11/22/89	12/13/89	$8.3 \times 10^{-12}$	$2.2 \times 10^{-13}$
Area 5, RWMS No. 9 (South)	12/13/89	01/03/90	$8.3 \times 10^{-12}$	$2.6 \times 10^{-13}$
Area 10, Gate 700 South	01/04/89	01/19/89	$2.7 \times 10^{-12}$	
Area 10, Gate 700 South	01/19/89	02/02/89	$<2.7 \times 10^{-12}$	
Area 10, Gate 700 South	02/02/89	02/16/89	$4.6 \times 10^{-12}$	
Area 10, Gate 700 South	02/16/89	03/03/89	$<3.7 \times 10^{-12}$	
Area 10, Gate 700 South	03/03/89	03/16/89	$4.5 \times 10^{-12}$	
Area 10, Gate 700 South	03/16/89	03/29/89	$<3.4 \times 10^{-12}$	
Area 10, Gate 700 South	03/29/89	04/13/89	$3.9 \times 10^{-12}$	
Area 10, Gate 700 South	04/12/89	04/26/89	$<2.1 \times 10^{-12}$	
Area 10, Gate 700 South	04/26/89	05/12/89	$<3.4 \times 10^{-12}$	
Area 10, Gate 700 South	05/12/89	06/01/89	$<1.9 \times 10^{-12}$	
Area 10, Gate 700 South	06/01/89	06/14/89	$<3.7 \times 10^{-12}$	
Area 10, Gate 700 South	06/14/89	06/27/89	$<3.8 \times 10^{-12}$	
Area 10, Gate 700 South	06/27/89	07/19/89	$1.3 \times 10^{-11}$	
Area 10, Gate 700 South	09/01/89	09/22/89	$2.8 \times 10^{-13}$	$3.0 \times 10^{-13}$
Area 10, Gate 700 South	09/22/89	11/02/89	$5.2 \times 10^{-13}$	$1.8 \times 10^{-13}$
Area 10, Gate 700 South	11/02/89	11/22/89	$1.1 \times 10^{-14}$	$6.1 \times 10^{-15}$
Area 10, Gate 700 South	11/22/89	12/13/89	$1.8 \times 10^{-12}$	$2.6 \times 10^{-13}$
Area 10, Gate 700 South	12/13/89	01/03/90	$9.4 \times 10^{-13}$	$2.5 \times 10^{-13}$
Area 12, Complex	01/04/89	01/19/89	$7.3 \times 10^{-12}$	
Area 12, Complex	01/19/89	02/02/89	$5.6 \times 10^{-12}$	
Area 12, Complex	02/02/89	02/16/89	$6.3 \times 10^{-12}$	
Area 12, Complex	02/16/89	03/03/89	$9.8 \times 10^{-12}$	
Area 12, Complex	03/03/89	03/16/89	$1.9 \times 10^{-11}$	
Area 12, Complex	03/16/89	03/29/89	$4.8 \times 10^{-12}$	
Area 12, Complex	03/29/89	04/13/89	$5.8 \times 10^{-12}$	
Area 12, Complex	04/13/89	04/26/89	$5.7 \times 10^{-12}$	
Area 12, Complex	04/26/89	05/12/89	$4.4 \times 10^{-12}$	
Area 12, Complex	05/12/89	06/01/89	$3.9 \times 10^{-12}$	
Area 12, Complex	06/01/89	06/14/89	$<5.5 \times 10^{-12}$	
Area 12, Complex	06/14/89	06/27/89	$3.7 \times 10^{-12}$	
Area 12, Complex	08/10/89	09/10/89	$2.2 \times 10^{-12}$	
Area 12, Complex	08/19/89	09/01/89	$1.2 \times 10^{-11}$	
Area 12, Complex	09/01/89	09/22/89	$3.9 \times 10^{-12}$	$3.2 \times 10^{-13}$
Area 12, Complex	09/22/89	11/02/89	$2.1 \times 10^{-12}$	$2.1 \times 10^{-13}$

Table B.1 (Tritium in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 12, Complex	11/02/89	11/22/89	$8.6 \times 10^{-14}$	$1.0 \times 10^{-14}$
Area 12, Complex	11/22/89	12/13/89	$4.5 \times 10^{-12}$	$2.7 \times 10^{-13}$
Area 15, EPA Farm Complex	01/04/89	01/19/89	$7.7 \times 10^{-11}$	
Area 15, EPA Farm Complex	01/19/89	02/02/89	$6.1 \times 10^{-11}$	
Area 15, EPA Farm Complex	02/02/89	02/16/89	$3.9 \times 10^{-11}$	
Area 15, EPA Farm Complex	02/16/89	03/03/89	$5.6 \times 10^{-11}$	
Area 15, EPA Farm Complex	03/03/89	03/16/89	$<2.4 \times 10^{-11}$	
Area 15, EPA Farm Complex	03/16/89	03/29/89	$8.2 \times 10^{-11}$	
Area 15, EPA Farm Complex	03/29/89	04/13/89	$1.4 \times 10^{-11}$	
Area 15, EPA Farm Complex	04/12/89	04/26/89	$9.9 \times 10^{-12}$	
Area 15, EPA Farm Complex	04/26/89	05/12/89	$1.7 \times 10^{-11}$	
Area 15, EPA Farm Complex	05/12/89	06/01/89	$8.4 \times 10^{-12}$	
Area 15, EPA Farm Complex	06/01/89	06/14/89	$9.0 \times 10^{-12}$	
Area 15, EPA Farm Complex	06/14/89	06/27/89	$1.7 \times 10^{-11}$	
Area 15, EPA Farm Complex	06/27/89	07/19/89	$1.9 \times 10^{-11}$	
Area 15, EPA Farm Complex	09/01/89	09/22/89	$1.1 \times 10^{-11}$	$5.3 \times 10^{-13}$
Area 15, EPA Farm Complex	09/22/89	11/02/89	$6.0 \times 10^{-12}$	$2.8 \times 10^{-13}$
Area 15, EPA Farm Complex	11/02/89	11/22/89	$6.4 \times 10^{-13}$	$1.7 \times 10^{-14}$
Area 15, EPA Farm Complex	11/22/89	12/13/89	$1.9 \times 10^{-11}$	$3.6 \times 10^{-13}$
Area 15, EPA Farm Complex	12/13/89	01/03/90	$1.3 \times 10^{-12}$	$6.5 \times 10^{-14}$
Area 23, Building 790 No. 2	01/04/89	01/19/89	$3.4 \times 10^{-12}$	
Area 23, Building 790 No. 2	01/19/89	02/02/89	$3.5 \times 10^{-12}$	
Area 23, Building 790 No. 2	02/02/89	02/16/89	$<3.3 \times 10^{-12}$	
Area 23, Building 790 No. 2	02/16/89	03/03/89	$<2.8 \times 10^{-12}$	
Area 23, Building 790 No. 2	03/03/89	03/16/89	$3.0 \times 10^{-12}$	
Area 23, Building 790 No. 2	03/16/89	03/29/89	$<3.3 \times 10^{-12}$	
Area 23, Building 790 No. 2	03/29/89	04/13/89	$<1.5 \times 10^{-12}$	
Area 23, Building 790 No. 2	04/12/89	04/26/89	$<2.5 \times 10^{-12}$	
Area 23, Building 790 No. 2	04/26/89	05/12/89	$<3.4 \times 10^{-12}$	
Area 23, Building 790 No. 2	05/12/89	06/01/89	$<2.1 \times 10^{-12}$	
Area 23, Building 790 No. 2	06/01/89	06/14/89	$<3.6 \times 10^{-12}$	
Area 23, Building 790 No. 2	06/14/89	06/27/89	$5.4 \times 10^{-12}$	
Area 23, Building 790 No. 2	06/27/89	07/19/89	$3.0 \times 10^{-12}$	
Area 23, Building 790 No. 2	08/10/89	09/01/89	$<9.0 \times 10^{-13}$	
Area 23, Building 790 No. 2	09/01/89	09/22/89	$7.6 \times 10^{-13}$	$3.4 \times 10^{-13}$
Area 23, Building 790 No. 2	09/22/89	11/02/89	$2.3 \times 10^{-13}$	$1.6 \times 10^{-13}$
Area 23, Building 790 No. 2	11/02/89	11/22/89	$1.6 \times 10^{-14}$	$4.3 \times 10^{-15}$
Area 23, Building 790 No. 2	11/22/89	12/13/89	$9.6 \times 10^{-13}$	$3.2 \times 10^{-13}$
Area 23, Building 790 No. 2	12/13/89	01/03/90	$1.5 \times 10^{-12}$	$4.4 \times 10^{-13}$
Area 23, East Boundary	01/04/89	01/19/89	$2.5 \times 10^{-12}$	
Area 23, East Boundary	01/19/89	02/02/89	$<2.4 \times 10^{-12}$	
Area 23, East Boundary	02/16/89	03/03/89	$<3.6 \times 10^{-12}$	
Area 23, East Boundary	03/03/89	03/16/89	$3.3 \times 10^{-12}$	
Area 23, East Boundary	03/16/89	03/29/89	$<3.6 \times 10^{-12}$	
Area 23, East Boundary	03/29/89	04/13/89	$2.0 \times 10^{-12}$	
Area 23, East Boundary	04/12/89	04/26/89	$<2.9 \times 10^{-12}$	
Area 23, East Boundary	04/26/89	05/12/89	$<3.7 \times 10^{-12}$	
Area 23, East Boundary	05/12/89	06/01/89	$<2.0 \times 10^{-12}$	
Area 23, East Boundary	06/14/89	06/27/89	$<2.9 \times 10^{-12}$	
Area 23, East Boundary	06/27/89	07/19/89	$1.8 \times 10^{-12}$	

Table B.1 (Tritium in Air, cont.)

Sampling Location	Sampling Dates		$\mu\text{Ci/mL}$	
	Start	End	Concentration	Standard Deviation (s)
Area 23, East Boundary	09/01/89	09/22/89	$6.4 \times 10^{-13}$	$4.0 \times 10^{-13}$
Area 23, East Boundary	09/22/89	11/02/89	$2.4 \times 10^{-13}$	$2.8 \times 10^{-13}$
Area 23, East Boundary	11/02/89	11/22/89	$7.4 \times 10^{-14}$	$2.2 \times 10^{-14}$
Area 23, East Boundary	12/13/89	01/03/90	$2.1 \times 10^{-12}$	$2.9 \times 10^{-13}$
Area 23, H&S Building Roof	01/19/89	02/02/89	$<3.1 \times 10^{-12}$	
Area 23, H&S Building Roof	02/02/89	02/16/89	$<3.5 \times 10^{-12}$	
Area 23, H&S Building Roof	02/16/89	03/03/89	$<3.4 \times 10^{-12}$	
Area 23, H&S Building Roof	03/29/89	04/13/89	$<1.7 \times 10^{-12}$	
Area 23, H&S Building Roof	04/12/89	04/26/89	$<2.8 \times 10^{-12}$	
Area 23, H&S Building Roof	04/26/89	05/12/89	$4.2 \times 10^{-11}$	
Area 23, H&S Building Roof	05/12/89	06/01/89	$<8.2 \times 10^{-13}$	
Area 23, H&S Building Roof	06/01/89	06/14/89	$<4.3 \times 10^{-12}$	
Area 23, H&S Building Roof	06/14/89	06/27/89	$5.3 \times 10^{-12}$	
Area 23, H&S Building Roof	06/27/89	07/19/89	$6.6 \times 10^{-12}$	
Area 23, H&S Building Roof	08/10/89	09/01/89	$<2.2 \times 10^{-12}$	
Area 23, H&S Building Roof	09/22/89	11/02/89	$3.4 \times 10^{-12}$	$8.0 \times 10^{-14}$
Area 23, H&S Building Roof	11/22/89	12/13/89	$3.4 \times 10^{-13}$	$1.3 \times 10^{-13}$
Area 23, H&S Building Roof	12/13/89	01/03/90	$2.5 \times 10^{-13}$	$1.6 \times 10^{-13}$
Area 25, E-MAD	01/04/89	01/19/89	$2.2 \times 10^{-12}$	
Area 25, E-MAD	01/19/89	02/02/89	$7.4 \times 10^{-13}$	
Area 25, E-MAD	02/02/89	02/16/89	$2.5 \times 10^{-12}$	
Area 25, E-MAD	02/16/89	03/03/89	$<2.6 \times 10^{-12}$	
Area 25, E-MAD	03/03/89	03/16/89	$<2.2 \times 10^{-12}$	
Area 25, E-MAD	04/13/89	04/25/89	$<3.1 \times 10^{-12}$	
Area 25, E-MAD	04/25/89	05/10/89	$2.3 \times 10^{-12}$	
Area 25, E-MAD	05/12/89	06/01/89	$<1.8 \times 10^{-12}$	
Area 25, E-MAD	06/01/89	06/14/89	$1.6 \times 10^{-11}$	
Area 25, E-MAD	06/14/89	06/27/89	$<3.0 \times 10^{-12}$	
Area 25, E-MAD	06/27/89	07/19/89	$7.4 \times 10^{-12}$	
Area 25, E-MAD	09/22/89	11/02/89	$-1.6 \times 10^{-13}$	$-1.6 \times 10^{-11}$
Area 25, E-MAD	11/02/89	11/22/89	$3.1 \times 10^{-14}$	$1.3 \times 10^{-14}$
Area 25, E-MAD	11/22/89	12/13/89	$3.5 \times 10^{-13}$	$2.6 \times 10^{-13}$
Area 25, E-MAD	12/13/89	01/03/90	$2.8 \times 10^{-13}$	$1.6 \times 10^{-13}$



# APPENDIX C RADIOACTIVITY IN CONTAINMENT PONDS

**Lawrence E. Barker**

Concentrations of radionuclides in waste water containment ponds was estimated by collecting water samples from T, N, and E Tunnels ponds and the Area 6 Decontamination Pad Pond. These samples are analyzed for  $^{238}\text{Pu}$ ,  $^{239}\text{Pu}$ , gamma-emitting radionuclides, gross beta, and tritium. Sampling locations, dates, and measured concentrations with analytical standard deviations are given in Tables C.1, C.2, C.3, C.4, and C.5 along with corresponding data for water from other sources. Statistical analyses of measured concentrations of  $^{238}\text{Pu}$ ,  $^{239}\text{Pu}$ , gamma-emitting radionuclides, gross beta, and tritium are presented below.

## PLUTONIUM-238

Measured concentrations of  $^{238}\text{Pu}$  in water, in  $\mu\text{Ci/mL}$ , for containment ponds are:

<u>Area</u>	<u>Minimum Concentration</u>	<u>Maximum Concentration</u>	<u>Arithmetic Average Concentration</u>
T Tunnel Pond	$2.3 \times 10^{-11}$	$7.3 \times 10^{-10}$	$2.8 \times 10^{-10}$
N Tunnel Pond	$-1.1 \times 10^{-11}$	$4.5 \times 10^{-11}$	$1.2 \times 10^{-11}$
E Tunnel Pond	$1.7 \times 10^{-9}$	$4.1 \times 10^{-9}$	$2.6 \times 10^{-9}$
Decontamination Pad Pond	$-8.9 \times 10^{-12}$	$2.8 \times 10^{-11}$	$5.2 \times 10^{-12}$

The concentration of  $^{238}\text{Pu}$  in water from the E Tunnel pond is much higher than that from other containment ponds. For all isotopes discussed in this appendix, the exploratory data analysis indicated that a log-normal distribution was the most appropriate assumption than a normal distribution. Thus regression of the logarithm of the concentration versus time was performed, and the residuals were examined for evidence of additional time patterns. However, where only descriptive statistics were called for, the arithmetic mean rather than the geometric mean was used. There was little evidence of time trends in measured concentrations of  $^{238}\text{Pu}$ . Plots of time versus the logarithm of the measured concentrations revealed no pattern. Linear regression analysis failed to reveal any patterns significant at the five percent level.

## PLUTONIUM-239

The same analytical methods used for  $^{238}\text{Pu}$  were used for  $^{239+240}\text{Pu}$ . Measured concentrations of  $^{239}\text{Pu}$  in water, in  $\mu\text{Ci/mL}$ , for containment ponds were:

<u>Area</u>	<u>Minimum Concentration</u>	<u>Maximum Concentration</u>	<u>Arithmetic Average Concentration</u>
T Tunnel Pond	$6.4 \times 10^{-10}$	$2.2 \times 10^{-8}$	$8.1 \times 10^{-9}$
N Tunnel Pond	$-1.0 \times 10^{-12}$	$1.6 \times 10^{-10}$	$4.4 \times 10^{-11}$
E Tunnel Pond	$1.4 \times 10^{-10}$	$3.3 \times 10^{-8}$	$2.1 \times 10^{-8}$
Decontamination Pad Pond	$6.1 \times 10^{-11}$	$1.8 \times 10^{-10}$	$1.2 \times 10^{-10}$

As with  $^{238}\text{Pu}$ , the average measured concentration of  $^{239}\text{Pu}$  was much greater in water samples from the E Tunnel pond than in those from other sources.

There is little evidence for time trends in measured concentrations of  $^{239}\text{Pu}$ . Plots of time versus measured concentrations revealed no pattern, and statistical analysis failed to reveal any patterns significant at the five percent level.

### GAMMA-EMITTING RADIONUCLIDES

Gamma-emitting radionuclides found in water from containment ponds were  $^{57}\text{Co}$ ,  $^{137}\text{Cs}$ ,  $^{131}\text{I}$ ,  $^{40}\text{K}$ ,  $^{95}\text{Nb}$ ,  $^{103}\text{Ru}$ ,  $^{106}\text{Ru}$ ,  $^{124}\text{Sb}$ ,  $^{125}\text{Sb}$ ,  $^{232}\text{Th}$ ,  $^{238}\text{U}$ , and  $^{95}\text{Zr}$ . These radionuclides were statistically examined using a two-way analysis of variance with factors of radionuclide identity and location. The variable analyzed was the logarithm of the concentration. Fisher's multiple comparison test was used to examine the patterns in significant differences. As would be expected, measured concentrations varied among radionuclides. After adjusting for differences in radionuclide, observed concentrations at the Decontamination Pad Pond were found to differ in a statistically significant manner from measured concentrations at the T, N, and E Tunnel ponds. Evidence was found that concentrations in T, N, and E Tunnel ponds differed. Sampling patterns made identification of differences impossible. That is, it can be said differences exist, but there were not sufficient data to identify what the differences were. Here T, N, and E Tunnel pond data were combined for simplicity.

Samples from the Decontamination Pad Pond collected on March 15 had observed concentrations of  $2.9 \times 10^{-7}$ ,  $3.6 \times 10^{-8}$ , and  $3.2 \times 10^{-8}$   $\mu\text{Ci/mL}$ , respectively, of  $^{131}\text{I}$ ,  $^{95}\text{Nb}$ , and  $^{124}\text{Sb}$ . Samples collected on April 14 and June 8 had similar concentrations of  $^{131}\text{I}$ , but no observed  $^{95}\text{Nb}$  or  $^{124}\text{Sb}$ . No other radionuclides were detected in the Decontamination Pad Pond samples.

Only  $^{137}\text{Cs}$ ,  $^{106}\text{Ru}$ , and  $^{125}\text{Sb}$  were found in more than four samples from the T, N, and E Tunnel ponds. Average concentrations of  $^{137}\text{Cs}$ ,  $^{106}\text{Ru}$ , and  $^{125}\text{Sb}$  in those samples containing them were, respectively,  $1.5 \times 10^{-6}$ ,  $6.8 \times 10^{-6}$ , and  $7.1 \times 10^{-7}$   $\mu\text{Ci/mL}$ . As most samples did not contain these radionuclides, it is more meaningful to state the overall respective averages of  $5.0 \times 10^{-7}$ ,  $1.8 \times 10^{-6}$ , and  $1.9 \times 10^{-7}$   $\mu\text{Ci/mL}$ . Although this water is not ingested, it is of interest to compare the concentrations to the Derived Concentration Guides (DCGs) for ingested water given in DOE Order 5400.5. The observed concentrations were 0.168, 0.300, and 0.00386 of the DCGs, respectively, for  $^{137}\text{Cs}$ ,  $^{106}\text{Ru}$ , and  $^{125}\text{Sb}$ . The greatest concentration of  $^{137}\text{Cs}$ ,  $2.8 \times 10^{-5}$   $\mu\text{Ci/mL}$ , was found in the E Tunnel pond on December 27. The greatest observed concentration of  $^{106}\text{Ru}$ ,  $1.2 \times 10^{-5}$   $\mu\text{Ci/mL}$ , was found in the T Tunnel pond on February 28. The greatest concentration of  $^{125}\text{Sb}$ ,  $1.2 \times 10^{-6}$   $\mu\text{Ci/mL}$ , was found in the T Tunnel pond on April 11. The greatest average concentration over all samples of any other radionuclide was  $2.5 \times 10^{-9}$   $\mu\text{Ci/mL}$  of  $^{40}\text{K}$ .

No time trends in concentrations of gamma-emitting radionuclides, for either the Decontamination Pad Pond or the tunnel ponds, were found to be statistically significant at the five percent level.

### GROSS BETA

The same statistical methods as described above for the gamma-emitter data were used on the gross beta data. Measured concentrations of gross beta in water, in  $\mu\text{Ci/mL}$ , for containment ponds were:

<u>Area</u>	<u>Minimum Concentration</u>	<u>Maximum Concentration</u>	<u>Arithmetic Average Concentration</u>
T Tunnel Pond	$1.5 \times 10^{-7}$	$1.5 \times 10^{-6}$	$6.3 \times 10^{-6}$
N Tunnel Pond	$4.2 \times 10^{-9}$	$7.6 \times 10^{-7}$	$6.7 \times 10^{-8}$
E Tunnel Pond	$7.3 \times 10^{-8}$	$4.3 \times 10^{-6}$	$7.3 \times 10^{-7}$
Decontamination Pad Pond	$1.2 \times 10^{-7}$	$2.6 \times 10^{-7}$	$2.0 \times 10^{-7}$

The highest average concentration of gross beta was in water samples from the T Tunnel pond. Three of the measured concentrations for the E Tunnel pond were unusually high. Measurements taken on June 28, July 20, and August 18 were, respectively,  $4.3 \times 10^{-6}$ ,  $8.3 \times 10^{-7}$ , and  $1.9 \times 10^{-8}$   $\mu\text{Ci/mL}$ . Excluding these, the highest measured concentration of gross beta in a water sample from the E Tunnel pond was  $1.6 \times 10^{-7}$   $\mu\text{Ci/mL}$ . With these three values removed, the remaining concentrations averaged  $1.3 \times 10^{-7}$   $\mu\text{Ci/mL}$ . Other than the June/July/August peak in gross beta in water in samples from the E Tunnel pond, there were no time trends which were statistically significant at the five percent level.

### TRITIUM

Measured concentrations of tritium in water, in  $\mu\text{Ci/mL}$ , for containment ponds were:

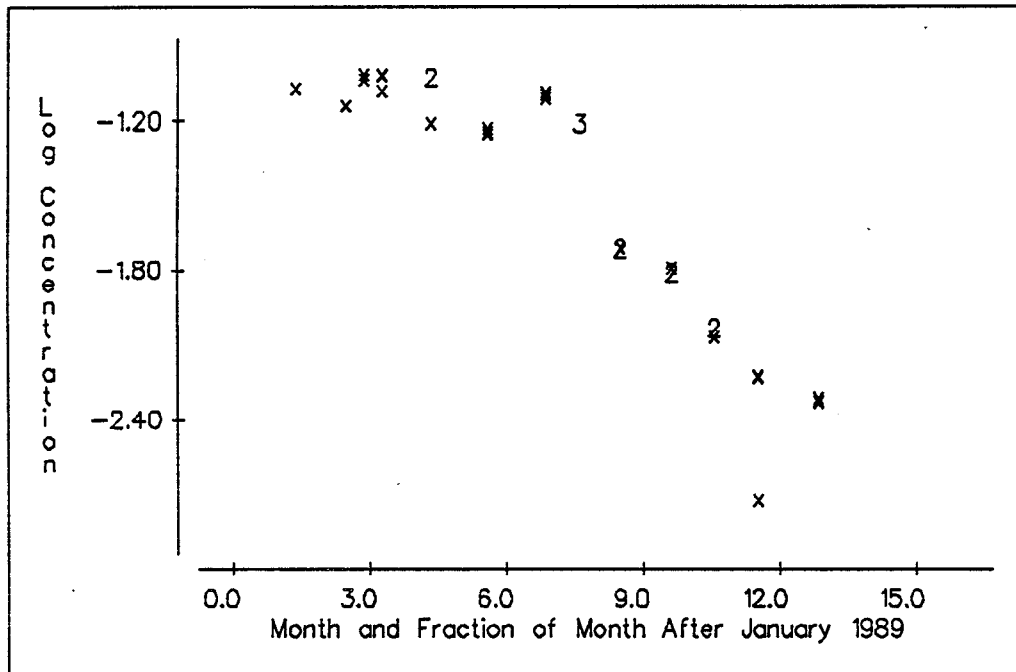
<u>Area</u>	<u>Minimum Concentration</u>	<u>Maximum Concentration</u>	<u>Arithmetic Average Concentration</u>
T Tunnel Pond	$1.9 \times 10^{-3}$	$9.8 \times 10^{-2}$	$4.8 \times 10^{-2}$
N Tunnel Pond	$3.0 \times 10^{-4}$	$9.0 \times 10^{-4}$	$5.1 \times 10^{-4}$
E Tunnel Pond	$1.2 \times 10^{-3}$	$2.4 \times 10^{-3}$	$1.8 \times 10^{-3}$
Decontamination Pad Pond	$1.7 \times 10^{-7}$	$3.4 \times 10^{-6}$	$1.8 \times 10^{-6}$

Although this water is not ingested, these concentrations are compared with the DCG for tritium in ingested water of  $2.0 \times 10^{-3}$   $\mu\text{Ci/mL}$ , given in DOE Order 5400.5. The fractions of the DCG for tritium in the T, N, and E Tunnel ponds and the Decontamination Pad Pond were, respectively, 23.94, 0.26, 0.88, and 0.00088. That is, water from the Decontamination Pad Pond contained less than one-tenth of one percent of the DCG for tritium in water, while water from the tunnel ponds exceed the DCG (T Tunnel) or contain a substantial portion of it (N and E Tunnels).

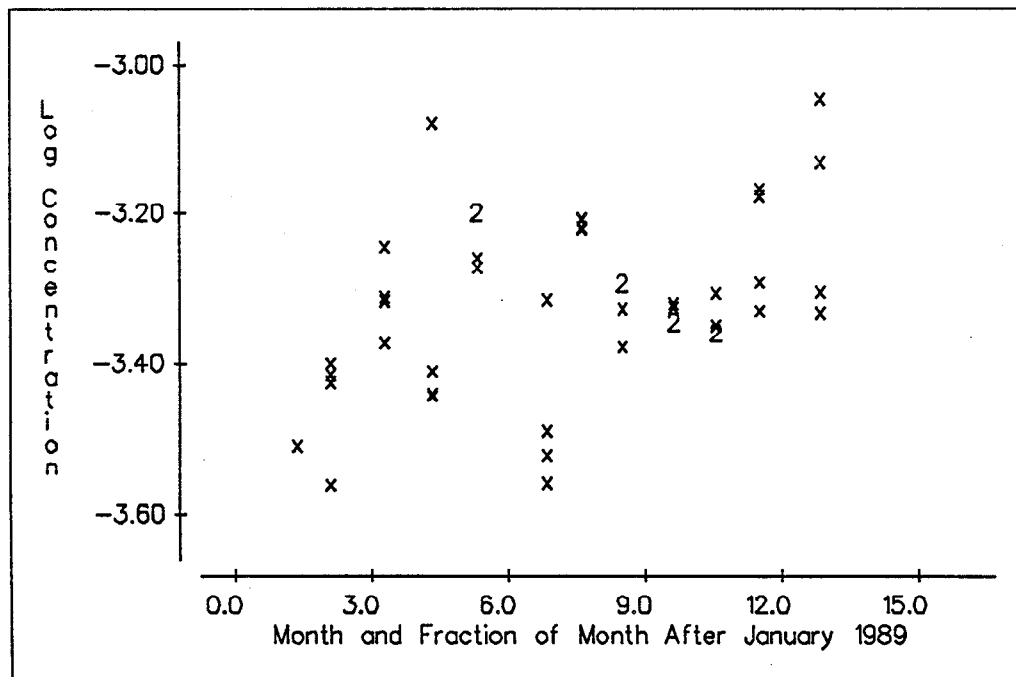
Measured concentrations of tritium in water from the Decontamination Pad Pond showed no statistically significant time trend. This was not true for T, N, and E Tunnels. Plots of base ten logarithms of measured tritium concentrations versus dates of sample collection for T, N, and E Tunnels are presented in Figures C.1, C.2, and C.3. (The numbers in the plots represent multiple observations.) Tritium concentrations in water samples from T and E Tunnel ponds were decreasing over time. Tritium concentrations in water samples from N Tunnel showed an increasing trend. Figure C.2 suggests concentrations increased during the first part of the year, stabilized during the middle, and possibly resumed increasing near the year's end. Linear regression with examination of the residuals showed that these concentrations are not random over time. The observed significance level for each trend was one percent.

The flow of tritium out of a tunnel is directly influenced by the mine-back and drill-back operations conducted after a nuclear test in that tunnel. At N Tunnel these activities were conducted throughout the year, and so it is reasonable to expect the concentration of

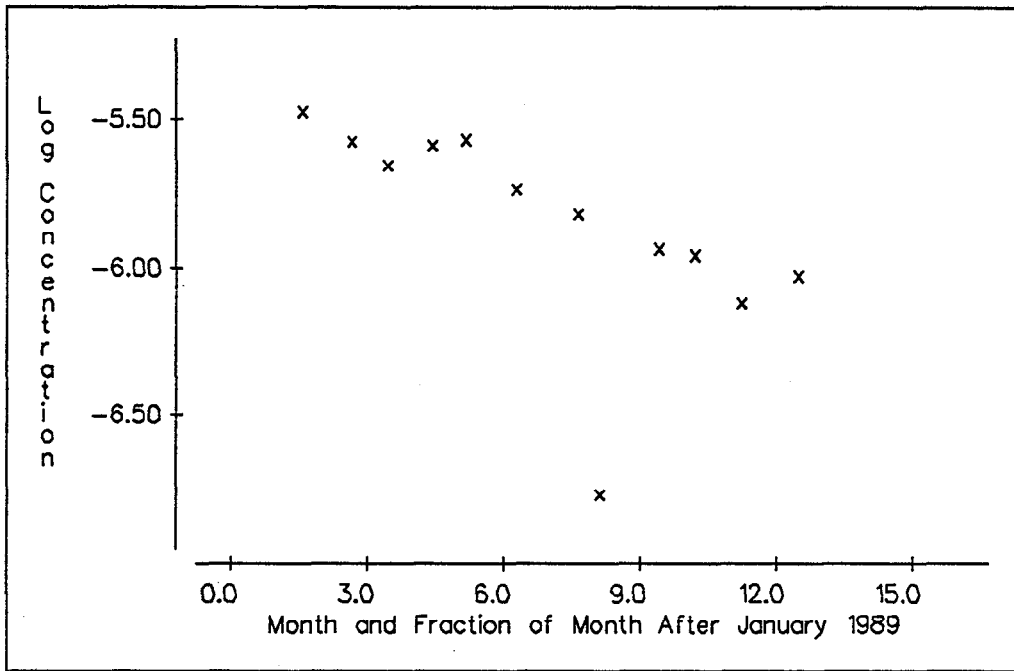
tritium to have shown an increasing trend. Decreasing trends are explained by the decay of tritium and by a decline in research activities.



Log of Tritium Concentrations in  $\mu\text{Ci/mL}$  at T Tunnel



Log of Tritium Concentrations in  $\mu\text{Ci/mL}$  at N Tunnel



Log of Tritium Concentrations in  $\mu\text{Ci/mL}$  at E Tunnel

Table C.1 <sup>238</sup>Pu in Water - 1989

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 1, Building 101	09/05/89	1.4 x 10 <sup>-12</sup>	2.6 x 10 <sup>-11</sup>
Area 1, Building 101	12/06/89	3.2 x 10 <sup>-12</sup>	4.7 x 10 <sup>-11</sup>
Area 2, Mud Plant Reservoir	03/02/89	3.5 x 10 <sup>-11</sup>	3.0 x 10 <sup>-11</sup>
Area 2, Mud Plant Reservoir	06/07/89	-1.1 x 10 <sup>-11</sup>	3.0 x 10 <sup>-11</sup>
Area 2, Mud Plant Reservoir	09/13/89	4.8 x 10 <sup>-12</sup>	2.7 x 10 <sup>-11</sup>
Area 2, Mud Plant Reservoir	12/14/89	-1.3 x 10 <sup>-11</sup>	3.1 x 10 <sup>-11</sup>
Area 2, Restroom	06/13/89	4.2 x 10 <sup>-12</sup>	3.0 x 10 <sup>-11</sup>
Area 2, Restroom	09/05/89	-1.5 x 10 <sup>-11</sup>	3.0 x 10 <sup>-11</sup>
Area 2, Restroom	12/06/89	4.6 x 10 <sup>-11</sup>	3.8 x 10 <sup>-11</sup>
Area 2, Well 2	03/17/89	5.8 x 10 <sup>-11</sup>	2.9 x 10 <sup>-11</sup>
Area 2, Well 2	06/20/89	-1.8 x 10 <sup>-11</sup>	2.8 x 10 <sup>-11</sup>
Area 2, Well 2	09/11/89	-3.3 x 10 <sup>-11</sup>	2.3 x 10 <sup>-11</sup>
Area 2, Well 2	12/12/89	1.9 x 10 <sup>-11</sup>	3.4 x 10 <sup>-11</sup>
Area 2, Well 2 Reservoir	06/07/89	2.8 x 10 <sup>-11</sup>	4.3 x 10 <sup>-11</sup>
Area 2, Well 2 Reservoir	09/13/89	-4.3 x 10 <sup>-11</sup>	4.6 x 10 <sup>-11</sup>
Area 2, Well 2 Reservoir	12/15/89	-1.1 x 10 <sup>-11</sup>	3.0 x 10 <sup>-11</sup>
Area 3, Cafeteria	06/13/89	1.2 x 10 <sup>-11</sup>	3.5 x 10 <sup>-11</sup>
Area 3, Cafeteria	09/05/89	-2.7 x 10 <sup>-11</sup>	3.0 x 10 <sup>-11</sup>
Area 3, Cafeteria	12/06/89	2.7 x 10 <sup>-11</sup>	3.6 x 10 <sup>-11</sup>
Area 3, Mud Plant Reservoir	03/10/89	7.5 x 10 <sup>-12</sup>	2.8 x 10 <sup>-11</sup>
Area 3, Mud Plant Reservoir	06/07/89	8.0 x 10 <sup>-12</sup>	3.4 x 10 <sup>-11</sup>
Area 3, Mud Plant Reservoir	09/12/89	2.0 x 10 <sup>-11</sup>	2.9 x 10 <sup>-11</sup>
Area 3, Mud Plant Reservoir	12/08/89	-3.9 x 10 <sup>-11</sup>	2.8 x 10 <sup>-11</sup>
Area 3, Well A Reservoir	03/10/89	2.4 x 10 <sup>-11</sup>	2.4 x 10 <sup>-11</sup>
Area 3, Well A Reservoir	06/07/89	-3.7 x 10 <sup>-11</sup>	3.8 x 10 <sup>-11</sup>
Area 3, Well A Reservoir	09/06/89	-5.1 x 10 <sup>-11</sup>	2.8 x 10 <sup>-11</sup>
Area 3, Well A Reservoir	12/08/89	5.5 x 10 <sup>-11</sup>	3.7 x 10 <sup>-11</sup>
Area 5, Cane Spring	03/09/89	5.2 x 10 <sup>-11</sup>	2.6 x 10 <sup>-11</sup>
Area 5, Cane Spring	06/07/89	1.1 x 10 <sup>-11</sup>	2.6 x 10 <sup>-11</sup>
Area 5, Cane Spring	12/15/89	3.5 x 10 <sup>-11</sup>	4.0 x 10 <sup>-11</sup>
Area 5, Well 5B Reservoir	03/09/89	7.2 x 10 <sup>-12</sup>	2.4 x 10 <sup>-11</sup>
Area 5, Well 5B Reservoir	06/07/89	-2.6 x 10 <sup>-12</sup>	4.0 x 10 <sup>-11</sup>
Area 5, Well 5B Reservoir	09/06/89	7.6 x 10 <sup>-12</sup>	2.8 x 10 <sup>-11</sup>
Area 5, Well 5B Reservoir	12/08/89	9.5 x 10 <sup>-12</sup>	3.5 x 10 <sup>-11</sup>
Area 5, Well 5C	03/14/89	2.3 x 10 <sup>-11</sup>	3.4 x 10 <sup>-11</sup>
Area 5, Well 5C	06/15/89	4.6 x 10 <sup>-12</sup>	2.9 x 10 <sup>-11</sup>
Area 5, Well 5C	09/11/89	-1.4 x 10 <sup>-11</sup>	2.1 x 10 <sup>-11</sup>
Area 5, Well Ue5c	12/08/89	-2.2 x 10 <sup>-11</sup>	2.5 x 10 <sup>-11</sup>
Area 5, Well Ue5c Reservoir	03/09/89	1.2 x 10 <sup>-11</sup>	2.5 x 10 <sup>-11</sup>
Area 5, Well Ue5c Reservoir	06/07/89	7.4 x 10 <sup>-11</sup>	4.3 x 10 <sup>-11</sup>
Area 5, Well Ue5c Reservoir	09/12/89	1.3 x 10 <sup>-11</sup>	3.7 x 10 <sup>-11</sup>
Area 5, Well Ue5c Reservoir	12/08/89	-1.6 x 10 <sup>-11</sup>	3.4 x 10 <sup>-11</sup>
Area 6, Bottled Water	03/07/89	4.3 x 10 <sup>-12</sup>	2.6 x 10 <sup>-11</sup>
Area 6, Bottled Water	06/12/89	-3.0 x 10 <sup>-11</sup>	2.9 x 10 <sup>-11</sup>
Area 6, Cafeteria	03/07/89	2.5 x 10 <sup>-11</sup>	2.3 x 10 <sup>-11</sup>
Area 6, Cafeteria	06/12/89	-2.2 x 10 <sup>-11</sup>	2.9 x 10 <sup>-11</sup>

Table C.1 (<sup>238</sup>Pu in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 6, Decontamination Pad Pond	03/15/89	$2.8 \times 10^{-11}$	$2.8 \times 10^{-11}$
Area 6, Decontamination Pad Pond	06/08/89	$-8.9 \times 10^{-12}$	$3.5 \times 10^{-11}$
Area 6, Decontamination Pad Pond	09/13/89	$-7.0 \times 10^{-13}$	$3.2 \times 10^{-11}$
Area 6, Decontamination Pad Pond	12/14/89	$2.6 \times 10^{-12}$	$3.1 \times 10^{-11}$
Area 6, Sewage	03/15/89	$5.5 \times 10^{-11}$	$2.8 \times 10^{-11}$
Area 6, Sewage	06/21/89	$-5.4 \times 10^{-11}$	$3.2 \times 10^{-11}$
Area 6, Sewage	09/27/89	$1.7 \times 10^{-11}$	$3.0 \times 10^{-11}$
Area 6, Sewage	12/14/89	$1.2 \times 10^{-11}$	$3.1 \times 10^{-11}$
Area 6, Well 3 Reservoir	03/10/89	$-1.9 \times 10^{-11}$	$2.6 \times 10^{-11}$
Area 6, Well 3 Reservoir	06/07/89	$4.0 \times 10^{-11}$	$4.4 \times 10^{-11}$
Area 6, Well 3 Reservoir	09/06/89	$-2.0 \times 10^{-11}$	$3.2 \times 10^{-11}$
Area 6, Well 3 Reservoir	12/08/89	$-3.9 \times 10^{-11}$	$3.6 \times 10^{-11}$
Area 6, Well 4	03/17/89	$3.0 \times 10^{-11}$	$2.8 \times 10^{-11}$
Area 6, Well 4	06/20/89	$1.2 \times 10^{-11}$	$2.8 \times 10^{-11}$
Area 6, Well 4	09/11/89	$2.0 \times 10^{-11}$	$3.1 \times 10^{-11}$
Area 6, Well 4	12/12/89	$-1.0 \times 10^{-13}$	$3.0 \times 10^{-11}$
Area 6, Well C	09/11/89	$-4.1 \times 10^{-11}$	$2.9 \times 10^{-11}$
Area 6, Well C1	03/17/89	$4.9 \times 10^{-12}$	$2.3 \times 10^{-11}$
Area 6, Well C1	06/20/89	$-6.7 \times 10^{-11}$	$3.4 \times 10^{-11}$
Area 6, Well C1	09/11/89	$2.2 \times 10^{-11}$	$3.9 \times 10^{-11}$
Area 6, Well C1	12/12/89	$-2.9 \times 10^{-12}$	$3.2 \times 10^{-11}$
Area 6, Well C1 Reservoir	03/10/89	$9.4 \times 10^{-12}$	$2.5 \times 10^{-11}$
Area 6, Well C1 Reservoir	06/07/89	$-3.6 \times 10^{-11}$	$3.6 \times 10^{-11}$
Area 6, Well C1 Reservoir	09/12/89	$3.9 \times 10^{-11}$	$3.4 \times 10^{-11}$
Area 6, Well C1 Reservoir	12/13/89	$1.1 \times 10^{-11}$	$3.0 \times 10^{-11}$
Area 7, Reitman Seep	03/09/89	$3.0 \times 10^{-11}$	$2.6 \times 10^{-11}$
Area 7, Reitman Seep	06/07/89	$1.5 \times 10^{-11}$	$5.1 \times 10^{-11}$
Area 7, Reitman Seep	09/13/89	$4.5 \times 10^{-12}$	$2.8 \times 10^{-11}$
Area 7, Reitman Seep	12/14/89	$-1.3 \times 10^{-11}$	$2.7 \times 10^{-11}$
Area 12, Cafeteria	06/13/89	$-7.4 \times 10^{-11}$	$3.0 \times 10^{-11}$
Area 12, Cafeteria	09/05/89	$-2.1 \times 10^{-11}$	$3.0 \times 10^{-11}$
Area 12, Captain Jack Spring	03/22/89	$1.1 \times 10^{-11}$	$2.3 \times 10^{-11}$
Area 12, Captain Jack Spring	12/15/89	$3.7 \times 10^{-11}$	$3.2 \times 10^{-11}$
Area 12, E Tunnel Effluent Pond	03/10/89	$1.8 \times 10^{-9}$	$1.1 \times 10^{-10}$
Area 12, E Tunnel Effluent Pond	06/28/89	$4.1 \times 10^{-9}$	$3.0 \times 10^{-10}$
Area 12, E Tunnel Effluent Pond	09/20/89	$1.7 \times 10^{-9}$	$1.2 \times 10^{-10}$
Area 12, E Tunnel Effluent Pond	12/27/89	$2.9 \times 10^{-9}$	$1.8 \times 10^{-10}$
Area 12, N Tunnel Effluent Pond	03/10/89	$3.3 \times 10^{-11}$	$2.3 \times 10^{-11}$
Area 12, N Tunnel Effluent Pond	06/28/89	$1.7 \times 10^{-11}$	$3.9 \times 10^{-11}$
Area 12, N Tunnel Effluent Pond	09/20/89	$1.8 \times 10^{-11}$	$3.1 \times 10^{-11}$
Area 12, N Tunnel Effluent Pond	12/27/89	$5.4 \times 10^{-12}$	$3.4 \times 10^{-11}$
Area 12, N Tunnel Pond No. 1	03/10/89	$4.5 \times 10^{-11}$	$2.2 \times 10^{-11}$
Area 12, N Tunnel Pond No. 1	06/28/89	$1.1 \times 10^{-11}$	$2.8 \times 10^{-11}$
Area 12, N Tunnel Pond No. 1	09/20/89	$1.5 \times 10^{-11}$	$3.1 \times 10^{-11}$
Area 12, N Tunnel Pond No. 1	12/27/89	$2.4 \times 10^{-11}$	$3.1 \times 10^{-11}$
Area 12, N Tunnel Pond No. 2	03/10/89	$6.8 \times 10^{-12}$	$2.2 \times 10^{-11}$

Table C.1 (<sup>238</sup>Pu in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 12, N Tunnel Pond No. 2	06/28/89	$1.2 \times 10^{-11}$	$3.4 \times 10^{-11}$
Area 12, N Tunnel Pond No. 2	09/20/89	$7.2 \times 10^{-12}$	$3.0 \times 10^{-11}$
Area 12, N Tunnel Pond No. 2	12/27/89	$-5.5 \times 10^{-12}$	$3.0 \times 10^{-11}$
Area 12, N Tunnel Pond No. 3	03/10/89	$-3.8 \times 10^{-12}$	$2.5 \times 10^{-11}$
Area 12, N Tunnel Pond No. 3	09/20/89	$-1.3 \times 10^{-11}$	$3.0 \times 10^{-11}$
Area 12, Sewage Pond	06/21/89	$1.0 \times 10^{-11}$	$3.7 \times 10^{-11}$
Area 12, Sewage Pond	09/20/89	$-1.5 \times 10^{-11}$	$2.9 \times 10^{-11}$
Area 12, Sewage Pond	12/14/89	$1.3 \times 10^{-11}$	$3.2 \times 10^{-11}$
Area 12, T Tunnel Effluent Pond	03/09/89	$7.3 \times 10^{-10}$	$5.8 \times 10^{-11}$
Area 12, T Tunnel Effluent Pond	06/28/89	$4.7 \times 10^{-10}$	$5.9 \times 10^{-11}$
Area 12, T Tunnel Effluent Pond	09/20/89	$1.4 \times 10^{-10}$	$4.0 \times 10^{-11}$
Area 12, T Tunnel Effluent Pond	12/27/89	$6.1 \times 10^{-11}$	$4.3 \times 10^{-11}$
Area 12, T Tunnel Pond No. 1	03/09/89	$6.0 \times 10^{-10}$	$5.4 \times 10^{-11}$
Area 12, T Tunnel Pond No. 1	06/28/89	$3.7 \times 10^{-10}$	$4.5 \times 10^{-11}$
Area 12, T Tunnel Pond No. 1	09/20/89	$9.2 \times 10^{-11}$	$3.6 \times 10^{-11}$
Area 12, T Tunnel Pond No. 1	12/27/89	$2.3 \times 10^{-11}$	$3.8 \times 10^{-11}$
Area 12, T Tunnel Pond No. 2	03/09/89	$6.0 \times 10^{-10}$	$5.4 \times 10^{-11}$
Area 12, T Tunnel Pond No. 2	06/28/89	$1.7 \times 10^{-10}$	$4.0 \times 10^{-11}$
Area 12, T Tunnel Pond No. 2	09/20/89	$6.2 \times 10^{-11}$	$4.7 \times 10^{-11}$
Area 12, T Tunnel Pond No. 2	12/27/89	$5.2 \times 10^{-11}$	$4.0 \times 10^{-11}$
Area 12, White Rock Spring	06/07/89	$-4.3 \times 10^{-11}$	$3.3 \times 10^{-11}$
Area 12, White Rock Spring	09/13/89	$-2.0 \times 10^{-11}$	$3.3 \times 10^{-11}$
Area 15, Well Ue15d	03/17/89	$9.0 \times 10^{-12}$	$2.6 \times 10^{-11}$
Area 15, Well Ue15d	06/20/89	$2.4 \times 10^{-11}$	$2.7 \times 10^{-11}$
Area 15, Well Ue15d	09/11/89	$-2.1 \times 10^{-11}$	$3.0 \times 10^{-11}$
Area 15, Well Ue15d	12/12/89	$-4.1 \times 10^{-12}$	$2.7 \times 10^{-11}$
Area 16, Tippipah Spring	03/15/89	$1.4 \times 10^{-11}$	$2.8 \times 10^{-11}$
Area 16, Tippipah Spring	06/08/89	$-1.4 \times 10^{-12}$	$3.2 \times 10^{-11}$
Area 16, Tippipah Spring	12/15/89	$2.3 \times 10^{-11}$	$4.3 \times 10^{-11}$
Area 16, Well 16D	03/17/89	$7.3 \times 10^{-12}$	$2.3 \times 10^{-11}$
Area 16, Well 16D	06/20/89	$3.0 \times 10^{-11}$	$3.2 \times 10^{-11}$
Area 16, Well 16D	09/11/89	$9.5 \times 10^{-12}$	$3.0 \times 10^{-11}$
Area 18, Camp 17 Reservoir	03/22/89	$2.6 \times 10^{-11}$	$2.7 \times 10^{-11}$
Area 18, Camp 17 Reservoir	06/21/89	$-1.4 \times 10^{-11}$	$3.1 \times 10^{-11}$
Area 18, Camp 17 Reservoir	09/26/89	$6.8 \times 10^{-12}$	$2.6 \times 10^{-11}$
Area 18, Well 8	03/17/89	$6.4 \times 10^{-11}$	$2.5 \times 10^{-11}$
Area 18, Well 8	06/20/89	$-4.1 \times 10^{-11}$	$2.5 \times 10^{-11}$
Area 18, Well 8	09/11/89	$3.1 \times 10^{-11}$	$3.3 \times 10^{-11}$
Area 18, Well 8	12/12/89	$-2.5 \times 10^{-11}$	$2.4 \times 10^{-11}$
Area 19, Well U19c	03/17/89	$1.9 \times 10^{-11}$	$2.3 \times 10^{-11}$
Area 19, Well U19c	06/20/89	$-1.6 \times 10^{-11}$	$3.3 \times 10^{-11}$
Area 19, Well U19c	09/11/89	$-3.1 \times 10^{-11}$	$3.0 \times 10^{-11}$
Area 19, Well U19c	12/12/89	$-1.0 \times 10^{-11}$	$2.8 \times 10^{-11}$
Area 19, Well U19c Reservoir	03/28/89	$-2.3 \times 10^{-11}$	$2.0 \times 10^{-11}$
Area 20, Water Well	03/17/89	$4.3 \times 10^{-11}$	$2.7 \times 10^{-11}$
Area 20, Water Well	09/11/89	$-6.9 \times 10^{-11}$	$3.0 \times 10^{-11}$



Table C.1 (<sup>238</sup>Pu in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 20, Well 20A Reservoir	03/22/89	5.5 x 10 <sup>-11</sup>	2.4 x 10 <sup>-11</sup>
Area 20, Well 20A Reservoir	06/21/89	1.8 x 10 <sup>-11</sup>	3.5 x 10 <sup>-11</sup>
Area 20, Well 20A Reservoir	09/26/89	1.5 x 10 <sup>-12</sup>	3.0 x 10 <sup>-11</sup>
Area 20, Well 20A Reservoir	12/18/89	-1.1 x 10 <sup>-10</sup>	4.8 x 10 <sup>-11</sup>
Area 23, Army Well No. 1	03/14/89	-2.5 x 10 <sup>-11</sup>	2.2 x 10 <sup>-11</sup>
Area 23, Army Well No. 1	06/15/89	-1.8 x 10 <sup>-11</sup>	2.5 x 10 <sup>-11</sup>
Area 23, Army Well No. 1	09/11/89	-2.2 x 10 <sup>-12</sup>	2.3 x 10 <sup>-11</sup>
Area 23, Cafeteria	03/07/89	3.1 x 10 <sup>-12</sup>	2.3 x 10 <sup>-11</sup>
Area 23, Cafeteria	06/12/89	-2.1 x 10 <sup>-11</sup>	2.8 x 10 <sup>-11</sup>
Area 23, Sewage Final Effluent Pond	03/15/89	8.6 x 10 <sup>-11</sup>	3.1 x 10 <sup>-11</sup>
Area 23, Sewage Final Effluent Pond	06/21/89	-3.9 x 10 <sup>-11</sup>	3.4 x 10 <sup>-11</sup>
Area 23, Sewage Final Effluent Pond	12/14/89	3.1 x 10 <sup>-11</sup>	2.9 x 10 <sup>-11</sup>
Area 25, Building 4221	06/12/89	4.0 x 10 <sup>-11</sup>	3.6 x 10 <sup>-11</sup>
Area 25, Service Station	03/07/89	1.1 x 10 <sup>-11</sup>	4.3 x 10 <sup>-11</sup>
Area 25, Well J-11 Reservoir	03/09/89	1.9 x 10 <sup>-11</sup>	2.8 x 10 <sup>-11</sup>
Area 25, Well J-11 Reservoir	06/08/89	-1.2 x 10 <sup>-11</sup>	3.6 x 10 <sup>-11</sup>
Area 25, Well J-11 Reservoir	09/06/89	2.1 x 10 <sup>-11</sup>	2.7 x 10 <sup>-11</sup>
Area 25, Well J-11 Reservoir	12/08/89	2.9 x 10 <sup>-11</sup>	3.4 x 10 <sup>-11</sup>
Area 25, Well J-12	03/09/89	4.5 x 10 <sup>-11</sup>	2.7 x 10 <sup>-11</sup>
Area 25, Well J-12	03/16/89	3.8 x 10 <sup>-11</sup>	2.2 x 10 <sup>-11</sup>
Area 25, Well J-12	06/08/89	-1.5 x 10 <sup>-11</sup>	3.4 x 10 <sup>-11</sup>
Area 25, Well J-12	06/15/89	-2.7 x 10 <sup>-11</sup>	2.7 x 10 <sup>-11</sup>
Area 25, Well J-12	09/11/89	2.0 x 10 <sup>-12</sup>	2.8 x 10 <sup>-11</sup>
Area 25, Well J-12	09/12/89	-9.5 x 10 <sup>-12</sup>	3.0 x 10 <sup>-11</sup>
Area 25, Well J-12	12/08/89	-1.1 x 10 <sup>-11</sup>	3.0 x 10 <sup>-11</sup>
Area 25, Well J-12	12/08/89	-1.1 x 10 <sup>-08</sup>	2.3 x 10 <sup>-08</sup>
Area 25, Well J-13	03/16/89	2.2 x 10 <sup>-12</sup>	2.3 x 10 <sup>-11</sup>
Area 25, Well J-13	06/15/89	-7.6 x 10 <sup>-11</sup>	3.0 x 10 <sup>-11</sup>
Area 25, Well J-13	09/11/89	-1.6 x 10 <sup>-11</sup>	2.4 x 10 <sup>-11</sup>
Area 25, Well J-13	12/08/89	-1.3 x 10 <sup>-11</sup>	2.8 x 10 <sup>-11</sup>
Area 27, Cafeteria	03/07/89	2.8 x 10 <sup>-11</sup>	2.8 x 10 <sup>-11</sup>
Area 27, Cafeteria	06/12/89	-5.6 x 10 <sup>-11</sup>	4.0 x 10 <sup>-11</sup>
Area 29, Topopah Spring	03/24/89	-2.4 x 10 <sup>-11</sup>	4.5 x 10 <sup>-11</sup>

Table C.2 <sup>239</sup>Pu in Water - 1989

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 1, Building 101	06/13/89	-4.8 x 10 <sup>-12</sup>	3.6 x 10 <sup>-11</sup>
Area 1, Building 101	09/05/89	6.0 x 10 <sup>-12</sup>	7.3 x 10 <sup>-12</sup>
Area 1, Building 101	12/06/89	-1.3 x 10 <sup>-11</sup>	9.9 x 10 <sup>-12</sup>
Area 2, Mud Plant Reservoir	03/02/89	3.4 x 10 <sup>-12</sup>	5.9 x 10 <sup>-12</sup>
Area 2, Mud Plant Reservoir	06/07/89	1.4 x 10 <sup>-11</sup>	9.6 x 10 <sup>-12</sup>
Area 2, Mud Plant Reservoir	09/13/89	1.2 x 10 <sup>-11</sup>	8.4 x 10 <sup>-12</sup>
Area 2, Mud Plant Reservoir	12/14/89	2.0 x 10 <sup>-12</sup>	7.9 x 10 <sup>-12</sup>
Area 2, Restroom	06/13/89	-4.7 x 10 <sup>-12</sup>	5.9 x 10 <sup>-12</sup>
Area 2, Restroom	09/05/89	-1.8 x 10 <sup>-12</sup>	6.4 x 10 <sup>-12</sup>
Area 2, Restroom	12/06/89	-5.0 x 10 <sup>-13</sup>	8.4 x 10 <sup>-12</sup>
Area 2, Well 2	03/17/89	3.8 x 10 <sup>-12</sup>	6.7 x 10 <sup>-12</sup>
Area 2, Well 2	06/20/89	4.7 x 10 <sup>-12</sup>	7.8 x 10 <sup>-12</sup>
Area 2, Well 2	09/11/89	3.7 x 10 <sup>-12</sup>	6.6 x 10 <sup>-12</sup>
Area 2, Well 2	12/12/89	-4.5 x 10 <sup>-12</sup>	7.0 x 10 <sup>-12</sup>
Area 2, Well 2 Reservoir	06/07/89	2.0 x 10 <sup>-13</sup>	1.1 x 10 <sup>-11</sup>
Area 2, Well 2 Reservoir	09/13/89	-1.3 x 10 <sup>-11</sup>	1.0 x 10 <sup>-11</sup>
Area 2, Well 2 Reservoir	12/15/89	-4.8 x 10 <sup>-12</sup>	5.9 x 10 <sup>-12</sup>
Area 3, Cafeteria	06/13/89	-1.2 x 10 <sup>-12</sup>	7.7 x 10 <sup>-12</sup>
Area 3, Cafeteria	09/05/89	-5.0 x 10 <sup>-12</sup>	6.0 x 10 <sup>-12</sup>
Area 3, Cafeteria	12/06/89	-6.0 x 10 <sup>-13</sup>	8.4 x 10 <sup>-12</sup>
Area 3, Mud Plant Reservoir	03/10/89	6.0 x 10 <sup>-11</sup>	1.6 x 10 <sup>-11</sup>
Area 3, Mud Plant Reservoir	06/07/89	1.1 x 10 <sup>-11</sup>	1.1 x 10 <sup>-11</sup>
Area 3, Mud Plant Reservoir	09/12/89	1.6 x 10 <sup>-11</sup>	9.3 x 10 <sup>-12</sup>
Area 3, Mud Plant Reservoir	12/08/89	2.7 x 10 <sup>-11</sup>	1.2 x 10 <sup>-11</sup>
Area 5, Cane Springs	03/09/89	0.0 x 10 <sup>0</sup>	0.0 x 10 <sup>0</sup>
Area 5, Cane Springs	06/07/89	-7.1 x 10 <sup>-12</sup>	4.3 x 10 <sup>-12</sup>
Area 5, Cane Springs	12/15/89	-9.5 x 10 <sup>-12</sup>	6.8 x 10 <sup>-12</sup>
Area 5, Well 5B Reservoir	03/09/89	0.0 x 10 <sup>0</sup>	0.0 x 10 <sup>0</sup>
Area 5, Well 5B Reservoir	06/07/89	2.0 x 10 <sup>-13</sup>	1.0 x 10 <sup>-11</sup>
Area 5, Well 5B Reservoir	09/06/89	3.8 x 10 <sup>-12</sup>	7.4 x 10 <sup>-12</sup>
Area 5, Well 5B Reservoir	12/08/89	3.0 x 10 <sup>-12</sup>	8.7 x 10 <sup>-12</sup>
Area 5, Well 5C	03/14/89	2.1 x 10 <sup>-11</sup>	1.3 x 10 <sup>-11</sup>
Area 5, Well 5C	06/15/89	-4.5 x 10 <sup>-12</sup>	5.2 x 10 <sup>-12</sup>
Area 5, Well 5C	09/11/89	6.3 x 10 <sup>-12</sup>	6.2 x 10 <sup>-12</sup>
Area 5, Well 5C	12/08/89	-2.3 x 10 <sup>-11</sup>	1.9 x 10 <sup>-11</sup>
Area 5, Well Ue5c	03/14/89	-3.7 x 10 <sup>-12</sup>	2.1 x 10 <sup>-11</sup>
Area 5, Well Ue5c	12/08/89	-3.9 x 10 <sup>-12</sup>	5.6 x 10 <sup>-12</sup>
Area 5, Well Ue5c Reservoir	03/09/89	-3.1 x 10 <sup>-12</sup>	3.1 x 10 <sup>-12</sup>
Area 5, Well Ue5c Reservoir	06/07/89	-5.2 x 10 <sup>-12</sup>	8.7 x 10 <sup>-12</sup>
Area 5, Well Ue5c Reservoir	09/12/89	-7.0 x 10 <sup>-13</sup>	8.7 x 10 <sup>-12</sup>
Area 5, Well Ue5c Reservoir	12/08/89	-4.8 x 10 <sup>-12</sup>	7.8 x 10 <sup>-12</sup>
Area 6, Bottled Water	03/07/89	6.0 x 10 <sup>-12</sup>	6.0 x 10 <sup>-12</sup>
Area 6, Bottled Water	06/12/89	9.0 x 10 <sup>-13</sup>	7.0 x 10 <sup>-12</sup>
Area 6, Cafeteria	03/07/89	8.0 x 10 <sup>-12</sup>	6.0 x 10 <sup>-12</sup>
Area 6, Cafeteria	06/12/89	-2.3 x 10 <sup>-12</sup>	5.7 x 10 <sup>-12</sup>
Area 6, Decontamination Pad Pond	03/15/89	1.8 x 10 <sup>-10</sup>	2.7 x 10 <sup>-11</sup>

Table C.2 (<sup>239</sup>Pu in Water, cont.)

Sampling Location	Sampling Dates	μCi/mL	
		Concentration	Standard Deviation (s)
Area 6, Decontamination Pad Pond	06/08/89	6.1 x 10 <sup>-11</sup>	2.0 x 10 <sup>-11</sup>
Area 6, Decontamination Pad Pond	09/13/89	1.5 x 10 <sup>-10</sup>	2.5 x 10 <sup>-11</sup>
Area 6, Decontamination Pad Pond	12/14/89	1.0 x 10 <sup>-10</sup>	2.1 x 10 <sup>-11</sup>
Area 6, Sewage	03/15/89	0.0 x 10 <sup>0</sup>	0.0 x 10 <sup>0</sup>
Area 6, Sewage	06/21/89	-4.9 x 10 <sup>-12</sup>	6.5 x 10 <sup>-12</sup>
Area 6, Sewage	09/27/89	1.0 x 10 <sup>-12</sup>	6.8 x 10 <sup>-12</sup>
Area 6, Sewage	12/14/89	-4.4 x 10 <sup>-12</sup>	6.0 x 10 <sup>-12</sup>
Area 6, Well 3 Reservoir	03/10/89	0.0 x 10 <sup>0</sup>	0.0 x 10 <sup>0</sup>
Area 6, Well 3 Reservoir	06/07/89	1.2 x 10 <sup>-11</sup>	1.4 x 10 <sup>-11</sup>
Area 6, Well 3 Reservoir	09/06/89	-7.0 x 10 <sup>-13</sup>	7.9 x 10 <sup>-12</sup>
Area 6, Well 3 Reservoir	12/08/89	1.5 x 10 <sup>-11</sup>	1.1 x 10 <sup>-11</sup>
Area 6, Well 4	03/17/89	-4.1 x 10 <sup>-12</sup>	4.1 x 10 <sup>-12</sup>
Area 6, Well 4	06/20/89	1.2 x 10 <sup>-11</sup>	8.6 x 10 <sup>-12</sup>
Area 6, Well 4	09/11/89	4.8 x 10 <sup>-12</sup>	8.1 x 10 <sup>-12</sup>
Area 6, Well 4	12/12/89	-1.2 x 10 <sup>-12</sup>	6.6 x 10 <sup>-12</sup>
Area 6, Well A Reservoir	03/10/89	0.0 x 10 <sup>0</sup>	0.0 x 10 <sup>0</sup>
Area 6, Well A Reservoir	06/07/89	3.9 x 10 <sup>-12</sup>	9.8 x 10 <sup>-12</sup>
Area 6, Well A Reservoir	09/06/89	-4.6 x 10 <sup>-12</sup>	6.2 x 10 <sup>-12</sup>
Area 6, Well A Reservoir	12/08/89	8.3 x 10 <sup>-12</sup>	1.1 x 10 <sup>-11</sup>
Area 6, Well C	09/11/89	1.0 x 10 <sup>-12</sup>	6.5 x 10 <sup>-12</sup>
Area 6, Well C1	03/17/89	6.0 x 10 <sup>-12</sup>	6.0 x 10 <sup>-12</sup>
Area 6, Well C1	06/20/89	-4.5 x 10 <sup>-12</sup>	8.2 x 10 <sup>-12</sup>
Area 6, Well C1	09/11/89	-9.3 x 10 <sup>-12</sup>	6.6 x 10 <sup>-12</sup>
Area 6, Well C1	12/12/89	-4.3 x 10 <sup>-12</sup>	6.7 x 10 <sup>-12</sup>
Area 6, Well C1 Reservoir	03/10/89	5.6 x 10 <sup>-12</sup>	5.6 x 10 <sup>-12</sup>
Area 6, Well C1 Reservoir	06/07/89	2.5 x 10 <sup>-12</sup>	9.0 x 10 <sup>-12</sup>
Area 6, Well C1 Reservoir	09/12/89	2.5 x 10 <sup>-12</sup>	8.3 x 10 <sup>-12</sup>
Area 6, Well C1 Reservoir	12/13/89	-7.5 x 10 <sup>-12</sup>	4.8 x 10 <sup>-12</sup>
Area 7, Reitman Seep	03/09/89	4.3 x 10 <sup>-11</sup>	1.2 x 10 <sup>-11</sup>
Area 7, Reitman Seep	06/07/89	3.9 x 10 <sup>-10</sup>	6.5 x 10 <sup>-11</sup>
Area 7, Reitman Seep	09/13/89	5.3 x 10 <sup>-11</sup>	1.5 x 10 <sup>-11</sup>
Area 7, Reitman Seep	12/14/89	9.7 x 10 <sup>-11</sup>	1.7 x 10 <sup>-11</sup>
Area 12, Cafeteria	06/13/89	6.5 x 10 <sup>-12</sup>	7.9 x 10 <sup>-12</sup>
Area 12, Cafeteria	09/05/89	-4.6 x 10 <sup>-12</sup>	5.8 x 10 <sup>-12</sup>
Area 12, Cafeteria	12/06/89	-4.5 x 10 <sup>-12</sup>	2.7 x 10 <sup>-11</sup>
Area 12, Captain Jack Spring	03/22/89	4.1 x 10 <sup>-11</sup>	1.2 x 10 <sup>-11</sup>
Area 12, Captain Jack Spring	12/15/89	2.1 x 10 <sup>-11</sup>	1.2 x 10 <sup>-11</sup>
Area 12, E Tunnel Effluent Pond	03/10/89	1.4 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 12, E Tunnel Effluent Pond	06/28/89	3.3 x 10 <sup>-8</sup>	2.0 x 10 <sup>-9</sup>
Area 12, E Tunnel Effluent Pond	09/20/89	1.4 x 10 <sup>-8</sup>	6.9 x 10 <sup>-10</sup>
Area 12, E Tunnel Effluent Pond	12/27/89	2.4 x 10 <sup>-8</sup>	1.1 x 10 <sup>-9</sup>
Area 12, N Tunnel Effluent Pond	03/10/89	1.1 x 10 <sup>-10</sup>	1.8 x 10 <sup>-11</sup>
Area 12, N Tunnel Effluent Pond	06/28/89	4.0 x 10 <sup>-13</sup>	1.0 x 10 <sup>-11</sup>
Area 12, N Tunnel Effluent Pond	09/20/89	2.8 x 10 <sup>-11</sup>	1.2 x 10 <sup>-11</sup>
Area 12, N Tunnel Effluent Pond	12/27/89	2.1 x 10 <sup>-11</sup>	1.1 x 10 <sup>-11</sup>
Area 12, N Tunnel Pond No. 1	03/10/89	6.5 x 10 <sup>-11</sup>	1.3 x 10 <sup>-11</sup>

Table C.2 (<sup>239</sup>Pu in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 12, N Tunnel Pond No. 1	06/28/89	$8.6 \times 10^{-12}$	$8.0 \times 10^{-12}$
Area 12, N Tunnel Pond No. 1	09/20/89	$2.0 \times 10^{-11}$	$1.1 \times 10^{-11}$
Area 12, N Tunnel Pond No. 1	12/27/89	$2.0 \times 10^{-11}$	$1.0 \times 10^{-11}$
Area 12, N Tunnel Pond No. 2	03/10/89	$8.5 \times 10^{-11}$	$1.6 \times 10^{-11}$
Area 12, N Tunnel Pond No. 2	06/28/89	$-1.0 \times 10^{-12}$	$7.7 \times 10^{-12}$
Area 12, N Tunnel Pond No. 2	09/20/89	$2.6 \times 10^{-11}$	$1.2 \times 10^{-11}$
Area 12, N Tunnel Pond No. 2	12/27/89	$3.3 \times 10^{-11}$	$1.2 \times 10^{-11}$
Area 12, N Tunnel Pond No. 3	03/10/89	$4.2 \times 10^{-11}$	$1.3 \times 10^{-11}$
Area 12, N Tunnel Pond No. 3	06/28/89	$4.9 \times 10^{-11}$	$9.4 \times 10^{-11}$
Area 12, N Tunnel Pond No. 3	09/20/89	$3.2 \times 10^{-11}$	$1.3 \times 10^{-11}$
Area 12, N Tunnel Pond No. 3	12/27/89	$1.6 \times 10^{-10}$	$6.5 \times 10^{-11}$
Area 12, Sewage Pond	06/21/89	$4.5 \times 10^{-11}$	$1.5 \times 10^{-11}$
Area 12, Sewage Pond	09/20/89	$-4.9 \times 10^{-12}$	$5.9 \times 10^{-12}$
Area 12, Sewage Pond	12/14/89	$-4.7 \times 10^{-12}$	$6.3 \times 10^{-12}$
Area 12, T Tunnel Effluent Pond	03/09/89	$2.2 \times 10^{-8}$	$9.6 \times 10^{-10}$
Area 12, T Tunnel Effluent Pond	06/28/89	$1.3 \times 10^{-8}$	$6.1 \times 10^{-10}$
Area 12, T Tunnel Effluent Pond	09/20/89	$2.1 \times 10^{-9}$	$1.4 \times 10^{-10}$
Area 12, T Tunnel Effluent Pond	12/27/89	$6.4 \times 10^{-10}$	$6.1 \times 10^{-11}$
Area 12, T Tunnel Pond No. 1	03/09/89	$1.9 \times 10^{-8}$	$8.7 \times 10^{-10}$
Area 12, T Tunnel Pond No. 1	06/28/89	$1.1 \times 10^{-8}$	$4.9 \times 10^{-10}$
Area 12, T Tunnel Pond No. 1	09/20/89	$1.8 \times 10^{-9}$	$1.1 \times 10^{-10}$
Area 12, T Tunnel Pond No. 1	12/27/89	$6.5 \times 10^{-10}$	$6.0 \times 10^{-11}$
Area 12, T Tunnel Pond No. 2	03/09/89	$1.7 \times 10^{-8}$	$8.0 \times 10^{-10}$
Area 12, T Tunnel Pond No. 2	06/28/89	$8.1 \times 10^{-9}$	$3.8 \times 10^{-10}$
Area 12, T Tunnel Pond No. 2	09/20/89	$1.8 \times 10^{-9}$	$1.4 \times 10^{-10}$
Area 12, T Tunnel Pond No. 2	12/27/89	$7.8 \times 10^{-10}$	$7.0 \times 10^{-11}$
Area 12, White Rock Spring	06/07/89	$1.6 \times 10^{-11}$	$9.4 \times 10^{-12}$
Area 12, White Rock Spring	09/13/89	$-1.8 \times 10^{-12}$	$7.2 \times 10^{-12}$
Area 15, Well Ue15d	03/17/89	$3.1 \times 10^{-12}$	$5.4 \times 10^{-12}$
Area 15, Well Ue15d	06/20/89	$-2.0 \times 10^{-12}$	$5.5 \times 10^{-12}$
Area 15, Well Ue15d	09/11/89	$-4.0 \times 10^{-12}$	$6.3 \times 10^{-12}$
Area 15, Well Ue15d	12/12/89	$1.4 \times 10^{-11}$	$9.6 \times 10^{-12}$
Area 16, Tippipah Spring	03/15/89	$3.8 \times 10^{-12}$	$6.7 \times 10^{-12}$
Area 16, Tippipah Spring	06/08/89	$-4.7 \times 10^{-12}$	$6.6 \times 10^{-12}$
Area 16, Tippipah Spring	12/15/89	$1.8 \times 10^{-12}$	$1.2 \times 10^{-11}$
Area 16, Well 16D	03/17/89	$0.0 \times 10^0$	$0.0 \times 10^0$
Area 16, Well 16D	06/20/89	$-4.5 \times 10^{-12}$	$5.8 \times 10^{-12}$
Area 16, Well 16D	09/11/89	$-7.8 \times 10^{-12}$	$5.1 \times 10^{-12}$
Area 16, Well 16D	12/12/89	$1.5 \times 10^{-11}$	$3.3 \times 10^{-11}$
Area 18, Camp 17 Reservoir	03/22/89	$6.3 \times 10^{-12}$	$6.3 \times 10^{-12}$
Area 18, Camp 17 Reservoir	06/21/89	$1.3 \times 10^{-11}$	$9.0 \times 10^{-12}$
Area 18, Camp 17 Reservoir	09/26/89	$4.8 \times 10^{-12}$	$6.7 \times 10^{-12}$
Area 18, Well 8	03/17/89	$8.0 \times 10^{-12}$	$6.0 \times 10^{-12}$
Area 18, Well 8	06/20/89	$-2.0 \times 10^{-12}$	$5.4 \times 10^{-12}$
Area 18, Well 8	09/11/89	$-8.0 \times 10^{-13}$	$7.6 \times 10^{-12}$
Area 18, Well 8	12/12/89	$1.1 \times 10^{-12}$	$5.8 \times 10^{-12}$

Table C.2 (<sup>239</sup>Pu in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 19, Well U19c	03/17/89	$5.7 \times 10^{-12}$	$5.7 \times 10^{-12}$
Area 19, Well U19c	06/20/89	$-4.5 \times 10^{-12}$	$6.6 \times 10^{-12}$
Area 19, Well U19c	09/11/89	$5.7 \times 10^{-12}$	$8.6 \times 10^{-12}$
Area 19, Well U19c	12/12/89	$8.2 \times 10^{-12}$	$8.5 \times 10^{-12}$
Area 19, Well U19c Reservoir	03/28/89	$5.3 \times 10^{-12}$	$5.3 \times 10^{-12}$
Area 20, Water Well	03/17/89	$3.5 \times 10^{-12}$	$6.1 \times 10^{-12}$
Area 20, Water Well	06/20/89	$-1.6 \times 10^{-11}$	$1.2 \times 10^{-11}$
Area 20, Water Well	09/11/89	$-4.5 \times 10^{-12}$	$5.9 \times 10^{-12}$
Area 20, Water Well	12/12/89	$-4.4 \times 10^{-12}$	$5.2 \times 10^{-11}$
Area 20, Well 20a Reservoir	03/22/89	$2.3 \times 10^{-11}$	$8.6 \times 10^{-12}$
Area 20, Well 20a Reservoir	06/21/89	$3.1 \times 10^{-12}$	$9.2 \times 10^{-12}$
Area 20, Well 20a Reservoir	09/26/89	$-7.8 \times 10^{-12}$	$4.9 \times 10^{-12}$
Area 20, Well 20a Reservoir	12/18/89	$7.7 \times 10^{-12}$	$1.1 \times 10^{-11}$
Area 23, Army Well No. 1	03/14/89	$7.3 \times 10^{-12}$	$5.4 \times 10^{-12}$
Area 23, Army Well No. 1	06/15/89	$-1.9 \times 10^{-12}$	$5.6 \times 10^{-12}$
Area 23, Army Well No. 1	09/11/89	$4.0 \times 10^{-13}$	$5.4 \times 10^{-12}$
Area 23, Army Well No. 1	12/08/89	$-2.5 \times 10^{-11}$	$2.2 \times 10^{-11}$
Area 23, Cafeteria	03/07/89	$2.9 \times 10^{-12}$	$5.1 \times 10^{-12}$
Area 23, Cafeteria	06/12/89	$3.5 \times 10^{-12}$	$7.0 \times 10^{-12}$
Area 23, Sewage Final Effluent Pond	03/15/89	$1.1 \times 10^{-11}$	$8.1 \times 10^{-12}$
Area 23, Sewage Final Effluent Pond	06/21/89	$6.0 \times 10^{-12}$	$9.4 \times 10^{-12}$
Area 23, Sewage Final Effluent Pond	12/14/89	$3.7 \times 10^{-12}$	$7.3 \times 10^{-12}$
Area 25, Building 4221	06/12/89	$-4.7 \times 10^{-12}$	$6.8 \times 10^{-12}$
Area 25, Service Station	03/07/89	$1.6 \times 10^{-11}$	$1.6 \times 10^{-11}$
Area 25, Well J-11 Reservoir	03/09/89	$1.1 \times 10^{-11}$	$8.3 \times 10^{-12}$
Area 25, Well J-11 Reservoir	06/08/89	$-4.7 \times 10^{-12}$	$8.0 \times 10^{-12}$
Area 25, Well J-11 Reservoir	09/06/89	$3.0 \times 10^{-12}$	$6.7 \times 10^{-12}$
Area 25, Well J-11 Reservoir	12/08/89	$-4.6 \times 10^{-12}$	$6.5 \times 10^{-12}$
Area 25, Well J-12	03/09/89	$0.0 \times 10^0$	$0.0 \times 10^0$
Area 25, Well J-12	03/16/89	$2.4 \times 10^{-12}$	$4.2 \times 10^{-12}$
Area 25, Well J-12	06/08/89	$-7.0 \times 10^{-13}$	$8.4 \times 10^{-12}$
Area 25, Well J-12	06/15/89	$2.3 \times 10^{-11}$	$1.1 \times 10^{-11}$
Area 25, Well J-12	09/11/89	$-6.8 \times 10^{-12}$	$4.2 \times 10^{-12}$
Area 25, Well J-12	09/12/89	$-1.5 \times 10^{-12}$	$7.1 \times 10^{-12}$
Area 25, Well J-12	12/08/89	$-3.0 \times 10^{-13}$	$7.2 \times 10^{-12}$
Area 25, Well J-12	12/08/89	$1.2 \times 10^{-9}$	$5.8 \times 10^{-9}$
Area 25, Well J-13	03/16/89	$1.0 \times 10^{-11}$	$6.3 \times 10^{-12}$
Area 25, Well J-13	06/15/89	$-4.0 \times 10^{-13}$	$8.3 \times 10^{-12}$
Area 25, Well J-13	09/11/89	$-4.2 \times 10^{-12}$	$4.6 \times 10^{-12}$
Area 25, Well J-13	12/08/89	$-6.6 \times 10^{-12}$	$4.3 \times 10^{-12}$
Area 27, Cafeteria	03/07/89	$6.8 \times 10^{-12}$	$6.8 \times 10^{-12}$
Area 27, Cafeteria	06/12/89	$1.3 \times 10^{-11}$	$1.0 \times 10^{-11}$
Area 29, Topopah Spring	03/24/89	$1.2 \times 10^{-11}$	$1.2 \times 10^{-11}$

Table C.3 Gamma-Emitting Radionuclides in Water - 1989

Sampling Location	Sampling Date	$\mu\text{Ci/mL}$		Radio-nuclide
		Concentration	Standard Deviation (s)	
Area 6, Decontamination Facility Pond	03/15/89	$2.87 \times 10^{-7}$	$3.45 \times 10^{-8}$	$^{131}\text{I}$
Area 6, Decontamination Facility Pond	03/15/89	$3.19 \times 10^{-8}$	$1.39 \times 10^{-8}$	$^{124}\text{Sb}$
Area 6, Decontamination Facility Pond	03/15/89	$3.61 \times 10^{-8}$	$1.23 \times 10^{-8}$	$^{95}\text{Nb}$
Area 6, Decontamination Facility Pond	04/14/89	$1.53 \times 10^{-7}$	$6.30 \times 10^{-8}$	$^{131}\text{I}$
Area 6, Decontamination Facility Pond	06/08/89	$1.56 \times 10^{-7}$	$4.47 \times 10^{-8}$	$^{131}\text{I}$
Area 12, E Tunnel Effluent Pond	02/28/89	$1.41 \times 10^{-7}$	$2.50 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, E Tunnel Effluent Pond	03/10/89	$1.38 \times 10^{-7}$	$2.28 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, E Tunnel Effluent Pond	04/11/89	$1.76 \times 10^{-7}$	$3.07 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, E Tunnel Effluent Pond	05/19/89	$9.41 \times 10^{-8}$	$2.26 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, E Tunnel Effluent Pond	05/19/89	$6.20 \times 10^{-8}$	$2.00 \times 10^{-8}$	$^{124}\text{Sb}$
Area 12, E Tunnel Effluent Pond	06/28/89	$1.15 \times 10^{-6}$	$1.13 \times 10^{-7}$	$^{137}\text{Cs}$
Area 12, E Tunnel Effluent Pond	07/20/89	$1.30 \times 10^{-6}$	$1.14 \times 10^{-7}$	$^{137}\text{Cs}$
Area 12, E Tunnel Effluent Pond	08/17/89	$2.57 \times 10^{-7}$	$1.05 \times 10^{-7}$	$^{232}\text{Th}$
Area 12, E Tunnel Effluent Pond	08/17/89	$8.37 \times 10^{-6}$	$4.64 \times 10^{-7}$	$^{137}\text{Cs}$
Area 12, E Tunnel Effluent Pond	08/17/89	$6.69 \times 10^{-7}$	$2.87 \times 10^{-7}$	$^{238}\text{U}$
Area 12, E Tunnel Effluent Pond	09/20/89	$1.18 \times 10^{-7}$	$3.14 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, E Tunnel Effluent Pond	12/27/89	$2.75 \times 10^{-5}$	$1.12 \times 10^{-5}$	$^{137}\text{Cs}$
Area 12, N Tunnel Effluent Pond	01/12/89	$1.28 \times 10^{-7}$	$3.28 \times 10^{-8}$	$^{125}\text{Sb}$
Area 12, N Tunnel Pond No. 1	08/17/89	$6.02 \times 10^{-8}$	$2.00 \times 10^{-8}$	$^{57}\text{Co}$
Area 12, N Tunnel Pond No. 2	08/17/89	$1.35 \times 10^{-7}$	$8.39 \times 10^{-8}$	$^{232}\text{Th}$
Area 12, N Tunnel Pond No. 3	06/28/89	$4.51 \times 10^{-7}$	$1.79 \times 10^{-7}$	$^{232}\text{Th}$
Area 12, T Tunnel Effluent Pond	01/12/89	$2.34 \times 10^{-7}$	$1.45 \times 10^{-7}$	$^{40}\text{K}$
Area 12, T Tunnel Effluent Pond	01/12/89	$1.07 \times 10^{-5}$	$6.30 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Effluent Pond	01/12/89	$8.21 \times 10^{-7}$	$1.27 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Effluent Pond	01/12/89	$4.58 \times 10^{-7}$	$4.72 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Effluent Pond	02/15/89	$8.05 \times 10^{-7}$	$1.32 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Effluent Pond	02/15/89	$1.16 \times 10^{-5}$	$6.79 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Effluent Pond	02/15/89	$1.58 \times 10^{-6}$	$1.11 \times 10^{-7}$	$^{137}\text{Cs}$
Area 12, T Tunnel Effluent Pond	03/09/89	$9.12 \times 10^{-6}$	$5.47 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Effluent Pond	03/09/89	$4.95 \times 10^{-7}$	$5.05 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Effluent Pond	03/09/89	$8.24 \times 10^{-7}$	$1.15 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Effluent Pond	04/11/89	$6.62 \times 10^{-6}$	$4.63 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Effluent Pond	04/11/89	$7.15 \times 10^{-7}$	$1.17 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Effluent Pond	04/11/89	$3.66 \times 10^{-7}$	$4.71 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Effluent Pond	05/19/89	$6.21 \times 10^{-6}$	$6.83 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Effluent Pond	05/19/89	$5.60 \times 10^{-7}$	$2.46 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Effluent Pond	05/19/89	$4.70 \times 10^{-7}$	$1.05 \times 10^{-7}$	$^{137}\text{Cs}$
Area 12, T Tunnel Effluent Pond	06/28/89	$3.19 \times 10^{-7}$	$6.16 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Effluent Pond	06/28/89	$1.11 \times 10^{-7}$	$3.27 \times 10^{-8}$	$^{103}\text{Ru}$
Area 12, T Tunnel Effluent Pond	06/28/89	$7.44 \times 10^{-6}$	$5.88 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Effluent Pond	06/28/89	$8.05 \times 10^{-7}$	$1.51 \times 10^{-7}$	$^{125}\text{Sb}$

Table C.3 (Gamma in Water, cont.)

Sampling Location	Sampling Date	$\mu\text{Ci/mL}$		Radio-nuclide
		Concen-tration	Standard Deviation (s)	
Area 12, T Tunnel Effluent Pond	07/20/89	$3.11 \times 10^{-7}$	$5.87 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Effluent Pond	07/20/89	$6.98 \times 10^{-7}$	$1.57 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Effluent Pond	07/20/89	$5.63 \times 10^{-6}$	$4.81 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Effluent Pond	08/17/89	$3.67 \times 10^{-7}$	$1.16 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Effluent Pond	08/17/89	$1.94 \times 10^{-6}$	$1.99 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Effluent Pond	08/17/89	$1.18 \times 10^{-7}$	$2.78 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Effluent Pond	09/20/89	$1.32 \times 10^{-6}$	$1.49 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Effluent Pond	09/20/89	$7.61 \times 10^{-8}$	$2.44 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Effluent Pond	09/20/89	$2.01 \times 10^{-7}$	$5.60 \times 10^{-8}$	$^{125}\text{Sb}$
Area 12, T Tunnel Pond No. 1	02/28/89	$6.99 \times 10^{-7}$	$6.22 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Pond No. 1	02/28/89	$1.17 \times 10^{-5}$	$6.72 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Pond No. 1	02/28/89	$9.24 \times 10^{-7}$	$1.35 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Pond No. 1	03/09/89	$1.09 \times 10^{-6}$	$1.31 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Pond No. 1	03/09/89	$5.25 \times 10^{-7}$	$5.04 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Pond No. 1	03/09/89	$1.82 \times 10^{-7}$	$6.17 \times 10^{-8}$	$^{232}\text{Th}$
Area 12, T Tunnel Pond No. 1	03/09/89	$1.04 \times 10^{-5}$	$6.02 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Pond No. 1	04/11/89	$1.15 \times 10^{-6}$	$1.54 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Pond No. 1	04/11/89	$4.21 \times 10^{-7}$	$5.17 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Pond No. 1	04/11/89	$1.02 \times 10^{-5}$	$6.30 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Pond No. 1	05/19/89	$2.30 \times 10^{-7}$	$4.18 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Pond No. 1	05/19/89	$6.71 \times 10^{-6}$	$4.56 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Pond No. 1	05/19/89	$7.27 \times 10^{-7}$	$1.13 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Pond No. 1	06/28/89	$1.11 \times 10^{-6}$	$2.19 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Pond No. 1	06/28/89	$6.62 \times 10^{-6}$	$5.23 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Pond No. 1	06/28/89	$2.15 \times 10^{-7}$	$4.33 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Pond No. 1	07/20/89	$3.01 \times 10^{-7}$	$5.55 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Pond No. 1	07/20/89	$5.82 \times 10^{-6}$	$4.77 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Pond No. 1	07/20/89	$7.16 \times 10^{-7}$	$1.42 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Pond No. 1	08/17/89	$6.28 \times 10^{-7}$	$1.45 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Pond No. 1	08/17/89	$8.01 \times 10^{-8}$	$2.09 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Pond No. 1	08/17/89	$1.81 \times 10^{-6}$	$1.83 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Pond No. 1	09/20/89	$1.21 \times 10^{-6}$	$1.36 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Pond No. 1	09/20/89	$5.81 \times 10^{-8}$	$2.53 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Pond No. 1	09/20/89	$2.51 \times 10^{-7}$	$6.79 \times 10^{-8}$	$^{125}\text{Sb}$
Area 12, T Tunnel Pond No. 2	02/28/89	$9.76 \times 10^{-7}$	$1.34 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Pond No. 2	02/28/89	$1.16 \times 10^{-5}$	$6.72 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Pond No. 2	02/28/89	$5.62 \times 10^{-7}$	$5.45 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Pond No. 2	03/09/89	$4.82 \times 10^{-7}$	$4.84 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Pond No. 2	03/09/89	$1.09 \times 10^{-6}$	$1.31 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Pond No. 2	03/09/89	$1.07 \times 10^{-5}$	$6.19 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Pond No. 2	04/11/89	$1.05 \times 10^{-6}$	$1.48 \times 10^{-7}$	$^{125}\text{Sb}$
Area 12, T Tunnel Pond No. 2	04/11/89	$1.05 \times 10^{-5}$	$6.54 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Pond No. 2	04/11/89	$4.04 \times 10^{-7}$	$5.03 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Pond No. 2	05/19/89	$2.06 \times 10^{-7}$	$3.66 \times 10^{-8}$	$^{137}\text{Cs}$
Area 12, T Tunnel Pond No. 2	05/19/89	$6.50 \times 10^{-6}$	$4.55 \times 10^{-7}$	$^{106}\text{Ru}$
Area 12, T Tunnel Pond No. 2	05/19/89	$7.04 \times 10^{-7}$	$1.16 \times 10^{-7}$	$^{125}\text{Sb}$

Table C.3 (Gamma in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Date</u>	<u>μCi/mL</u>		<u>Radio-nuclide</u>
		<u>Concen-tration</u>	<u>Standard Deviation (s)</u>	
Area 12, T Tunnel Pond No. 2	06/28/89	$6.81 \times 10^{-7}$	$1.36 \times 10^{-7}$	<sup>125</sup> Sb
Area 12, T Tunnel Pond No. 2	06/28/89	$8.44 \times 10^{-8}$	$3.99 \times 10^{-8}$	<sup>137</sup> Cs
Area 12, T Tunnel Pond No. 2	06/28/89	$5.58 \times 10^{-8}$	$2.47 \times 10^{-8}$	<sup>109</sup> Ru
Area 12, T Tunnel Pond No. 2	06/28/89	$5.53 \times 10^{-6}$	$4.70 \times 10^{-7}$	<sup>106</sup> Ru
Area 12, T Tunnel Pond No. 2	07/20/89	$6.12 \times 10^{-6}$	$4.93 \times 10^{-7}$	<sup>106</sup> Ru
Area 12, T Tunnel Pond No. 2	07/20/89	$1.06 \times 10^{-7}$	$5.25 \times 10^{-8}$	<sup>95</sup> Zr
Area 12, T Tunnel Pond No. 2	07/20/89	$5.16 \times 10^{-7}$	$1.19 \times 10^{-7}$	<sup>125</sup> Sb
Area 12, T Tunnel Pond No. 2	07/20/89	$3.33 \times 10^{-7}$	$5.33 \times 10^{-8}$	<sup>137</sup> Cs
Area 12, T Tunnel Pond No. 2	08/17/89	$6.59 \times 10^{-7}$	$1.68 \times 10^{-7}$	<sup>125</sup> Sb
Area 12, T Tunnel Pond No. 2	08/17/89	$1.81 \times 10^{-6}$	$2.24 \times 10^{-7}$	<sup>106</sup> Ru
Area 12, T Tunnel Pond No. 2	09/20/89	$1.16 \times 10^{-6}$	$1.37 \times 10^{-7}$	<sup>106</sup> Ru
Area 12, T Tunnel Pond No. 2	09/20/89	$1.58 \times 10^{-7}$	$5.98 \times 10^{-8}$	<sup>125</sup> Sb
Area 12, T Tunnel Pond No. 2	09/20/89	$1.04 \times 10^{-7}$	$2.19 \times 10^{-8}$	<sup>137</sup> Cs
Area 19, Well U19c	04/11/89	$7.65 \times 10^{-7}$	$3.02 \times 10^{-7}$	<sup>241</sup> Am



Table C.4 Gross Beta in Water - 1989

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 1, Building 101	01/23/89	4.3 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 1, Building 101	01/30/89	5.0 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 1, Building 101	02/06/89	5.2 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 1, Building 101	02/13/89	7.1 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 1, Building 101	02/23/89	6.9 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 1, Building 101	02/27/89	4.9 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 1, Building 101	03/06/89	6.2 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 1, Building 101	03/07/89	4.7 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 1, Building 101	03/14/89	9.3 x 10 <sup>-9</sup>	3.5 x 10 <sup>-10</sup>
Area 1, Building 101	03/20/89	8.8 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 1, Building 101	03/27/89	8.5 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 1, Building 101	04/03/89	6.4 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 1, Building 101	04/10/89	4.7 x 10 <sup>-9</sup>	4.9 x 10 <sup>-10</sup>
Area 1, Building 101	04/18/89	1.4 x 10 <sup>-9</sup>	4.6 x 10 <sup>-10</sup>
Area 1, Building 101	04/24/89	2.9 x 10 <sup>-9</sup>	4.9 x 10 <sup>-10</sup>
Area 1, Building 101	05/01/89	6.1 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 1, Building 101	05/08/89	5.1 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 1, Building 101	05/15/89	5.9 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 1, Building 101	05/23/89	4.8 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 1, Building 101	05/30/89	5.4 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 1, Building 101	06/05/89	8.4 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 1, Building 101	06/13/89	5.4 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 1, Building 101	06/20/89	5.2 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 1, Building 101	06/26/89	6.6 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 1, Building 101	07/05/89	6.5 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 1, Building 101	07/11/89	6.1 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 1, Building 101	07/20/89	7.4 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 1, Building 101	07/25/89	5.6 x 10 <sup>-9</sup>	4.8 x 10 <sup>-10</sup>
Area 1, Building 101	07/31/89	6.4 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 1, Building 101	08/07/89	5.5 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 1, Building 101	08/15/89	7.1 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 1, Building 101	08/21/89	7.3 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 1, Building 101	08/29/89	7.7 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 1, Building 101	09/05/89	9.6 x 10 <sup>-9</sup>	3.2 x 10 <sup>-9</sup>
Area 1, Building 101	09/11/89	6.5 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 1, Building 101	09/18/89	6.7 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 1, Building 101	09/25/89	6.8 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 1, Building 101	10/02/89	7.1 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 1, Building 101	10/09/89	2.5 x 10 <sup>-9</sup>	4.9 x 10 <sup>-10</sup>
Area 1, Building 101	10/16/89	7.3 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 1, Building 101	10/23/89	3.8 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 1, Building 101	10/30/89	6.6 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 1, Building 101	11/06/89	7.5 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 1, Building 101	11/28/89	7.8 x 10 <sup>-9</sup>	6.3 x 10 <sup>-10</sup>
Area 1, Building 101	12/06/89	9.4 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 1, Building 101	12/11/89	1.0 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>

Table C.4 (Gross Beta in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 2, Mud Plant Reservoir	01/23/89	$3.1 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 2, Mud Plant Reservoir	02/03/89	$5.4 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 2, Mud Plant Reservoir	03/02/89	$6.0 \times 10^{-9}$	$5.5 \times 10^{-10}$
Area 2, Mud Plant Reservoir	04/05/89	$6.2 \times 10^{-9}$	$5.3 \times 10^{-9}$
Area 2, Mud Plant Reservoir	05/10/89	$6.8 \times 10^{-9}$	$5.5 \times 10^{-10}$
Area 2, Mud Plant Reservoir	06/07/89	$8.6 \times 10^{-9}$	$5.7 \times 10^{-10}$
Area 2, Mud Plant Reservoir	07/14/89	$7.5 \times 10^{-9}$	$5.5 \times 10^{-10}$
Area 2, Mud Plant Reservoir	08/02/89	$1.1 \times 10^{-8}$	$5.9 \times 10^{-10}$
Area 2, Mud Plant Reservoir	09/13/89	$7.6 \times 10^{-9}$	$5.8 \times 10^{-10}$
Area 2, Mud Plant Reservoir	10/11/89	$5.3 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 2, Mud Plant Reservoir	11/14/89	$2.7 \times 10^{-9}$	$6.0 \times 10^{-10}$
Area 2, Mud Plant Reservoir	12/08/89	$1.0 \times 10^{-8}$	$6.0 \times 10^{-10}$
Area 2, Restroom	01/03/89	$3.0 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 2, Restroom	01/09/89	$2.5 \times 10^{-9}$	$4.6 \times 10^{-10}$
Area 2, Restroom	01/17/89	$1.7 \times 10^{-9}$	$4.4 \times 10^{-10}$
Area 2, Restroom	01/23/89	$2.4 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 2, Restroom	01/30/89	$2.2 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 2, Restroom	02/06/89	$3.1 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 2, Restroom	02/13/89	$1.6 \times 10^{-9}$	$4.4 \times 10^{-10}$
Area 2, Restroom	02/23/89	$3.1 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 2, Restroom	02/27/89	$3.1 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 2, Restroom	03/06/89	$3.6 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 2, Restroom	03/14/89	$3.7 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 2, Restroom	03/20/89	$4.6 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 2, Restroom	03/27/89	$2.3 \times 10^{-9}$	$4.6 \times 10^{-10}$
Area 2, Restroom	04/03/89	$3.3 \times 10^{-9}$	$4.6 \times 10^{-10}$
Area 2, Restroom	04/10/89	$2.8 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 2, Restroom	04/18/89	$2.8 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 2, Restroom	04/24/89	$8.0 \times 10^{-10}$	$4.0 \times 10^{-10}$
Area 2, Restroom	05/01/89	$2.5 \times 10^{-9}$	$4.5 \times 10^{-10}$
Area 2, Restroom	05/08/89	$3.1 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 2, Restroom	05/15/89	$2.4 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 2, Restroom	05/23/89	$2.9 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 2, Restroom	05/30/89	$3.3 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 2, Restroom	06/05/89	$3.2 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 2, Restroom	06/13/89	$3.0 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 2, Restroom	06/19/89	$2.7 \times 10^{-9}$	$4.5 \times 10^{-10}$
Area 2, Restroom	06/26/89	$3.5 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 2, Restroom	07/05/89	$4.3 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 2, Restroom	07/11/89	$4.1 \times 10^{-9}$	$5.5 \times 10^{-10}$
Area 2, Restroom	07/17/89	$4.5 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 2, Restroom	07/25/89	$3.1 \times 10^{-9}$	$4.1 \times 10^{-10}$
Area 2, Restroom	07/31/89	$4.1 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 2, Restroom	08/07/89	$3.1 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 2, Restroom	08/15/89	$2.6 \times 10^{-9}$	$4.6 \times 10^{-10}$
Area 2, Restroom	08/21/89	$3.6 \times 10^{-9}$	$4.7 \times 10^{-10}$

Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 2, Restroom	08/29/89	3.1 x 10 <sup>-9</sup>	4.8 x 10 <sup>-10</sup>
Area 2, Restroom	09/05/89	4.1 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 2, Restroom	09/11/89	2.8 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 2, Restroom	09/18/89	3.0 x 10 <sup>-9</sup>	4.6 x 10 <sup>-10</sup>
Area 2, Restroom	09/25/89	2.8 x 10 <sup>-9</sup>	4.8 x 10 <sup>-10</sup>
Area 2, Restroom	10/02/89	3.0 x 10 <sup>-9</sup>	4.5 x 10 <sup>-10</sup>
Area 2, Restroom	10/09/89	6.8 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 2, Restroom	10/16/89	3.2 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 2, Restroom	10/23/89	3.8 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 2, Restroom	10/30/89	3.0 x 10 <sup>-9</sup>	4.7 x 10 <sup>-10</sup>
Area 2, Restroom	11/06/89	3.7 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 2, Restroom	11/28/89	3.8 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 2, Restroom	12/06/89	4.2 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 2, Restroom	12/11/89	4.3 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 2, Restroom	12/18/89	1.3 x 10 <sup>-8</sup>	7.2 x 10 <sup>-10</sup>
Area 2, Restroom	12/18/89	4.3 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 2, Well 2	01/18/89	5.1 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 2, Well 2	02/15/89	5.9 x 10 <sup>-9</sup>	4.9 x 10 <sup>-10</sup>
Area 2, Well 2	03/17/89	8.2 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 2, Well 2	04/11/89	3.3 x 10 <sup>-9</sup>	4.2 x 10 <sup>-10</sup>
Area 2, Well 2	05/17/89	6.8 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 2, Well 2	06/20/89	6.5 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 2, Well 2	07/11/89	6.7 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 2, Well 2	08/09/89	4.8 x 10 <sup>-9</sup>	3.5 x 10 <sup>-10</sup>
Area 2, Well 2	09/11/89	7.5 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 2, Well 2	10/16/89	5.6 x 10 <sup>-9</sup>	4.9 x 10 <sup>-10</sup>
Area 2, Well 2	11/06/89	6.4 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 2, Well 2	12/08/89	6.7 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 2, Well 2 Reservoir	01/06/89	7.5 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 2, Well 2 Reservoir	02/03/89	5.6 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 2, Well 2 Reservoir	03/02/89	4.7 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 2, Well 2 Reservoir	04/05/89	7.0 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 2, Well 2 Reservoir	05/10/89	6.8 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 2, Well 2 Reservoir	06/07/89	4.9 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 2, Well 2 Reservoir	07/14/89	9.5 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 2, Well 2 Reservoir	08/02/89	7.8 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 2, Well 2 Reservoir	09/13/89	6.4 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 2, Well 2 Reservoir	10/11/89	6.1 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 2, Well 2 Reservoir	12/15/89	6.8 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 3, Cafeteria	01/03/89	6.1 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 3, Cafeteria	01/09/89	8.3 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 3, Cafeteria	01/17/89	9.4 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 3, Cafeteria	01/23/89	9.0 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 3, Cafeteria	01/30/89	7.6 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 3, Cafeteria	02/06/89	9.9 x 10 <sup>-9</sup>	6.4 x 10 <sup>-10</sup>
Area 3, Cafeteria	02/13/89	1.0 x 10 <sup>-8</sup>	6.0 x 10 <sup>-10</sup>

Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 3, Cafeteria	02/23/89	5.1 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 3, Cafeteria	02/27/89	1.1 x 10 <sup>-8</sup>	6.2 x 10 <sup>-10</sup>
Area 3, Cafeteria	03/06/89	1.1 x 10 <sup>-8</sup>	1.9 x 10 <sup>-9</sup>
Area 3, Cafeteria	03/14/89	1.1 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 3, Cafeteria	03/20/89	1.2 x 10 <sup>-8</sup>	6.6 x 10 <sup>-10</sup>
Area 3, Cafeteria	03/27/89	1.0 x 10 <sup>-8</sup>	3.7 x 10 <sup>-10</sup>
Area 3, Cafeteria	04/03/89	8.9 x 10 <sup>-9</sup>	6.3 x 10 <sup>-10</sup>
Area 3, Cafeteria	04/10/89	9.1 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 3, Cafeteria	04/18/89	1.1 x 10 <sup>-8</sup>	6.2 x 10 <sup>-10</sup>
Area 3, Cafeteria	04/24/89	9.2 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 3, Cafeteria	05/01/89	6.2 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 3, Cafeteria	05/08/89	1.1 x 10 <sup>-8</sup>	6.9 x 10 <sup>-10</sup>
Area 3, Cafeteria	05/15/89	1.4 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 3, Cafeteria	05/23/89	7.7 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 3, Cafeteria	05/30/89	9.6 x 10 <sup>-9</sup>	6.4 x 10 <sup>-10</sup>
Area 3, Cafeteria	06/05/89	9.0 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 3, Cafeteria	06/13/89	1.3 x 10 <sup>-8</sup>	6.4 x 10 <sup>-10</sup>
Area 3, Cafeteria	06/19/89	1.7 x 10 <sup>-8</sup>	3.4 x 10 <sup>-9</sup>
Area 3, Cafeteria	06/26/89	1.4 x 10 <sup>-8</sup>	7.0 x 10 <sup>-10</sup>
Area 3, Cafeteria	07/05/89	1.2 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 3, Cafeteria	07/11/89	1.2 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 3, Cafeteria	07/17/89	1.1 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 3, Cafeteria	07/25/89	5.3 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 3, Cafeteria	07/31/89	8.9 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 3, Cafeteria	08/07/89	8.2 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 3, Cafeteria	08/15/89	1.2 x 10 <sup>-8</sup>	6.7 x 10 <sup>-10</sup>
Area 3, Cafeteria	08/21/89	1.2 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 3, Cafeteria	08/29/89	1.2 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 3, Cafeteria	09/05/89	1.6 x 10 <sup>-8</sup>	9.8 x 10 <sup>-10</sup>
Area 3, Cafeteria	09/11/89	1.2 x 10 <sup>-8</sup>	6.6 x 10 <sup>-10</sup>
Area 3, Cafeteria	09/18/89	1.0 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 3, Cafeteria	09/25/89	1.2 x 10 <sup>-8</sup>	6.4 x 10 <sup>-10</sup>
Area 3, Cafeteria	10/02/89	9.6 x 10 <sup>-9</sup>	6.3 x 10 <sup>-10</sup>
Area 3, Cafeteria	10/09/89	3.4 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 3, Cafeteria	10/16/89	9.8 x 10 <sup>-9</sup>	6.7 x 10 <sup>-10</sup>
Area 3, Cafeteria	10/23/89	1.1 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 3, Cafeteria	10/30/89	7.8 x 10 <sup>-9</sup>	6.3 x 10 <sup>-10</sup>
Area 3, Cafeteria	11/06/89	1.1 x 10 <sup>-8</sup>	7.0 x 10 <sup>-10</sup>
Area 3, Cafeteria	11/28/89	1.0 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 3, Cafeteria	12/06/89	1.3 x 10 <sup>-8</sup>	7.1 x 10 <sup>-10</sup>
Area 3, Cafeteria	12/11/89	1.4 x 10 <sup>-8</sup>	7.0 x 10 <sup>-10</sup>
Area 3, Mud Plant Reservoir	03/10/89	8.8 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 3, Mud Plant Reservoir	04/07/89	5.7 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 3, Mud Plant Reservoir	05/05/89	7.6 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 3, Mud Plant Reservoir	06/07/89	8.6 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 3, Mud Plant Reservoir	07/18/89	8.3 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>

Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 3, Mud Plant Reservoir	08/03/89	8.6 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 3, Mud Plant Reservoir	09/12/89	9.9 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 3, Mud Plant Reservoir	10/06/89	9.9 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 3, Mud Plant Reservoir	11/02/89	9.9 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 3, Mud Plant Reservoir	12/08/89	8.2 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 5, Cane Springs	01/10/89	6.6 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 5, Cane Springs	02/08/89	5.4 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 5, Cane Springs	03/09/89	6.2 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 5, Cane Springs	04/05/89	4.7 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 5, Cane Springs	05/17/89	6.6 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 5, Cane Springs	06/07/89	7.1 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 5, Cane Springs	07/20/89	6.7 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 5, Cane Springs	08/17/89	5.5 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 5, Cane Springs	10/26/89	8.6 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 5, Cane Springs	11/14/89	2.1 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 5, Cane Springs	12/26/89	5.5 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 5, Well 5B Reservoir	02/24/89	6.0 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 5, Well 5B Reservoir	03/09/89	7.1 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 5, Well 5B Reservoir	04/07/89	9.2 x 10 <sup>-9</sup>	6.5 x 10 <sup>-10</sup>
Area 5, Well 5B Reservoir	05/04/89	7.4 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 5, Well 5B Reservoir	06/07/89	7.6 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 5, Well 5B Reservoir	07/18/89	6.4 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 5, Well 5B Reservoir	08/01/89	8.5 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 5, Well 5B Reservoir	09/06/89	9.9 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 5, Well 5B Reservoir	10/05/89	7.3 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 5, Well 5B Reservoir	11/01/89	6.7 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 5, Well 5B Reservoir	12/08/89	8.4 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 5, Well 5C	01/10/89	7.4 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 5, Well 5C	02/15/89	5.5 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 5, Well 5C	03/14/89	9.0 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 5, Well 5C	04/11/89	4.9 x 10 <sup>-9</sup>	4.9 x 10 <sup>-10</sup>
Area 5, Well 5C	05/17/89	7.9 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 5, Well 5C	06/15/89	6.9 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 5, Well 5C	07/11/89	5.4 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 5, Well 5C	08/09/89	7.7 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 5, Well 5C	09/11/89	8.4 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 5, Well 5C	10/12/89	7.3 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 5, Well 5C	11/06/89	8.0 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 5, Well 5C	12/12/89	7.6 x 10 <sup>-9</sup>	6.3 x 10 <sup>-10</sup>
Area 5, Well Ue5c	01/10/89	7.2 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 5, Well Ue5c	02/15/89	5.2 x 10 <sup>-9</sup>	4.9 x 10 <sup>-10</sup>
Area 5, Well Ue5c	03/14/89	7.1 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 5, Well Ue5c	11/29/89	7.2 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 5, Well Ue5c	12/08/89	9.8 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 5, Well Ue5c Reservoir	01/19/89	7.5 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 5, Well Ue5c Reservoir	02/24/89	6.9 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>

Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 5, Well Ue5c Reservoir	03/09/89	7.2 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 5, Well Ue5c Reservoir	04/07/89	8.8 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 5, Well Ue5c Reservoir	05/11/89	8.6 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 5, Well Ue5c Reservoir	06/07/89	8.7 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 5, Well Ue5c Reservoir	07/18/89	1.2 x 10 <sup>-8</sup>	6.2 x 10 <sup>-10</sup>
Area 5, Well Ue5c Reservoir	08/01/89	1.2 x 10 <sup>-8</sup>	6.9 x 10 <sup>-10</sup>
Area 5, Well Ue5c Reservoir	09/12/89	1.1 x 10 <sup>-8</sup>	6.1 x 10 <sup>-10</sup>
Area 5, Well Ue5c Reservoir	10/05/89	8.4 x 10 <sup>-9</sup>	6.4 x 10 <sup>-10</sup>
Area 5, Well Ue5c Reservoir	11/01/89	1.6 x 10 <sup>-8</sup>	7.2 x 10 <sup>-10</sup>
Area 5, Well Ue5c Reservoir	12/08/89	1.1 x 10 <sup>-8</sup>	6.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	01/03/89	1.0 x 10 <sup>-10</sup>	4.0 x 10 <sup>-10</sup>
Area 6, Bottled Water	01/09/89	3.0 x 10 <sup>-10</sup>	4.0 x 10 <sup>-10</sup>
Area 6, Bottled Water	01/17/89	6.0 x 10 <sup>-10</sup>	3.6 x 10 <sup>-10</sup>
Area 6, Bottled Water	01/23/89	4.0 x 10 <sup>-10</sup>	3.9 x 10 <sup>-10</sup>
Area 6, Bottled Water	01/31/89	2.0 x 10 <sup>-10</sup>	3.9 x 10 <sup>-10</sup>
Area 6, Bottled Water	02/06/89	1.0 x 10 <sup>-10</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	02/13/89	5.0 x 10 <sup>-10</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	02/22/89	2.0 x 10 <sup>-10</sup>	4.1 x 10 <sup>-10</sup>
Area 6, Bottled Water	03/01/89	0.0 x 10 <sup>0</sup>	3.7 x 10 <sup>-10</sup>
Area 6, Bottled Water	03/07/89	1.0 x 10 <sup>-10</sup>	4.3 x 10 <sup>-10</sup>
Area 6, Bottled Water	03/13/89	2.0 x 10 <sup>-10</sup>	4.4 x 10 <sup>-10</sup>
Area 6, Bottled Water	03/20/89	2.0 x 10 <sup>-9</sup>	4.5 x 10 <sup>-10</sup>
Area 6, Bottled Water	03/27/89	8.5 x 10 <sup>-9</sup>	3.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	04/03/89	5.0 x 10 <sup>-10</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	04/11/89	0.0 x 10 <sup>0</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	04/19/89	3.0 x 10 <sup>-10</sup>	3.6 x 10 <sup>-10</sup>
Area 6, Bottled Water	04/24/89	2.0 x 10 <sup>-10</sup>	3.7 x 10 <sup>-10</sup>
Area 6, Bottled Water	05/01/89	4.0 x 10 <sup>-10</sup>	4.0 x 10 <sup>-10</sup>
Area 6, Bottled Water	05/08/89	0.0 x 10 <sup>0</sup>	3.7 x 10 <sup>-10</sup>
Area 6, Bottled Water	05/15/89	9.0 x 10 <sup>-10</sup>	4.9 x 10 <sup>-10</sup>
Area 6, Bottled Water	05/22/89	2.0 x 10 <sup>-10</sup>	4.0 x 10 <sup>-10</sup>
Area 6, Bottled Water	05/30/89	6.0 x 10 <sup>-10</sup>	4.0 x 10 <sup>-10</sup>
Area 6, Bottled Water	06/05/89	6.0 x 10 <sup>-10</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	06/12/89	2.0 x 10 <sup>-10</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	06/19/89	0.0 x 10 <sup>0</sup>	4.3 x 10 <sup>-10</sup>
Area 6, Bottled Water	06/26/89	1.7 x 10 <sup>-9</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	07/05/89	1.5 x 10 <sup>-9</sup>	4.0 x 10 <sup>-10</sup>
Area 6, Bottled Water	07/11/89	1.2 x 10 <sup>-9</sup>	3.9 x 10 <sup>-10</sup>
Area 6, Bottled Water	07/17/89	8.0 x 10 <sup>-10</sup>	4.1 x 10 <sup>-10</sup>
Area 6, Bottled Water	07/24/89	6.0 x 10 <sup>-10</sup>	4.3 x 10 <sup>-10</sup>
Area 6, Bottled Water	07/31/89	1.5 x 10 <sup>-9</sup>	4.1 x 10 <sup>-10</sup>
Area 6, Bottled Water	08/07/89	8.0 x 10 <sup>-10</sup>	4.3 x 10 <sup>-10</sup>
Area 6, Bottled Water	08/14/89	3.0 x 10 <sup>-10</sup>	3.9 x 10 <sup>-10</sup>
Area 6, Bottled Water	08/21/89	5.0 x 10 <sup>-10</sup>	3.8 x 10 <sup>-10</sup>
Area 6, Bottled Water	08/28/89	9.0 x 10 <sup>-10</sup>	3.9 x 10 <sup>-10</sup>
Area 6, Bottled Water	09/06/89	7.0 x 10 <sup>-10</sup>	4.2 x 10 <sup>-10</sup>

Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 6, Bottled Water	09/11/89	7.0 x 10 <sup>-10</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	09/18/89	3.0 x 10 <sup>-10</sup>	4.0 x 10 <sup>-10</sup>
Area 6, Bottled Water	09/26/89	1.0 x 10 <sup>-10</sup>	3.9 x 10 <sup>-10</sup>
Area 6, Bottled Water	10/02/89	2.0 x 10 <sup>-10</sup>	4.1 x 10 <sup>-10</sup>
Area 6, Bottled Water	10/09/89	1.0 x 10 <sup>-10</sup>	4.0 x 10 <sup>-10</sup>
Area 6, Bottled Water	10/16/89	2.0 x 10 <sup>-10</sup>	4.1 x 10 <sup>-10</sup>
Area 6, Bottled Water	10/23/89	3.0 x 10 <sup>-10</sup>	3.9 x 10 <sup>-10</sup>
Area 6, Bottled Water	10/30/89	3.0 x 10 <sup>-10</sup>	3.7 x 10 <sup>-10</sup>
Area 6, Bottled Water	11/06/89	2.0 x 10 <sup>-10</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	11/13/89	2.0 x 10 <sup>-10</sup>	4.4 x 10 <sup>-10</sup>
Area 6, Bottled Water	11/20/89	5.0 x 10 <sup>-10</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	11/28/89	1.0 x 10 <sup>-10</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	12/05/89	0.0 x 10 <sup>0</sup>	3.8 x 10 <sup>-10</sup>
Area 6, Bottled Water	12/11/89	3.0 x 10 <sup>-10</sup>	4.3 x 10 <sup>-10</sup>
Area 6, Bottled Water	12/18/89	2.0 x 10 <sup>-10</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Bottled Water	12/18/89	1.4 x 10 <sup>-8</sup>	6.9 x 10 <sup>-10</sup>
Area 6, Cafeteria	01/03/89	5.8 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 6, Cafeteria	01/09/89	1.0 x 10 <sup>-8</sup>	6.3 x 10 <sup>-10</sup>
Area 6, Cafeteria	01/17/89	1.0 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 6, Cafeteria	01/23/89	8.5 x 10 <sup>-9</sup>	6.7 x 10 <sup>-10</sup>
Area 6, Cafeteria	01/31/89	8.3 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 6, Cafeteria	02/06/89	8.5 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 6, Cafeteria	02/13/89	7.6 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 6, Cafeteria	02/22/89	6.0 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 6, Cafeteria	03/01/89	1.1 x 10 <sup>-8</sup>	4.3 x 10 <sup>-10</sup>
Area 6, Cafeteria	03/07/89	3.9 x 10 <sup>-9</sup>	8.8 x 10 <sup>-10</sup>
Area 6, Cafeteria	03/13/89	4.7 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 6, Cafeteria	03/20/89	8.8 x 10 <sup>-9</sup>	6.3 x 10 <sup>-10</sup>
Area 6, Cafeteria	03/27/89	8.7 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 6, Cafeteria	04/03/89	8.5 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 6, Cafeteria	04/11/89	5.3 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 6, Cafeteria	04/19/89	9.3 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 6, Cafeteria	04/24/89	9.0 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 6, Cafeteria	05/01/89	8.8 x 10 <sup>-9</sup>	6.3 x 10 <sup>-10</sup>
Area 6, Cafeteria	05/08/89	1.0 x 10 <sup>-8</sup>	6.3 x 10 <sup>-10</sup>
Area 6, Cafeteria	05/15/89	9.9 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 6, Cafeteria	05/22/89	8.3 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 6, Cafeteria	05/30/89	1.1 x 10 <sup>-8</sup>	6.3 x 10 <sup>-10</sup>
Area 6, Cafeteria	06/05/89	1.1 x 10 <sup>-8</sup>	6.2 x 10 <sup>-10</sup>
Area 6, Cafeteria	06/12/89	1.3 x 10 <sup>-8</sup>	6.7 x 10 <sup>-10</sup>
Area 6, Cafeteria	06/19/89	1.7 x 10 <sup>-8</sup>	2.8 x 10 <sup>-9</sup>
Area 6, Cafeteria	06/26/89	1.4 x 10 <sup>-8</sup>	7.6 x 10 <sup>-10</sup>
Area 6, Cafeteria	07/05/89	1.2 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 6, Cafeteria	07/11/89	9.0 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 6, Cafeteria	07/17/89	6.9 x 10 <sup>-9</sup>	6.3 x 10 <sup>-10</sup>
Area 6, Cafeteria	07/24/89	6.9 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>

Table C.4 (Gross Beta in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 6, Cafeteria	07/31/89	$8.5 \times 10^{-9}$	$6.3 \times 10^{-10}$
Area 6, Cafeteria	08/07/89	$9.2 \times 10^{-9}$	$6.5 \times 10^{-10}$
Area 6, Cafeteria	08/14/89	$1.3 \times 10^{-8}$	$6.5 \times 10^{-10}$
Area 6, Cafeteria	08/21/89	$1.1 \times 10^{-8}$	$6.2 \times 10^{-10}$
Area 6, Cafeteria	08/28/89	$1.1 \times 10^{-8}$	$6.6 \times 10^{-10}$
Area 6, Cafeteria	09/06/89	$1.2 \times 10^{-8}$	$6.6 \times 10^{-10}$
Area 6, Cafeteria	09/11/89	$1.0 \times 10^{-8}$	$6.3 \times 10^{-10}$
Area 6, Cafeteria	09/18/89	$9.8 \times 10^{-9}$	$6.2 \times 10^{-10}$
Area 6, Cafeteria	09/26/89	$1.1 \times 10^{-8}$	$6.2 \times 10^{-10}$
Area 6, Cafeteria	10/02/89	$8.0 \times 10^{-9}$	$6.1 \times 10^{-10}$
Area 6, Cafeteria	10/09/89	$1.1 \times 10^{-8}$	$6.4 \times 10^{-10}$
Area 6, Cafeteria	10/16/89	$9.5 \times 10^{-9}$	$6.3 \times 10^{-10}$
Area 6, Cafeteria	10/23/89	$1.2 \times 10^{-8}$	$6.5 \times 10^{-10}$
Area 6, Cafeteria	10/30/89	$1.1 \times 10^{-8}$	$6.5 \times 10^{-10}$
Area 6, Cafeteria	11/06/89	$1.1 \times 10^{-8}$	$6.6 \times 10^{-10}$
Area 6, Cafeteria	11/13/89	$6.6 \times 10^{-9}$	$5.7 \times 10^{-10}$
Area 6, Cafeteria	11/20/89	$1.0 \times 10^{-8}$	$6.4 \times 10^{-10}$
Area 6, Cafeteria	11/28/89	$1.2 \times 10^{-8}$	$6.7 \times 10^{-10}$
Area 6, Cafeteria	12/05/89	$1.2 \times 10^{-8}$	$6.5 \times 10^{-10}$
Area 6, Cafeteria	12/11/89	$1.2 \times 10^{-8}$	$6.8 \times 10^{-10}$
Area 6, Cafeteria	12/18/89	$6.8 \times 10^{-9}$	$5.8 \times 10^{-10}$
Area 6, Cafeteria	12/26/89	$6.0 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 6, Decontamination Facility Pond	01/19/89	$2.6 \times 10^{-7}$	$4.3 \times 10^{-8}$
Area 6, Decontamination Facility Pond	02/21/89	$2.6 \times 10^{-7}$	$4.4 \times 10^{-8}$
Area 6, Decontamination Facility Pond	03/15/89	$1.3 \times 10^{-7}$	$3.3 \times 10^{-8}$
Area 6, Decontamination Facility Pond	04/14/89	$2.5 \times 10^{-7}$	$4.3 \times 10^{-8}$
Area 6, Decontamination Facility Pond	05/05/89	$1.6 \times 10^{-7}$	$4.1 \times 10^{-8}$
Area 6, Decontamination Facility Pond	06/08/89	$1.9 \times 10^{-7}$	$4.2 \times 10^{-8}$
Area 6, Decontamination Facility Pond	07/20/89	$2.6 \times 10^{-7}$	$7.6 \times 10^{-8}$
Area 6, Decontamination Facility Pond	08/03/89	$2.3 \times 10^{-7}$	$7.4 \times 10^{-8}$
Area 6, Decontamination Facility Pond	09/13/89	$2.5 \times 10^{-7}$	$4.4 \times 10^{-8}$
Area 6, Decontamination Facility Pond	10/06/89	$1.2 \times 10^{-7}$	$1.2 \times 10^{-8}$
Area 6, Decontamination Facility Pond	11/07/89	$1.2 \times 10^{-7}$	$1.2 \times 10^{-8}$
Area 6, Decontamination Facility Pond	12/27/89	$3.0 \times 10^{-8}$	$2.5 \times 10^{-8}$
Area 6, Sewage	03/15/89	$1.0 \times 10^{-8}$	$6.3 \times 10^{-10}$
Area 6, Sewage	06/21/89	$6.1 \times 10^{-8}$	$1.2 \times 10^{-9}$
Area 6, Sewage	09/27/89	$3.6 \times 10^{-8}$	$1.3 \times 10^{-9}$
Area 6, Sewage	12/27/89	$1.4 \times 10^{-7}$	$2.8 \times 10^{-8}$
Area 6, Well 3 Reservoir	01/19/89	$1.0 \times 10^{-8}$	$6.1 \times 10^{-10}$
Area 6, Well 3 Reservoir	02/24/89	$5.1 \times 10^{-9}$	$5.5 \times 10^{-10}$
Area 6, Well 3 Reservoir	03/10/89	$6.7 \times 10^{-9}$	$5.9 \times 10^{-10}$
Area 6, Well 3 Reservoir	04/07/89	$7.1 \times 10^{-9}$	$5.9 \times 10^{-10}$
Area 6, Well 3 Reservoir	05/04/89	$5.5 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 6, Well 3 Reservoir	06/07/89	$5.4 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 6, Well 3 Reservoir	07/18/89	$8.2 \times 10^{-9}$	$5.5 \times 10^{-10}$
Area 6, Well 3 Reservoir	08/01/89	$7.2 \times 10^{-9}$	$5.6 \times 10^{-10}$



Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 6, Well 3 Reservoir	09/06/89	1.1 x 10 <sup>-8</sup>	6.4 x 10 <sup>-10</sup>
Area 6, Well 3 Reservoir	10/05/89	9.9 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 6, Well 3 Reservoir	11/02/89	6.5 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 6, Well 3 Reservoir	12/08/89	1.3 x 10 <sup>-8</sup>	6.7 x 10 <sup>-10</sup>
Area 6, Well 4	01/18/89	6.0 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 6, Well 4	02/15/89	5.8 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 6, Well 4	03/17/89	7.0 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 6, Well 4	04/11/89	3.2 x 10 <sup>-9</sup>	4.6 x 10 <sup>-10</sup>
Area 6, Well 4	05/17/89	1.5 x 10 <sup>-9</sup>	4.6 x 10 <sup>-10</sup>
Area 6, Well 4	05/17/89	6.5 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 6, Well 4	06/20/89	6.0 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 6, Well 4	07/11/89	3.6 x 10 <sup>-9</sup>	4.2 x 10 <sup>-10</sup>
Area 6, Well 4	08/09/89	6.4 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 6, Well 4	09/11/89	7.1 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 6, Well 4	10/16/89	6.4 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 6, Well 4	11/06/89	6.9 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 6, Well 4	12/12/89	1.3 x 10 <sup>-9</sup>	4.7 x 10 <sup>-10</sup>
Area 6, Well A Reservoir	01/19/89	8.3 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 6, Well A Reservoir	02/24/89	4.9 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 6, Well A Reservoir	03/10/89	5.8 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 6, Well A Reservoir	04/07/89	7.3 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 6, Well A Reservoir	05/04/89	4.5 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 6, Well A Reservoir	06/07/89	6.2 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 6, Well A Reservoir	07/18/89	8.1 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 6, Well A Reservoir	08/01/89	8.3 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 6, Well A Reservoir	09/06/89	1.1 x 10 <sup>-8</sup>	6.6 x 10 <sup>-10</sup>
Area 6, Well A Reservoir	10/06/89	3.5 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 6, Well A Reservoir	11/02/89	8.0 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 6, Well A Reservoir	12/15/89	7.6 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 6, Well C	01/18/89	1.4 x 10 <sup>-8</sup>	6.3 x 10 <sup>-10</sup>
Area 6, Well C	05/17/89	1.4 x 10 <sup>-8</sup>	6.2 x 10 <sup>-10</sup>
Area 6, Well C	07/11/89	1.1 x 10 <sup>-8</sup>	5.6 x 10 <sup>-10</sup>
Area 6, Well C	08/09/89	1.2 x 10 <sup>-8</sup>	6.3 x 10 <sup>-10</sup>
Area 6, Well C	09/11/89	1.5 x 10 <sup>-8</sup>	1.5 x 10 <sup>-9</sup>
Area 6, Well C	12/08/89	8.7 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 6, Well C1	01/18/89	1.3 x 10 <sup>-8</sup>	6.2 x 10 <sup>-10</sup>
Area 6, Well C1	02/15/89	1.2 x 10 <sup>-8</sup>	6.1 x 10 <sup>-10</sup>
Area 6, Well C1	03/17/89	1.8 x 10 <sup>-8</sup>	1.5 x 10 <sup>-9</sup>
Area 6, Well C1	04/11/89	9.3 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 6, Well C1	05/17/89	1.4 x 10 <sup>-8</sup>	6.1 x 10 <sup>-10</sup>
Area 6, Well C1	06/20/89	1.0 x 10 <sup>-8</sup>	5.7 x 10 <sup>-10</sup>
Area 6, Well C1	07/11/89	1.6 x 10 <sup>-8</sup>	6.4 x 10 <sup>-10</sup>
Area 6, Well C1	08/09/89	1.2 x 10 <sup>-8</sup>	6.2 x 10 <sup>-10</sup>
Area 6, Well C1	09/11/89	1.8 x 10 <sup>-8</sup>	3.5 x 10 <sup>-9</sup>
Area 6, Well C1	10/16/89	1.4 x 10 <sup>-8</sup>	6.7 x 10 <sup>-10</sup>
Area 6, Well C1	10/16/89	1.5 x 10 <sup>-8</sup>	6.9 x 10 <sup>-10</sup>

Table C.4 (Gross Beta in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 6, Well C1	11/06/89	$1.6 \times 10^{-8}$	$6.7 \times 10^{-10}$
Area 6, Well C1 Reservoir	01/19/89	$7.4 \times 10^{-9}$	$6.4 \times 10^{-10}$
Area 6, Well C1 Reservoir	02/24/89	$5.0 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 6, Well C1 Reservoir	03/10/89	$5.8 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 6, Well C1 Reservoir	04/07/89	$7.3 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 6, Well C1 Reservoir	05/04/89	$5.5 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 6, Well C1 Reservoir	06/07/89	$7.3 \times 10^{-9}$	$5.9 \times 10^{-10}$
Area 6, Well C1 Reservoir	07/18/89	$7.4 \times 10^{-9}$	$5.7 \times 10^{-10}$
Area 6, Well C1 Reservoir	08/03/89	$9.6 \times 10^{-9}$	$6.0 \times 10^{-10}$
Area 6, Well C1 Reservoir	09/12/89	$7.6 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 6, Well C1 Reservoir	10/05/89	$6.9 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 6, Well C1 Reservoir	11/01/89	$6.2 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 6, Well C1 Reservoir	12/08/89	$9.3 \times 10^{-9}$	$5.8 \times 10^{-10}$
Area 7, Reitman Seep	01/06/89	$2.5 \times 10^{-8}$	$8.4 \times 10^{-10}$
Area 7, Reitman Seep	02/15/89	$1.8 \times 10^{-8}$	$7.4 \times 10^{-10}$
Area 7, Reitman Seep	03/09/89	$3.0 \times 10^{-8}$	$1.2 \times 10^{-9}$
Area 7, Reitman Seep	04/28/89	$1.2 \times 10^{-8}$	$6.4 \times 10^{-10}$
Area 7, Reitman Seep	05/18/89	$1.8 \times 10^{-8}$	$6.8 \times 10^{-10}$
Area 7, Reitman Seep	06/07/89	$2.2 \times 10^{-8}$	$7.4 \times 10^{-10}$
Area 7, Reitman Seep	07/26/89	$6.8 \times 10^{-9}$	$5.8 \times 10^{-10}$
Area 7, Reitman Seep	08/25/89	$2.1 \times 10^{-8}$	$7.1 \times 10^{-10}$
Area 7, Reitman Seep	09/13/89	$2.0 \times 10^{-8}$	$7.2 \times 10^{-10}$
Area 7, Reitman Seep	10/10/89	$7.5 \times 10^{-8}$	$1.6 \times 10^{-9}$
Area 7, Reitman Seep	10/26/89	$4.2 \times 10^{-8}$	$9.6 \times 10^{-10}$
Area 7, Reitman Seep	11/14/89	$3.4 \times 10^{-8}$	$1.1 \times 10^{-9}$
Area 12, Cafeteria	01/03/89	$2.1 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 12, Cafeteria	01/09/89	$3.4 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 12, Cafeteria	01/17/89	$2.4 \times 10^{-9}$	$4.6 \times 10^{-10}$
Area 12, Cafeteria	01/23/89	$2.1 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 12, Cafeteria	01/30/89	$1.7 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 12, Cafeteria	02/06/89	$2.5 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 12, Cafeteria	02/13/89	$2.8 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 12, Cafeteria	02/23/89	$1.8 \times 10^{-9}$	$4.6 \times 10^{-10}$
Area 12, Cafeteria	02/27/89	$2.3 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 12, Cafeteria	03/06/89	$2.5 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 12, Cafeteria	03/14/89	$3.1 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 12, Cafeteria	03/20/89	$4.6 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 12, Cafeteria	03/27/89	$8.5 \times 10^{-9}$	$3.2 \times 10^{-10}$
Area 12, Cafeteria	04/03/89	$3.6 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 12, Cafeteria	04/10/89	$3.0 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 12, Cafeteria	04/18/89	$3.5 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 12, Cafeteria	04/24/89	$3.4 \times 10^{-9}$	$4.6 \times 10^{-10}$
Area 12, Cafeteria	05/01/89	$2.0 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 12, Cafeteria	05/08/89	$2.2 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 12, Cafeteria	05/15/89	$2.3 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 12, Cafeteria	05/23/89	$2.4 \times 10^{-9}$	$5.4 \times 10^{-10}$

Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 12, Cafeteria	05/30/89	$2.7 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 12, Cafeteria	06/05/89	$3.8 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 12, Cafeteria	06/13/89	$2.7 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 12, Cafeteria	06/19/89	$2.3 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 12, Cafeteria	06/26/89	$4.3 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 12, Cafeteria	07/05/89	$4.2 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 12, Cafeteria	07/11/89	$4.3 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 12, Cafeteria	07/17/89	$4.1 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 12, Cafeteria	07/25/89	$2.7 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 12, Cafeteria	07/31/89	$3.1 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 12, Cafeteria	08/07/89	$3.1 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 12, Cafeteria	08/15/89	$3.8 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 12, Cafeteria	08/21/89	$3.5 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 12, Cafeteria	08/29/89	$4.2 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 12, Cafeteria	09/05/89	$4.3 \times 10^{-9}$	$5.7 \times 10^{-10}$
Area 12, Cafeteria	09/11/89	$2.5 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 12, Cafeteria	09/18/89	$4.0 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 12, Cafeteria	09/25/89	$3.7 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 12, Cafeteria	10/02/89	$2.8 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 12, Cafeteria	10/09/89	$3.8 \times 10^{-9}$	$5.7 \times 10^{-10}$
Area 12, Cafeteria	10/16/89	$3.2 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 12, Cafeteria	10/23/89	$2.1 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 12, Cafeteria	10/30/89	$3.3 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 12, Cafeteria	11/06/89	$3.6 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 12, Cafeteria	11/28/89	$4.6 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 12, Cafeteria	12/06/89	$3.7 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 12, Cafeteria	12/11/89	$3.8 \times 10^{-9}$	$5.5 \times 10^{-10}$
Area 12, Cafeteria	12/18/89	$3.7 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 12, Cafeteria	12/26/89	$2.8 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 12, Captain Jack Spring	03/22/89	$5.1 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 12, Captain Jack Spring	04/11/89	$2.0 \times 10^{-9}$	$4.5 \times 10^{-10}$
Area 12, Captain Jack Spring	05/19/89	$5.4 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 12, Captain Jack Spring	07/14/89	$3.7 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 12, Captain Jack Spring	08/24/89	$5.8 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 12, Captain Jack Spring	09/13/89	$1.3 \times 10^{-8}$	$6.2 \times 10^{-10}$
Area 12, Captain Jack Spring	10/26/89	$6.6 \times 10^{-9}$	$5.7 \times 10^{-10}$
Area 12, E Tunnel Effluent Pond	02/28/89	$1.6 \times 10^{-7}$	$9.9 \times 10^{-9}$
Area 12, E Tunnel Effluent Pond	03/10/89	$1.4 \times 10^{-7}$	$7.9 \times 10^{-9}$
Area 12, E Tunnel Effluent Pond	04/11/89	$1.3 \times 10^{-7}$	$1.1 \times 10^{-8}$
Area 12, E Tunnel Effluent Pond	05/19/89	$7.3 \times 10^{-8}$	$8.1 \times 10^{-9}$
Area 12, E Tunnel Effluent Pond	06/28/89	$4.3 \times 10^{-6}$	$2.5 \times 10^{-7}$
Area 12, E Tunnel Effluent Pond	07/20/89	$8.3 \times 10^{-7}$	$8.6 \times 10^{-8}$
Area 12, E Tunnel Effluent Pond	08/17/89	$1.9 \times 10^{-6}$	$1.1 \times 10^{-7}$
Area 12, E Tunnel Effluent Pond	09/20/89	$1.5 \times 10^{-7}$	$3.4 \times 10^{-8}$
Area 12, E Tunnel Effluent Pond	10/19/89	$1.1 \times 10^{-7}$	$3.4 \times 10^{-8}$
Area 12, E Tunnel Effluent Pond	11/16/89	$1.1 \times 10^{-7}$	$1.3 \times 10^{-8}$

Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 12, E Tunnel Effluent Pond	12/14/89	$1.1 \times 10^{-7}$	$3.3 \times 10^{-8}$
Area 12, N Tunnel Effluent Pond	01/12/89	$2.6 \times 10^{-8}$	$7.8 \times 10^{-9}$
Area 12, N Tunnel Effluent Pond	02/03/89	$3.4 \times 10^{-8}$	$7.0 \times 10^{-9}$
Area 12, N Tunnel Effluent Pond	03/10/89	$1.9 \times 10^{-8}$	$5.4 \times 10^{-9}$
Area 12, N Tunnel Effluent Pond	04/11/89	$3.4 \times 10^{-8}$	$7.3 \times 10^{-9}$
Area 12, N Tunnel Effluent Pond	05/10/89	$1.8 \times 10^{-8}$	$6.9 \times 10^{-9}$
Area 12, N Tunnel Effluent Pond	06/28/89	$4.5 \times 10^{-8}$	$6.1 \times 10^{-8}$
Area 12, N Tunnel Effluent Pond	07/20/89	$1.3 \times 10^{-7}$	$6.2 \times 10^{-8}$
Area 12, N Tunnel Effluent Pond	08/17/89	$6.0 \times 10^{-8}$	$3.1 \times 10^{-8}$
Area 12, N Tunnel Effluent Pond	09/20/89	$5.5 \times 10^{-8}$	$3.1 \times 10^{-8}$
Area 12, N Tunnel Effluent Pond	10/19/89	$3.7 \times 10^{-8}$	$3.2 \times 10^{-8}$
Area 12, N Tunnel Effluent Pond	11/16/89	$3.2 \times 10^{-8}$	$1.1 \times 10^{-8}$
Area 12, N Tunnel Effluent Pond	12/27/89	$7.4 \times 10^{-8}$	$2.6 \times 10^{-8}$
Area 12, N Tunnel Pond No. 1	02/03/89	$4.5 \times 10^{-8}$	$7.5 \times 10^{-9}$
Area 12, N Tunnel Pond No. 1	03/10/89	$7.2 \times 10^{-9}$	$5.6 \times 10^{-9}$
Area 12, N Tunnel Pond No. 1	04/11/89	$3.7 \times 10^{-8}$	$7.8 \times 10^{-9}$
Area 12, N Tunnel Pond No. 1	05/10/89	$1.4 \times 10^{-8}$	$6.8 \times 10^{-9}$
Area 12, N Tunnel Pond No. 1	06/28/89	$6.4 \times 10^{-8}$	$6.3 \times 10^{-8}$
Area 12, N Tunnel Pond No. 1	07/20/89	$1.3 \times 10^{-7}$	$6.3 \times 10^{-8}$
Area 12, N Tunnel Pond No. 1	08/17/89	$8.3 \times 10^{-8}$	$3.3 \times 10^{-8}$
Area 12, N Tunnel Pond No. 1	09/20/89	$5.6 \times 10^{-8}$	$3.1 \times 10^{-8}$
Area 12, N Tunnel Pond No. 1	10/19/89	$1.0 \times 10^{-7}$	$3.4 \times 10^{-8}$
Area 12, N Tunnel Pond No. 1	11/16/89	$9.5 \times 10^{-9}$	$1.0 \times 10^{-8}$
Area 12, N Tunnel Pond No. 1	12/27/89	$3.3 \times 10^{-7}$	$3.4 \times 10^{-8}$
Area 12, N Tunnel Pond No. 2	02/03/89	$3.7 \times 10^{-8}$	$6.9 \times 10^{-9}$
Area 12, N Tunnel Pond No. 2	03/10/89	$3.1 \times 10^{-8}$	$6.5 \times 10^{-9}$
Area 12, N Tunnel Pond No. 2	04/11/89	$2.2 \times 10^{-8}$	$7.4 \times 10^{-9}$
Area 12, N Tunnel Pond No. 2	05/10/89	$2.3 \times 10^{-8}$	$6.8 \times 10^{-9}$
Area 12, N Tunnel Pond No. 2	06/28/89	$1.7 \times 10^{-7}$	$6.5 \times 10^{-8}$
Area 12, N Tunnel Pond No. 2	07/20/89	$3.2 \times 10^{-8}$	$6.3 \times 10^{-8}$
Area 12, N Tunnel Pond No. 2	08/17/89	$6.5 \times 10^{-8}$	$3.2 \times 10^{-8}$
Area 12, N Tunnel Pond No. 2	09/20/89	$7.8 \times 10^{-8}$	$3.2 \times 10^{-8}$
Area 12, N Tunnel Pond No. 2	10/19/89	$7.8 \times 10^{-8}$	$3.3 \times 10^{-8}$
Area 12, N Tunnel Pond No. 2	11/16/89	$2.9 \times 10^{-8}$	$1.1 \times 10^{-8}$
Area 12, N Tunnel Pond No. 2	12/27/89	$3.7 \times 10^{-8}$	$2.5 \times 10^{-8}$
Area 12, N Tunnel Pond No. 3	02/03/89	$7.5 \times 10^{-7}$	$1.9 \times 10^{-8}$
Area 12, N Tunnel Pond No. 3	03/10/89	$2.4 \times 10^{-8}$	$7.2 \times 10^{-9}$
Area 12, N Tunnel Pond No. 3	04/11/89	$2.9 \times 10^{-8}$	$7.2 \times 10^{-9}$
Area 12, N Tunnel Pond No. 3	05/10/89	$3.5 \times 10^{-8}$	$7.2 \times 10^{-9}$
Area 12, N Tunnel Pond No. 3	06/28/89	$4.0 \times 10^{-8}$	$6.0 \times 10^{-8}$
Area 12, N Tunnel Pond No. 3	07/20/89	$9.4 \times 10^{-8}$	$6.3 \times 10^{-8}$
Area 12, N Tunnel Pond No. 3	08/17/89	$4.5 \times 10^{-8}$	$3.1 \times 10^{-8}$
Area 12, N Tunnel Pond No. 3	09/20/89	$1.5 \times 10^{-7}$	$3.5 \times 10^{-8}$
Area 12, N Tunnel Pond No. 3	10/19/89	$4.2 \times 10^{-9}$	$3.0 \times 10^{-8}$
Area 12, N Tunnel Pond No. 3	11/16/89	$2.3 \times 10^{-8}$	$1.1 \times 10^{-8}$
Area 12, N Tunnel Pond No. 3	12/27/89	$4.8 \times 10^{-8}$	$2.5 \times 10^{-8}$

Table C.4 (Gross Beta in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 12, Sewage Pond	03/22/89	$1.1 \times 10^{-8}$	$6.3 \times 10^{-10}$
Area 12, Sewage Pond	06/21/89	$1.6 \times 10^{-8}$	$7.0 \times 10^{-10}$
Area 12, Sewage Pond	09/20/89	$1.3 \times 10^{-8}$	$6.6 \times 10^{-10}$
Area 12, Sewage Pond	12/14/89	$5.6 \times 10^{-8}$	$1.1 \times 10^{-9}$
Area 12, Tunnel Effluent Pond	01/12/89	$1.5 \times 10^{-5}$	$8.4 \times 10^{-8}$
Area 12, Tunnel Effluent Pond	02/15/89	$1.0 \times 10^{-5}$	$9.8 \times 10^{-8}$
Area 12, Tunnel Effluent Pond	03/09/89	$1.2 \times 10^{-5}$	$7.4 \times 10^{-8}$
Area 12, Tunnel Effluent Pond	04/11/89	$7.0 \times 10^{-6}$	$6.4 \times 10^{-8}$
Area 12, Tunnel Effluent Pond	05/19/89	$8.2 \times 10^{-6}$	$6.0 \times 10^{-8}$
Area 12, Tunnel Effluent Pond	06/28/89	$1.0 \times 10^{-5}$	$4.2 \times 10^{-8}$
Area 12, Tunnel Effluent Pond	07/20/89	$8.9 \times 10^{-6}$	$2.1 \times 10^{-7}$
Area 12, Tunnel Effluent Pond	08/17/89	$2.2 \times 10^{-6}$	$7.6 \times 10^{-8}$
Area 12, Tunnel Effluent Pond	09/20/89	$1.5 \times 10^{-6}$	$6.6 \times 10^{-8}$
Area 12, Tunnel Effluent Pond	10/19/89	$6.9 \times 10^{-7}$	$4.9 \times 10^{-8}$
Area 12, Tunnel Effluent Pond	11/16/89	$1.5 \times 10^{-7}$	$1.4 \times 10^{-8}$
Area 12, Tunnel Effluent Pond	12/27/89	$4.8 \times 10^{-7}$	$3.8 \times 10^{-8}$
Area 12, Tunnel Pond No. 1	02/28/89	$1.3 \times 10^{-5}$	$8.1 \times 10^{-8}$
Area 12, Tunnel Pond No. 1	03/09/89	$1.5 \times 10^{-5}$	$8.3 \times 10^{-8}$
Area 12, Tunnel Pond No. 1	04/11/89	$1.2 \times 10^{-5}$	$7.7 \times 10^{-8}$
Area 12, Tunnel Pond No. 1	05/19/89	$7.0 \times 10^{-6}$	$5.9 \times 10^{-8}$
Area 12, Tunnel Pond No. 1	06/28/89	$7.7 \times 10^{-6}$	$3.7 \times 10^{-8}$
Area 12, Tunnel Pond No. 1	07/20/89	$6.6 \times 10^{-6}$	$1.8 \times 10^{-7}$
Area 12, Tunnel Pond No. 1	08/17/89	$2.0 \times 10^{-6}$	$7.4 \times 10^{-8}$
Area 12, Tunnel Pond No. 1	09/20/89	$1.2 \times 10^{-6}$	$6.0 \times 10^{-8}$
Area 12, Tunnel Pond No. 1	10/19/89	$6.5 \times 10^{-7}$	$4.9 \times 10^{-8}$
Area 12, Tunnel Pond No. 1	11/16/89	$3.0 \times 10^{-7}$	$1.8 \times 10^{-8}$
Area 12, Tunnel Pond No. 1	12/12/89	$3.3 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 12, Tunnel Pond No. 2	02/28/89	$1.6 \times 10^{-5}$	$8.4 \times 10^{-8}$
Area 12, Tunnel Pond No. 2	03/09/89	$1.5 \times 10^{-5}$	$6.1 \times 10^{-8}$
Area 12, Tunnel Pond No. 2	04/11/89	$1.3 \times 10^{-5}$	$8.3 \times 10^{-8}$
Area 12, Tunnel Pond No. 2	05/19/89	$8.0 \times 10^{-6}$	$5.9 \times 10^{-8}$
Area 12, Tunnel Pond No. 2	06/28/89	$8.2 \times 10^{-6}$	$3.7 \times 10^{-8}$
Area 12, Tunnel Pond No. 2	07/20/89	$6.4 \times 10^{-6}$	$1.8 \times 10^{-7}$
Area 12, Tunnel Pond No. 2	08/17/89	$2.1 \times 10^{-6}$	$7.5 \times 10^{-8}$
Area 12, Tunnel Pond No. 2	09/20/89	$1.4 \times 10^{-6}$	$6.2 \times 10^{-8}$
Area 12, Tunnel Pond No. 2	10/19/89	$7.5 \times 10^{-7}$	$5.1 \times 10^{-8}$
Area 12, Tunnel Pond No. 2	11/16/89	$4.0 \times 10^{-7}$	$2.0 \times 10^{-8}$
Area 12, Tunnel Pond No. 2	12/27/89	$3.4 \times 10^{-7}$	$3.4 \times 10^{-8}$
Area 12, White Rock Spring	01/06/89	$6.7 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 12, White Rock Spring	02/03/89	$4.4 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 12, White Rock Spring	03/02/89	$5.7 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 12, White Rock Spring	04/05/89	$6.0 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 12, White Rock Spring	05/18/89	$5.0 \times 10^{-9}$	$6.0 \times 10^{-10}$
Area 12, White Rock Spring	06/07/89	$6.6 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 12, White Rock Spring	07/26/89	$4.2 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 12, White Rock Spring	08/17/89	$6.6 \times 10^{-9}$	$5.4 \times 10^{-10}$

Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 12, White Rock Spring	12/15/89	7.4 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 15, Tub Spring	01/12/89	4.7 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 15, Tub Spring	03/02/89	5.0 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 15, Tub Spring	04/28/89	3.5 x 10 <sup>-9</sup>	4.5 x 10 <sup>-10</sup>
Area 15, Tub Spring	12/15/89	7.1 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 15, Well Ue15d	01/18/89	1.5 x 10 <sup>-8</sup>	6.1 x 10 <sup>-10</sup>
Area 15, Well Ue15d	02/15/89	2.3 x 10 <sup>-8</sup>	6.7 x 10 <sup>-10</sup>
Area 15, Well Ue15d	03/17/89	2.0 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 15, Well Ue15d	04/11/89	1.2 x 10 <sup>-8</sup>	5.5 x 10 <sup>-10</sup>
Area 15, Well Ue15d	05/17/89	1.9 x 10 <sup>-8</sup>	6.4 x 10 <sup>-10</sup>
Area 15, Well Ue15d	06/20/89	1.2 x 10 <sup>-8</sup>	5.6 x 10 <sup>-10</sup>
Area 15, Well Ue15d	07/11/89	1.7 x 10 <sup>-8</sup>	6.1 x 10 <sup>-10</sup>
Area 15, Well Ue15d	08/09/89	1.2 x 10 <sup>-8</sup>	5.0 x 10 <sup>-10</sup>
Area 15, Well Ue15d	09/11/89	1.9 x 10 <sup>-8</sup>	6.4 x 10 <sup>-10</sup>
Area 15, Well Ue15d	10/16/89	1.8 x 10 <sup>-8</sup>	4.7 x 10 <sup>-10</sup>
Area 15, Well Ue15d	11/06/89	1.8 x 10 <sup>-8</sup>	6.6 x 10 <sup>-10</sup>
Area 15, Well Ue15d	12/12/89	2.0 x 10 <sup>-8</sup>	7.4 x 10 <sup>-10</sup>
Area 16, Tippisah Spring	01/24/89	1.8 x 10 <sup>-9</sup>	4.6 x 10 <sup>-10</sup>
Area 16, Tippisah Spring	03/15/89	3.8 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 16, Tippisah Spring	04/11/89	3.4 x 10 <sup>-9</sup>	4.7 x 10 <sup>-10</sup>
Area 16, Tippisah Spring	05/05/89	2.3 x 10 <sup>-9</sup>	4.7 x 10 <sup>-10</sup>
Area 16, Tippisah Spring	06/08/89	3.2 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 16, Tippisah Spring	07/20/89	2.9 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 16, Tippisah Spring	08/03/89	2.9 x 10 <sup>-9</sup>	4.8 x 10 <sup>-10</sup>
Area 16, Tippisah Spring	10/06/89	4.3 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 16, Tippisah Spring	12/14/89	1.8 x 10 <sup>-8</sup>	7.2 x 10 <sup>-10</sup>
Area 16, Well 16D	01/18/89	6.7 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 16, Well 16D	02/15/89	7.4 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 16, Well 16D	03/17/89	9.9 x 10 <sup>-9</sup>	6.5 x 10 <sup>-10</sup>
Area 16, Well 16D	04/11/89	4.3 x 10 <sup>-9</sup>	4.5 x 10 <sup>-10</sup>
Area 16, Well 16D	05/17/89	6.5 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 16, Well 16D	06/20/89	6.8 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 16, Well 16D	07/11/89	6.7 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 16, Well 16D	08/09/89	7.3 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 16, Well 16D	09/11/89	6.7 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 16, Well 16D	10/16/89	7.4 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 16, Well 16D	11/06/89	7.3 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 16, Well 16D	12/12/89	7.5 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 18, Camp 17 Reservoir	01/10/89	2.5 x 10 <sup>-9</sup>	4.7 x 10 <sup>-10</sup>
Area 18, Camp 17 Reservoir	02/28/89	3.9 x 10 <sup>-9</sup>	4.8 x 10 <sup>-10</sup>
Area 18, Camp 17 Reservoir	03/22/89	3.6 x 10 <sup>-9</sup>	4.9 x 10 <sup>-10</sup>
Area 18, Camp 17 Reservoir	04/06/89	3.8 x 10 <sup>-9</sup>	4.8 x 10 <sup>-10</sup>
Area 18, Camp 17 Reservoir	05/10/89	3.4 x 10 <sup>-9</sup>	4.8 x 10 <sup>-10</sup>
Area 18, Camp 17 Reservoir	06/21/89	3.3 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 18, Camp 17 Reservoir	07/14/89	4.2 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 18, Camp 17 Reservoir	08/02/89	3.9 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>

Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 18, Camp 17 Reservoir	09/26/89	3.6 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 18, Camp 17 Reservoir	10/11/89	4.5 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 18, Camp 17 Reservoir	12/13/89	7.5 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 18, Well 8	01/18/89	2.4 x 10 <sup>-9</sup>	4.5 x 10 <sup>-10</sup>
Area 18, Well 8	02/15/89	2.1 x 10 <sup>-9</sup>	4.3 x 10 <sup>-10</sup>
Area 18, Well 8	03/17/89	4.0 x 10 <sup>-9</sup>	4.5 x 10 <sup>-10</sup>
Area 18, Well 8	04/11/89	3.1 x 10 <sup>-9</sup>	4.2 x 10 <sup>-10</sup>
Area 18, Well 8	05/17/89	2.7 x 10 <sup>-9</sup>	4.5 x 10 <sup>-10</sup>
Area 18, Well 8	06/20/89	2.5 x 10 <sup>-9</sup>	4.5 x 10 <sup>-10</sup>
Area 18, Well 8	07/11/89	3.5 x 10 <sup>-9</sup>	4.4 x 10 <sup>-10</sup>
Area 18, Well 8	08/09/89	2.7 x 10 <sup>-9</sup>	4.5 x 10 <sup>-10</sup>
Area 18, Well 8	09/11/89	2.5 x 10 <sup>-9</sup>	4.7 x 10 <sup>-10</sup>
Area 18, Well 8	10/16/89	3.7 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 18, Well 8	11/06/89	3.6 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 18, Well 8	12/12/89	2.2 x 10 <sup>-8</sup>	7.4 x 10 <sup>-10</sup>
Area 19, Well U19c	01/18/89	5.0 x 10 <sup>-10</sup>	4.4 x 10 <sup>-10</sup>
Area 19, Well U19c	02/15/89	1.0 x 10 <sup>-10</sup>	3.9 x 10 <sup>-10</sup>
Area 19, Well U19c	03/17/89	1.0 x 10 <sup>-9</sup>	4.2 x 10 <sup>-10</sup>
Area 19, Well U19c	04/11/89	1.1 x 10 <sup>-9</sup>	4.0 x 10 <sup>-10</sup>
Area 19, Well U19c	05/17/89	4.0 x 10 <sup>-10</sup>	4.5 x 10 <sup>-10</sup>
Area 19, Well U19c	06/20/89	3.0 x 10 <sup>-10</sup>	4.0 x 10 <sup>-10</sup>
Area 19, Well U19c	07/11/89	1.9 x 10 <sup>-9</sup>	4.1 x 10 <sup>-10</sup>
Area 19, Well U19c	08/09/89	8.0 x 10 <sup>-10</sup>	4.3 x 10 <sup>-10</sup>
Area 19, Well U19c	09/11/89	3.0 x 10 <sup>-10</sup>	4.5 x 10 <sup>-10</sup>
Area 19, Well U19c	10/16/89	1.7 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 19, Well U19c	11/06/89	1.5 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 19, Well U19c	12/08/89	7.0 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 19, Well U19c Reservoir	01/10/89	0.0 x 10 <sup>0</sup>	4.2 x 10 <sup>-10</sup>
Area 19, Well U19c Reservoir	02/28/89	4.0 x 10 <sup>-10</sup>	4.9 x 10 <sup>-10</sup>
Area 19, Well U19c Reservoir	03/28/89	1.0 x 10 <sup>-9</sup>	4.9 x 10 <sup>-10</sup>
Area 19, Well U19c Reservoir	04/06/89	1.0 x 10 <sup>-9</sup>	4.4 x 10 <sup>-10</sup>
Area 19, Well U19c Reservoir	05/10/89	1.6 x 10 <sup>-9</sup>	4.7 x 10 <sup>-10</sup>
Area 19, Well U19c Reservoir	08/02/89	1.4 x 10 <sup>-9</sup>	4.6 x 10 <sup>-10</sup>
Area 19, Well U19c Reservoir	12/18/89	1.9 x 10 <sup>-8</sup>	7.8 x 10 <sup>-10</sup>
Area 20, Water Well	01/18/89	2.6 x 10 <sup>-9</sup>	4.6 x 10 <sup>-10</sup>
Area 20, Water Well	02/15/89	1.3 x 10 <sup>-9</sup>	4.3 x 10 <sup>-10</sup>
Area 20, Water Well	03/17/89	3.0 x 10 <sup>-9</sup>	4.6 x 10 <sup>-10</sup>
Area 20, Water Well	04/11/89	1.3 x 10 <sup>-9</sup>	4.2 x 10 <sup>-10</sup>
Area 20, Water Well	06/20/89	4.0 x 10 <sup>-10</sup>	4.2 x 10 <sup>-10</sup>
Area 20, Water Well	07/11/89	2.6 x 10 <sup>-9</sup>	4.6 x 10 <sup>-10</sup>
Area 20, Water Well	09/11/89	2.2 x 10 <sup>-9</sup>	4.6 x 10 <sup>-10</sup>
Area 20, Water Well	10/16/89	2.2 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 20, Water Well	11/06/89	2.9 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 20, Water Well	12/12/89	9.4 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 20, Well 20a Reservoir	01/10/89	1.0 x 10 <sup>-9</sup>	4.7 x 10 <sup>-10</sup>
Area 20, Well 20a Reservoir	02/28/89	2.4 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>

Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 20, Well 20a Reservoir	03/22/89	2.2 x 10 <sup>-9</sup>	4.9 x 10 <sup>-10</sup>
Area 20, Well 20a Reservoir	04/06/89	6.0 x 10 <sup>-10</sup>	4.3 x 10 <sup>-10</sup>
Area 20, Well 20a Reservoir	05/10/89	4.7 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 20, Well 20a Reservoir	06/21/89	6.8 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 20, Well 20a Reservoir	07/14/89	6.0 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 20, Well 20a Reservoir	08/02/89	3.0 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 20, Well 20a Reservoir	09/26/89	5.8 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 20, Well 20a Reservoir	10/11/89	3.3 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 20, Well 20a Reservoir	11/08/89	8.6 x 10 <sup>-9</sup>	7.2 x 10 <sup>-10</sup>
Area 20, Well 20a Reservoir	11/08/89	3.7 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 22, Army Well No. 1	01/10/89	5.6 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 22, Army Well No. 1	02/15/89	6.2 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 22, Army Well No. 1	03/14/89	6.6 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 22, Army Well No. 1	04/11/89	3.7 x 10 <sup>-9</sup>	4.3 x 10 <sup>-10</sup>
Area 22, Army Well No. 1	05/17/89	6.0 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 22, Army Well No. 1	06/15/89	4.1 x 10 <sup>-9</sup>	4.9 x 10 <sup>-10</sup>
Area 22, Army Well No. 1	07/11/89	3.6 x 10 <sup>-9</sup>	4.7 x 10 <sup>-10</sup>
Area 22, Army Well No. 1	08/09/89	6.0 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 22, Army Well No. 1	09/11/89	7.0 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 22, Army Well No. 1	10/12/89	4.4 x 10 <sup>-9</sup>	4.9 x 10 <sup>-10</sup>
Area 22, Army Well No. 1	11/06/89	5.8 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 22, Army Well No. 1	12/12/89	4.0 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 23, Cafeteria	01/03/89	2.6 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 23, Cafeteria	01/09/89	3.3 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 23, Cafeteria	01/17/89	2.2 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 23, Cafeteria	01/23/89	6.6 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 23, Cafeteria	01/31/89	4.1 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 23, Cafeteria	02/06/89	5.3 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 23, Cafeteria	02/13/89	4.6 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 23, Cafeteria	02/21/89	5.0 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 23, Cafeteria	03/01/89	6.1 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 23, Cafeteria	03/07/89	4.3 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 23, Cafeteria	03/13/89	5.2 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 23, Cafeteria	03/20/89	3.9 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 23, Cafeteria	03/27/89	9.1 x 10 <sup>-9</sup>	3.4 x 10 <sup>-10</sup>
Area 23, Cafeteria	04/03/89	3.5 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 23, Cafeteria	04/11/89	3.2 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 23, Cafeteria	04/19/89	5.1 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 23, Cafeteria	04/24/89	2.8 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 23, Cafeteria	05/01/89	2.6 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 23, Cafeteria	05/08/89	3.9 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 23, Cafeteria	05/15/89	3.3 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 23, Cafeteria	05/22/89	1.8 x 10 <sup>-9</sup>	4.6 x 10 <sup>-10</sup>
Area 23, Cafeteria	05/30/89	1.9 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 23, Cafeteria	06/05/89	2.4 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 23, Cafeteria	06/12/89	2.1 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>



Table C.4 (Gross Beta In Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 23, Cafeteria	06/19/89	$1.8 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 23, Cafeteria	06/26/89	$5.0 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 23, Cafeteria	07/05/89	$4.9 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 23, Cafeteria	07/11/89	$3.6 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 23, Cafeteria	07/17/89	$3.9 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 23, Cafeteria	07/24/89	$2.6 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 23, Cafeteria	07/31/89	$3.2 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 23, Cafeteria	08/07/89	$2.6 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 23, Cafeteria	08/14/89	$4.4 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 23, Cafeteria	08/21/89	$3.1 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 23, Cafeteria	08/28/89	$1.9 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 23, Cafeteria	09/06/89	$3.4 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 23, Cafeteria	09/11/89	$4.7 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 23, Cafeteria	09/18/89	$2.1 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 23, Cafeteria	09/26/89	$2.5 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 23, Cafeteria	10/02/89	$3.3 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 23, Cafeteria	10/09/89	$1.1 \times 10^{-9}$	$4.6 \times 10^{-10}$
Area 23, Cafeteria	10/16/89	$2.4 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 23, Cafeteria	10/23/89	$1.8 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 23, Cafeteria	10/30/89	$2.0 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 23, Cafeteria	11/06/89	$2.8 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 23, Cafeteria	11/13/89	$7.0 \times 10^{-10}$	$4.7 \times 10^{-10}$
Area 23, Cafeteria	11/20/89	$2.0 \times 10^{-10}$	$5.0 \times 10^{-10}$
Area 23, Cafeteria	11/28/89	$3.7 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 23, Cafeteria	12/05/89	$6.4 \times 10^{-9}$	$5.7 \times 10^{-10}$
Area 23, Cafeteria	12/11/89	$2.5 \times 10^{-9}$	$5.5 \times 10^{-10}$
Area 23, Cafeteria	12/18/89	$3.2 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 23, Cafeteria	12/26/89	$3.9 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 23, Sewage Final Effluent Pond	03/15/89	$1.6 \times 10^{-8}$	$7.2 \times 10^{-10}$
Area 23, Sewage Final Effluent Pond	06/21/89	$9.8 \times 10^{-9}$	$6.1 \times 10^{-10}$
Area 23, Sewage Final Effluent Pond	12/14/89	$1.0 \times 10^{-8}$	$6.6 \times 10^{-10}$
Area 25, Building 4221	03/13/89	$9.2 \times 10^{-9}$	$3.5 \times 10^{-10}$
Area 25, Building 4221	03/20/89	$5.9 \times 10^{-9}$	$5.7 \times 10^{-10}$
Area 25, Building 4221	03/27/89	$4.8 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 25, Building 4221	04/03/89	$3.8 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 25, Building 4221	04/11/89	$3.4 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 25, Building 4221	04/19/89	$2.8 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 25, Building 4221	04/24/89	$3.0 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 25, Building 4221	05/01/89	$3.8 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 25, Building 4221	05/08/89	$4.1 \times 10^{-9}$	$5.5 \times 10^{-10}$
Area 25, Building 4221	05/15/89	$2.8 \times 10^{-9}$	$5.8 \times 10^{-10}$
Area 25, Building 4221	05/22/89	$2.9 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 25, Building 4221	05/30/89	$2.6 \times 10^{-9}$	$4.5 \times 10^{-10}$
Area 25, Building 4221	06/05/89	$4.2 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 25, Building 4221	06/12/89	$4.0 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 25, Building 4221	06/19/89	$3.4 \times 10^{-9}$	$4.3 \times 10^{-10}$

Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 25, Building 4221	06/26/89	6.1 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 25, Building 4221	07/05/89	4.1 x 10 <sup>-9</sup>	4.8 x 10 <sup>-10</sup>
Area 25, Building 4221	07/11/89	4.1 x 10 <sup>-9</sup>	4.7 x 10 <sup>-10</sup>
Area 25, Building 4221	07/17/89	4.2 x 10 <sup>-9</sup>	5.0 x 10 <sup>-10</sup>
Area 25, Building 4221	07/24/89	3.5 x 10 <sup>-9</sup>	4.8 x 10 <sup>-10</sup>
Area 25, Building 4221	07/31/89	5.2 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 25, Building 4221	08/07/89	4.2 x 10 <sup>-9</sup>	4.7 x 10 <sup>-10</sup>
Area 25, Building 4221	08/14/89	5.0 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 25, Building 4221	08/21/89	4.8 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 25, Building 4221	08/28/89	5.3 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 25, Building 4221	09/06/89	5.3 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 25, Building 4221	09/11/89	4.9 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 25, Building 4221	09/18/89	5.2 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 25, Building 4221	09/26/89	4.0 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 25, Building 4221	10/02/89	4.3 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 25, Building 4221	10/09/89	5.7 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 25, Building 4221	10/16/89	4.7 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 25, Building 4221	10/30/89	4.6 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 25, Building 4221	11/06/89	5.3 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 25, Building 4221	11/13/89	4.5 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 25, Building 4221	11/20/89	4.3 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 25, Building 4221	11/28/89	5.0 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 25, Building 4221	12/05/89	5.1 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 25, Building 4221	12/11/89	5.8 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 25, Building 4221	12/18/89	6.0 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 25, Building 4221	12/18/89	8.4 x 10 <sup>-9</sup>	6.3 x 10 <sup>-10</sup>
Area 25, Service Station	01/03/89	3.9 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 25, Service Station	01/09/89	4.2 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 25, Service Station	01/17/89	5.1 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 25, Service Station	01/23/89	4.1 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 25, Service Station	01/31/89	3.4 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 25, Service Station	02/06/89	4.6 x 10 <sup>-9</sup>	5.3 x 10 <sup>-10</sup>
Area 25, Service Station	02/13/89	4.8 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 25, Service Station	02/22/89	4.1 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 25, Service Station	03/01/89	4.6 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 25, Service Station	12/26/89	5.5 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 25, Well J11 Reservoir	01/10/89	3.9 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 25, Well J11 Reservoir	02/10/89	3.8 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 25, Well J11 Reservoir	03/09/89	5.6 x 10 <sup>-9</sup>	5.5 x 10 <sup>-10</sup>
Area 25, Well J11 Reservoir	04/07/89	5.3 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 25, Well J11 Reservoir	05/04/89	5.6 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 25, Well J11 Reservoir	06/08/89	4.7 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 25, Well J11 Reservoir	07/20/89	5.2 x 10 <sup>-9</sup>	5.1 x 10 <sup>-10</sup>
Area 25, Well J11 Reservoir	08/01/89	7.3 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 25, Well J11 Reservoir	09/06/89	5.4 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 25, Well J11 Reservoir	10/05/89	5.4 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>

Table C.4 (Gross Beta in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 25, Well J11 Reservoir	11/01/89	$3.9 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 25, Well J11 Reservoir	12/14/89	$6.9 \times 10^{-9}$	$6.2 \times 10^{-10}$
Area 25, Well J12	01/10/89	$4.7 \times 10^{-9}$	$5.0 \times 10^{-10}$
Area 25, Well J12	02/10/89	$7.5 \times 10^{-9}$	$5.9 \times 10^{-10}$
Area 25, Well J12	02/15/89	$4.0 \times 10^{-9}$	$4.5 \times 10^{-10}$
Area 25, Well J12	03/09/89	$4.1 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 25, Well J12	03/16/89	$4.4 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 25, Well J12	04/07/89	$5.5 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 25, Well J12	04/11/89	$2.1 \times 10^{-9}$	$4.0 \times 10^{-10}$
Area 25, Well J12	05/04/89	$4.7 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 25, Well J12	05/17/89	$5.1 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 25, Well J12	06/08/89	$6.0 \times 10^{-9}$	$5.5 \times 10^{-10}$
Area 25, Well J12	06/15/89	$4.6 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 25, Well J12	07/11/89	$3.9 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 25, Well J12	07/20/89	$5.9 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 25, Well J12	08/01/89	$6.2 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 25, Well J12	08/09/89	$3.8 \times 10^{-9}$	$4.4 \times 10^{-10}$
Area 25, Well J12	09/11/89	$4.6 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 25, Well J12	09/12/89	$6.1 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 25, Well J12	10/05/89	$5.6 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 25, Well J12	10/11/89	$9.0 \times 10^{-10}$	$5.1 \times 10^{-10}$
Area 25, Well J12	10/12/89	$3.8 \times 10^{-9}$	$4.6 \times 10^{-10}$
Area 25, Well J12	11/01/89	$1.7 \times 10^{-9}$	$4.5 \times 10^{-10}$
Area 25, Well J12	11/06/89	$5.5 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 25, Well J12	12/08/89	$6.4 \times 10^{-9}$	$5.7 \times 10^{-10}$
Area 25, Well J13	01/10/89	$4.1 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 25, Well J13	02/15/89	$4.4 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 25, Well J13	03/16/89	$4.8 \times 10^{-9}$	$4.7 \times 10^{-10}$
Area 25, Well J13	04/11/89	$3.4 \times 10^{-9}$	$4.5 \times 10^{-10}$
Area 25, Well J13	05/17/89	$4.6 \times 10^{-9}$	$4.9 \times 10^{-10}$
Area 25, Well J13	06/15/89	$3.5 \times 10^{-9}$	$4.6 \times 10^{-10}$
Area 25, Well J13	07/11/89	$4.8 \times 10^{-9}$	$5.2 \times 10^{-10}$
Area 25, Well J13	08/09/89	$2.4 \times 10^{-9}$	$4.2 \times 10^{-10}$
Area 25, Well J13	09/11/89	$4.4 \times 10^{-9}$	$4.8 \times 10^{-10}$
Area 25, Well J13	10/12/89	$2.8 \times 10^{-9}$	$4.6 \times 10^{-10}$
Area 25, Well J13	11/06/89	$4.5 \times 10^{-9}$	$5.1 \times 10^{-10}$
Area 25, Well J13	12/08/89	$6.0 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 27, Cafeteria	01/03/89	$3.7 \times 10^{-9}$	$5.9 \times 10^{-10}$
Area 27, Cafeteria	01/09/89	$4.3 \times 10^{-9}$	$5.5 \times 10^{-10}$
Area 27, Cafeteria	01/17/89	$3.2 \times 10^{-9}$	$5.4 \times 10^{-10}$
Area 27, Cafeteria	01/23/89	$5.8 \times 10^{-9}$	$6.1 \times 10^{-10}$
Area 27, Cafeteria	01/31/89	$6.4 \times 10^{-9}$	$5.6 \times 10^{-10}$
Area 27, Cafeteria	02/06/89	$5.2 \times 10^{-9}$	$6.0 \times 10^{-10}$
Area 27, Cafeteria	02/13/89	$5.5 \times 10^{-9}$	$5.8 \times 10^{-10}$
Area 27, Cafeteria	02/22/89	$4.8 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 27, Cafeteria	03/01/89	$5.6 \times 10^{-9}$	$5.9 \times 10^{-10}$

Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 27, Cafeteria	03/07/89	4.7 x 10 <sup>-9</sup>	5.4 x 10 <sup>-10</sup>
Area 27, Cafeteria	03/13/89	7.0 x 10 <sup>-9</sup>	6.3 x 10 <sup>-10</sup>
Area 27, Cafeteria	03/20/89	7.1 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 27, Cafeteria	03/27/89	9.9 x 10 <sup>-9</sup>	3.7 x 10 <sup>-10</sup>
Area 27, Cafeteria	04/03/89	3.9 x 10 <sup>-9</sup>	5.7 x 10 <sup>-10</sup>
Area 27, Cafeteria	04/11/89	6.1 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 27, Cafeteria	04/19/89	7.4 x 10 <sup>-9</sup>	6.4 x 10 <sup>-10</sup>
Area 27, Cafeteria	04/24/89	7.2 x 10 <sup>-9</sup>	5.6 x 10 <sup>-10</sup>
Area 27, Cafeteria	05/01/89	7.8 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 27, Cafeteria	05/08/89	1.0 x 10 <sup>-8</sup>	6.3 x 10 <sup>-10</sup>
Area 27, Cafeteria	05/15/89	1.1 x 10 <sup>-8</sup>	7.2 x 10 <sup>-10</sup>
Area 27, Cafeteria	05/22/89	9.4 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 27, Cafeteria	05/30/89	8.6 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 27, Cafeteria	06/05/89	9.7 x 10 <sup>-9</sup>	6.1 x 10 <sup>-10</sup>
Area 27, Cafeteria	06/12/89	1.1 x 10 <sup>-8</sup>	6.3 x 10 <sup>-10</sup>
Area 27, Cafeteria	06/19/89	9.7 x 10 <sup>-9</sup>	2.0 x 10 <sup>-9</sup>
Area 27, Cafeteria	06/26/89	1.4 x 10 <sup>-8</sup>	7.1 x 10 <sup>-10</sup>
Area 27, Cafeteria	07/05/89	1.2 x 10 <sup>-8</sup>	6.7 x 10 <sup>-10</sup>
Area 27, Cafeteria	07/11/89	1.2 x 10 <sup>-8</sup>	6.3 x 10 <sup>-10</sup>
Area 27, Cafeteria	07/17/89	9.0 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 27, Cafeteria	07/24/89	6.7 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 27, Cafeteria	07/31/89	7.8 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 27, Cafeteria	08/07/89	9.9 x 10 <sup>-9</sup>	6.4 x 10 <sup>-10</sup>
Area 27, Cafeteria	08/14/89	7.4 x 10 <sup>-9</sup>	5.9 x 10 <sup>-10</sup>
Area 27, Cafeteria	08/21/89	1.1 x 10 <sup>-8</sup>	6.3 x 10 <sup>-10</sup>
Area 27, Cafeteria	08/28/89	1.1 x 10 <sup>-8</sup>	6.3 x 10 <sup>-10</sup>
Area 27, Cafeteria	09/06/89	1.1 x 10 <sup>-8</sup>	7.0 x 10 <sup>-10</sup>
Area 27, Cafeteria	09/11/89	1.0 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 27, Cafeteria	09/18/89	9.4 x 10 <sup>-9</sup>	6.4 x 10 <sup>-10</sup>
Area 27, Cafeteria	09/26/89	1.2 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 27, Cafeteria	10/02/89	1.0 x 10 <sup>-8</sup>	6.4 x 10 <sup>-10</sup>
Area 27, Cafeteria	10/09/89	9.6 x 10 <sup>-9</sup>	6.6 x 10 <sup>-10</sup>
Area 27, Cafeteria	10/16/89	1.1 x 10 <sup>-8</sup>	6.6 x 10 <sup>-10</sup>
Area 27, Cafeteria	10/23/89	8.1 x 10 <sup>-9</sup>	6.0 x 10 <sup>-10</sup>
Area 27, Cafeteria	10/30/89	1.1 x 10 <sup>-8</sup>	6.7 x 10 <sup>-10</sup>
Area 27, Cafeteria	11/06/89	1.0 x 10 <sup>-8</sup>	6.6 x 10 <sup>-10</sup>
Area 27, Cafeteria	11/13/89	6.5 x 10 <sup>-9</sup>	5.8 x 10 <sup>-10</sup>
Area 27, Cafeteria	11/28/89	1.1 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 27, Cafeteria	12/05/89	1.1 x 10 <sup>-8</sup>	6.5 x 10 <sup>-10</sup>
Area 27, Cafeteria	12/11/89	1.3 x 10 <sup>-8</sup>	6.8 x 10 <sup>-10</sup>
Area 27, Cafeteria	12/26/89	5.4 x 10 <sup>-9</sup>	6.2 x 10 <sup>-10</sup>
Area 29, Topopah Spring	03/24/89	8.3 x 10 <sup>-9</sup>	3.1 x 10 <sup>-10</sup>
Area 29, Topopah Spring	04/11/89	4.2 x 10 <sup>-9</sup>	4.7 x 10 <sup>-10</sup>
Area 29, Topopah Spring	05/18/89	3.6 x 10 <sup>-9</sup>	4.5 x 10 <sup>-10</sup>
Area 29, Topopah Spring	05/18/89	5.4 x 10 <sup>-9</sup>	5.2 x 10 <sup>-10</sup>
Area 29, Topopah Spring	06/20/89	4.7 x 10 <sup>-9</sup>	3.9 x 10 <sup>-10</sup>

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Table C.4 (Gross Beta in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concen- tration</u>	<u>Standard Deviation (s)</u>
Area 29, Topopah Spring	07/21/89	$6.8 \times 10^{-9}$	$5.3 \times 10^{-10}$
Area 29, Topopah Spring	08/17/89	$2.0 \times 10^{-8}$	$7.0 \times 10^{-10}$

Table C.5 Tritium in Water - 1989

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 1, Building 101	01/23/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	01/30/89	0.0 x 10 <sup>0</sup>	1.6 x 10 <sup>-7</sup>
Area 1, Building 101	02/06/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	02/13/89	3.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 1, Building 101	02/23/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 1, Building 101	02/27/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	03/06/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	03/14/89	-1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 1, Building 101	03/20/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	03/27/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 1, Building 101	04/03/89	-2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 1, Building 101	04/10/89	2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 1, Building 101	04/18/89	2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 1, Building 101	04/24/89	2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 1, Building 101	05/01/89	-2.0 x 10 <sup>-7</sup>	2.1 x 10 <sup>-7</sup>
Area 1, Building 101	05/08/89	1.0 x 10 <sup>-7</sup>	2.1 x 10 <sup>-7</sup>
Area 1, Building 101	05/15/89	0.0 x 10 <sup>0</sup>	2.3 x 10 <sup>-7</sup>
Area 1, Building 101	05/23/89	1.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 1, Building 101	05/30/89	0.0 x 10 <sup>0</sup>	1.6 x 10 <sup>-7</sup>
Area 1, Building 101	06/05/89	1.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 1, Building 101	06/13/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 1, Building 101	06/20/89	3.0 x 10 <sup>-7</sup>	2.2 x 10 <sup>-7</sup>
Area 1, Building 101	06/26/89	0.0 x 10 <sup>0</sup>	1.9 x 10 <sup>-7</sup>
Area 1, Building 101	07/05/89	-1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 1, Building 101	07/11/89	-1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 1, Building 101	07/20/89	3.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	07/25/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 1, Building 101	07/31/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	08/07/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 1, Building 101	08/15/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	08/21/89	1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 1, Building 101	08/29/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	09/05/89	-2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 1, Building 101	09/11/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	09/18/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 1, Building 101	09/25/89	-3.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	10/02/89	-2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 1, Building 101	10/09/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 1, Building 101	10/16/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	10/23/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	10/30/89	0.0 x 10 <sup>0</sup>	1.5 x 10 <sup>-7</sup>
Area 1, Building 101	11/06/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	11/21/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	11/28/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 1, Building 101	12/06/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 1, Building 101	12/11/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>

Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 1, Building 101	12/18/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Mud Plant Reservoir	01/23/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Mud Plant Reservoir	02/03/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Mud Plant Reservoir	03/02/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Mud Plant Reservoir	04/05/89	6.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 2, Mud Plant Reservoir	05/10/89	4.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Mud Plant Reservoir	06/07/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Mud Plant Reservoir	07/14/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Mud Plant Reservoir	08/02/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Mud Plant Reservoir	09/13/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Mud Plant Reservoir	10/11/89	4.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Mud Plant Reservoir	11/14/89	5.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Mud Plant Reservoir	12/14/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Restroom	01/03/89	-2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Restroom	01/09/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	01/17/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	01/23/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	01/30/89	-1.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 2, Restroom	02/06/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	02/13/89	2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 2, Restroom	02/23/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Restroom	02/27/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	03/06/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	03/14/89	4.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Restroom	03/20/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	03/27/89	3.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 2, Restroom	04/03/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Restroom	04/10/89	-1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 2, Restroom	04/18/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 2, Restroom	04/24/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 2, Restroom	05/01/89	2.0 x 10 <sup>-7</sup>	2.1 x 10 <sup>-7</sup>
Area 2, Restroom	05/08/89	0.0 x 10 <sup>0</sup>	2.1 x 10 <sup>-7</sup>
Area 2, Restroom	05/15/89	-1.0 x 10 <sup>-7</sup>	2.2 x 10 <sup>-7</sup>
Area 2, Restroom	05/23/89	1.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 2, Restroom	05/30/89	0.0 x 10 <sup>0</sup>	1.6 x 10 <sup>-7</sup>
Area 2, Restroom	06/05/89	-1.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 2, Restroom	06/13/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Restroom	06/19/89	-1.0 x 10 <sup>-7</sup>	2.1 x 10 <sup>-7</sup>
Area 2, Restroom	06/26/89	1.0 x 10 <sup>-7</sup>	1.9 x 10 <sup>-7</sup>
Area 2, Restroom	07/05/89	-2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Restroom	07/11/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Restroom	07/17/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	07/25/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Restroom	07/31/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	08/07/89	3.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Restroom	08/15/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>

Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 2, Restroom	08/21/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Restroom	08/29/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	09/05/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 2, Restroom	09/11/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	09/18/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Restroom	09/25/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	10/02/89	-1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 2, Restroom	10/09/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Restroom	10/16/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	10/23/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	10/30/89	-1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 2, Restroom	11/06/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	11/21/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	11/28/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Restroom	12/06/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	12/11/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	12/18/89	-2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Restroom	12/26/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Well 2	01/18/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Well 2	02/15/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Well 2	03/17/89	7.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Well 2	04/11/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Well 2	05/17/89	3.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Well 2	06/20/89	3.0 x 10 <sup>-7</sup>	2.2 x 10 <sup>-7</sup>
Area 2, Well 2	07/11/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Well 2	08/09/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Well 2	09/11/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Well 2	10/16/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Well 2	11/06/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Well 2	12/12/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Well 2 Reservoir	01/06/89	-2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Well 2 Reservoir	02/03/89	-2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Well 2 Reservoir	03/02/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Well 2 Reservoir	04/05/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Well 2 Reservoir	05/10/89	3.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Well 2 Reservoir	06/07/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Well 2 Reservoir	07/14/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Well 2 Reservoir	08/02/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 2, Well 2 Reservoir	09/13/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 2, Well 2 Reservoir	10/11/89	-1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 2, Well 2 Reservoir	12/15/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 3, Cafeteria	01/03/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 3, Cafeteria	01/09/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	01/17/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	01/23/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	01/30/89	0.0 x 10 <sup>0</sup>	1.6 x 10 <sup>-7</sup>



Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 3, Cafeteria	02/06/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	02/13/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 3, Cafeteria	02/23/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 3, Cafeteria	02/27/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	03/06/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	03/14/89	1.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 3, Cafeteria	03/20/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	03/27/89	2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 3, Cafeteria	04/03/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 3, Cafeteria	04/10/89	-3.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 3, Cafeteria	04/18/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 3, Cafeteria	04/24/89	0.0 x 10 <sup>0</sup>	1.5 x 10 <sup>-7</sup>
Area 3, Cafeteria	05/01/89	1.0 x 10 <sup>-7</sup>	2.1 x 10 <sup>-7</sup>
Area 3, Cafeteria	05/08/89	3.0 x 10 <sup>-7</sup>	2.1 x 10 <sup>-7</sup>
Area 3, Cafeteria	05/15/89	0.0 x 10 <sup>0</sup>	2.3 x 10 <sup>-7</sup>
Area 3, Cafeteria	05/23/89	1.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 3, Cafeteria	05/30/89	-1.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 3, Cafeteria	06/05/89	2.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 3, Cafeteria	06/13/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 3, Cafeteria	06/19/89	0.0 x 10 <sup>0</sup>	2.1 x 10 <sup>-7</sup>
Area 3, Cafeteria	06/26/89	-1.0 x 10 <sup>-7</sup>	1.9 x 10 <sup>-7</sup>
Area 3, Cafeteria	07/05/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 3, Cafeteria	07/11/89	3.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 3, Cafeteria	07/17/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	07/25/89	3.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 3, Cafeteria	07/31/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	08/07/89	4.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 3, Cafeteria	08/15/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	08/21/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 3, Cafeteria	08/29/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 3, Cafeteria	09/05/89	-1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 3, Cafeteria	09/11/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	09/18/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 3, Cafeteria	09/25/89	-2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	10/02/89	-1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 3, Cafeteria	10/09/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 3, Cafeteria	10/16/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	10/23/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	10/30/89	0.0 x 10 <sup>0</sup>	1.5 x 10 <sup>-7</sup>
Area 3, Cafeteria	11/06/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	11/21/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	11/28/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 3, Cafeteria	12/06/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	12/11/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Cafeteria	12/18/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 3, Mud Plant Reservoir	03/10/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>

Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 3, Mud Plant Reservoir	04/07/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 3, Mud Plant Reservoir	05/05/89	$8.0 \times 10^{-7}$	$2.2 \times 10^{-7}$
Area 3, Mud Plant Reservoir	06/07/89	$-2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 3, Mud Plant Reservoir	07/18/89	$2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 3, Mud Plant Reservoir	08/03/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 3, Mud Plant Reservoir	09/12/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 3, Mud Plant Reservoir	10/06/89	$-2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 3, Mud Plant Reservoir	11/02/89	$-2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 3, Mud Plant Reservoir	12/08/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 5, Cane Springs	01/10/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Cane Springs	02/08/89	$-3.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 5, Cane Springs	03/09/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 5, Cane Springs	04/05/89	$6.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 5, Cane Springs	05/17/89	$3.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 5, Cane Springs	06/07/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Cane Springs	07/20/89	$-2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 5, Cane Springs	08/17/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 5, Cane Springs	10/26/89	$0.0 \times 10^0$	$1.5 \times 10^{-7}$
Area 5, Cane Springs	11/14/89	$4.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 5, Cane Springs	12/15/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well 5B Reservoir	02/24/89	$3.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 5, Well 5B Reservoir	03/09/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 5, Well 5B Reservoir	04/07/89	$3.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 5, Well 5B Reservoir	05/04/89	$1.0 \times 10^{-7}$	$2.3 \times 10^{-7}$
Area 5, Well 5B Reservoir	06/07/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well 5B Reservoir	07/18/89	$4.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 5, Well 5B Reservoir	08/01/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 5, Well 5B Reservoir	09/06/89	$-1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 5, Well 5B Reservoir	10/05/89	$4.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 5, Well 5B Reservoir	11/01/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 5, Well 5B Reservoir	12/08/89	$3.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well 5C	01/10/89	$3.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well 5C	02/15/89	$1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 5, Well 5C	03/14/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well 5C	04/11/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well 5C	05/17/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well 5C	06/15/89	$3.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well 5C	07/11/89	$1.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 5, Well 5C	08/09/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 5, Well 5C	09/11/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 5, Well 5C	10/12/89	$1.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 5, Well 5C	11/06/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 5, Well 5C	12/08/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well Ue5c	01/10/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well Ue5c	02/15/89	$-2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 5, Well Ue5c	03/14/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$

Table C.5 (Tritium in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 5, Well Ue5c	11/29/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 5, Well Ue5c	12/08/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well Ue5c Reservoir	01/19/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 5, Well Ue5c Reservoir	02/24/89	$3.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 5, Well Ue5c Reservoir	03/09/89	$2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 5, Well Ue5c Reservoir	04/07/89	$-1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 5, Well Ue5c Reservoir	05/11/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well Ue5c Reservoir	06/07/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well Ue5c Reservoir	07/18/89	$3.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 5, Well Ue5c Reservoir	08/01/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 5, Well Ue5c Reservoir	09/12/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 5, Well Ue5c Reservoir	10/05/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 5, Well Ue5c Reservoir	11/01/89	$1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 5, Well Ue5c Reservoir	12/08/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Bottled Water	01/03/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Bottled Water	01/09/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	01/17/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	01/23/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	01/31/89	$-2.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 6, Bottled Water	02/06/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	02/13/89	$0.0 \times 10^0$	$1.5 \times 10^{-7}$
Area 6, Bottled Water	02/22/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Bottled Water	03/01/89	$4.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Bottled Water	03/07/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	03/13/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Bottled Water	03/20/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	03/27/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Bottled Water	04/03/89	$-4.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Bottled Water	04/11/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Bottled Water	04/19/89	$-2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	04/24/89	$0.0 \times 10^0$	$1.5 \times 10^{-7}$
Area 6, Bottled Water	05/01/89	$0.0 \times 10^0$	$2.1 \times 10^{-7}$
Area 6, Bottled Water	05/08/89	$3.0 \times 10^{-7}$	$2.1 \times 10^{-7}$
Area 6, Bottled Water	05/15/89	$-1.0 \times 10^{-7}$	$2.2 \times 10^{-7}$
Area 6, Bottled Water	05/22/89	$2.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 6, Bottled Water	05/30/89	$0.0 \times 10^0$	$1.6 \times 10^{-7}$
Area 6, Bottled Water	06/05/89	$2.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 6, Bottled Water	06/12/89	$2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Bottled Water	06/19/89	$2.0 \times 10^{-7}$	$2.2 \times 10^{-7}$
Area 6, Bottled Water	06/26/89	$-2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Bottled Water	07/05/89	$-1.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Bottled Water	07/11/89	$2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Bottled Water	07/17/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	07/24/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Bottled Water	07/31/89	$3.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	08/07/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$

Table C.5 (Tritium in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 6, Bottled Water	08/14/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	08/21/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Bottled Water	08/28/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	09/06/89	$4.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Bottled Water	09/11/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	09/18/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Bottled Water	09/26/89	$2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Bottled Water	10/02/89	$-2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Bottled Water	10/09/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Bottled Water	10/16/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	10/23/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	10/30/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Bottled Water	11/06/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	11/13/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Bottled Water	11/20/89	$3.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	11/28/89	$3.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Bottled Water	12/05/89	$-3.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	12/11/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	12/18/89	$2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Bottled Water	12/26/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	01/03/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Cafeteria	01/09/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	01/17/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	01/23/89	$-2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	01/31/89	$0.0 \times 10^0$	$1.6 \times 10^{-7}$
Area 6, Cafeteria	02/06/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	02/13/89	$1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Cafeteria	02/22/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Cafeteria	03/01/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Cafeteria	03/07/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	03/13/89	$5.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Cafeteria	03/27/89	$4.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Cafeteria	04/03/89	$0.0 \times 10^0$	$1.8 \times 10^{-7}$
Area 6, Cafeteria	04/11/89	$-1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Cafeteria	04/19/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	04/24/89	$0.0 \times 10^0$	$1.5 \times 10^{-7}$
Area 6, Cafeteria	05/01/89	$1.0 \times 10^{-7}$	$2.1 \times 10^{-7}$
Area 6, Cafeteria	05/08/89	$1.0 \times 10^{-7}$	$2.1 \times 10^{-7}$
Area 6, Cafeteria	05/15/89	$-2.0 \times 10^{-7}$	$2.2 \times 10^{-7}$
Area 6, Cafeteria	05/22/89	$2.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 6, Cafeteria	05/30/89	$-2.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 6, Cafeteria	06/05/89	$2.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 6, Cafeteria	06/12/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Cafeteria	06/19/89	$-4.0 \times 10^{-7}$	$2.1 \times 10^{-7}$
Area 6, Cafeteria	06/26/89	$-4.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Cafeteria	07/05/89	$-2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$

Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 6, Cafeteria	07/11/89	$2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Cafeteria	07/17/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	07/24/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Cafeteria	07/31/89	$3.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	08/07/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Cafeteria	08/14/89	$-2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	08/21/89	$0.0 \times 10^0$	$1.8 \times 10^{-7}$
Area 6, Cafeteria	08/28/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	09/06/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Cafeteria	09/11/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	09/18/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Cafeteria	09/26/89	$3.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Cafeteria	10/02/89	$3.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Cafeteria	10/09/89	$2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Cafeteria	10/16/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	10/23/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	10/30/89	$1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Cafeteria	11/06/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	11/13/89	$8.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Cafeteria	11/20/89	$4.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	11/28/89	$3.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Cafeteria	12/05/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	12/11/89	$2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	12/18/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Cafeteria	12/26/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Decontamination Facility Pond	01/19/89	$3.4 \times 10^{-6}$	$1.8 \times 10^{-7}$
Area 6, Decontamination Facility Pond	02/21/89	$2.7 \times 10^{-6}$	$1.8 \times 10^{-7}$
Area 6, Decontamination Facility Pond	03/15/89	$2.2 \times 10^{-6}$	$1.9 \times 10^{-7}$
Area 6, Decontamination Facility Pond	04/14/89	$2.6 \times 10^{-6}$	$2.0 \times 10^{-7}$
Area 6, Decontamination Facility Pond	05/05/89	$2.7 \times 10^{-6}$	$2.3 \times 10^{-7}$
Area 6, Decontamination Facility Pond	06/08/89	$1.8 \times 10^{-6}$	$2.0 \times 10^{-7}$
Area 6, Decontamination Facility Pond	07/20/89	$1.5 \times 10^{-6}$	$1.6 \times 10^{-7}$
Area 6, Decontamination Facility Pond	08/03/89	$2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Decontamination Facility Pond	09/13/89	$1.1 \times 10^{-6}$	$1.6 \times 10^{-7}$
Area 6, Decontamination Facility Pond	10/06/89	$1.1 \times 10^{-6}$	$1.9 \times 10^{-7}$
Area 6, Decontamination Facility Pond	11/07/89	$8.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Decontamination Facility Pond	12/14/89	$9.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Sewage	03/15/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Sewage	06/21/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Sewage	09/27/89	$3.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Sewage	12/14/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Well 3 Reservoir	01/19/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Well 3 Reservoir	02/24/89	$4.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Well 3 Reservoir	03/10/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Well 3 Reservoir	04/07/89	$1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Well 3 Reservoir	05/04/89	$3.0 \times 10^{-7}$	$2.3 \times 10^{-7}$

Table C.5 (Tritium in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 6, Well 3 Reservoir	06/07/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Well 3 Reservoir	07/18/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Well 3 Reservoir	08/01/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Well 3 Reservoir	09/06/89	$-1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Well 3 Reservoir	10/05/89	$3.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Well 3 Reservoir	11/02/89	$0.0 \times 10^0$	$1.8 \times 10^{-7}$
Area 6, Well 3 Reservoir	12/08/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Well 4	01/18/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Well 4	02/15/89	$0.0 \times 10^0$	$1.8 \times 10^{-7}$
Area 6, Well 4	03/17/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Well 4	04/11/89	$4.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Well 4	05/17/89	$3.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Well 4	05/17/89	$2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Well 4	06/20/89	$2.0 \times 10^{-7}$	$2.2 \times 10^{-7}$
Area 6, Well 4	07/11/89	$-1.0 \times 10^{-7}$	$2.3 \times 10^{-7}$
Area 6, Well 4	08/09/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Well 4	09/11/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Well 4	10/16/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Well 4	11/06/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Well 4	12/12/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Well A Reservoir	01/19/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Well A Reservoir	02/24/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Well A Reservoir	03/10/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Well A Reservoir	04/07/89	$-1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Well A Reservoir	05/04/89	$5.0 \times 10^{-7}$	$2.3 \times 10^{-7}$
Area 6, Well A Reservoir	06/07/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Well A Reservoir	07/18/89	$-3.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Well A Reservoir	08/01/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Well A Reservoir	09/06/89	$-1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Well A Reservoir	10/06/89	$1.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Well A Reservoir	11/02/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Well A Reservoir	12/08/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Well C	01/18/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Well C	05/17/89	$7.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Well C	07/11/89	$1.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Well C	08/09/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Well C	09/11/89	$2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Well C	10/16/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Well C1	01/18/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Well C1	02/15/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Well C1	03/17/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Well C1	04/11/89	$3.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Well C1	05/17/89	$3.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Well C1	06/20/89	$-1.0 \times 10^{-7}$	$2.1 \times 10^{-7}$
Area 6, Well C1	07/11/89	$-2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Well C1	08/09/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$

Table C.5 (Tritium in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 6, Well C1	09/11/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Well C1	10/16/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Well C1	11/06/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Well C1	12/12/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Well C1 Reservoir	01/19/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 6, Well C1 Reservoir	02/24/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Well C1 Reservoir	03/10/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Well C1 Reservoir	04/07/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Well C1 Reservoir	05/04/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 6, Well C1 Reservoir	06/07/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Well C1 Reservoir	07/18/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 6, Well C1 Reservoir	08/03/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 6, Well C1 Reservoir	09/12/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Well C1 Reservoir	10/05/89	$4.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 6, Well C1 Reservoir	11/01/89	$1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 6, Well C1 Reservoir	12/13/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 7, Reitman Seep	01/06/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 7, Reitman Seep	02/15/89	$-3.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 7, Reitman Seep	03/09/89	$1.1 \times 10^{-6}$	$1.5 \times 10^{-7}$
Area 7, Reitman Seep	04/28/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 7, Reitman Seep	05/18/89	$-1.0 \times 10^{-7}$	$2.0 \times 10^{-7}$
Area 7, Reitman Seep	06/07/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 7, Reitman Seep	07/26/89	$3.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 7, Reitman Seep	08/25/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 7, Reitman Seep	09/13/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 7, Reitman Seep	10/26/89	$-1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 7, Reitman Seep	11/14/89	$4.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 7, Reitman Seep	12/14/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, Cafeteria	01/03/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, Cafeteria	01/09/89	$2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	01/17/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	01/23/89	$-2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	01/30/89	$1.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 12, Cafeteria	02/06/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	02/13/89	$0.0 \times 10^0$	$1.5 \times 10^{-7}$
Area 12, Cafeteria	02/23/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, Cafeteria	02/27/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	03/06/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	03/14/89	$4.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, Cafeteria	03/20/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	03/27/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	04/03/89	$-2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, Cafeteria	04/10/89	$4.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 12, Cafeteria	04/18/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 12, Cafeteria	04/24/89	$-2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	05/01/89	$4.0 \times 10^{-7}$	$2.2 \times 10^{-7}$

Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 12, Cafeteria	05/08/89	$3.0 \times 10^{-7}$	$2.1 \times 10^{-7}$
Area 12, Cafeteria	05/15/89	$-1.0 \times 10^{-7}$	$2.2 \times 10^{-7}$
Area 12, Cafeteria	05/23/89	$1.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 12, Cafeteria	05/30/89	$-1.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 12, Cafeteria	06/05/89	$1.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 12, Cafeteria	06/13/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 12, Cafeteria	06/19/89	$-2.0 \times 10^{-7}$	$2.1 \times 10^{-7}$
Area 12, Cafeteria	06/26/89	$-2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 12, Cafeteria	07/05/89	$1.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 12, Cafeteria	07/11/89	$2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 12, Cafeteria	07/17/89	$2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	07/25/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, Cafeteria	07/31/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	08/07/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, Cafeteria	08/15/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	08/21/89	$-2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, Cafeteria	08/29/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	09/05/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 12, Cafeteria	09/11/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	09/18/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, Cafeteria	09/25/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	10/02/89	$-3.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 12, Cafeteria	10/09/89	$0.0 \times 10^0$	$1.8 \times 10^{-7}$
Area 12, Cafeteria	10/16/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	10/23/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	10/30/89	$-1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 12, Cafeteria	11/06/89	$2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	11/21/89	$3.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	11/28/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 12, Cafeteria	12/06/89	$2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	12/11/89	$2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	12/18/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Cafeteria	12/26/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, Captain Jack Spring	03/22/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 12, Captain Jack Spring	04/11/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, Captain Jack Spring	05/19/89	$1.0 \times 10^{-7}$	$2.2 \times 10^{-7}$
Area 12, Captain Jack Spring	07/14/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, Captain Jack Spring	08/24/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 12, Captain Jack Spring	10/26/89	$1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 12, Captain Jack Spring	12/15/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, E Tunnel Effluent Pond	02/28/89	$1.4 \times 10^{-3}$	$2.3 \times 10^{-6}$
Area 12, E Tunnel Effluent Pond	03/10/89	$1.4 \times 10^{-3}$	$2.3 \times 10^{-6}$
Area 12, E Tunnel Effluent Pond	04/11/89	$1.3 \times 10^{-3}$	$2.2 \times 10^{-6}$
Area 12, E Tunnel Effluent Pond	05/19/89	$2.4 \times 10^{-3}$	$3.2 \times 10^{-6}$
Area 12, E Tunnel Effluent Pond	06/28/89	$1.3 \times 10^{-3}$	$2.6 \times 10^{-6}$
Area 12, E Tunnel Effluent Pond	07/20/89	$1.7 \times 10^{-3}$	$2.4 \times 10^{-6}$



Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 12, E Tunnel Effluent Pond	08/17/89	$1.8 \times 10^{-3}$	$2.5 \times 10^{-6}$
Area 12, E Tunnel Effluent Pond	09/20/89	$1.4 \times 10^{-3}$	$2.2 \times 10^{-6}$
Area 12, E Tunnel Effluent Pond	10/19/89	$1.5 \times 10^{-3}$	$2.4 \times 10^{-6}$
Area 12, E Tunnel Effluent Pond	11/16/89	$1.2 \times 10^{-3}$	$2.1 \times 10^{-6}$
Area 12, E Tunnel Effluent Pond	12/27/89	$2.1 \times 10^{-3}$	$2.6 \times 10^{-6}$
Area 12, N Tunnel Effluent Pond	01/12/89	$3.1 \times 10^{-4}$	$1.0 \times 10^{-6}$
Area 12, N Tunnel Effluent Pond	02/03/89	$2.7 \times 10^{-4}$	$9.6 \times 10^{-7}$
Area 12, N Tunnel Effluent Pond	03/10/89	$4.9 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Effluent Pond	04/11/89	$3.6 \times 10^{-4}$	$1.2 \times 10^{-6}$
Area 12, N Tunnel Effluent Pond	05/10/89	$6.3 \times 10^{-4}$	$1.7 \times 10^{-6}$
Area 12, N Tunnel Effluent Pond	06/28/89	$2.8 \times 10^{-4}$	$1.2 \times 10^{-6}$
Area 12, N Tunnel Effluent Pond	07/20/89	$6.2 \times 10^{-4}$	$1.5 \times 10^{-6}$
Area 12, N Tunnel Effluent Pond	08/17/89	$4.7 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Effluent Pond	09/20/89	$4.5 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Effluent Pond	10/19/89	$4.9 \times 10^{-4}$	$1.4 \times 10^{-6}$
Area 12, N Tunnel Effluent Pond	11/16/89	$5.1 \times 10^{-4}$	$1.4 \times 10^{-6}$
Area 12, N Tunnel Effluent Pond	12/27/89	$4.7 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 1	02/03/89	$4.0 \times 10^{-4}$	$1.2 \times 10^{-6}$
Area 12, N Tunnel Pond No. 1	03/10/89	$4.2 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 1	04/11/89	$3.6 \times 10^{-4}$	$1.2 \times 10^{-6}$
Area 12, N Tunnel Pond No. 1	05/10/89	$6.3 \times 10^{-4}$	$1.7 \times 10^{-6}$
Area 12, N Tunnel Pond No. 1	06/28/89	$3.0 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 1	07/20/89	$6.0 \times 10^{-4}$	$1.4 \times 10^{-6}$
Area 12, N Tunnel Pond No. 1	08/17/89	$5.1 \times 10^{-4}$	$1.4 \times 10^{-6}$
Area 12, N Tunnel Pond No. 1	09/20/89	$4.5 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 1	10/19/89	$4.4 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 1	11/16/89	$6.8 \times 10^{-4}$	$1.6 \times 10^{-6}$
Area 12, N Tunnel Pond No. 1	12/27/89	$5.0 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 2	02/03/89	$3.8 \times 10^{-4}$	$1.1 \times 10^{-6}$
Area 12, N Tunnel Pond No. 2	03/10/89	$5.7 \times 10^{-4}$	$1.4 \times 10^{-6}$
Area 12, N Tunnel Pond No. 2	04/11/89	$3.9 \times 10^{-4}$	$1.2 \times 10^{-6}$
Area 12, N Tunnel Pond No. 2	05/10/89	$5.3 \times 10^{-4}$	$1.5 \times 10^{-6}$
Area 12, N Tunnel Pond No. 2	06/28/89	$3.2 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 2	07/20/89	$6.0 \times 10^{-4}$	$1.5 \times 10^{-6}$
Area 12, N Tunnel Pond No. 2	08/17/89	$5.1 \times 10^{-4}$	$1.4 \times 10^{-6}$
Area 12, N Tunnel Pond No. 2	09/20/89	$4.8 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 2	10/19/89	$4.5 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 2	11/16/89	$6.7 \times 10^{-4}$	$1.6 \times 10^{-6}$
Area 12, N Tunnel Pond No. 2	12/27/89	$9.0 \times 10^{-4}$	$1.7 \times 10^{-6}$
Area 12, N Tunnel Pond No. 3	02/03/89	$3.8 \times 10^{-4}$	$1.1 \times 10^{-6}$
Area 12, N Tunnel Pond No. 3	03/10/89	$4.8 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 3	04/11/89	$8.3 \times 10^{-4}$	$1.7 \times 10^{-6}$
Area 12, N Tunnel Pond No. 3	05/10/89	$5.5 \times 10^{-4}$	$1.6 \times 10^{-6}$
Area 12, N Tunnel Pond No. 3	06/28/89	$4.9 \times 10^{-4}$	$1.6 \times 10^{-6}$
Area 12, N Tunnel Pond No. 3	07/20/89	$6.2 \times 10^{-4}$	$1.5 \times 10^{-6}$
Area 12, N Tunnel Pond No. 3	08/17/89	$4.2 \times 10^{-4}$	$1.3 \times 10^{-6}$

Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 12, N Tunnel Pond No. 3	09/20/89	$4.7 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 3	10/19/89	$4.4 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 3	11/16/89	$4.7 \times 10^{-4}$	$1.3 \times 10^{-6}$
Area 12, N Tunnel Pond No. 3	12/27/89	$7.4 \times 10^{-4}$	$1.6 \times 10^{-6}$
Area 12, Sewage Pond	03/22/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 12, Sewage Pond	06/21/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, Sewage Pond	09/20/89	$3.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 12, Sewage Pond	12/14/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 12, T Tunnel Effluent Pond	01/12/89	$8.4 \times 10^{-2}$	$3.0 \times 10^{-5}$
Area 12, T Tunnel Effluent Pond	02/15/89	$7.3 \times 10^{-2}$	$2.6 \times 10^{-5}$
Area 12, T Tunnel Effluent Pond	03/09/89	$8.3 \times 10^{-2}$	$2.9 \times 10^{-5}$
Area 12, T Tunnel Effluent Pond	04/11/89	$6.2 \times 10^{-2}$	$2.2 \times 10^{-5}$
Area 12, T Tunnel Effluent Pond	05/19/89	$5.7 \times 10^{-2}$	$2.8 \times 10^{-5}$
Area 12, T Tunnel Effluent Pond	06/28/89	$8.2 \times 10^{-2}$	$5.4 \times 10^{-5}$
Area 12, T Tunnel Effluent Pond	07/20/89	$6.1 \times 10^{-2}$	$3.8 \times 10^{-5}$
Area 12, T Tunnel Effluent Pond	08/17/89	$1.9 \times 10^{-2}$	$8.5 \times 10^{-6}$
Area 12, T Tunnel Effluent Pond	09/20/89	$1.6 \times 10^{-2}$	$7.4 \times 10^{-6}$
Area 12, T Tunnel Effluent Pond	10/19/89	$9.1 \times 10^{-3}$	$5.8 \times 10^{-6}$
Area 12, T Tunnel Effluent Pond	11/16/89	$1.9 \times 10^{-3}$	$2.7 \times 10^{-6}$
Area 12, T Tunnel Effluent Pond	12/27/89	$4.8 \times 10^{-3}$	$4.1 \times 10^{-6}$
Area 12, T Tunnel Pond No. 1	02/28/89	$9.3 \times 10^{-2}$	$3.3 \times 10^{-5}$
Area 12, T Tunnel Pond No. 1	03/09/89	$9.7 \times 10^{-2}$	$3.5 \times 10^{-5}$
Area 12, T Tunnel Pond No. 1	04/11/89	$9.4 \times 10^{-2}$	$3.5 \times 10^{-5}$
Area 12, T Tunnel Pond No. 1	05/19/89	$5.6 \times 10^{-2}$	$2.8 \times 10^{-5}$
Area 12, T Tunnel Pond No. 1	06/28/89	$8.0 \times 10^{-2}$	$5.3 \times 10^{-5}$
Area 12, T Tunnel Pond No. 1	07/20/89	$6.1 \times 10^{-2}$	$3.8 \times 10^{-5}$
Area 12, T Tunnel Pond No. 1	08/17/89	$1.9 \times 10^{-2}$	$8.4 \times 10^{-6}$
Area 12, T Tunnel Pond No. 1	09/20/89	$1.5 \times 10^{-2}$	$7.3 \times 10^{-6}$
Area 12, T Tunnel Pond No. 1	10/19/89	$9.2 \times 10^{-3}$	$5.8 \times 10^{-6}$
Area 12, T Tunnel Pond No. 1	11/16/89	$5.8 \times 10^{-3}$	$4.7 \times 10^{-6}$
Area 12, T Tunnel Pond No. 1	12/27/89	$4.7 \times 10^{-3}$	$4.0 \times 10^{-6}$
Area 12, T Tunnel Pond No. 2	02/28/89	$9.8 \times 10^{-2}$	$3.4 \times 10^{-5}$
Area 12, T Tunnel Pond No. 2	03/09/89	$9.6 \times 10^{-2}$	$3.5 \times 10^{-5}$
Area 12, T Tunnel Pond No. 2	04/11/89	$9.4 \times 10^{-2}$	$3.5 \times 10^{-5}$
Area 12, T Tunnel Pond No. 2	05/19/89	$5.9 \times 10^{-2}$	$2.9 \times 10^{-5}$
Area 12, T Tunnel Pond No. 2	06/28/89	$7.7 \times 10^{-2}$	$5.2 \times 10^{-5}$
Area 12, T Tunnel Pond No. 2	07/20/89	$6.1 \times 10^{-2}$	$3.8 \times 10^{-5}$
Area 12, T Tunnel Pond No. 2	08/17/89	$1.9 \times 10^{-2}$	$8.4 \times 10^{-6}$
Area 12, T Tunnel Pond No. 2	09/20/89	$1.5 \times 10^{-2}$	$7.2 \times 10^{-6}$
Area 12, T Tunnel Pond No. 2	10/19/89	$8.5 \times 10^{-3}$	$5.6 \times 10^{-6}$
Area 12, T Tunnel Pond No. 2	11/16/89	$5.9 \times 10^{-3}$	$4.7 \times 10^{-6}$
Area 12, T Tunnel Pond No. 2	12/27/89	$4.6 \times 10^{-3}$	$4.0 \times 10^{-6}$
Area 12, White Rock Spring	01/06/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, White Rock Spring	02/03/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 12, White Rock Spring	03/02/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 12, White Rock Spring	04/05/89	$9.0 \times 10^{-7}$	$1.5 \times 10^{-7}$

Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 12, White Rock Spring	05/18/89	1.0 x 10 <sup>-7</sup>	2.0 x 10 <sup>-7</sup>
Area 12, White Rock Spring	06/07/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 12, White Rock Spring	07/26/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 12, White Rock Spring	08/17/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 12, White Rock Spring	09/13/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 15, Tub Spring	01/12/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 15, Tub Spring	02/28/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 15, Tub Spring	03/02/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 15, Tub Spring	04/28/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 15, Tub Spring	05/18/89	-1.0 x 10 <sup>-7</sup>	2.0 x 10 <sup>-7</sup>
Area 15, Well Ue15d	01/18/89	-2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 15, Well Ue15d	02/15/89	-1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 15, Well Ue15d	03/17/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 15, Well Ue15d	04/11/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 15, Well Ue15d	05/17/89	7.0 x 10 <sup>-7</sup>	1.9 x 10 <sup>-7</sup>
Area 15, Well Ue15d	06/20/89	1.0 x 10 <sup>-7</sup>	2.2 x 10 <sup>-7</sup>
Area 15, Well Ue15d	07/11/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 15, Well Ue15d	08/09/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 15, Well Ue15d	09/11/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 15, Well Ue15d	10/16/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 15, Well Ue15d	11/06/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 15, Well Ue15d	12/12/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 16, Tippipah Spring	01/24/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 16, Tippipah Spring	03/15/89	2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 16, Tippipah Spring	04/11/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 16, Tippipah Spring	05/05/89	3.0 x 10 <sup>-7</sup>	2.1 x 10 <sup>-7</sup>
Area 16, Tippipah Spring	06/08/89	2.0 x 10 <sup>-7</sup>	2.3 x 10 <sup>-7</sup>
Area 16, Tippipah Spring	07/20/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 16, Tippipah Spring	08/03/89	3.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 16, Tippipah Spring	10/06/89	-1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 16, Tippipah Spring	12/15/89	4.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 16, Well 16D	01/18/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 16, Well 16D	02/15/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 16, Well 16D	03/17/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 16, Well 16D	04/11/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 16, Well 16D	05/17/89	4.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 16, Well 16D	06/20/89	-2.0 x 10 <sup>-7</sup>	2.1 x 10 <sup>-7</sup>
Area 16, Well 16D	07/11/89	1.0 x 10 <sup>-7</sup>	2.3 x 10 <sup>-7</sup>
Area 16, Well 16D	08/09/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 16, Well 16D	09/11/89	3.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 16, Well 16D	10/16/89	3.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 16, Well 16D	11/06/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 16, Well 16D	12/12/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 18, Camp 17 Reservoir	01/10/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 18, Camp 17 Reservoir	02/28/89	3.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 18, Camp 17 Reservoir	03/22/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>

Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 18, Camp 17 Reservoir	04/06/89	3.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 18, Camp 17 Reservoir	05/10/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 18, Camp 17 Reservoir	06/21/89	-3.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 18, Camp 17 Reservoir	07/14/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 18, Camp 17 Reservoir	08/02/89	1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 18, Camp 17 Reservoir	09/26/89	1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 18, Camp 17 Reservoir	10/11/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 18, Camp 17 Reservoir	11/08/89	3.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 18, Well 8	01/18/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 18, Well 8	02/15/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 18, Well 8	03/17/89	3.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 18, Well 8	04/11/89	4.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 18, Well 8	05/17/89	1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 18, Well 8	06/20/89	3.0 x 10 <sup>-7</sup>	2.2 x 10 <sup>-7</sup>
Area 18, Well 8	07/11/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 18, Well 8	08/09/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 18, Well 8	09/11/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 18, Well 8	10/16/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 18, Well 8	11/06/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 18, Well 8	12/12/89	3.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 19, Well U19c	01/18/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 19, Well U19c	02/15/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 19, Well U19c	03/17/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 19, Well U19c	04/11/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 19, Well U19c	05/17/89	5.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 19, Well U19c	06/20/89	1.0 x 10 <sup>-7</sup>	2.2 x 10 <sup>-7</sup>
Area 19, Well U19c	07/11/89	-3.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 19, Well U19c	08/09/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 19, Well U19c	09/11/89	3.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 19, Well U19c	10/16/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 19, Well U19c	11/06/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 19, Well U19c	12/12/89	-2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 19, Well U19c Reservoir	01/10/89	4.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 19, Well U19c Reservoir	02/28/89	3.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 19, Well U19c Reservoir	03/28/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 19, Well U19c Reservoir	04/06/89	4.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 19, Well U19c Reservoir	05/10/89	9.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 19, Well U19c Reservoir	08/02/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 19, Well U19c Reservoir	10/11/89	1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 20, Water Well	01/18/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 20, Water Well	02/15/89	-2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 20, Water Well	03/17/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 20, Water Well	04/11/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 20, Water Well	06/20/89	2.0 x 10 <sup>-7</sup>	2.2 x 10 <sup>-7</sup>
Area 20, Water Well	07/11/89	0.0 x 10 <sup>0</sup>	2.3 x 10 <sup>-7</sup>
Area 20, Water Well	09/11/89	3.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>

Table C.5 (Tritium in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 20, Water Well	10/16/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 20, Water Well	11/06/89	$2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 20, Water Well	12/12/89	$2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 20, Well 20a Reservoir	01/10/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 20, Well 20a Reservoir	02/28/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 20, Well 20a Reservoir	03/22/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 20, Well 20a Reservoir	04/06/89	$4.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 20, Well 20a Reservoir	05/10/89	$4.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 20, Well 20a Reservoir	06/21/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 20, Well 20a Reservoir	07/14/89	$3.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 20, Well 20a Reservoir	08/02/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 20, Well 20a Reservoir	09/26/89	$2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 20, Well 20a Reservoir	10/11/89	$4.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 20, Well 20a Reservoir	11/08/89	$3.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 20, Well 20a Reservoir	12/18/89	$-2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 22, Army Well No. 1	01/10/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 22, Army Well No. 1	02/15/89	$0.0 \times 10^0$	$1.5 \times 10^{-7}$
Area 22, Army Well No. 1	03/14/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 22, Army Well No. 1	04/11/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 22, Army Well No. 1	05/17/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 22, Army Well No. 1	06/15/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 22, Army Well No. 1	07/11/89	$4.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 22, Army Well No. 1	08/09/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 22, Army Well No. 1	09/11/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 22, Army Well No. 1	10/12/89	$-1.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 22, Army Well No. 1	11/06/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 22, Army Well No. 1	12/08/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 23, Cafeteria	01/03/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 23, Cafeteria	01/09/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 23, Cafeteria	01/17/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 23, Cafeteria	01/23/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 23, Cafeteria	01/31/89	$-2.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 23, Cafeteria	02/06/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 23, Cafeteria	02/13/89	$0.0 \times 10^0$	$1.5 \times 10^{-7}$
Area 23, Cafeteria	02/21/89	$0.0 \times 10^0$	$1.5 \times 10^{-7}$
Area 23, Cafeteria	03/01/89	$5.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 23, Cafeteria	03/07/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 23, Cafeteria	03/13/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 23, Cafeteria	03/20/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 23, Cafeteria	03/27/89	$2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 23, Cafeteria	04/03/89	$0.0 \times 10^0$	$1.8 \times 10^{-7}$
Area 23, Cafeteria	04/11/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 23, Cafeteria	04/19/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 23, Cafeteria	04/24/89	$0.0 \times 10^0$	$1.5 \times 10^{-7}$
Area 23, Cafeteria	05/01/89	$3.0 \times 10^{-7}$	$2.2 \times 10^{-7}$
Area 23, Cafeteria	05/08/89	$4.0 \times 10^{-7}$	$2.1 \times 10^{-7}$

Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 23, Cafeteria	05/15/89	0.0 x 10 <sup>0</sup>	2.2 x 10 <sup>-7</sup>
Area 23, Cafeteria	05/22/89	2.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 23, Cafeteria	05/30/89	1.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 23, Cafeteria	06/05/89	0.0 x 10 <sup>0</sup>	1.6 x 10 <sup>-7</sup>
Area 23, Cafeteria	06/12/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 23, Cafeteria	06/19/89	-1.0 x 10 <sup>-7</sup>	2.1 x 10 <sup>-7</sup>
Area 23, Cafeteria	06/26/89	-3.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 23, Cafeteria	07/05/89	-2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 23, Cafeteria	07/11/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 23, Cafeteria	07/17/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 23, Cafeteria	07/24/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 23, Cafeteria	07/31/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 23, Cafeteria	08/07/89	3.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 23, Cafeteria	08/14/89	4.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 23, Cafeteria	08/21/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 23, Cafeteria	08/28/89	-2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 23, Cafeteria	09/06/89	5.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 23, Cafeteria	09/11/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 23, Cafeteria	09/18/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 23, Cafeteria	09/26/89	3.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 23, Cafeteria	10/02/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 23, Cafeteria	10/09/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 23, Cafeteria	10/16/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 23, Cafeteria	10/23/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 23, Cafeteria	10/30/89	2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 23, Cafeteria	11/06/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 23, Cafeteria	11/13/89	3.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 23, Cafeteria	11/20/89	5.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 23, Cafeteria	11/28/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 23, Cafeteria	12/05/89	-2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 23, Cafeteria	12/11/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 23, Cafeteria	12/18/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 23, Cafeteria	12/26/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 23, Sewage Final Effluent Pond	03/15/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 23, Sewage Final Effluent Pond	06/21/89	4.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 23, Sewage Final Effluent Pond	12/14/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Building 4221	03/13/89	2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Building 4221	03/20/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	03/27/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Building 4221	04/03/89	-1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Building 4221	04/11/89	0.0 x 10 <sup>0</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Building 4221	04/19/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	04/24/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Building 4221	05/01/89	3.0 x 10 <sup>-7</sup>	2.2 x 10 <sup>-7</sup>
Area 25, Building 4221	05/08/89	2.0 x 10 <sup>-7</sup>	2.1 x 10 <sup>-7</sup>
Area 25, Building 4221	05/15/89	-2.0 x 10 <sup>-7</sup>	2.2 x 10 <sup>-7</sup>

Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 25, Building 4221	05/22/89	1.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 25, Building 4221	05/30/89	-2.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 25, Building 4221	06/05/89	2.0 x 10 <sup>-7</sup>	1.6 x 10 <sup>-7</sup>
Area 25, Building 4221	06/12/89	-4.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Building 4221	06/19/89	1.0 x 10 <sup>-7</sup>	2.1 x 10 <sup>-7</sup>
Area 25, Building 4221	06/26/89	-1.0 x 10 <sup>-7</sup>	1.9 x 10 <sup>-7</sup>
Area 25, Building 4221	07/05/89	-3.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Building 4221	07/11/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Building 4221	07/17/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Building 4221	07/24/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Building 4221	07/31/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	08/07/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Building 4221	08/14/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	08/21/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Building 4221	08/28/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	09/06/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Building 4221	09/11/89	3.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Building 4221	09/18/89	-2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Building 4221	09/26/89	3.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Building 4221	10/02/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	10/09/89	4.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Building 4221	10/16/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	10/30/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Building 4221	11/06/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	11/13/89	-2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	11/20/89	3.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	11/28/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Building 4221	12/05/89	-2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	12/11/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	12/18/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Building 4221	12/26/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Service Station	01/03/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Service Station	01/09/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Service Station	01/17/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Service Station	01/23/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Service Station	01/31/89	0.0 x 10 <sup>0</sup>	1.6 x 10 <sup>-7</sup>
Area 25, Service Station	02/06/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Service Station	02/13/89	1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Service Station	02/22/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Service Station	03/01/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Service Station	03/07/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J11 Reservoir	01/10/89	3.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Well J11 Reservoir	02/10/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J11 Reservoir	03/09/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J11 Reservoir	04/07/89	0.0 x 10 <sup>0</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Well J11 Reservoir	05/04/89	4.0 x 10 <sup>-7</sup>	2.3 x 10 <sup>-7</sup>

Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 25, Well J11 Reservoir	06/08/89	0.0 x 10 <sup>0</sup>	2.3 x 10 <sup>-7</sup>
Area 25, Well J11 Reservoir	07/20/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J11 Reservoir	08/01/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Well J11 Reservoir	09/06/89	-1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Well J11 Reservoir	10/05/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Well J11 Reservoir	11/01/89	-1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Well J11 Reservoir	12/08/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Well J12	01/10/89	3.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Well J12	02/10/89	-1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J12	02/15/89	0.0 x 10 <sup>0</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Well J12	03/09/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J12	03/16/89	-2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Well J12	04/07/89	0.0 x 10 <sup>0</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Well J12	04/11/89	3.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Well J12	05/04/89	3.0 x 10 <sup>-7</sup>	2.3 x 10 <sup>-7</sup>
Area 25, Well J12	05/17/89	4.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Well J12	06/08/89	0.0 x 10 <sup>0</sup>	2.2 x 10 <sup>-7</sup>
Area 25, Well J12	06/15/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Well J12	07/11/89	2.0 x 10 <sup>-7</sup>	2.3 x 10 <sup>-7</sup>
Area 25, Well J12	07/20/89	3.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J12	08/01/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Well J12	08/09/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J12	09/11/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J12	09/12/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J12	10/05/89	5.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Well J12	10/12/89	-1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Well J12	11/01/89	-1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Well J12	11/06/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J12	12/08/89	-1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Well J12	12/08/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Well J13	01/10/89	0.0 x 10 <sup>0</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Well J13	02/15/89	-1.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Well J13	03/16/89	-2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Well J13	04/11/89	3.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Well J13	05/17/89	1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Well J13	06/15/89	4.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 25, Well J13	07/11/89	2.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Well J13	08/09/89	1.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J13	09/11/89	2.0 x 10 <sup>-7</sup>	1.5 x 10 <sup>-7</sup>
Area 25, Well J13	10/12/89	1.0 x 10 <sup>-7</sup>	1.8 x 10 <sup>-7</sup>
Area 25, Well J13	11/06/89	2.0 x 10 <sup>-7</sup>	1.4 x 10 <sup>-7</sup>
Area 25, Well J13	12/08/89	2.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 27, Cafeteria	01/03/89	1.0 x 10 <sup>-7</sup>	1.7 x 10 <sup>-7</sup>
Area 27, Cafeteria	01/09/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 27, Cafeteria	01/17/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>
Area 27, Cafeteria	01/23/89	0.0 x 10 <sup>0</sup>	1.4 x 10 <sup>-7</sup>



Table C.5 (Tritium in Water, cont.)

Sampling Location	Sampling Dates	$\mu\text{Ci/mL}$	
		Concentration	Standard Deviation (s)
Area 27, Cafeteria	01/31/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 27, Cafeteria	02/06/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	02/13/89	$-1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 27, Cafeteria	02/22/89	$-1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 27, Cafeteria	03/01/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 27, Cafeteria	03/07/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	03/13/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 27, Cafeteria	03/20/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	03/27/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 27, Cafeteria	04/03/89	$-2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 27, Cafeteria	04/11/89	$2.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 27, Cafeteria	04/19/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	04/24/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	05/01/89	$1.0 \times 10^{-7}$	$2.1 \times 10^{-7}$
Area 27, Cafeteria	05/08/89	$1.0 \times 10^{-7}$	$2.1 \times 10^{-7}$
Area 27, Cafeteria	05/15/89	$1.0 \times 10^{-7}$	$2.3 \times 10^{-7}$
Area 27, Cafeteria	05/22/89	$2.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 27, Cafeteria	05/30/89	$-1.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 27, Cafeteria	06/05/89	$3.0 \times 10^{-7}$	$1.6 \times 10^{-7}$
Area 27, Cafeteria	06/12/89	$3.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 27, Cafeteria	06/19/89	$1.0 \times 10^{-7}$	$2.1 \times 10^{-7}$
Area 27, Cafeteria	06/26/89	$1.0 \times 10^{-7}$	$1.9 \times 10^{-7}$
Area 27, Cafeteria	07/05/89	$-1.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 27, Cafeteria	07/11/89	$0.0 \times 10^0$	$1.8 \times 10^{-7}$
Area 27, Cafeteria	07/17/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	07/24/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 27, Cafeteria	07/31/89	$2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	08/07/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 27, Cafeteria	08/14/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 27, Cafeteria	08/21/89	$0.0 \times 10^0$	$1.8 \times 10^{-7}$
Area 27, Cafeteria	08/28/89	$1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 27, Cafeteria	09/06/89	$2.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 27, Cafeteria	09/11/89	$5.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 27, Cafeteria	09/18/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 27, Cafeteria	09/26/89	$3.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 27, Cafeteria	10/02/89	$1.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 27, Cafeteria	10/09/89	$1.0 \times 10^{-7}$	$1.8 \times 10^{-7}$
Area 27, Cafeteria	10/16/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	10/23/89	$-2.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	10/30/89	$0.0 \times 10^0$	$1.5 \times 10^{-7}$
Area 27, Cafeteria	11/06/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	11/13/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	11/28/89	$1.0 \times 10^{-7}$	$1.7 \times 10^{-7}$
Area 27, Cafeteria	12/05/89	$-1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	12/11/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 27, Cafeteria	12/18/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$

Table C.5 (Tritium in Water, cont.)

<u>Sampling Location</u>	<u>Sampling Dates</u>	<u>μCi/mL</u>	
		<u>Concentration</u>	<u>Standard Deviation (s)</u>
Area 29, Topopah Spring	03/24/89	$0.0 \times 10^0$	$1.7 \times 10^{-7}$
Area 29, Topopah Spring	04/11/89	$1.0 \times 10^{-7}$	$1.4 \times 10^{-7}$
Area 29, Topopah Spring	05/18/89	$2.0 \times 10^{-7}$	$2.0 \times 10^{-7}$
Area 29, Topopah Spring	06/20/89	$-2.0 \times 10^{-7}$	$2.1 \times 10^{-7}$
Area 29, Topopah Spring	07/21/89	$2.0 \times 10^{-7}$	$1.5 \times 10^{-7}$
Area 29, Topopah Spring	08/17/89	$0.0 \times 10^0$	$1.4 \times 10^{-7}$
Area 29, Topopah Spring	10/10/89	$0.0 \times 10^0$	$1.8 \times 10^{-7}$

# APPENDIX D

## RADIOACTIVITY IN WATER

### OTHER THAN CONTAINMENT PONDS

Lawrence E. Barker

Water at the NTS, other than that in containment ponds, is classified as drinking water, supply water, natural springs, open reservoirs, supply wells, and sewage lagoons. Although these differ functionally, observed concentrations of radionuclides in water from these sources did not significantly differ statistically. Samples from these sources were statistically analyzed as if from a single source. Any loss of information caused by combination of sample types was made up for by the gain in simplicity, since otherwise multiple, nearly identical concentrations would have been reported.

Exploratory data analysis procedures indicated that fit to either a normal or log-normal distribution was an acceptable assumption. The normal assumption was chosen to simplify interpretation of the statistical results. Multi-way analyses of variance were used to identify differences between isotopes, locations, and time periods. Except as noted, no significant differences were found.

Measured concentrations of  $^{238}\text{Pu}$ ,  $^{239}\text{Pu}$ , gamma-emitting radionuclides, gross beta, and tritium in water other than containment ponds were much smaller than those in samples obtained from containment ponds. This was expected, and can be confirmed by comparing the concentrations given below with those in Appendix C. Sampling locations, dates, and measured concentrations and standard errors of concentrations are displayed in Tables C.1, C.2, C.3, C.4, and C.5, along with corresponding data for samples from containment ponds.

Measured concentrations of  $^{238}\text{Pu}$  in water, in  $\mu\text{Ci/mL}$ , contained an obvious outlier of  $-1.1 \times 10^{-8}$ , measured on December 8 at Well J-12. Neglecting this value, measured concentrations ranged from  $-1.1 \times 10^{-10}$ , measured on December 18 at the Well 20a Reservoir, to  $7.1 \times 10^{-9}$ , measured on March 15 in Area 23 Sewage Final Effluent pond. Neglecting the single extreme at Well J-12, the average concentration was  $1.2 \times 10^{-10}$ .

Measured concentrations of  $^{239}\text{Pu}$  in water, in  $\mu\text{Ci/mL}$ , ranged from  $-2.5 \times 10^{-11}$  to  $1.2 \times 10^{-9}$ , both recorded on December 8, at Army Well #1 and Well J-12, respectively. The average measured concentration was  $1.5 \times 10^{-11}$ .

Measured concentrations of gamma-emitting radionuclides varied by radionuclide. Adjusting for differences in radionuclides, no statistically significant differences in sampling location or over time were found. No radionuclide was found in more than three samples. Only  $^{238}\text{U}$  was found in the three samples, with an average concentration in those samples containing a  $^{238}\text{U}$  level of  $1.2 \times 10^{-6} \mu\text{Ci/mL}$ .

Measured concentrations of gross beta in water, in  $\mu\text{Ci/mL}$ , ranged from  $-1.0 \times 10^{-8}$ , recorded as collected on March 27 in the Area 3 Cafeteria, to  $7.5 \times 10^{-8}$ , recorded as collected on October 10 at Topopah Spring. The average concentration was  $6.4 \times 10^{-8}$ .

No statistically significant differences in concentrations of gross beta compared over either time or location were observed, except the measured concentration of  $^{238}\text{Pu}$  at Well J-12 observed on December 8.

Measured concentrations of tritium in water, in  $\mu\text{Ci/mL}$ , range from  $-4.0 \times 10^{-7}$ , recorded on June 26 at the Area 6 Cafeteria, to  $1.1 \times 10^{-6}$ , recorded on March 9 at Reitman Seep. Measured concentrations average  $7.6 \times 10^{-8}$ .

# APPENDIX E

## RADIOACTIVE NOBLE GASES IN AIR ONSITE

Robert R. Kinnison

The data consisted of krypton and xenon concentrations from seven stations collected over the entire year and from five test event sites collected for two or more months. The information was comprised of: an alphabetic station description, the dates sample collection started and ended, and the krypton and xenon concentrations in pCi/m<sup>3</sup> with one analytic standard deviation (1s). Table E.1 contains these data. (A dash denotes a missing value.)

Table E.1 Sample Results - <sup>133</sup>Xe and <sup>85</sup>Kr - 1989

Sampling Location	Sampling Dates		Kr	Kr	Xe	Xe
	Start	End	pCi/m <sup>3</sup>	1s	pCi/m <sup>3</sup>	1s
Area 1, BJY	01/30/89	02/08/89	34.2	0.95	48	-
Area 1, BJY	01/25/89	01/30/89	26.3	0.90	12	-
Area 1, BJY	02/16/89	02/23/89	22.7	1.00	13	-
Area 1, BJY	02/23/89	03/02/89	27.6	0.95	30	-
Area 1, BJY	02/08/89	02/16/89	19.2	1.00	49	-
Area 1, BJY	03/03/89	03/09/89	24.1	0.85	10	-
Area 1, BJY	03/16/89	03/23/89	28.2	0.85	49	-
Area 1, BJY	03/09/89	03/16/89	21.7	1.95	-	-
Area 1, BJY	03/09/89	03/16/89	30.4	1.15	12	-
Area 1, BJY	03/03/89	03/09/89	486.0	7.00	-	-
Area 1, BJY	04/26/89	05/03/89	-	-	27	-
Area 1, BJY	04/13/89	04/20/89	22.6	0.95	75	-
Area 1, BJY	04/06/89	04/13/89	20.1	0.80	23	-
Area 1, BJY	04/20/89	04/26/89	24.3	0.70	21	-
Area 1, BJY	05/03/89	05/09/89	-	-	21	-
Area 1, BJY	06/16/89	06/21/89	-	-	63	-
Area 1, BJY	06/30/89	07/07/89	20.4	1.80	290	-
Area 1, BJY	06/21/89	06/30/89	-	-	41	-
Area 1, BJY	07/07/89	07/14/89	22.7	0.95	23	-
Area 1, BJY	07/28/89	08/02/89	-	-	25	-
Area 1, BJY	08/31/89	09/07/89	23.1	1.25	16	-
Area 1, BJY	08/02/89	08/09/89	27.7	0.85	-	-
Area 1, BJY	08/23/89	08/31/89	20.8	0.55	9	-
Area 1, BJY	09/19/89	09/27/89	17.6	0.65	28	-
Area 1, BJY	09/27/89	10/03/89	28.6	1.45	40	-
Area 1, BJY	09/07/89	09/12/89	26.2	1.15	6	-
Area 1, BJY	10/11/89	10/17/89	20.3	0.85	36	-
Area 1, BJY	10/17/89	10/26/89	10.8	0.90	76	-
Area 1, BJY	10/03/89	10/11/89	23.9	0.65	56	-
Area 1, BJY	11/30/89	12/06/89	-	-	980000	1760.00
Area 1, BJY	11/24/89	11/30/89	21.3	0.90	130	19.00
Area 1, BJY	12/21/89	12/28/89	22.7	1.20	-20	23.35
Area 1, BJY	12/28/89	01/04/90	33.3	1.00	73	14.65
Area 1, BJY	12/06/89	12/12/89	72.5	1.65	9200	215.00

Table E.1 (<sup>133</sup>Xe and <sup>85</sup>Kr, cont.)

Sampling Location	Sampling Dates		Kr pCi/m <sup>3</sup>	Kr 1s	Xe pCi/m <sup>3</sup>	Xe 1s
	Start	End				
Area 1, BJY	12/12/89	12/21/89	31.2	1.05	348	50.00
Area 1, Gravel Pit	01/24/89	01/31/89	25.2	0.65	11	-
Area 1, Gravel Pit	01/31/89	02/07/89	23.3	1.10	37	-
Area 1, Gravel Pit	02/14/89	02/24/89	-	-	57	-
Area 1, Gravel Pit	02/07/89	02/14/89	40.8	2.10	39	-
Area 1, Gravel Pit	02/24/89	03/02/89	24.1	0.95	27	-
Area 1, Gravel Pit	03/28/89	04/04/89	20.6	1.15	85	-
Area 1, Gravel Pit	03/16/89	03/21/89	19.2	1.20	113	-
Area 1, Gravel Pit	03/21/89	03/28/89	-	-	38	-
Area 1, Gravel Pit	03/02/89	03/08/89	23.3	0.70	78	-
Area 1, Gravel Pit	04/19/89	04/25/89	-	-	29	-
Area 1, Gravel Pit	04/14/89	04/19/89	27.4	0.70	26	-
Area 1, Gravel Pit	04/04/89	04/12/89	-	-	34	-
Area 1, Gravel Pit	05/11/89	05/16/89	29.9	1.25	28	-
Area 1, Gravel Pit	06/30/89	07/07/89	24.6	1.05	110	-
Area 1, Gravel Pit	06/20/89	06/30/89	20.2	0.80	35	-
Area 1, Gravel Pit	06/06/89	06/15/89	14.7	0.70	108	-
Area 1, Gravel Pit	06/15/89	06/20/89	19.0	0.60	236	-
Area 1, Gravel Pit	07/13/89	07/19/89	-	-	241	-
Area 1, Gravel Pit	07/19/89	07/28/89	21.8	0.90	40	-
Area 1, Gravel Pit	07/28/89	08/02/89	13.4	1.60	24	-
Area 1, Gravel Pit	07/07/89	07/13/89	31.7	1.15	34	-
Area 1, Gravel Pit	08/31/89	09/06/89	21.1	0.55	5	-
Area 1, Gravel Pit	08/23/89	08/31/89	14.0	3.20	-	-
Area 1, Gravel Pit	08/23/89	08/31/89	23.3	1.10	23	-
Area 1, Gravel Pit	08/02/89	08/09/89	25.4	1.30	30	-
Area 1, Gravel Pit	08/09/89	08/15/89	28.8	1.25	4	-
Area 1, Gravel Pit	09/06/89	09/12/89	20.9	1.05	5	-
Area 1, Gravel Pit	09/12/89	09/19/89	-	-	15	-
Area 1, Gravel Pit	09/27/89	10/03/89	22.8	0.75	17	-
Area 1, Gravel Pit	10/03/89	10/10/89	28.7	1.15	22	-
Area 1, Gravel Pit	10/10/89	10/17/89	29.5	0.95	36	-
Area 1, Gravel Pit	11/24/89	12/01/89	-	-	36	18.50
Area 1, Gravel Pit	11/02/89	11/07/89	20.5	0.75	30	-
Area 1, Gravel Pit	11/07/89	11/16/89	17.3	0.60	42	-
Area 1, Gravel Pit	12/21/89	12/26/89	-	-	450	18.50
Area 1, Gravel Pit	12/12/89	12/21/89	-	-	469	12.50
Area 1, Gravel Pit	12/01/89	12/07/89	22.6	0.60	360	48.00
Area 1, Gravel Pit	12/07/89	12/12/89	14.4	0.65	212	61.00
Area 5, Gate 200	01/30/89	02/08/89	11.4	0.60	28	-
Area 5, Gate 200	01/25/89	01/30/89	20.8	0.65	10	-
Area 5, Gate 200	01/19/89	01/25/89	19.9	0.60	18	-
Area 5, Gate 200	02/11/89	02/23/89	22.1	0.75	31	-
Area 5, Gate 200	02/08/89	02/16/89	23.1	0.85	19	-
Area 5, Gate 200	02/23/89	03/03/89	31.7	1.35	24	-
Area 5, Gate 200	03/03/89	03/09/89	21.6	0.65	16	-
Area 5, Gate 200	03/16/89	03/23/89	18.6	1.30	148	-
Area 5, Gate 200	04/06/89	04/13/89	-	-	82	-
Area 5, Gate 200	04/06/89	04/13/89	29.0	0.90	-	-

Table E.1 (<sup>133</sup>Xe and <sup>85</sup>Kr, cont.)

Sampling Location	Sampling Dates		Kr	Kr	Xe	Xe
	Start	End	pCi/m <sup>3</sup>	1s	pCi/m <sup>3</sup>	1s
Area 5, Gate 200	04/13/89	04/20/89	28.5	0.90	29	-
Area 5, Gate 200	04/20/89	04/26/89	-	-	32	-
Area 5, Gate 200	04/25/89	05/03/89	25.1	1.30	35	-
Area 5, Gate 200	05/17/89	05/24/89	27.1	0.65	13	-
Area 5, Gate 200	05/09/89	05/17/89	7.8	2.25	113	-
Area 5, Gate 200	05/24/89	06/01/89	24.7	0.75	-	-
Area 5, Gate 200	05/03/89	05/09/89	25.9	0.75	67	-
Area 5, Gate 200	06/21/89	06/30/89	17.8	0.80	66	-
Area 5, Gate 200	09/13/89	09/19/89	48.4	1.30	-	-
Area 5, Gate 200	09/15/89	09/19/89	35.9	1.00	-	-
Area 5, Gate 200	09/15/89	09/19/89	23.6	2.35	7	-
Area 5, Gate 200	09/13/89	09/19/89	27.4	2.00	10	-
Area 5, Gate 200	09/19/89	10/03/89	21.7	0.90	42	-
Area 5, Gate 200	09/19/89	09/27/89	25.7	0.60	39	-
Area 5, Gate 200	09/19/89	10/03/89	23.8	0.80	-	-
Area 5, Gate 200	09/07/89	09/13/89	22.8	1.10	18	-
Area 5, Gate 200	10/03/89	10/11/89	30.0	1.30	107	-
Area 5, Gate 200	10/31/89	11/08/89	16.4	1.05	40	-
Area 5, Gate 200	10/11/89	10/17/89	23.9	1.00	42	-
Area 5, Gate 200	11/16/89	11/24/89	-	-	21	-
Area 5, Gate 200	12/22/89	12/28/89	30.3	2.40	128	65.00
Area 5, Gate 200	12/28/89	01/03/90	23.9	0.70	59	30.10
Area 5, Gate 200	12/06/89	12/12/89	10.2	0.85	2430	655.00
Area 12, Camp	01/31/89	02/07/89	26.6	0.95	29	-
Area 12, Camp	01/25/89	01/31/89	21.3	0.65	8	-
Area 12, Camp	01/24/89	01/31/89	18.1	1.05	13	-
Area 12, Camp	02/14/89	02/24/89	26.3	0.80	27	-
Area 12, Camp	02/07/89	02/14/89	23.5	0.85	30	-
Area 12, Camp	02/24/89	03/02/89	20.7	0.60	21	-
Area 12, Camp	03/21/89	03/28/89	20.5	1.00	33	-
Area 12, Camp	03/15/89	03/21/89	25.3	0.60	7	-
Area 12, Camp	03/23/89	03/29/89	-	-	159	-
Area 12, Camp	03/08/89	03/15/89	-	-	27	-
Area 12, Camp	03/02/89	03/08/89	16.5	0.90	1840	32.00
Area 12, Camp	04/25/89	05/02/89	-	-	299	-
Area 12, Camp	04/04/89	04/12/89	20.1	1.00	30	-
Area 12, Camp	04/19/89	04/25/89	27.9	2.05	48	-
Area 12, Camp	05/11/89	05/24/89	-	-	57	-
Area 12, Camp	05/24/89	06/07/89	20.4	0.80	17	-
Area 12, Camp	05/31/89	06/06/89	21.2	0.70	-	-
Area 12, Camp	05/11/89	05/16/89	28.9	0.70	32	-
Area 12, Camp	06/15/89	06/20/89	16.3	0.55	243	-
Area 12, Camp	06/20/89	06/30/89	-	-	22	-
Area 12, Camp	06/06/89	06/15/89	-	-	83	-
Area 12, Camp	07/13/89	07/19/89	23.5	0.70	81	-
Area 12, Camp	07/19/89	07/28/89	26.5	1.05	34	-
Area 12, Camp	08/23/89	08/31/89	19.6	0.65	14	-
Area 12, Camp	08/16/89	08/23/89	20.7	0.60	-	-
Area 12, Camp	08/23/89	08/31/89	22.2	0.70	-	-

Table E.1 (<sup>133</sup>Xe and <sup>85</sup>Kr, cont.)

Sampling Location	Sampling Dates		Kr pCi/m <sup>3</sup>	Kr 1s	Xe pCi/m <sup>3</sup>	Xe 1s
	Start	End				
Area 12, Camp	08/04/89	08/09/89	19.6	0.95	15	-
Area 12, Camp	08/31/89	09/06/89	22.5	0.65	6	-
Area 12, Camp	08/04/89	08/09/89	21.0	0.85	-	-
Area 12, Camp	09/06/89	09/12/89	21.1	1.05	15	-
Area 12, Camp	09/19/89	10/04/89	27.7	0.80	-	-
Area 12, Camp	09/12/89	09/19/89	21.2	0.70	-	-
Area 12, Camp	09/12/89	09/19/89	41.3	0.80	50	-
Area 12, Camp	09/19/89	10/04/89	21.3	0.80	79	-
Area 12, Camp	10/10/89	10/17/89	-	-	44	-
Area 12, Camp	10/24/89	11/01/89	96.4	1.15	96	-
Area 12, Camp	10/04/89	10/10/89	24.6	0.90	51	-
Area 12, Camp	11/01/89	11/07/89	23.7	1.05	7	-
Area 12, Camp	11/01/89	11/07/89	26.5	0.80	-	-
Area 12, Camp	11/24/89	12/01/89	33.9	0.95	108	21.50
Area 12, Camp	11/07/89	11/16/89	701.0	2.50	10019	75.00
Area 12, Camp	12/12/89	12/22/89	40.5	0.95	687	10.50
Area 12, Camp	12/26/89	01/04/90	-	-	-	-
Area 12, Camp	12/22/89	12/26/89	22.6	1.05	8	3.95
Area 12, Camp	12/01/89	12/07/89	19400.0	12.50	392000	345.00
Area 15, EPA Farm	02/02/89	02/07/89	-	-	5	-
Area 15, EPA Farm	02/07/89	02/15/89	26.6	0.95	29	-
Area 15, EPA Farm	03/02/89	03/08/89	16.4	1.00	26	-
Area 15, EPA Farm	03/15/89	03/21/89	21.5	0.70	56	-
Area 15, EPA Farm	03/02/89	03/08/89	25.2	1.25	-	-
Area 15, EPA Farm	03/28/89	04/04/89	-	-	66	-
Area 15, EPA Farm	03/21/89	03/28/89	17.5	0.95	121	-
Area 15, EPA Farm	03/08/89	03/15/89	22.0	0.80	-	-
Area 15, EPA Farm	04/25/89	05/02/89	-	-	13	-
Area 15, EPA Farm	04/19/89	04/25/89	26.1	1.25	27	-
Area 15, EPA Farm	04/12/89	04/19/89	-	-	42	-
Area 15, EPA Farm	04/04/89	04/12/89	-	-	33	-
Area 15, EPA Farm	04/04/89	04/12/89	23.5	2.65	-	-
Area 15, EPA Farm	04/19/89	04/25/89	23.6	1.20	-	-
Area 15, EPA Farm	05/11/89	05/16/89	32.4	1.10	65	-
Area 15, EPA Farm	05/16/89	05/24/89	27.3	0.90	41	-
Area 15, EPA Farm	05/24/89	05/31/89	17.8	1.25	30	-
Area 15, EPA Farm	06/30/89	07/07/89	14.7	0.95	104	-
Area 15, EPA Farm	06/20/89	06/30/89	17.6	0.60	32	-
Area 15, EPA Farm	06/15/89	06/20/89	18.4	0.55	122	-
Area 15, EPA Farm	06/06/89	06/15/89	-	-	140	-
Area 15, EPA Farm	07/19/89	08/02/89	18.2	0.85	28	-
Area 15, EPA Farm	07/07/89	07/13/89	-	-	21	-
Area 15, EPA Farm	08/02/89	08/09/89	17.1	0.95	10	-
Area 15, EPA Farm	08/15/89	08/23/89	22.7	1.10	48	-
Area 15, EPA Farm	09/08/89	09/12/89	-	-	10	-
Area 15, EPA Farm	10/10/89	10/17/89	22.4	1.20	41	-
Area 15, EPA Farm	10/03/89	10/10/89	24.4	0.95	58	-
Area 15, EPA Farm	11/07/89	11/16/89	13.3	1.20	84	-
Area 15, EPA Farm	11/01/89	11/07/89	38.5	1.40	36	-



Table E.1 ( $^{133}\text{Xe}$  and  $^{85}\text{Kr}$ , cont.)

Sampling Location	Sampling Dates		Kr pCi/m <sup>3</sup>	Kr 1s	Xe pCi/m <sup>3</sup>	Xe 1s
	Start	End				
Area 15, EPA Farm	12/12/89	12/21/89	27.4	0.85	698	13.00
Area 15, EPA Farm	12/27/89	01/04/90	29.3	1.95	50	43.95
Area 15, EPA Farm	12/21/89	12/27/89	13.9	1.00	53	26.70
Area 20, Camp	01/24/89	01/31/89	31.2	0.80	54	-
Area 20, Camp	01/30/89	02/07/89	26.0	0.75	-	-
Area 20, Camp	01/24/89	01/31/89	31.4	0.75	-	-
Area 20, Camp	02/23/89	02/28/89	-	-	9	-
Area 20, Camp	02/13/89	02/23/89	53.2	0.90	13	-
Area 20, Camp	02/07/89	02/13/89	27.6	0.65	11	-
Area 20, Camp	02/13/89	02/23/89	31.9	1.10	-	-
Area 20, Camp	03/07/89	03/15/89	17.3	0.90	736	18.50
Area 20, Camp	03/21/89	03/28/89	39.0	1.50	709	-
Area 20, Camp	03/15/89	03/21/89	23.6	1.10	109	-
Area 20, Camp	04/25/89	05/02/89	29.5	1.00	75	-
Area 20, Camp	04/12/89	04/19/89	33.9	1.35	116	-
Area 20, Camp	04/19/89	04/25/89	31.4	0.60	24	-
Area 20, Camp	04/12/89	04/19/89	31.2	1.25	-	-
Area 20, Camp	04/03/89	04/12/89	44.2	2.15	-	-
Area 20, Camp	04/03/89	04/12/89	19.8	0.80	60	-
Area 20, Camp	05/11/89	05/24/89	20.5	1.20	91	-
Area 20, Camp	05/31/89	06/06/89	26.0	1.35	28	-
Area 20, Camp	05/12/89	05/16/89	29.3	0.70	43	-
Area 20, Camp	05/02/89	05/12/89	35.0	1.15	63	-
Area 20, Camp	06/29/89	07/12/89	23.7	0.90	-	-
Area 20, Camp	06/15/89	06/20/89	-	-	128	-
Area 20, Camp	06/29/89	07/12/89	26.5	1.30	93	-
Area 20, Camp	06/06/89	06/15/89	21.7	0.95	247	-
Area 20, Camp	07/18/89	07/27/89	28.2	4.45	-	-
Area 20, Camp	07/12/89	07/18/89	17.6	1.70	60	-
Area 20, Camp	07/18/89	07/27/89	28.4	1.25	85	-
Area 20, Camp	08/01/89	08/08/89	18.5	1.15	6	-
Area 20, Camp	08/08/89	08/16/89	21.4	0.90	22	-
Area 20, Camp	08/31/89	09/06/89	29.0	0.60	5	-
Area 20, Camp	08/16/89	08/22/89	20.3	1.25	8	-
Area 20, Camp	08/22/89	08/31/89	28.7	0.85	12	-
Area 20, Camp	09/27/89	10/03/89	22.1	0.65	30	-
Area 20, Camp	09/12/89	09/19/89	44.4	1.00	-	-
Area 20, Camp	09/19/89	09/27/89	20.5	0.95	-	-
Area 20, Camp	09/12/89	09/19/89	27.0	1.95	11	-
Area 20, Camp	09/06/89	09/12/89	-	-	5	-
Area 20, Camp	10/10/89	10/17/89	21.1	2.60	40	-
Area 20, Camp	10/24/89	11/01/89	20.0	1.50	-	-
Area 20, Camp	10/24/89	11/01/89	23.2	1.05	104	-
Area 20, Camp	10/03/89	10/10/89	35.2	1.20	63	-
Area 20, Camp	11/01/89	11/07/89	26.8	0.80	4	-
Area 20, Camp	11/24/89	12/01/89	38.9	1.95	12	26.50
Area 20, Camp	11/16/89	11/24/89	30.4	0.60	16	-
Area 20, Camp	11/07/89	11/16/89	-	-	91	-
Area 20, Camp	12/18/89	12/26/89	-	-	111	32.00

Table E.1 (<sup>133</sup>Xe and <sup>85</sup>Kr, cont.)

Sampling Location	Sampling Dates		Kr pCi/m <sup>3</sup>	Kr 1s	Xe pCi/m <sup>3</sup>	Xe 1s
	Start	End				
Area 20, Camp	12/26/89	01/02/90	160.0	1.15	2790	21.50
Area 20, Camp	12/08/89	12/12/89	24.2	1.00	10	3.45
Area 20, Camp	12/01/89	12/07/89	-	-	1	4.10
Area 20, Camp	12/12/89	12/18/89	33.6	1.35	110	4.50
Area 20, Camp	01/02/90	01/08/90	96.2	1.00	213	6.50
Area 25, E-MAD	01/25/89	01/30/89	17.1	1.15	-	-
Area 25, E-MAD	01/25/89	01/30/89	22.0	0.80	12	-
Area 25, E-MAD	01/30/89	02/08/89	21.8	0.70	-	-
Area 25, E-MAD	01/30/89	02/08/89	19.7	0.65	26	-
Area 25, E-MAD	02/08/89	02/15/89	21.6	0.70	24	-
Area 25, E-MAD	02/08/89	02/15/89	27.3	0.80	-	-
Area 25, E-MAD	02/15/89	02/23/89	25.2	1.00	-	-
Area 25, E-MAD	02/23/89	03/03/89	21.1	0.65	21	-
Area 25, E-MAD	02/15/89	02/23/89	25.2	1.00	30	-
Area 25, E-MAD	03/29/89	04/05/89	24.5	1.10	96	-
Area 25, E-MAD	03/23/89	03/29/89	-	-	332	-
Area 25, E-MAD	03/23/89	03/29/89	23.3	1.05	47	-
Area 25, E-MAD	03/09/89	03/16/89	24.2	1.05	19	-
Area 25, E-MAD	04/05/89	04/13/89	35.5	1.05	35	-
Area 25, E-MAD	04/14/89	04/26/89	22.0	0.90	34	-
Area 25, E-MAD	04/25/89	05/03/89	24.5	1.00	17	-
Area 25, E-MAD	04/25/89	05/02/89	31.9	1.65	-	-
Area 25, E-MAD	04/25/89	05/03/89	21.3	1.45	-	-
Area 25, E-MAD	05/17/89	05/24/89	24.5	1.10	65	-
Area 25, E-MAD	05/03/89	05/09/89	30.2	2.10	114	-
Area 25, E-MAD	05/09/89	05/17/89	23.5	0.65	42	-
Area 25, E-MAD	06/16/89	06/21/89	18.3	0.60	51	-
Area 25, E-MAD	06/07/89	06/16/89	26.4	1.40	208	-
Area 25, E-MAD	06/21/89	06/29/89	14.7	0.75	30	-
Area 25, E-MAD	06/29/89	07/07/89	18.3	0.90	124	-
Area 25, E-MAD	07/28/89	08/02/89	16.3	0.80	17	-
Area 25, E-MAD	07/14/89	07/28/89	-	-	40	-
Area 25, E-MAD	07/07/89	07/14/89	27.0	1.05	10	-
Area 25, E-MAD	08/31/89	09/07/89	16.0	0.95	7	-
Area 25, E-MAD	08/23/89	08/31/89	18.6	0.60	8	-
Area 25, E-MAD	08/15/89	08/23/89	12.1	1.00	-	-
Area 25, E-MAD	08/15/89	08/23/89	-	-	32	-
Area 25, E-MAD	08/09/89	08/15/89	26.2	0.80	8	-
Area 25, E-MAD	09/27/89	10/03/89	23.2	0.90	8	-
Area 25, E-MAD	09/22/89	09/27/89	17.7	0.95	48	-
Area 25, E-MAD	09/13/89	09/22/89	21.0	1.60	85	-
Area 25, E-MAD	09/07/89	09/13/89	28.2	0.75	8	-
Area 25, E-MAD	10/17/89	10/25/89	9.3	0.70	70	-
Area 25, E-MAD	10/10/89	10/17/89	30.8	1.75	-	-
Area 25, E-MAD	10/03/89	10/10/89	24.1	1.35	46	-
Area 25, E-MAD	10/31/89	11/08/89	10.5	0.80	31	-
Area 25, E-MAD	10/10/89	10/17/89	-	-	46	-
Area 25, E-MAD	11/08/89	11/14/89	-	-	15	-
Area 25, E-MAD	11/30/89	12/06/89	24.8	0.60	78	83.00

Table E.1 (<sup>133</sup>Xe and <sup>85</sup>Kr, cont.)

Sampling Location	Sampling Dates		Kr	Kr	Xe	Xe
	Start	End	pCi/m <sup>3</sup>	1s	pCi/m <sup>3</sup>	1s
Area 25, E-MAD	11/14/89	11/22/89	13.7	0.60	22	48.80
Area 25, E-MAD	11/22/89	11/30/89	17.3	0.70	110	18.00
Area 25, E-MAD	12/12/89	12/21/89	21.3	0.95	179	30.60
Area 25, E-MAD	12/21/89	12/26/89	21.6	0.70	20	25.55
Area 25, E-MAD	12/24/89	01/04/90	28.9	0.60	31	8.80
Area 25, E-MAD	12/06/89	12/12/89	42.0	0.75	1206	50.50

### XENON DATA

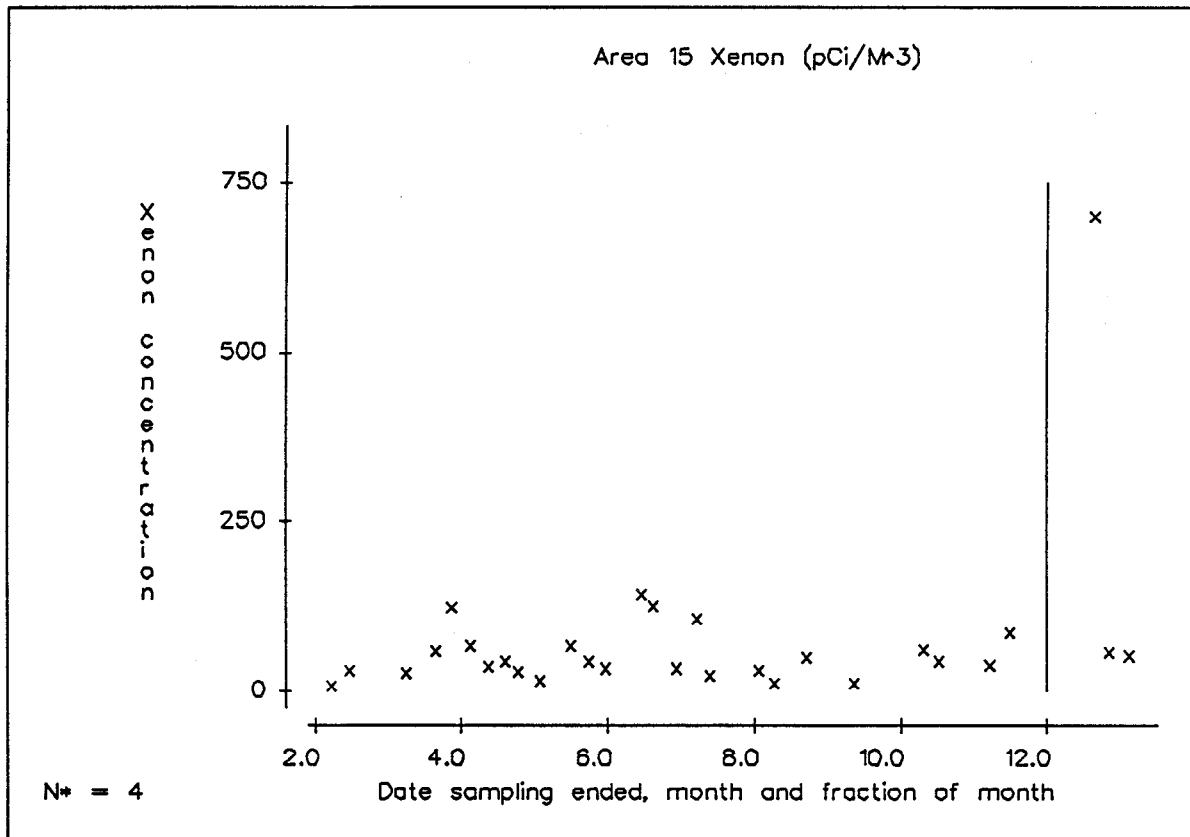
Most of the xenon data are reported without an analytic standard deviation, which signifies that the concentration was below detection limit, and the reported value is the detection limit. Thus the data actually provide information about the statistical characteristics of the detection limit rather than xenon concentrations. The reporting method was changed in December, when the computed concentration value and analytic standard deviation were reported whether or not the concentration was below the detection limit. In addition a known venting occurred in December which caused a "spike" in the data. Thus, the xenon data consisted of two parts: January through November data, which consisted of mostly detection limit values, and December values, which included very few actual data values and a spike from a known venting. The plot of Area 15 xenon data on page E-8 is a typical xenon record.

This plot has a vertical line separating the detection limit data from the xenon data in December. The "N\* = 4" in the lower left corner signifies that four of the values were coded as missing values. The two ambient values in December were well within the range of detection limit values.

Since there were actual xenon data for only the month of December, and those data contained a spike of known origin, no formal statistical analysis was justified. The detection limit data were of secondary interest for the annual report. For each NTS area the values were subjected to exploratory data analysis for statistical distributions and found to typically have a log-normal distribution, which is the theoretical statistical distribution of counting errors.

### KRYPTON DATA

The krypton data are reported with one standard deviation counting errors. An important consideration in any statistical analysis of the krypton values is whether or not the counting errors should be included in any formal statistics. This was investigated by considering the counting variances (square of the standard deviations) as within group error and comparing it to the between-group variance computed from the krypton values. A total variance was computed for each data set as the average within group variance plus the between-groups variance. Typically the total variance was three to four percent larger than the between-groups variance. Since a variance inflation of three to four percent is small, the counting errors were not used in the formal statistical analyses.



An exploratory data analysis was performed on the krypton data for each of the seven sites where continuous annual monitoring was done. Plots of the data showed no time trends for any sites. A few showed atypical values as listed below. At the BJJ there were atypical values for the samples, with collection ending on March 9th and December 12th. Area 12 data showed atypical values for the samples, with collection ending on October 1st and 16th, and on December 7th. Area 20 data showed atypical values for the samples collected in January 1990. The atypical values were removed from the data, then exploratory data analysis was performed to determine the distribution of the data. Almost all the data groups fit, with at least 95 percent confidence, both a normal and a log-normal distribution. The normal distribution was chosen for further statistical analyses to avoid the statistical problem of bias when log-normal statistics are exponentiated to express results in original units of measurement. It should be noted that since the variability in the krypton data is mostly due to random sources other than counting errors, there is no theoretical reason to expect a log-normal data distribution.

The following table (E.2) gives the basic descriptive statistics of the seven stations where annual krypton data were collected. The atypical values were removed from the data before this table was computed. Following the table are plots of krypton concentrations versus time for these locations. For locations with atypical data, two plots are given, with and without the atypical values.

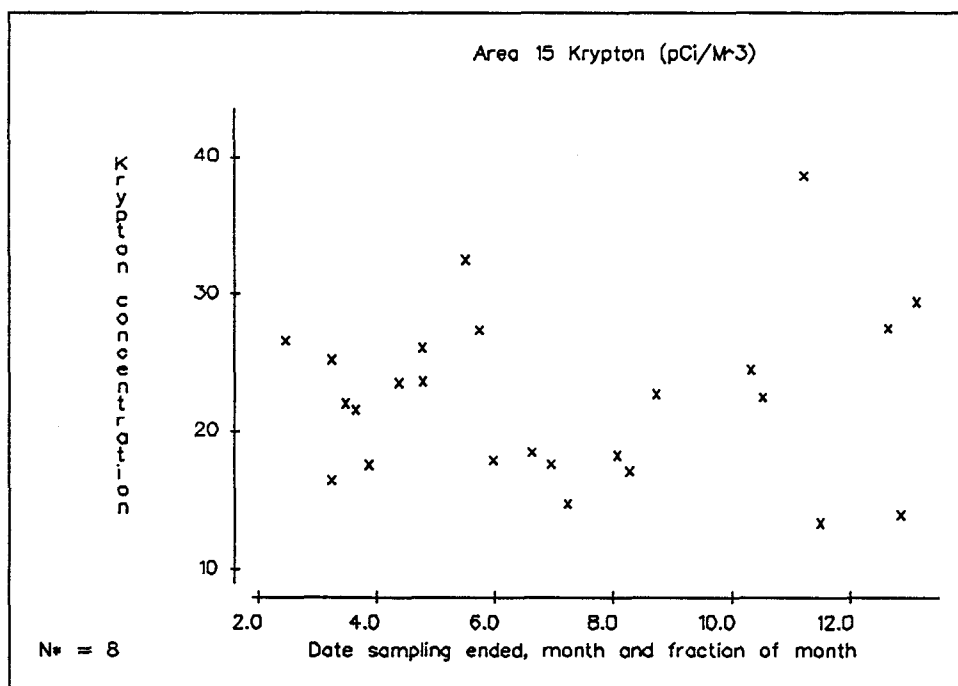
A one-way analysis of variance was used to compare these seven areas for equality of krypton data means, using the data with atypical values removed. The analysis resulted in the highly significant finding that the means were not equal. A Fisher's multiple comparison procedure was then used to determine the pattern of equality among the

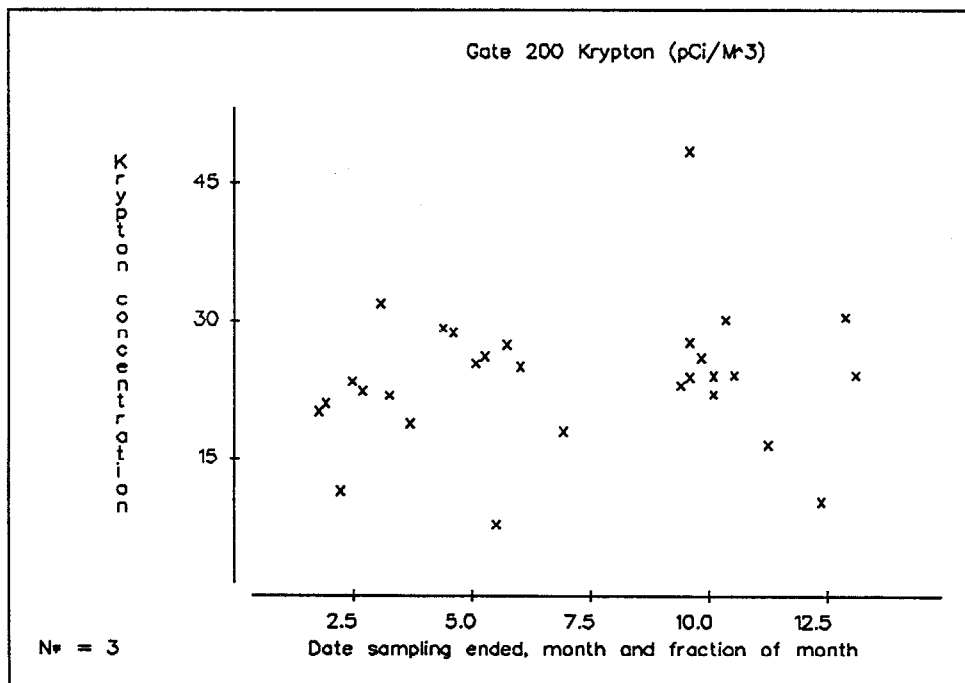
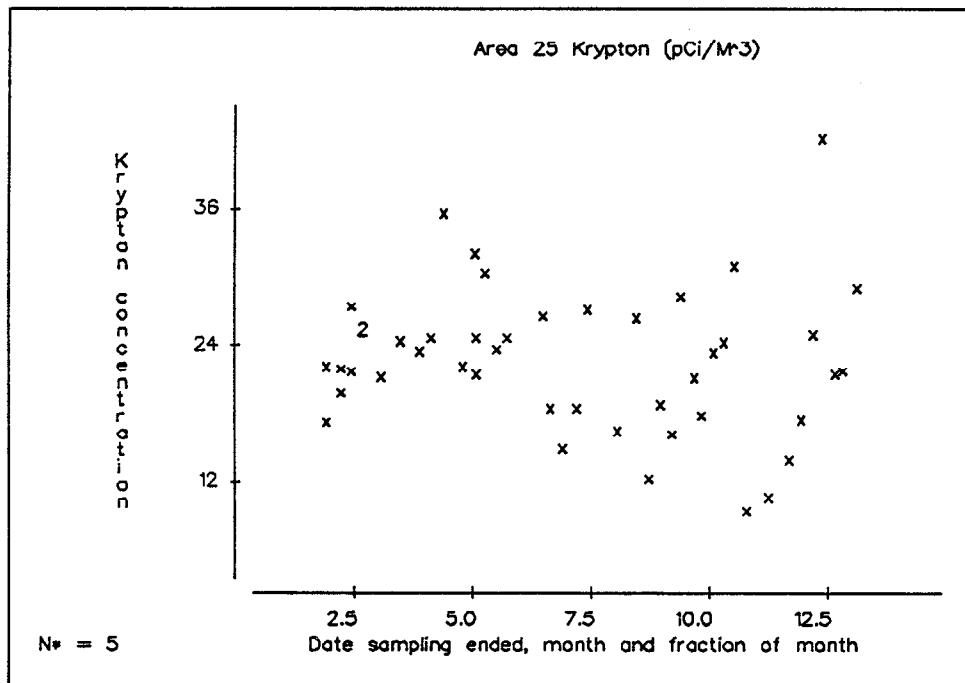
means. This procedure resulted in the finding that the Area 20 mean value was significantly high while all the other means were not significantly different at the five percent level. The data for the six similar groups were then combined. The combined concentration data fit a normal distribution but not a log-normal distribution. The descriptive statistics for these combined krypton data from Areas 12, 15, 25, the Area 1 Gravel Pit, the BJY, and Area 5, Gate 200, are given below. These values will be called the "Site ambient concentrations."

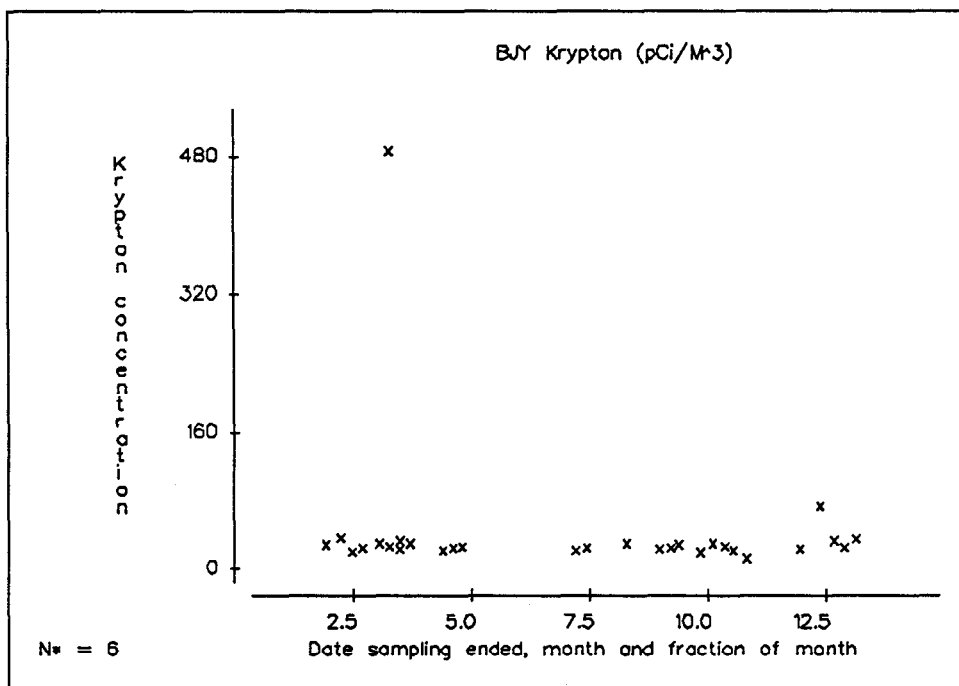
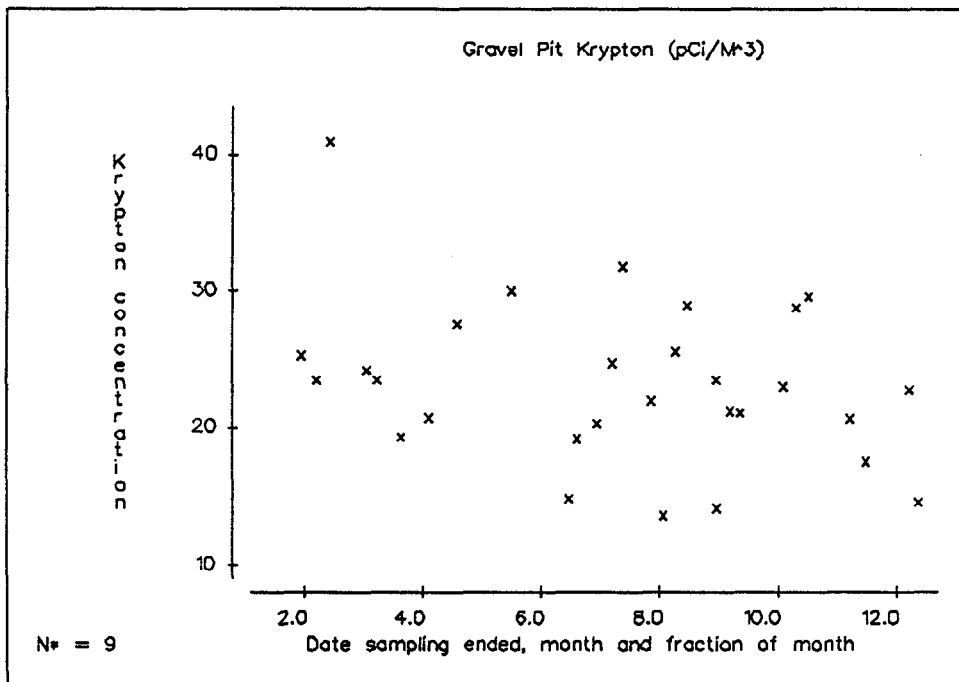
<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>1s</u>	<u>Minimum</u>	<u>Maximum</u>
184	22.70	22.70	5.246	7.80	38.50

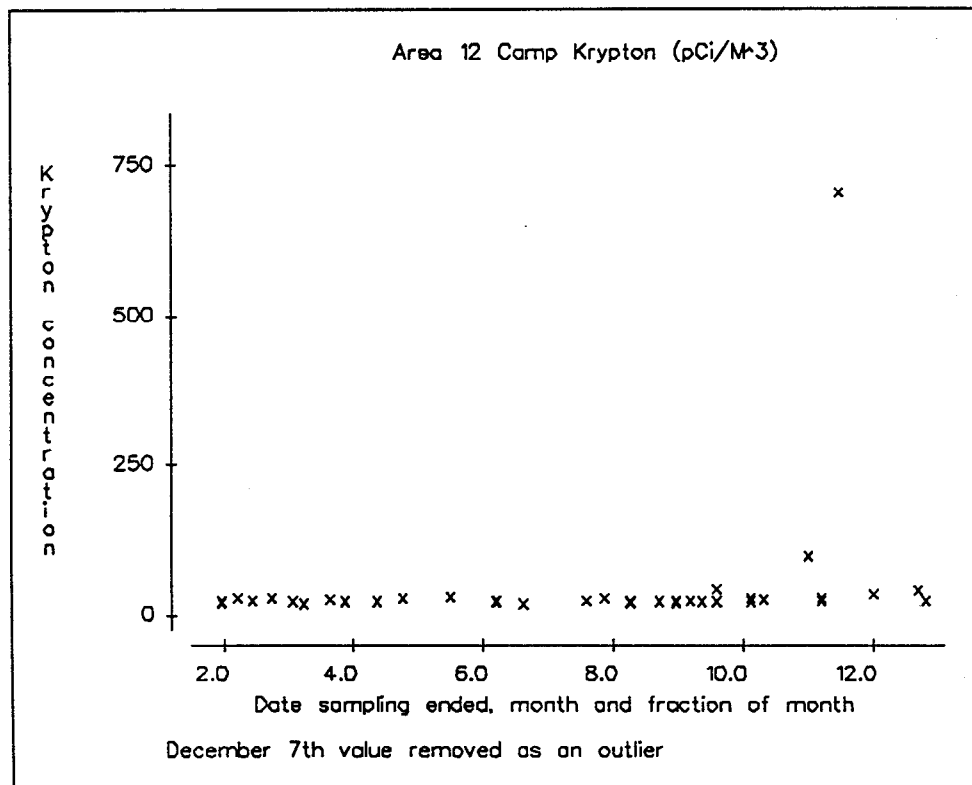
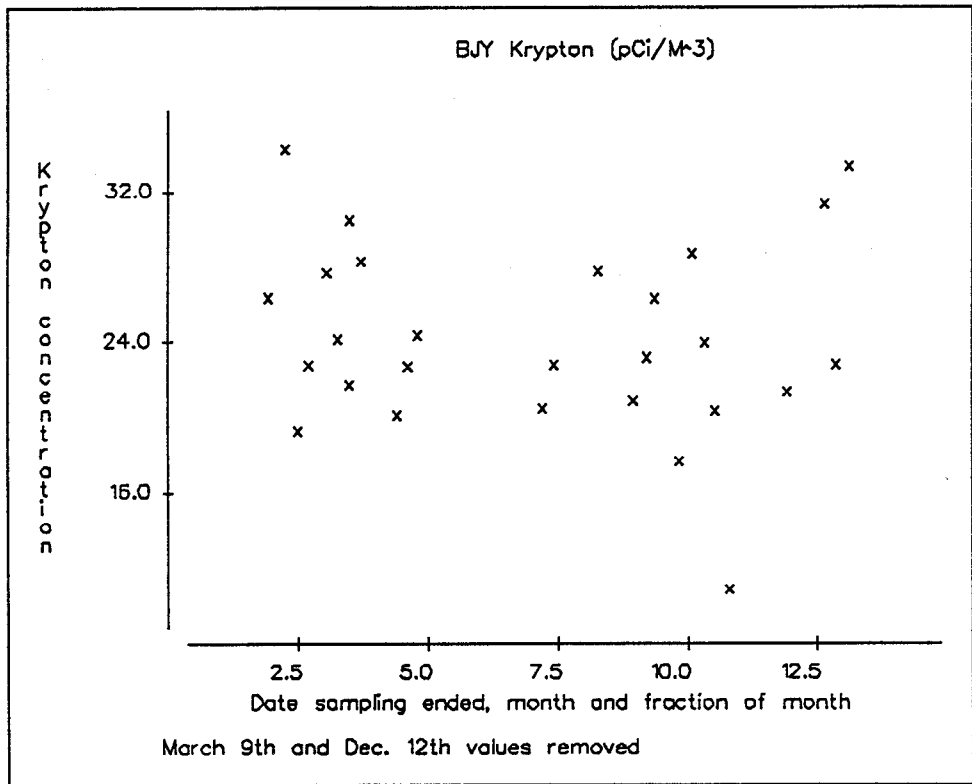
Table E.2 Statistical Analysis of Xenon and Krypton Data

<u>Location</u>	<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>1s</u>	<u>Minimum</u>	<u>Maximum</u>
Area 15	25	22.31	22.40	6.06	13.30	38.50
Area 25	44	22.11	22.00	5.62	9.30	35.50
Area 5, Gate 200	28	22.67	23.70	5.90	7.80	31.70
Area 1, Gravel Pit	28	22.42	22.70	4.96	13.40	31.70
BJY	27	24.15	23.10	5.07	10.80	34.20
Area 12	32	22.87	21.75	3.78	16.30	33.90
Area 20	40	26.79	26.90	5.75	17.30	39.00

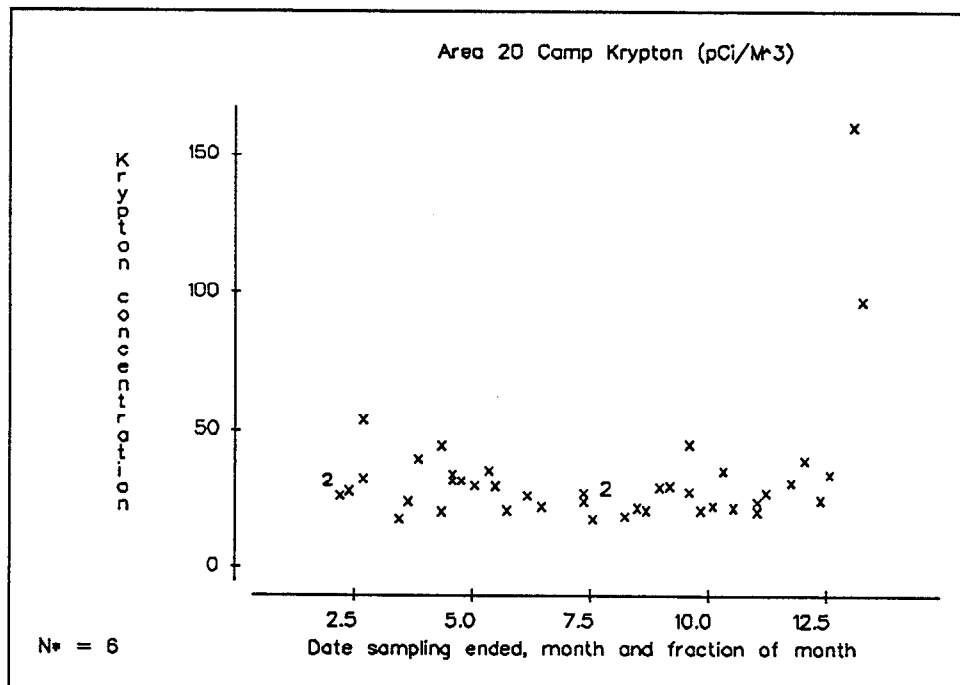
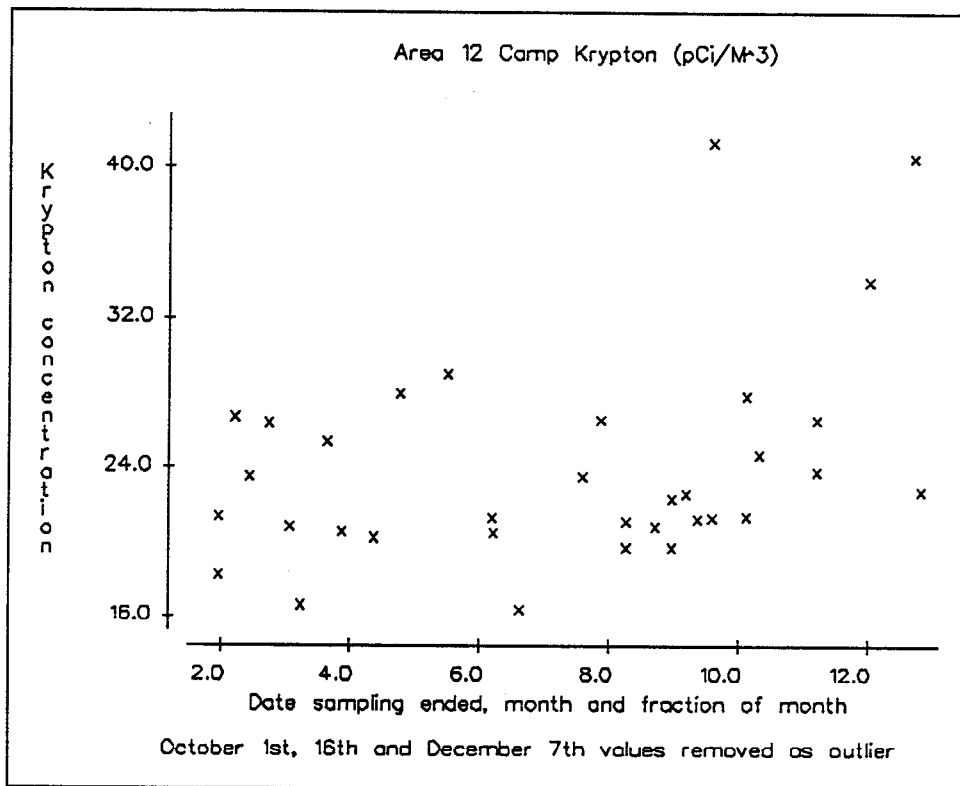


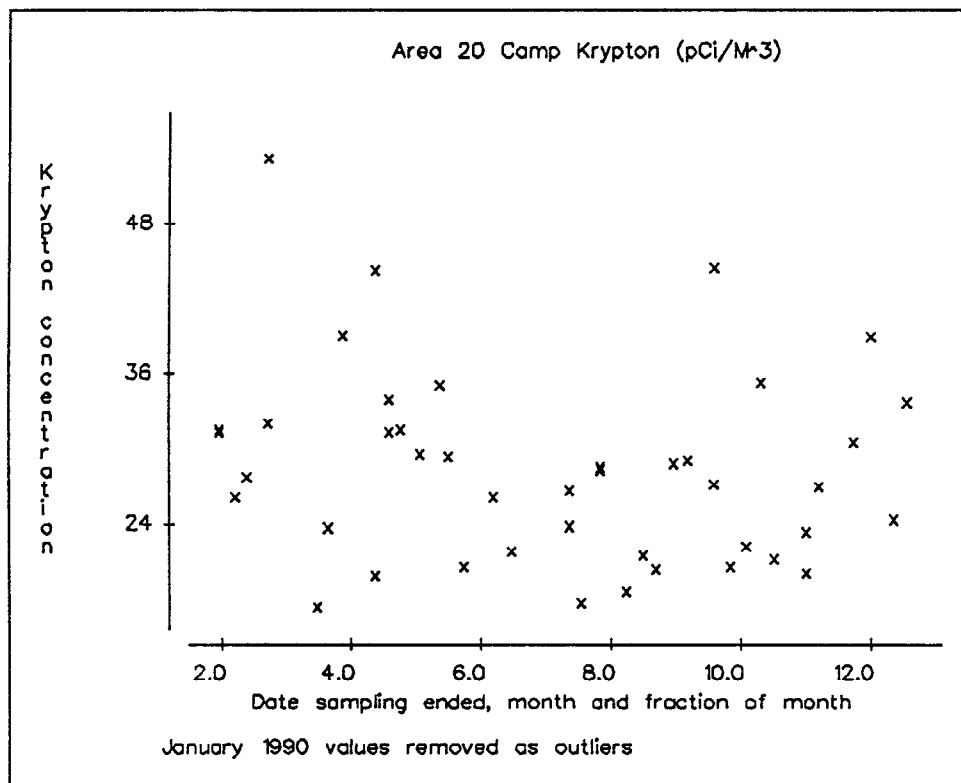








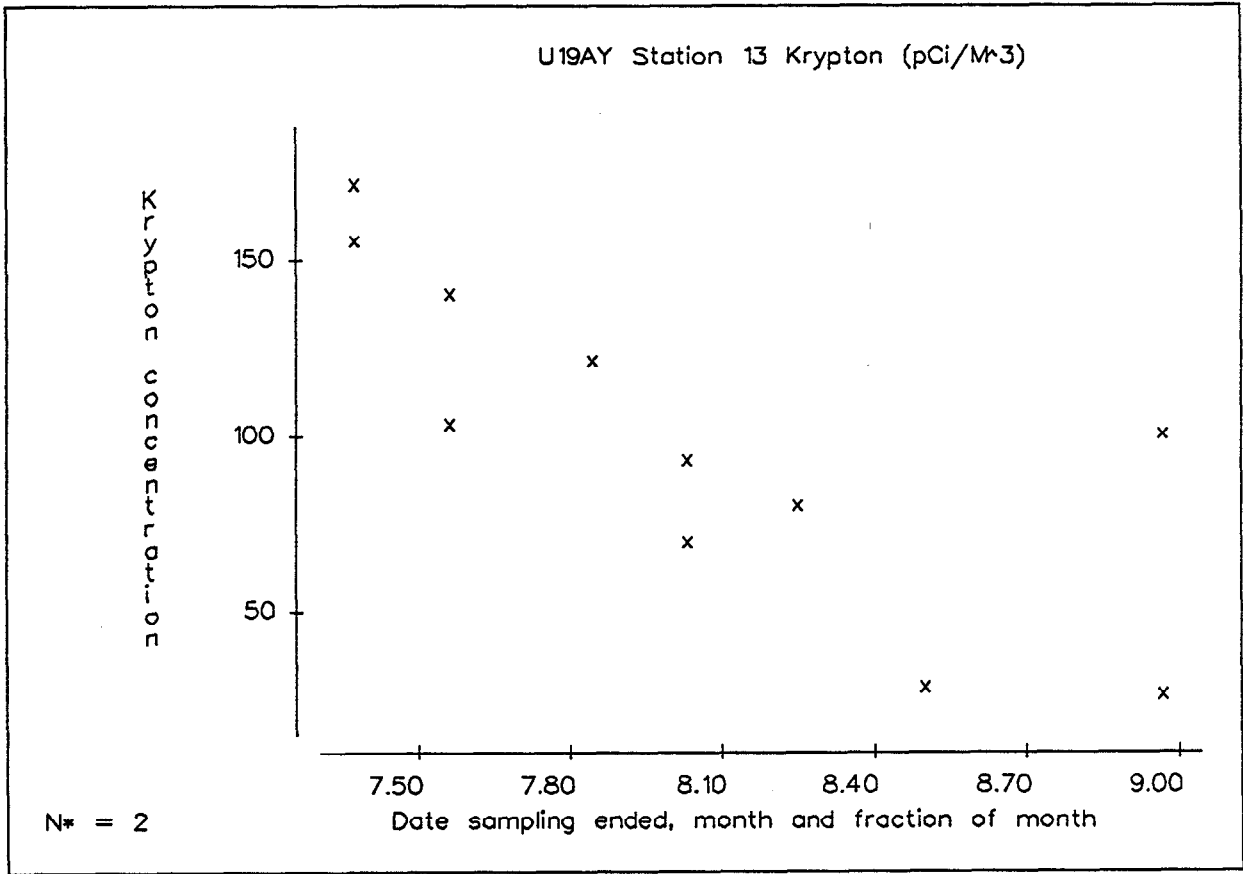




### INDIVIDUAL EVENTS (NUCLEAR TESTS)

For most of the individual events there are too little data for statistical analysis. Hence, only a cursory statistical evaluation is possible. At P Tunnel there were four stations with one sample taken in September. Krypton values were within the range of Site ambient concentrations, and for xenon only detection limits were reported. The two samples taken at the P Tunnel water tank showed krypton levels in the range of Site ambient concentrations and xenon levels about 10 times ambient Area 12 values. Data from locations U19ay, U20aw, and U20bc showed only ambient levels of krypton and detection limits for xenon. At U20az both krypton and xenon showed the effect of a release of radioactivity following a test.

At location U19ay, 10 samples were collected from mid-July to the end of August. Only detection limits were reported for the xenon data. The krypton data showed a linearly decreasing trend from mid-July to mid-August; this was tested for statistical significance using linear regression and found to be significant. The following plot shows this trend.





# APPENDIX F ONSITE THERMOLUMINESCENT DOSIMETER DATA

Robert R. Kinnison

Thermoluminescent dosimeters (TLDs) were placed at 150 locations at the NTS. The dosimeters were exchanged quarterly and read at the REECo Laboratory in Mercury. Since the first quarter of data has been reported in the 1988 annual report, only the last three quarters of the year are reported here. Table F.1 shows the data. "Area" refers to the NTS area within which the sampling point is located, and "Location" identifies the location within each area. A dash in this table denotes a missing data value.

Table F.1 TLD Network Gamma Exposure Rates

<u>Area</u>	<u>Location</u>	<u>2d Quarter mR/day</u>	<u>3d Quarter mR/day</u>	<u>4th Quarter mR/day</u>	<u>Average mR/day</u>	<u>1988 Exposure mR/yr</u>	<u>1989 Exposure mR/yr</u>
1	BJY	0.37	0.41	0.38	0.39	172	141
1	Sandbag Storage Hut	0.35	0.36	0.36	0.36	135	130
1	Stake TH-28	0.29	0.51	0.50	0.43	-	158
1	Stake TH-38	0.32	0.38	0.36	0.35	157	129
2	Cable Yard	1.63	0.49	0.46	0.86	164	314
2	Stake M-140	0.40	0.46	0.41	0.42	168	154
2	Stake M-150	0.42	0.47	0.45	0.45	181	163
2	Stake 2L-9	-	0.71	0.67	0.69	339	251
2	Stake 2N-8	4.17	4.46	4.37	4.33	1905	1581
3	LANL Trailers	0.36	0.46	0.40	0.40	139	147
3	Stake D & OB Rd Jct.	0.26	0.35	0.28	0.30	102	108
3	Stake A 6.5	0.48	0.88	0.49	0.62	230	225
3	Stake 11.5/OB Rd.	0.36	0.46	0.41	0.41	-	149
3	U3ax/bl Northeast	0.89	1.01	0.89	0.93	374	340
3	U3ax/bl Northwest	0.54	0.65	0.57	0.59	-	213
3	U3ax/bl Southeast	0.51	0.61	0.55	0.55	217	202
3	U3ax/bl South	0.45	0.54	0.49	0.49	193	179
3	U3by North	0.84	0.95	0.90	0.90	388	326
3	U3by South	0.47	0.57	0.51	0.51	206	187
3	U3bz North	0.63	0.70	0.64	0.66	281	239
3	U3bz South	0.42	0.51	0.48	0.47	183	170
3	U3cj South	0.39	0.49	0.44	0.44	164	160
3	U3co North	3.15	3.59	3.27	3.34	1110	1218
3	U3co South	2.00	2.15	2.03	2.06	770	752
3	U3du North	0.48	0.58	0.52	0.53	186	192
3	U3du South	0.55	0.68	0.62	0.61	241	223
3	U3ey South	0.42	0.52	0.44	0.46	347	167
4	Stake M-130	0.37	0.40	0.37	0.38	161	139
4	Stake 4A-9	3.68	4.38	4.24	4.10	1484	1497
4	Stake TH-58	0.27	0.32	0.30	0.30	151	108
4	Stake TH-48	0.35	0.47	0.39	0.41	166	148
5	RWMS Fence East 1000'	0.37	0.44	0.41	0.41	184	148
5	RWMS Fence East 1500'	0.35	0.43	0.37	0.38	175	139
5	RWMS Fence East 500'	0.35	0.43	0.38	0.39	177	140
5	RWMS Fence East Gate	0.36	0.42	0.37	0.38	162	139
5	RWMS Fence NE Corner	0.37	0.44	0.38	0.40	183	144
5	RWMS Fence North 1000'	0.37	0.44	0.40	0.41	175	148
5	RWMS Fench North 1500'	0.38	0.44	0.40	0.41	174	149

Table F.1 (Gamma Monitoring, cont.)

Area	Location	2d Quarter mR/day	3d Quarter mR/day	4th Quarter mR/day	Average mR/day	1988 Exposure mR/yr	1989 Exposure mR/yr
5	RWMS Fence North 500'	0.39	0.47	0.41	0.42	228	154
5	RWMS NW Corner	0.39	0.47	0.40	0.42	186	153
5	RWMS Office	0.32	0.38	0.30	0.33	128	121
5	RWMS South 500'	0.37	0.44	0.39	0.40	183	146
5	RWMS South Gate	0.46	0.39	0.32	0.39	558	142
5	RWMS SW Corner	0.36	0.43	0.38	0.39	168	142
5	RWMS West 1000'	0.40	0.46	0.42	0.43	190	156
5	RWMS West 1500'	0.39	0.45	0.42	0.42	204	152
5	RWMS West 500'	0.37	0.45	0.41	0.41	179	148
5	Well 5B	0.31	0.39	0.36	0.36	157	129
6	CP-2 Logistics Desk	0.20	0.27	0.22	0.23	80	83
6	CP-6	0.21	0.29	0.33	0.27	131	100
6	CP-50 Calib. Bench	0.24	0.28	0.23	0.25	120	91
6	CP-50 Inst. Calib. Door	0.32	0.47	0.42	0.41	126	148
6	Decon Pad Back Room	0.27	0.33	0.28	0.30	117	108
6	Decon Pad Office	0.22	0.25	0.21	0.23	117	82
6	Stake TH-1	0.20	0.25	0.29	0.25	100	90
6	Stake TH-9	0.30	0.36	0.35	0.33	146	121
6	Stake TH-18	0.25	0.31	0.30	0.29	128	105
6	Well 3	0.34	0.38	0.36	0.36	135	130
6	Yucca Oil Storage	0.28	0.36	0.31	0.32	106	115
7	7-300 Bunker	1.01	1.04	1.12	1.06	485	385
8	Stake 8K-25	0.33	0.36	0.35	0.35	150	126
9	9-300 Bunker	0.39	0.44	0.42	0.42	179	151
10	Stake 10A-24	0.58	0.67	0.60	0.62	263	225
10	Circle & L Road Jct.	0.39	0.43	0.38	0.40	175	146
10	Sedan Visitor Box	0.47	0.48	0.48	0.48	210	174
10	Sedan West	1.31	1.49	1.48	1.43	626	520
10	Stake CA-14	0.42	0.45	0.55	0.47	204	172
11	Gate 293	0.38	0.48	0.40	0.42	158	153
12	Building 12-10	0.34	0.43	0.39	0.32	139	116
12	Stake M-168	0.33	0.42	0.37	0.31	124	112
12	Stake M-170	0.32	0.39	0.36	0.30	319	108
12	Stake M-175 & G Road	0.37	0.43	0.40	0.33	131	119
12	Stake TH-68.5	0.27	0.34	0.31	0.25	131	92
12	T Tunnel No. 2 Pond	0.98	1.25	1.16	0.93	358	340
12	Upper Haines Lake	0.31	0.37	0.34	0.28	157	102
12	Upper N Pond	0.36	0.45	0.42	0.34	195	124
15	EPA Farm	0.35	0.41	0.35	0.37	155	134
15	U15e Lamp Shack	0.37	0.43	0.39	0.40	170	145
15	U15e Office	0.30	0.33	0.29	0.31	-	112
15	U15e Storage Shed	0.39	0.43	0.39	0.40	173	147
15	U15e Sub-Station	0.31	1.46	0.32	0.70	137	254
17	Stake M-185	0.37	0.46	0.43	0.42	142	153
17	Stake M-190	0.39	0.50	0.48	0.46	201	166
18	Stake M-196	0.41	0.50	0.45	0.45	219	165
18	Stake P-35	0.41	0.51	0.50	0.47	204	172
18	Stake P-39	0.43	0.48	0.46	0.46	131	167
19	Stake C-27	0.42	0.51	0.50	0.48	192	174
19	Stake C-16	0.40	0.50	-	0.45	203	164
19	Stake C-31	0.42	0.45	0.48	0.45	262	164
19	Stake C-25	0.42	0.48	0.46	0.46	199	166
19	Stake P-41	-	0.50	0.51	0.51	214	186
19	Stake P-46	0.39	0.46	0.44	0.43	179	156
19	Stake P-54	0.38	0.47	0.43	0.43	181	156
19	Stake P-59	0.46	0.54	0.52	0.51	214	185

Table F.1 (Gamma Monitoring, cont.)

Area	Location	2d Quarter mR/day	3d Quarter mR/day	4th Quarter mR/day	Average mR/day	1988 Exposure mR/yr	1989 Exposure mR/yr
19	Stake P-66	-	0.53	0.52	0.53	270	193
19	Stake P-71	0.44	0.50	0.48	0.47	199	172
19	Stake P-77	0.49	0.54	0.54	0.52	199	190
19	Stake P-87	0.53	0.55	0.60	0.56	495	203
19	Stake P-88	-	0.48	0.51	0.50	307	182
19	Stake P-91	-	0.45	0.58	0.52	188	189
19	Stake R-3	0.50	0.51	0.56	0.52	208	191
19	Stake R-7	0.48	0.53	0.56	0.52	210	191
19	Stake R-31	0.44	0.47	0.50	0.47	179	172
19	Stake R-20	0.44	0.47	0.49	0.47	184	170
19	Stake R-26	0.45	0.48	0.53	0.49	186	177
19	Well U19c Res. Upper	0.39	0.49	0.46	0.45	192	163
20	P & K Rd. Jct.	0.43	0.45	0.48	0.45	184	164
20	Stake P-116.5	0.44	0.46	0.77	0.55	186	202
20	Stake P-124	0.45	0.49	0.47	0.47	197	171
20	Stake P-120.5	0.42	0.47	0.46	0.45	175	165
20	Stake P-129.5	0.47	0.50	0.50	0.49	186	179
20	Stake P-134.5	0.04	0.47	0.47	0.32	186	118
20	Stake A-106	-	0.48	0.51	0.33	292	120
20	Stake J-6	0.48	0.51	0.51	0.50	175	181
20	Stake J-16	0.43	0.47	0.48	0.46	188	167
20	Stake J-24	0.44	0.93	0.46	0.61	190	222
20	Stake J-31	1.02	1.06	1.10	1.06	443	386
22	Bldg. 190 Bench Drawer	0.63	0.43	0.44	0.50	270	181
22	Desert Rock Control Tower	0.20	0.23	0.21	0.21	84	78
23	Bldg. 180 Scaler Room	0.31	0.30	0.30	0.30	139	110
23	Bldg. 610 Gate	0.18	0.21	0.17	0.19	88	68
23	Bldg. 610 Bay	6.47	2.73	2.17	3.79	801	382
23	Bldg. 650 Dosimetry	0.18	0.22	0.17	0.19	95	69
23	Bldg. 650 Roof	0.16	0.20	0.16	0.18	86	64
23	Bldg. 650 Storage Room	0.20	0.22	0.20	0.21	126	76
23	Gate 100	0.19	0.21	0.18	0.19	91	69
23	Post Office	0.21	0.25	0.22	0.23	106	83
25	Gate 25-4 P	0.38	0.42	0.40	0.40	173	146
25	Gate 25-7 P	0.36	0.40	0.37	0.38	179	137
25	E-MAD East	0.35	0.40	0.36	0.37	173	135
25	E-MAD North	0.31	0.36	0.32	0.33	148	121
25	E-MAD South	0.35	0.39	0.36	0.37	161	134
25	E-MAD West	-	0.86	0.34	0.60	153	219
25	HENRE Site	0.37	0.39	0.38	0.38	170	138
25	NRDS Warehouse	0.35	0.42	0.38	0.38	166	139
27	Cafeteria	0.37	0.21	0.39	0.32	179	118

### DATA ANALYSIS

The data analysis was performed in two phases. The first phase used exploratory data analysis methods to determine the distribution of the data and to identify atypical values. The second phase used analysis of variance to test for significant differences between groups of data values. Table F.2 identifies the atypical values which were found by a statistical examination of the data distribution for each area and each quarter.

Exploratory data analysis primarily consisted of probability plots of the data and logarithms of the data grouped by quarter and area. Goodness of fit was tested using the correlation coefficient goodness-of-fit test, which is asymptotically equivalent to the Shapiro-Wilk test.

Data points which were grossly higher or lower than most were removed and the goodness-of-fit test repeated. With very few exceptions, the original data either fit both a normal and a log-normal distribution or fit neither, and removal of the atypical values resulted in an acceptable fit to both (at the 95 percent or higher confidence level). Since it is easier to statistically interpret normal data than it is to interpret log-normal data, the normal distribution was chosen for the analyses of variance described below. Table F.2 lists those data values that were found to be atypical and gives the mean of the data with the atypical values removed. For comparison, the pooled standard deviation from the analysis of variance with the atypical values removed was 0.06. The examination for atypical values could not be done on several of the groups because of small sample size; data from Areas 4, 8, 9, 11, 17, 18, 22, and 27 had sample sizes of three or smaller for each quarter.

Table F.2 Atypical Data Values - TLD Data

<u>Area Location</u>	<u>Quarter</u>	<u>Atypical Data</u>	<u>Group Mean</u>
Area 2, Cable Yard	2	1.63	0.41
Area 2, Stake 2N-8	2	4.17	0.41
Area 2, Stake 2N-8	3	4.46	0.47
Area 2, Stake 2N-8	4	4.37	0.50
Area 3, U3co North	2	3.15	0.45
Area 3, U3co North	3	3.59	0.53
Area 3, U3co North	4	3.27	0.49
Area 3, U3co South	2	2.00	0.45
Area 3, U3co South	3	2.15	0.53
Area 3, U3co South	4	2.03	0.49
Area 4, Stake 4A-9	2	3.68	0.33
Area 4, Stake 4A-9	3	4.38	0.40
Area 4, Stake 4A-9	4	4.24	0.36
Area 7, 7-300 Bunker	2	1.01	-
Area 7, 7-300 Bunker	3	1.04	-
Area 7, 7-300 Bunker	4	1.12	-
Area 10, Sedan West	2	1.31	0.46
Area 10, Sedan West	3	1.49	0.51
Area 10, Sedan West	4	1.48	0.50
Area 12, T Tunnel No. Pond	2	0.98	0.33
Area 12, T Tunnel No. Pond	3	1.25	0.40
Area 12, T Tunnel No. Pond	4	1.16	0.37
Area 15, Sub Station U15e	3	1.46	0.40
Area 20, Stake P-134.5	2	1.03	0.44
Area 20, Stake J-31	2	1.02	0.44
Area 20, Stake J-31	3	1.06	0.48
Area 20, Stake J-31	4	1.10	0.48
Area 23, Building 610 Bay	2	6.47	0.21
Area 23, Building 610 Bay	3	2.73	0.23
Area 23, Building 610 Bay	4	2.17	0.20
Area 25, E-MAD West	3	0.86	0.40

Of the 150 TLD stations distributed throughout the NTS, several were placed near sources of radiation. Therefore, it was expected that the TLDs placed at these locations would display what are referred to as "atypical values." The results from these TLDs are atypical



only with respect to TLDs distributed elsewhere on the NTS. The atypical values listed in Table F.2 were expected with the exception of Area 15, Station U15e; Area 20, Stake 20 P 134.5; and the Area 2 Cable Yard.

In the case of the TLD located in Area 15 Station U15e and the TLD located at the Area 2 Cable Yard, the measurements taken at Area 15 (third quarter 1989) and Area 2 (second quarter 1989) were anomalous and much greater than expected. Measurements taken before and after these anomalies were at expected values. Two possibilities may explain this phenomenon. It is possible that some time during the year, a source of radiation was moved through the area and, prior to the placement of the next TLD, moved away. This is possible, but based on the fact that radiological activities were essentially nonexistent in Area 15 during 1989, it is more likely that the 1.46 mR/day measurement was an error. If so, the error could arise from instrument failure or identification error (although it is unlikely that this TLD was mistaken for one placed elsewhere because there were no missing location TLDs during the third quarter of 1989). It is most likely that the TLD failed. An investigation was conducted to determine if there was reason to support the hypothesis that a source was moved into this area, but nothing was found to explain this phenomenon. Area 2 is nearer to radiological activities than many TLDs, so it is possible that this measurement was real; however, since these TLDs are deployed for an entire quarter of a year, it is almost impossible to pinpoint the movement of a radiation source in and out of the area.

The case of the Area 20 Stake 20 P 134.5 location TLD is also difficult to explain. The measurement result of 0.03 mR/day is too low for background levels found worldwide. This means that a new TLD was most likely not deployed at the site, and the TLD which was already on location remained there for one more quarter. However, if this had been the case, one should expect the next quarter's result to be twice the expected value. As seen from Table F.1, this was not the case. Therefore, instrument or TLD failure may once again be the only explanation. All other measurement results in the Table F.2 were expected.

Table F.3 summarizes the data with the atypical values removed and gives the number of remaining data values and the mean with the data grouped by area and quarter. The column marked "All" gives the total number of samples for each row and the row mean, which averages over the quarters for each area. The bottom row, marked "Total," gives the total number of samples for each column and the column mean, which averages over the areas for each quarter. In this table note that the row totals have sample sizes that range from 3 to 55, while the column totals have sample sizes all very close to 119. This is statistically a very important characteristic because it strongly influences the way patterns of significant differences can be elucidated.

The first step in the formal statistical analysis of these data was to perform a two-way analysis of variance to simultaneously test for differences between areas and differences between quarters. Most applicable analysis of variance programs require equal sample sizes within the cells of data and thus cannot be used with this data set. It was necessary to use a Generalized Linear Model program in order to calculate this analysis of variance with variable sample sizes within the cells. The generalized linear model assumes that the analysis of variance effects are fixed and fully crossed; these are reasonable assumptions for the TLD data. An analysis was performed using all the data, that is, without removing the atypical values. This showed a difference between areas, no differences between quarters, and no interactions. The analysis with the atypical values removed showed differences between areas and quarters, and no interactions. The analysis of variance table for the data without atypical values is shown in Table F.4.

Table F.3 Data with Outliers Removed

	<u>Area</u>	<u>Quarter</u>				<u>All</u>	<u>Area</u>	<u>Quarter</u>				<u>All</u>							
		<u>2</u>	<u>3</u>	<u>4</u>	<u>All</u>			<u>2</u>	<u>3</u>	<u>4</u>	<u>All</u>								
Samples Mean <sup>(a)</sup>	1	4	4	4	12	0.33	0.42	0.40	0.38	Samples Mean	15	5	4	5	14	0.34	0.40	0.35	0.36
Samples Mean	2	2	3	4	9	0.41	0.47	0.50	0.47	Samples Mean	17	2	2	2	6	0.38	0.48	0.46	0.44
Samples Mean	3	14	12	14	40	0.45	0.53	0.49	0.49	Samples Mean	18	3	3	3	9	0.42	0.50	0.47	0.46
Samples Mean	4	3	3	3	9	0.33	0.40	0.36	0.36	Samples Mean	19	16	20	19	55	0.44	0.49	0.51	0.48
Samples Mean	5	17	17	17	51	0.37	0.43	0.38	0.40	Samples Mean	20	8	9	9	26	0.45	0.48	0.48	0.47
Samples Mean	6	11	11	11	33	0.26	0.32	0.30	0.29	Samples Mean	22	2	2	2	6	0.41	0.33	0.32	0.36
Samples Mean	8	1	1	1	3	0.33	0.36	0.35	0.35	Samples Mean	23	7	7	7	21	0.21	0.23	0.20	0.21
Samples Mean	9	1	1	1	3	0.39	0.44	0.42	0.42	Samples Mean	25	7	7	8	22	0.35	0.40	0.37	0.37
Samples Mean	10	4	4	4	12	0.46	0.51	0.50	0.49	Samples Mean	27	1	1	1	3	0.37	0.21	0.39	0.32
Samples Mean	11	1	1	1	3	0.38	0.48	0.40	0.42	Samples Mean	Total	116	119	123	358	0.37	0.43	0.41	0.41
Samples Mean	12	7	7	7	21	0.33	0.40	0.37	0.37										

Table F.4 Analysis of Variance without Atypical Data

<u>Source</u>	<u>DF</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Area	19	2.204084	0.116004	35.58	0.0
Quarter	2	0.051408	0.025704	7.88	0.0
Area x Quarter	38	0.112730	0.002967	0.91	0.625
Error	298	0.971509	0.003260		

Scheffe contrast were used to elucidate the significance of differences between quarters and between areas. This technique showed the means of all three quarters to be significantly different. Note, however, in the above table of means (Table 5.3), that there is only a 14 percent difference between the highest and lowest quarter mean, and there is no constant trend over time. The large number of data values for each quarter, averaging 119, seems to have promoted a statistical significance (i.e., the differences were too large to attribute to sampling error) where there is no practical significance. Because of the vastly differing number of data values for the areas (the "Means" rows in Table F.3), no

consistent or interpretable patterns could be found. For example, there is a significant difference between Area 12 (0.37) and Area 20 (0.47), but there is no difference between Area 4 (0.36) and Area 2 (0.47).

The final analysis performed compared the 1988 annual doses with the 1989 annual doses for each area. This was done by comparing the differences between the years. An examination of these differences showed one value very different from all others. The data from the Building 610 Bay changed from 80 mR in 1988 to 1382 mR in 1989. As this location is where Laboratory calibration sources are stored, it does not measure any environmental conditions at NTS and was deleted from the data before the following statistical analyses were performed. A one-way analysis of variance with the differences between years, grouped by areas, showed no significant differences between the areas at the five percent confidence level. When a simple Student's t-test was done on the differences to check if each mean was significantly different than zero, a highly significant difference was found. The 1989 average annual dose, 32 mR, was lower than the 1988 average annual dose, with a 15 percent decrease from 1988 to 1989. Although this difference is statistically significant, it may represent only random variability between years. It is necessary to analyze annual exposures from multiple years to adequately interpret the practical significance of any one significant difference.