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**EML Surface Air Sampling Program,
1990-1993 Data**

Richard J. Larsen, Colin G. Sanderson and John Kada

November 1995

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ABSTRACT

Measurements of the concentrations of specific atmospheric radionuclides in air filter samples collected for the Environmental Measurements Laboratory's Surface Air Sampling Program (SASP) during 1990-1993, with the exception of April 1993, indicate that anthropogenic radionuclides, in both hemispheres, were at or below the lower limits of detection for the sampling and analytical techniques that were used to collect and measure them. The occasional detection of ^{137}Cs in some air filter samples may have resulted from resuspension of previously deposited debris. Following the April 6, 1993 accident and release of radionuclides into the atmosphere at a reprocessing plant in the Tomsk-7 military nuclear complex located 16 km north of the Siberian city of Tomsk, Russia, weekly air filter samples from Barrow, Alaska; Thule, Greenland and Moosonee, Canada were selected for special analyses. Traces of radioactive debris from the accident were detected in some of these samples.

The naturally occurring radioisotopes that we measure, ^7Be and ^{210}Pb , continue to be detected in most air filter samples. Variations in the annual mean concentrations of ^7Be at many of the sites appear to result primarily from changes in the atmospheric production rate of this cosmogenic radionuclide. Short-term variations in the concentrations of ^7Be and ^{210}Pb continued to be observed at many sites at which weekly air filter samples were analyzed. These short-term fluctuations probably resulted from variations in meteorological factors. The data from our quality control samples indicate that in general the reliability of the air filter measurements are acceptable for their intended application.

The monthly gross gamma-ray activity and the monthly mean surface air concentrations of ^7Be , ^{95}Zr , ^{137}Cs , ^{144}Ce , and ^{210}Pb measured at sampling sites in SASP during 1990-1993 are presented. The weekly mean surface air concentrations of ^7Be , ^{95}Zr , ^{137}Cs , ^{144}Ce , and ^{210}Pb for samples collected during 1990-1993 are given for 17 sites.

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1. INTRODUCTION

Since January 1963, the Environmental Measurements Laboratory (EML) has conducted the Surface Air Sampling Program (SASP). This study is essentially a continuation of a program that was initiated by the U.S. Naval Research Laboratory (NRL) in 1957, and was continued by them until the end of 1962.

The primary objective of this program is to study the spatial and temporal distribution of specific natural and anthropogenic radionuclides in the surface air. SASP provides data that can be used to test the accuracy of model predictions of the trajectories that are followed by natural or artificial aerosols, such as radioactive debris from nuclear weapons tests or other nuclear events, which can serve as tracers for point source injections into the atmosphere. The SASP data also provided some of the earliest evidence on the extent of the large scale lateral distribution of pollutants injected into the troposphere; for example, that the tropical troposphere often serves as a barrier to the interhemispheric exchange of pollutants emitted into the troposphere at mid- or high-latitudes. The occurrence of seasonal cycles of ^7Be concentrations in the surface air at many sites in the sampling network was also observed from the data. Some of the factors that cause these seasonal variations, such as atmospheric transport and removal processes, were identified by Feely et al. (1989). Larsen (1993) used data from the program to indicate that a global decrease in the production rate of cosmic-ray products, such as ^7Be , had accompanied the recent increase in solar activity. The extensive ^7Be and ^{210}Pb database continues to provide the scientific community with tracer data which is used to verify global climate model simulations (Brost et al., 1991; Feichter et al., 1991; Rehfeld and Heimann, 1994). It was suggested by Brost et al. (1991), that the simulation of ^7Be and ^{210}Pb might establish the standards for how well a model can represent the concentration and deposition of an aerosol species. As part of this research, EML initiated the simulation of the global distributions of ^{222}Rn and ^{210}Pb using EML's three-dimensional global transport model (Lee et al., 1993a; Lee and Feichter, in press). Comparing model simulations against measurements of ^{210}Pb and other natural tracers will provide useful information necessary to validate and add, remove or modify the existing model modules that describe the various physical processes of the atmosphere.

Following the Chernobyl accident, the data were used to characterize the Chernobyl debris which was transported across North America (Feely et al., 1988; Larsen et al., 1986; Larsen and Juzdan, 1986). Larsen et al. (1989) also used the data in a study of the transport processes associated with the initial elevated concentrations of the Chernobyl debris in the surface air in the United States. In 1993, the program was used to detect minute quantities of debris from the April 6th accidental release of radioactivity from the Tomsk-7 nuclear complex in Russia, demonstrating the long-range dispersion of radioactivity in the atmosphere from this

accident, and the capability of the SASP network to detect it (Larsen et al., 1994; Lee et al., 1993b).

Data from SASP are periodically reported in EML reports (Larsen and Sanderson, 1991). The data resulting from this program constitute one of the most extensive and detailed records on atmospheric radioactivity in the world. The resulting data are distributed to scientific organizations throughout the world and have been used by such groups as the United Nations Scientific Committee on the Effects of Atomic Radiation (1993), the United Kingdom's Monitoring and Assessment Research Center (1987), the Max Plank Institute for Chemistry, and more recently the data has been selected for incorporation into the National Implementation Plan for American Participation in the International Arctic Monitoring and Assessment Program. Recently, EML was selected to assist the World Meteorological Organization's, Global Atmospheric Watch program by serving as the "GAW-Global Calibration Facility for Radioactivity". EML was chosen because of its established leadership over the past two decades in the global measurements of natural and anthropogenic radionuclides.

2. SITES

Many of the original NRL sites, which were located roughly along the 80th Meridian (west), have been continued in the sampling network of the current program. Since 1963, a number of other sites have been added to this network, on a permanent or temporary basis, to investigate the possible effects of longitude, elevation, proximity to coastlines, over-ocean sampling, and localized contamination. Sampling sites are eliminated from the network as specific studies are completed, as data appear to become redundant, or as sampling at a particular site ceases to be possible. It is expected, however, that the continuity of sampling will be maintained at most of the current sites.

Beginning in late 1982, our sampling in the Southern and Eastern Hemispheres was increased significantly by the establishment of new sites in New Zealand, Australia, Falkland Islands, and Antarctica. Some of these new sampling sites were established for EML's Remote Atmospheric Measurements Program (RAMP), an extension and modification of SASP. The objective of RAMP is to perform field measurements of gamma-ray emitting radionuclides having short half-lives, such as ^7Be , on air filter samples directly after collection at remote or weathered-in stations. The logistical problems associated with remote sites and the relatively short half-life of the predominant radionuclide being collected on the air filters are two important factors that led to the development of RAMP. To accomplish this objective, RAMP sites are equipped with remote atmospheric measurement systems (RAMS) which measure the gamma-ray activity in air filter samples at the field locations using either a sodium iodide or a germanium detector and the resulting spectra are transmitted to EML using the ARGOS communication system flown aboard National Oceanic and Atmospheric Administration satellites (Sanderson et al., 1994). Air filter samples collected at RAMP sites are also analyzed at EML using germanium detectors, primarily for the detection of ^{210}Pb . In addition to gamma-ray spectrometric analysis, many of the air filter samples collected are also analyzed for the major cations and anions by the University of Miami's (UOM) Division of Marine and Atmospheric Chemistry. Special emphasis is placed on studies of sulfur and nitrogen species that play an important role in aerosol chemistry and may also impact on aerosol-related climate processes (Prospero et al., 1991; Savoie et al., 1992, 1993). The co-related chemical and radionuclide data are especially useful for the development of global atmospheric transport models.

During 1993, air filter samples were collected at 41 sites, 16 in the Northern Hemisphere and 25 in the Southern Hemisphere, extending in latitude from about 76° north to 90° south. Table 1 lists all of the sampling sites that have been used at any time during the program, together with their geographic coordinates and elevations, and it also indicates whether or not each was active in the program during 1993. Figure 1 displays all of the sampling stations that were active during 1993. The sites that comprise RAMP are also identified in Table 1 and Figure 1.

In 1991, the second generation of RAMP hardware and software developed at EML were installed at five remote locations: Base Marsh, King George Island; Palmer Station, Anvers Island; Mawson, Antarctica; St. Denis, Reunion Island, Indian Ocean; and, Pelindaba (Pretoria), South Africa. In 1992, EML, in collaboration with the UOM, established RAMP sites at Cape Point, South Africa, and at Marion Island in the southern Indian Ocean. During 1993, the network was expanded by the incorporation of four sites (Tromso, Norway; Gibraltar; Hong Kong; and Singapore) from the United Kingdom's Atomic Energy Authority's (UKAEA) former global network. The UKAEA will continue to maintain the environmental sampling capability at the four sites, but the samples will be analyzed at EML. Both UKAEA and EML will share the data and interact on future research activities. In February 1993, a SASP site was established at Durazno, Uruguay with the assistance of the Governor, and it is maintained by the Institute of Science and Technology. EML and the Institute of Science and Technology will share the data and interact on future research activities. In December 1993, a third-generation, state-of-the-art radiation detection system, designed, developed, constructed and tested at EML, was successfully installed at Geyokcha, Turkmenistan as part of an upgraded seismic site supported by the Advanced Research Project Agency (ARPA). The data from this site will be shared by EML and ARPA.

3. METHODS AND MATERIALS

3.1 Sampling Systems

Three air sampling systems are currently used in SASP: a Roots 24-AF or 24-URAI blower connected to a 1 HP electric motor by a fan belt and a Fuji ring compressor directly connected to either a 0.5 or 1 HP electric motor. The Roots sampler accommodates a 20.3 cm diameter filter, which has an effective exposure area (the area of a filter exposed to the airstream) of about 266 cm², while the Fuji sampler accommodates a 20.3 cm by 25.4 cm rectangular filter with an effective exposure area of about 407 cm². In general, the samples are collected at weekly intervals. The typical range in the flow rates through an air filter using the Fuji and Roots samplers are about 0.8-1.0 (Fuji 0.5HP), 1.5-1.8 (Fuji 1HP) and 0.9-1.5 (Roots 1HP) m³ min⁻¹, respectively. Microsorban filter material was primarily used in SASP until 1988 when our stock was depleted following the termination of its manufacture. During the fall of 1988 we changed to the use of Microdon LM2020 filter material (Pellon Company, 20 Industrial Ave., Chelmsford, MA 01824). Since production of this filter was also discontinued, Gelman glass fiber filter material was also used for several months at some of the Chilean sites until we supplied these sites with Dynaweb DW7301L filter material (Web Dynamics, Ironia Road, Flanders, NJ 07836). We phased in Dynaweb filter material into the program as our stock of Microdon diminished. Dynaweb filter material is currently used at all sites in the program. Dynaweb DW7301L is composed of three layers of 100% polypropylene web sandwiched between two sheets of 100% polyester protective scrim. The collection efficiency of this material as a function of particle size and face velocity has been identified (Larsen, 1990). Intercomparison data on the collection of ⁷Be and ²¹⁰Pb using Microdon and Dynaweb indicate no significant differences in the collection efficiency of these two filter materials. Detailed descriptions of these filter materials, the air samplers and the techniques used to calibrate the samplers and determine air flow rates through the filters are presented in the EML Procedures Manual (1992).

3.2 Sample Collection, Processing, and Analysis

At most SASP stations the filters are changed on the 1st, 8th, 15th, and 22nd of the month, or more frequently if the filter becomes clogged. At RAMP stations the filters are changed once a week. The air filter samples that are collected on approximately a weekly basis are referred to as "weekly samples" throughout this report. The weekly samples collected at all SASP sites are composited to form monthly samples. Monthly samples, which consist of weekly samples that represent a minimum of 14 days of exposure during any given month, are referred to as "monthly composite samples" throughout this report.

Frequent readings of the pressure drop across the filter or, at RAMP stations, across a fixed orifice, and of the temperature are submitted to EML along with the filters to permit the

calculation of the volume of air that was sampled. The filters from most sites are returned to EML for analysis at the end of each month. Because of transportation difficulties, the samples collected at the South Pole Station, Mawson, Marion Island, Palmer and Marsh Antarctica during the winter months are retained at the sites until they can be shipped to EML. This adversely affects the detection and the precision of measurements of short-lived radionuclides in these filters.

During 1990-1993, the weekly samples from most of the sites that use a 20.3 cm diameter filter were cut in half; one half of the filter was included in a monthly composite sample, while the other half was archived. The monthly composite samples are compressed into 45-cm³ plastic planchets and are analyzed for gamma-ray emitting radionuclides using either n-type low-energy coaxial, high-purity germanium (HPGe) detectors or p-type coaxial high-resolution, germanium lithium (Ge(Li)) or HPGe detectors. All weekly samples from sites using 20.3 cm by 25.4 cm rectangular filters are treated differently. A section (80.6 cm² for Microdon, 65.3 cm² for Dynaweb) of each of these filters is removed and compressed into a 1-2 cm³ cylinder, which is analyzed by gamma-ray spectrometry using a HPGe detector with a 1.5 cm diameter well. The remainder of the filter is archived. These filters are not composited into monthly composite samples.

The activities of specific isotopes (⁷Be, ⁹⁵Zr, ¹³⁷Cs, ¹⁴⁴Ce and ²¹⁰Pb) are determined by computer analysis of the spectral data from both monthly composite and weekly samples. The total gamma-ray activity of each monthly composite sample is determined by summing the total counts obtained with germanium detectors between 100 keV and 2.0 MeV, without any correction for detector efficiency or radioactive decay.

3.3 Detection Limits

In this report we define our lower limits of detection (LLD) as three times the statistical variation of the background associated with each nuclide. The LLD's vary with the isotope, sample activity, detector, and count time. The approximate LLD for the detectors used to analyze the monthly composite samples, using a 16 hour count time, are 300, 75, 45, 150, and 500 mBq for ⁷Be, ⁹⁵Zr, ¹³⁷Cs, ¹⁴⁴Ce, and ²¹⁰Pb, respectively. For the well detectors used to analyze the weekly samples, the LLD for a 16 hour count time are ~45, 10, 6, 20 and 50 mBq for ⁷Be, ⁹⁵Zr, ¹³⁷Cs, ¹⁴⁴Ce and ²¹⁰Pb, respectively. The minimum detectable concentration for monthly composite samples collected using an air sampler having a flow rate of about 1.2 m³ min⁻¹ is about 12, 3, 2, 6, and 19 μBq m⁻³ for ⁷Be, ⁹⁵Zr, ¹³⁷Cs, ¹⁴⁴Ce, and ²¹⁰Pb, respectively. The minimum detectable concentration for weekly samples collected on a 20.3 by 25.4 cm Microdon filter using an air sampler having a flow rate of about 0.9 m³ min⁻¹ is about 25, 6, 3, 11, and 28 μBq m⁻³ for ⁷Be, ⁹⁵Zr, ¹³⁷Cs, ¹⁴⁴Ce, and ²¹⁰Pb, respectively. For Dynaweb material, we estimate minimum detectable concentrations of about 32, 7, 4, 14, and 35 μBq m⁻³ at sampler flow rates of about 0.9 m³ min⁻¹ and 17, 4, 2, 7 and 19 μBq m⁻³ at sampler flow rates of about 1.7 m³ min⁻¹ for ⁷Be, ⁹⁵Zr, ¹³⁷Cs, ¹⁴⁴Ce, and ²¹⁰Pb, respectively.

The sensitivity of the well detectors, which are used to analyze weekly samples, is about 10 times higher than the detectors used to analyze the monthly composite samples. If a single 20.3 cm by 25.4 cm rectangular Dynaweb filter is analyzed for radionuclides, only about 16% of the exposed filter area can be used in the well detectors. This restriction in sample size is necessary to form the required 1-2 cm³ pellet. This sample size limitation does not apply for the coaxial detectors used to analyze the monthly composite samples. Thus, for our application, the apparent sensitivity of the well detectors is about 1.6 times higher than the coaxial detectors.

4. DATA UNCERTAINTY AND REPORTING

The overall uncertainty of the data results primarily from uncertainty in volume determination, sample processing, and analysis. We estimate this uncertainty from the square root of the sum of the squares of these individual uncertainties.

During flow calibrations of Roots air samplers at EML, sampler flow rates may vary by about 0-5% at a fixed sampler setting. We estimate that these variations will be greater for samplers located at field sites. We have measured changes with time ranging from 0-16% in the flow rates of Roots samplers located at field sites. In general, these changes averaged about 7% and occurred over periods of several years. We feel that these changes primarily result from variations with time in sampler efficiency and sampler gauge operations. The components of the Fuji air sampler are protected from the environment; therefore, we expect that the flow rate changes with time will be less than those measured for the Roots air sampler. In this report, we assume an average uncertainty in sample flow determinations of 7% for the Roots and 5% for the Fuji air sampler. It is possible, however, for larger systematic errors to be present in the volume determination. Currently, we try to calibrate the air samplers as frequently as possible and also try to perform other tests that are designed to monitor the performance of the air samplers. These measures will help to minimize the occurrence of large systematic errors.

The uncertainty associated with sample preparation comes about primarily from the handling and cutting of samples during processing. The nonhomogenous distribution of activity in some samples and variations in the sample geometry, such as differences in sample volume following filter compression, also contribute to the overall sample preparation uncertainty. We attribute an average uncertainty of 3% to sample preparation.

The uncertainty from counting includes the standard deviation (SD) calculated using the Poisson assumption, as well as other sources of uncertainty such as positioning of the sample in the detector. We estimate the total error from analysis for each isotope by using twice the SD, which is calculated from the activity measured during each gamma-ray spectrometric analysis.

In the data tables, the overall uncertainty of the data reported for each monthly composite or weekly sample is always less than 20% unless the symbol 'a', 'b' or 'c' follows the data. The overall uncertainty of data followed by 'a' is between 20-50%, 'b' is between 50-100%, and 'c' is greater than 100%. Data followed by a 'd' are considered to be of doubtful validity. In general, samples considered to be of doubtful validity appear to have been sampled, processed, and analyzed correctly. We believe, however, that occasional random errors, such as those that could occur during data transcriptions, which are extremely difficult to identify and reconstruct after the fact, result in data of 'doubtful validity'. The activities of isotopes that are below the lower limit of detection (LLD) by gamma-ray spectrometry are reported as less than '<' values. Unlike data reported as less than '<' values, data followed by the symbol 'c' indicate that photopeaks for the isotope have been detected during analyses, however the overall uncertainties associated with these data are greater than 100%. The symbol "***.*" is used to identify less than '<' values greater than 99.9 that result from radioactive decay in samples having long delays between collection and analyses. All data in this report are reported to three significant figures or less.

The minimum reported concentration for gross gamma-ray activity is $0.01 \text{ counts min}^{-1} \text{ m}^{-3}$ of sampled air. Previous SASP data indicated that when low concentrations of fission products are present in the samples, the gross gamma-ray activities are often at or above $0.01 \text{ counts min}^{-1} \text{ m}^{-3}$. Gross gamma-ray activities below $0.01 \text{ counts min}^{-1} \text{ m}^{-3}$ seem to vary with the activities of the natural radioisotopes in the sample and do not provide additional significant information, especially since ^7Be and ^{210}Pb are analyzed individually.

5. QUALITY CONTROL PLAN

To monitor the quality of the data from this program, four types of quality control samples (reference, duplicate, replicate, blank) are regularly submitted to the analysts together with routine monthly composite and weekly samples. These quality control samples are submitted "blind" (i.e., in such a way as to be indistinguishable from the routine samples by the analyst) insofar as this is possible.

Reference samples, spiked with known amounts of radionuclides, are used to test the accuracy of the gamma-ray spectrometric analysis. For monthly composite samples, weighed portions of reference solutions are added to halves of four clean filters (to duplicate as closely as possible the characteristics of monthly composite samples). For weekly samples, the reference solutions are added to filter sections which are then compressed into 1-2 cm³ cylinders. If reference solutions are available, ⁷Be, ⁹⁵Zr, ¹³⁷Cs, ¹⁴⁴Ce and ²¹⁰Pb are routinely added to the reference samples. The % deviations reported for these quality control samples are influenced by a number of factors besides the accuracy of the gamma-ray spectrometric analysis. Errors in the calibration of the reference solution, weighing errors during the application of the standard solutions to blank filters and a nonhomogeneous distribution of the reference solution in the sample all contribute to the overall reported deviation. Therefore we believe that these quality control results represent the minimum accuracy obtained in the program. Reference samples with % deviations less than 20 % are thus considered acceptable. In addition, the accuracy of the data is considered acceptable if the mean of the % deviations obtained over long-time periods (one year or longer) is less than 10%.

Some samples are split into two sections, each submitted under a different sample number, to determine the precision of the analyses. The monthly composite duplicate analysis is obtained by cutting in half each of the weekly filters in a monthly composite sample, and combining the halves to form two equivalent monthly composite samples that are then submitted to the analyst under different sample numbers. To prepare duplicates from a weekly sample, duplicate sections are cut from a weekly filter to form two equivalent samples. When the routine environmental samples are counted, the filters are folded and compressed into a planchet. It is assumed that this process produces a close approximation to a homogeneous source. Part of the deviation between the duplicate samples results from the failure of this assumption. Any inhomogeneities in the filter material that allow higher flow rates, and thus higher collection efficiencies, for some sections of filter than for others also contribute to deviations between duplicate samples, and to errors in the data for routine samples. Smaller deviations are to be expected from weekly duplicate samples compared to monthly composite samples. When weekly samples are counted, a section of each filter is cut and compressed into a pellet. It is assumed that this process produces a closer approximation to a homogeneous source than the process used to count a composite sample. Duplicate samples with % deviations less than 15% are thus considered acceptable. In addition, the accuracy of the data is considered acceptable if the mean of the % deviations obtained over long-time periods (one

year or longer) is less than 10%.

A single sample spiked with ^{137}Cs and ^{210}Pb is analyzed from time to time to monitor the operation of the gamma-ray spectrometers over long-time periods. The monthly composite sample was prepared by compressing two filters spiked with ^{137}Cs and ^{210}Pb into a planchet. The weekly sample was prepared by compressing a filter section spiked with ^{137}Cs and ^{210}Pb into a 1 cm^3 pellet. These samples are repeatedly submitted for analysis with different identification numbers. These replicate samples are not intended to be 'blind' to the analyst. These samples provide the best estimate of the long-term precision of analysis since, unlike duplicate samples, the sample homogeneity remains constant during each analysis. We expect the % deviations to be similar in magnitude to those expected due to random error. Replicate samples with % deviations less than 10% are thus considered acceptable. In addition, the accuracy of the data is considered acceptable if the mean of the % deviations obtained over long-time periods (one year or longer) is less than 5%.

Blank filters are submitted to test for possible contamination of the samples during handling and analysis, and to monitor the sensitivity of the analytical technique. A monthly composite blank sample consists of one or more clean filters while a weekly blank sample consists of a clean section of a filter. Blank values are acceptable if they are less than the lower limit of detection for the analytical techniques that we currently use. If the quality control samples indicate trends of unacceptable results, we attempt to identify and correct the source of error.

In addition to this Quality Control Plan, the criteria established in the Project Quality Assurance Plan for Pollutants in Surface, Tropospheric and Stratospheric Air, which were approved by the EML Quality Assurance Officer, are followed. The adherence to the criteria of the Project Quality Assurance Plan are periodically reviewed through an independent audit process.

6. RADIONUCLIDES IN MONTHLY COMPOSITE SAMPLES

6.1 Summary

During 1990-1993, the tropospheric concentrations of anthropogenic radioactivity in monthly composite samples were at or below the LLD of our analytical systems and sampling techniques. However, traces of radioactive debris from the April 6, 1993 accident at a reprocessing plant in the Tomsk-7 military nuclear complex located 16 km north of the Siberian city of Tomsk, Russia, were detected in some weekly air filter samples from Barrow Alaska; Thule, Greenland and Moosonee, Canada which were selected for special analyses. The activities associated with the Tomsk-7 debris were below our LLD for the routine analysis of monthly composite samples and therefore do not appear in the monthly composite data tables. The occasional detection of ^{137}Cs at activities near our LLD may have resulted from resuspension of previously deposited debris. We continue to measure the naturally occurring radioisotopes, ^7Be and ^{210}Pb , in most of the filter samples. A decrease in the annual mean concentrations of ^7Be from 1985-1990 was observed at many sites in the SASP network, however, during 1992-1993 the annual mean concentrations increased again at many of the sites. Variations in the annual mean concentrations of ^7Be at many of the sites appear to result primarily from changes in the atmospheric production rate of this cosmogenic radionuclide.

6.2 Results

The results of analyses of radionuclides by gamma-ray spectrometry and of total gamma-ray activity for monthly composite samples collected during 1990-1993 are reported in Tables 2 to 25. The annual average surface air concentrations of ^7Be and ^{210}Pb since 1980 are presented in Tables 26 and 27 for all sites that were active during 1990-1993. These averages were calculated for all years having six or more monthly values. Tables 28 and 29 present summary statistics (median, mean, standard deviation, minimum value, maximum value, number of data points used) for all monthly composite measurements of ^7Be and ^{210}Pb at all sites that are currently active. All of the monthly composite data for ^7Be and ^{210}Pb at sites that are currently active are also displayed in Figures 2 - 37. Data of doubtful validity were excluded from both the calculations of the statistics and from the graphics.

The data are reported using the International System of Units (SI). The total gamma-ray activities are reported in units of photons per minute per standard cubic meter of sampled air. The surface air concentrations of ^7Be and ^{210}Pb are reported in millibecquerels (10^{-3}Bq) per standard cubic meter of air, and ^{95}Zr , ^{137}Cs , and ^{144}Ce are reported in microbecquerels (10^{-6}Bq) per standard cubic meter of air. The standard volume used in this program is defined by the sea-level condition of the International Civil Aviation Organization (ICAO) Standard Atmosphere: a temperature of 15°C and a pressure of 1 atmosphere. The concentrations are

reported as corrected for radioactive decay to the midpoint of the month of collection. The data are reported as outlined in Section 4, 'Data Uncertainty and Reporting'.

The monthly data values reported for Reunion Island, Pretoria, Cape Point, Norfolk Island, Perth, Cape Grim, Lower Hutt, Chatham Island, Invercargill, Falkland Islands, Marion Island, Marsh, Palmer, and Mawson are means (weighted using duration of sampling) calculated from the weekly sample data. The counting errors for these data were calculated by dividing the square root of the sum of the squares of the counting errors for each sample that forms a monthly composite sample by the number of weekly samples used in the calculation. Gross gamma-ray measurements were not performed on filters from these sites. The monthly composite data reported for New York City are means (weighted using counting errors) of duplicate analyses of these samples.

6.3 Discussion

During 1990-1993, with the exception of April 1993, the concentrations of the anthropogenic radionuclides that we measured were at or below the LLD of our analytical and sampling techniques, as indicated by the less than '<' sign. The occasional detection of low activities of ^{137}Cs may reflect resuspension of debris that was previously deposited. On April 6, 1993, an accident at a reprocessing plant in the Tomsk-7 military nuclear complex located 16 km north of the Siberian city of Tomsk released radioactive materials into the environment. Debris from the accident was detected on weekly air filter samples (see Section 7, 'Radionuclides in Weekly Samples, 1990-1993 Data') analyzed using special procedures. Prior to this accident, the last major releases of anthropogenic radionuclides to the atmosphere occurred on April 26, 1986, as a result of the accident at the Chernobyl reactor and on October 16, 1980, from the last announced atmospheric test of a high yield weapon by the People's Republic of China at Lop Nor. With the exception of the debris from Tomsk, of the radionuclides that we measure by gamma-ray spectrometry, only the naturally occurring ^7Be and ^{210}Pb are still readily measured. ^7Be (half-life 53.2 d) is produced by cosmic-ray interaction in the upper troposphere and the stratosphere. ^{210}Pb (half-life 21 y) is a decay product of ^{222}Rn , which is a natural gaseous radioisotope emitted from soils. Because of their distinctly different source regions, these radionuclides serve as tracers for upper and lower tropospheric sources and transport processes. A decrease in ^7Be from 1985-1990 was observed at many sites in the network (Larsen, 1993), however, during 1992-1993 concentrations have increased again at many of the sites. Variations in the annual mean concentrations of ^7Be at many of the sites appear to result primarily from changes in the atmospheric production rate of this cosmogenic radionuclide.

7. RADIONUCLIDES IN WEEKLY SAMPLES, 1990-1993 DATA

7.1 Summary

Weekly samples from selected sites were analyzed for several radionuclide fission products and for the naturally occurring radioisotopes, ^7Be and ^{210}Pb . During 1990-1993, with the exception of April 1993, the concentrations of fission products were at or below the LLD of our analytical and sampling techniques. Following the April 6, 1993 accident and release of radionuclides into the atmosphere at a reprocessing plant in the Tomsk-7 military nuclear complex located 16 km north of the Siberian city of Tomsk, Russia, weekly air filter samples from Barrow Alaska; Thule, Greenland and Moosonee, Canada were selected for detailed analyses. Traces of radioactive debris from the accident were detected in some of these samples. The surface air concentrations of ^7Be and ^{210}Pb continue to show large week to week variations superimposed on a seasonal cycle.

7.2 Results

Table 30 lists the latitudes, longitudes, and elevations of the sites for which weekly sample measurements were made during 1990-1993. Data for these sample analyses are reported in Tables 31 to 47. These tables list the beginning and ending dates (Universal Time Coordinated) of collection for each sample, the volume of air sampled (in thousands of cubic meters at standard conditions) and the air concentrations of the naturally occurring radioisotopes, ^7Be and ^{210}Pb , and the anthropogenic radioisotopes, ^{95}Zr , ^{137}Cs , and ^{144}Ce . All data are corrected for radioactive decay to the midpoint of the collection period. The data are reported as outlined in Section 4, 'Data Uncertainty and Reporting'. Most of the data reported for New York City, NY, are means (weighted using counting errors) from duplicate analyses on these samples.

7.3 Discussion

The weekly samples from selected sites are analyzed in order to obtain a detailed resolution of the variations in the surface air concentrations of these radionuclides. These radionuclides are measured with good precision in most of these samples. At most sites, the concentrations of ^7Be and ^{210}Pb show large week to week variations superimposed on a seasonal cycle (Feely et al., 1989).

On April 6, 1993, an accident at a reprocessing plant in the Tomsk-7 military nuclear complex located 16 km north of the Siberian city of Tomsk released radioactive materials into the environment. The accident was initiated when a process tank containing a uranium-plutonium solution exploded. The beta and gamma-ray activity in the tank was estimated to be

about 19.9 TBq and about 7.5% of the tanks contents were released into the environment. The isotopic composition of the beta and gamma-ray emitters in the solution at the time of the accident was reported to be 43.2% ^{95}Nb , 35.3% ^{106}Ru , 18.7% ^{95}Zr , 2.7% ^{103}Ru , <0.1% ^{137}Cs and traces of ^{90}Sr (Gonzalez et al., 1993; IAEA, 1993). Following the accident, week-long high-volume air filter samples collected at Barrow, Alaska, the most northern site in the United States, were express mailed to EML and were immediately analyzed for gamma-ray emitting isotopes. The samples were counted in 4-5 days using a gamma-ray spectrometry with a 320 cm^3 high-purity germanium well detector. The fission products ^{95}Nb and ^{106}Ru were first detected at Barrow, Alaska, which is about 5000 km from Tomsk, in the samples collected from April 15-21. Zirconium-95 and ^{103}Ru were detected, in addition to ^{95}Nb and ^{106}Ru , in the samples collected from April 21-30. No fission products were detected in the samples collected from April 30-May 8th. The surface air concentrations of ^{95}Nb and ^{106}Ru inferred from the April 15-21 sample were 2.2 and 14.7 $\mu\text{Bq m}^{-3}$, respectively, while the surface air concentrations of ^{95}Nb , ^{95}Zr , ^{103}Ru and ^{106}Ru , inferred from the April 21-30 sample were 2.8, 1.2, 0.80, 16.1 $\mu\text{Bq m}^{-3}$, respectively (Larsen et. al., 1994; Lee et. al., 1993b). Samples from Moosonee, Canada and Thule, Greenland were also selected for special analyses. Niobium-95 and ^{106}Ru were detected in air filter samples collected from April 15-22 and April 22-May 1 at Moosonee, with inferred surface air concentrations of 9.4, 28.0, 2.9 and 10.2 $\mu\text{Bq m}^{-3}$, respectively. At Thule, ^{95}Nb and ^{106}Ru were detected in an air filter sample collected from April 16-26, while only ^{106}Ru was detected in a sample collected from April 26-May 1. The inferred surface air concentrations were 6.0, 22.0 and 20.7 $\mu\text{Bq m}^{-3}$, respectively. With the exception of the traces of Tomsk debris detected at Barrow, Alaska, Moosonee, Canada and Thule, Greenland, the fission products routinely measured in weekly air filter samples in SASP have been at or near their LLD by the analytical and sampling techniques that we used to measure them throughout the period of 1990-1993, hence the less than '<' values.

8. QUALITY CONTROL RESULTS

8.1 Summary

Reference, duplicate, replicate and blank samples, used to judge the quality of the gamma-ray spectrometry analyses on the air filter samples collected during 1990 through 1993, were routinely analyzed as part of SASP. The results of the analyses of reference samples indicate that the overall accuracy for the radioisotopes that we report for both monthly composite and weekly samples was acceptable. The data for duplicates indicates that the precision of analyses is also acceptable for both monthly composite and weekly samples. The data for the replicate monthly composite and weekly sample analyses indicates acceptable long-term precision, and the analyses of monthly composite and weekly blank samples indicate that there were no contamination problems. Although some of the deviations for specific radionuclides were unacceptable, we feel that the overall quality of the data presented in this report is acceptable for its intended use.

8.2 Results

The results of analyses of the monthly composite reference, duplicate, replicate and blank samples by gamma-ray spectrometry during 1990 through 1993 are given in Tables 48 to 51, respectively. Figures 38 to 46 graphically present the results of the analyses of the monthly composite reference, duplicate and replicate samples.

The % deviation (deviation factor) presented in Table 48, 'Analyses of Composite Reference Samples', is a % deviation of the reported from the added values, relative to the added values. The deviation factor, a ratio that is a measure of the deviation of the reported activity from the added activity for each of the nuclides measured, follows in parentheses. The calculation of this ratio is described in the footnotes of Table 48. If the reported activity is within the counting error (2s) of the added activity, the absolute value of this ratio will be less than or equal to 1.0. When practical, monthly composite reference samples are routinely resubmitted for analysis if the deviation of the initial analysis is unacceptable. Figures 38 to 42, 'Composite Reference Samples' present the % deviation for ^7Be , ^{95}Zr , ^{137}Cs , ^{144}Ce and ^{210}Pb , respectively. The bold horizontal line represents the mean % deviation obtained during the reporting period. If monthly composite reference samples were counted multiple times, the % deviation used in these figures was an average of the multiple deviations. Percent deviations greater than 50% were not included in these figures or calculations. We believe that these rare and random large % deviations do not truly reflect the overall quality of the reported data.

The % deviation from the analyses of composite duplicate samples presented in Table 49, 'Analyses of Composite Duplicate Samples', gives the absolute value of the greater of the %

deviations of the individual values from the weighted mean value relative to the weighted mean value. The deviation factor, a ratio that is a measure of the deviation of the members of each pair of analyses from the weighted mean value for the pair, follows in parentheses. The difference between the weighted mean and each of the individual results is divided by the counting error (2s) of that result to obtain a ratio. The larger of these ratios is given in the table. If a duplicate analysis agrees with the mean to within the counting error (2s), this ratio should be less than or equal to 1.0. Figures 43 and 44, 'Composite Duplicate Samples' present the % deviations for ^7Be and ^{210}Pb , respectively. As previously discussed, the bold horizontal line represents the mean % deviation and the rare deviations greater than 50% were not included in the figures or calculations.

Data for a monthly composite replicate sample that was prepared in April 1987 and reanalyzed routinely since its preparation are given in Table 50. The % deviation presented in Table 50 is a % deviation of the reported value from the long-term mean value of the composite replicate sample (146.44 Bq ^{137}Cs and 50.61 Bq ^{210}Pb), relative to the long-term mean value. Ideally, these values should cluster around zero. Figures 45 and 46, 'Composite Replicate Sample' present the % deviations for ^{137}Cs and ^{210}Pb , respectively.

Data for the monthly composite blank samples are presented in Table 51. The counting error at 2s approximates the lower limit of detection for a given detector counter over the specified time interval.

The results of analyses of individual weekly reference, duplicate, replicate and blank samples by gamma-ray spectrometry are given in Tables 52 to 55, respectively. The calculations and significance of the reported % deviation and (deviation factor) in Tables 52 and 53, and the % deviation in Table 54 are identical to those previously described in Tables 48 to 50. Data for the individual weekly blank samples are presented in Table 55. The figures presenting the % deviations for individual samples are identical to those used to present the % deviations for composite samples. Figures 47-51 present the % deviations for reference samples, Figures 52 and 53 present the % deviation for duplicate samples and Figures 54 and 55 present the % deviations for replicate samples.

8.3 Discussion

The data presented in Tables 48 to 51 and Figures 38 to 46 are intended to give an indication of the quality of the data from the gamma-ray spectrometric analysis of the surface air filter composite samples. In general, the accuracy of analysis (Table 48, Figures 38-42) over the four years reported (1990-1993) is acceptable. The long-term mean % deviations for ^7Be , ^{95}Zr , ^{137}Cs , ^{144}Ce and ^{210}Pb are -10.9, -5.6, 0.4, 2.1 and 2.9, respectively. The ^7Be data (Figure 38) suggests that the reference samples were systematically low during the second half of 1990, 1991 and the first half of 1992. The reason for this apparent trend is unknown. In late

1992 and early 1993 the % deviations were again clustered near zero. The addition of ^7Be to the composite reference samples was discontinued early in 1993 when we were unable to obtain a new reference ^7Be standard. The results for ^{137}Cs seem to track those of ^7Be although the long-term mean deviation is lower. Unlike ^7Be and ^{137}Cs , the results for ^{210}Pb do not appear to show any systematic bias. Although the long-term mean % deviations for ^7Be , ^{95}Zr , ^{137}Cs , ^{144}Ce and ^{210}Pb are acceptable, some of the individual analyses are not. These data present the worst case accuracy estimates. The deviations reported are influenced by a number of factors besides the accuracy of the gamma-ray spectrometric analysis. Errors in the calibration of the reference solution, weighing errors during the application of the standard solutions to blank filters and especially the nonhomogeneous distribution of the reference solution in the sample all contribute to the overall reported deviation. Larsen and Sanderson (1990) have previously described the counting variation that can result from nonhomogeneous samples.

The data for duplicate analyses of the monthly composite filter samples are given in Table 49 and are presented in Figures 43 and 44. Here the deviations are generally less than they are for the reference samples. The overall average maximum deviation was 7.1% for ^7Be and 8.2% for ^{210}Pb . The fact that ^7Be and ^{210}Pb deviations tend to be smaller for the duplicate samples than for the reference samples suggests that problems with the spiking procedures do indeed cause much of the poor agreement found in Table 48. When the routine environmental samples are counted, the filters are folded and compressed into a planchet. It is assumed that this process produces a close approximation to a homogeneous source. Part of the deviation between the duplicate samples results from the failure of this assumption. Any inhomogeneities in the filter material that allow higher flow rates, and thus higher collection efficiencies, for some sections of filter than for others also contribute to deviations between duplicate samples, and to errors in the data for routine samples.

The replicate data presented in Table 50 and Figures 45 and 46 indicate good long-term precision of the gamma-ray spectrometric analysis. The long-term % deviation for both ^{137}Cs and ^{210}Pb , 0.3% and 3.3% are low. Only one analysis performed during the middle of 1993 is unacceptable.

In general the data for composite blank samples (Table 51), to which no radionuclides were added, are quite adequate. There is no evidence that there are any important problems involving radioactive contamination of the samples during their processing or measurement. Most of the gamma-ray spectrometric data for blanks indicate activity below the lower limit of detection (zero activity with an error value that approximates that lower limit of detection).

The data in Table 52 to 55 and Figures 47 to 55 are intended to give an indication of the quality of the data from the gamma-ray spectrometric analysis of the surface air filter individual samples. In general, the accuracy of analysis (Table 52, Figures 47-51) over the four years reported (1990-1993) is acceptable. The long-term average % deviations for ^7Be , ^{95}Zr , ^{137}Cs , ^{144}Ce and ^{210}Pb are 2.2, 7.7, 5.0, 12.8 and 7.7, respectively. Unlike the composite reference data

for ^7Be (Figure 38), the individual sample data suggest no apparent systematic bias with time. The results for ^{210}Pb , however, do appear to show an apparent positive systematic bias with time. During 1990 the % deviations were systematically low, however, during 1991-1993 the deviations appear to be systematically high. The cause for these trends is unclear, but the individual deviations are in general less than 20%. As with the composite reference samples, these data present the worst case estimates for accuracy.

The data for duplicate analyses of the individual composite filter samples are given in Table 53 and are presented in Figures 52 and 53. The individual deviations are generally less than they are for the reference samples. The overall average maximum deviation was 6.0% for ^7Be and 4.8% for ^{210}Pb . Most of the data are clustered near zero, indicating good precision.

The replicate data presented in Table 54 and Figures 54 and 55 indicate good long-term precision of the gamma-ray spectrometric analysis. The long-term % deviation for both ^{137}Cs and ^{210}Pb , -0.4% and 0.2%, are low. The deviations oscillate around zero, as should be expected.

In general the data for individual blank samples (Table 55), to which no radionuclides were added, are quite adequate. There is no evidence that there are any important problems involving radioactive contamination of the samples during their processing or measurement. Most of the gamma-ray spectrometric data for blanks indicate activity below the lower limit of detection (zero activity with an error value that approximates that lower limit of detection).

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Tables 1 - 55

TABLE 1
SAMPLING SITES

Sampling Site	Latitude	Longitude	Elevation (m)	Currently Active
Nord, Greenland	80:40°N	17:00°W	250	-
Thule, Greenland	76:36°N	68:35°W	259	yes
Barrow, Alaska	71:10°N	156:30°W	4	yes
Constable Point, Greenland	70:45°N	22:36°W	50	yes
Kap Tobin, Greenland	70:25°N	21:59°W	22	-
Tromso, Norway*	69:30°N	19:00°E	-	yes
Moosonee, Ontario, Canada	51:16°N	80::30°W	10	yes
Seattle, Washington	47:36°N	122:33°W	3	-
Helena, Montana	46:36°N	112:00°W	1187	-
Beaverton, Oregon	45:32°N	122:53°W	64	yes
Rexburg, Idaho	43:48°N	111:50°W	1502	yes
Argonne, Illinois	41:41°N	87:58°W	160	-
Woods Hole, Massachusetts	41:32°N	70:35°W	11	-
Westwood, New Jersey	41:00°N	74:01°W	38	-
Chester, New Jersey	40:48°N	74:40°W	268	yes
Salt Lake City, Utah	40:46°N	110:49°W	1516	-
New York City, New York	40:44°N	74:00°W	56	yes
Rocky Flats, Colorado	40:00°N	105:11°W	1814	-
Sterling, Virginia	38:58°N	77:25°W	76	-
Richmond, California	37:56°N	122:20°W	20	-
Geyokcha, Turkmenistan**	37:55°N	58:07°E	635	yes
Livermore, California	37:39°N	121:32°W	392	-
Gibraltar*	36:00°N	5:30°E	-	yes
Montgomery, Alabama	32:23°N	86:19°W	51	yes
Miami, Florida	25:49°N	80:17°W	7	yes
Bimini, Bahamas	25:46°N	79:22°W	3	-
Hong Kong*	22:30°N	114:00°E	-	yes
Mauna Loa, Hawaii	19:28°N	155:36°W	3401	yes
San Juan, Puerto Rico	18:26°N	66:00°W	10	-
Miraflores, Panama Canal Zone	9:00°N	79:35°W	10	-
Balboa, Panama Canal Zone	8:58°N	79:34°W	23	-
Merida, Venezuela	8:36°N	71:10°W	1570	-
Pico Espejo, Venezuela	8:35°N	71:10°W	4767	-
La Aguada, Venezuela	8:35°N	71:09°W	3450	-
Singapore*	1:30°N	104:00°E	-	yes
Guayaquil, Ecuador	2:10°S	79:52°W	7	yes
Lima, Peru	12:01°S	77:08°W	13	yes
Tutuila, Samoa	14:15°S	170:34°W	77	yes
Chacaltaya, Bolivia	16:21°S	68:07°W	5220	yes
Reunion Island**	21:10°s	55:50°E	181	yes
Antofagasta, Chile	23:37°S	70:16°W	31	yes
Pretoria, S. Africa**	25:45°S	28:12°E	1400	yes
Isla de Pascua (Easter Island)	27:10°S	109:26°W	41	yes
Norfolk Island**	29:00°S	168:00°E	10	yes
Perth, Australia**	32:00°S	116:00°E	100	yes
Durazno, Uruguay	33:21°S	56:28°W	84	yes
Santiago, Chile	33:28°S	70:42°W	520	yes

TABLE 1 (Cont'd)

Sampling Site	Latitude	Longitude	Elevation (m)	Currently Active
Cape Point, S. Africa*	34:22°S	18:30°E	274	yes
Cape Grim, Tasmania, Australia**	41:00°S	145:00°E	50	yes
Lower Hutt, New Zealand**	41:12°S	174:54°E	10	yes
Puerto Montt, Chile	41:27°S	72:57°W	7	yes
Chatham Island	44:00°S	176:00°W	100	yes
Invercargill, New Zealand	46:26°S	168:21°E	10	yes
Marion Island**	46:55°S	37:45°E	10	yes
Falkland Islands	51:49°S	58:27°W	68	yes
Punta Arenas, Chile	53:08°S	70:53°W	35	yes
Marsh, Antarctica**	62:11°S	58:59°W	10	yes
Palmer, Antarctica**	64:46°S	64:04°W	30	yes
Chilean Antarctic Station	64:49°S	62:52°W	10	-
Mawson, Antarctic Station**	67:36°S	62:53°E	10	yes
South Pole Station	90:00°S	-	2800	yes

*Sampling sites of U. S. Atomic Energy Authority.

**Sampling sites of RAMP

TABLE 2
GROSS GAMMA CONCENTRATIONS IN SURFACE AIR
(photons min⁻¹ m⁻³)

Site	1990:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barrow, Alaska	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Constable Pt., Greenland	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Moosonee, Ontario	< 0.01	< 0.01	< 0.01	< 0.01	--	--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Beaverton, Oregon	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Rexburg, Idaho	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chester, New Jersey	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
New York, New York	--	--	--	--	--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Montgomery, Alabama	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Miami, Florida	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Mauna Loa, Hawaii	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Guayaquil, Ecuador	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ilima, Peru	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tutuila, Samoa	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chacaltaya, Bolivia	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Antofagasta, Chile	< 0.01	--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isla de Pascua-Easter Is.	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Santiago, Chile	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Puerto Montt, Chile	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Punta Arenas, Chile	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
South Pole Station	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Note:
-- = No data

TABLE 3
GROSS GAMMA CONCENTRATIONS IN SURFACE AIR
(photons $\text{min}^{-1} \text{m}^{-3}$)

Site	1991:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland		--	--	--	--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barrow, Alaska		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Constable Pt., Greenland		--	--	--	--	--	--	--	--	--	< 0.01	< 0.01	< 0.01
Moosonee, Ontario		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Beaverton, Oregon		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Rexburg, Idaho		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chester, New Jersey		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
New York, New York		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Montgomery, Alabama		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01
Miami, Florida		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Miami, Hawaii		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Guayaquil, Ecuador		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lima, Peru		< 0.01	< 0.01	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.01	< 0.01	< 0.01
Tutuila, Samoa		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--
Chacaltaya, Bolivia		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Antofagasta, Chile		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isla de Pascua-Easter Is.		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Santiago, Chile		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01
Puerto Montt, Chile		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	--	< 0.01
Punta Arenas, Chile		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
South Pole Station		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Note: -- = No data

TABLE 4
GROSS GAMMA CONCENTRATIONS IN SURFACE AIR
(photons $\text{min}^{-1} \text{m}^{-3}$)

Site	1992:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01
Barrow, Alaska		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Constable Pt., Greenland		--	--	--	--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Moosonee, Ontario		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Beaverton, Oregon		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Rexburg, Idaho		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chester, New Jersey		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
New York, New York		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Montgomery, Alabama		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Miami, Florida		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	--	< 0.01
Mauna Loa, Hawaii		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01
Guayaquil, Ecuador		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lima, Peru		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tutuila, Samoa		--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chacaltaya, Bolivia		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Antofagasta, Chile		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isla de Pascua-Easter Is.		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Santiago, Chile		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Puerto Montt, Chile		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Punta Arenas, Chile		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
South Pole Station		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Note: -- = No data

TABLE 5
GROSS GAMMA CONCENTRATIONS IN SURFACE AIR
(photons $\text{min}^{-1} \text{m}^{-3}$)

Site	1993:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barrow, Alaska		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Constable Pt., Greenland		< 0.01	< 0.01	< 0.01	< 0.01	--	--	--	--	--	--	--	--
Moosonee, Ontario		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Beaverton, Oregon		< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Rexburg, Idaho		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chester, New Jersey		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
New York, New York		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Montgomery, Alabama		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Miami, Florida		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Mauna Loa, Hawaii		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Guayaquil, Ecuador		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lima, Peru		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tutuila, Samoa		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chacaltaya, Bolivia		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Antofagasta, Chile		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isla de Pascua-Easter Is.		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	--	--	--
Durazno, Uruguay		--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Santiago, Chile		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	--	--
Puerto Montt, Chile		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	--	--	< 0.01
Punta Arenas, Chile		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	--	--	--
South Pole Station		< 0.01	--	--	--	--	--	--	--	--	--	< 0.01	< 0.01

Note: -- = No data

TABLE 6
BERYLLIUM-7 CONCENTRATIONS IN SURFACE AIR
(mBq m⁻³)

Site	1990:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland		2.0	2.4	3.1	2.5	2.0	1.6 ^a	--	0.8	1.7	1.6	2.2	2.1 ^a
Barrow, Alaska		1.4	1.7	1.7	1.6	1.0	0.8	0.4	0.6	0.7 ^a	0.9	1.4	1.7
Constable Point, Greenland		2.4	1.8 ^a	5.7	2.3	0.6 ^a	< 0.7	--	--	1.6 ^a	1.9	3.2	2.4
Moosonee, Ontario		1.6	2.2	1.4	--	--	--	3.3	2.9	1.3	1.8	2.3	2.2
Beaverton, Oregon		1.4	1.5	2.2	1.8	1.1	0.9	1.7	1.6	2.9	1.7	0.8 ^a	2.4
Rexburg, Idaho		2.2	3.2	5.1	4.6	4.9	5.6	6.8	6.1	5.4	4.3	3.3	3.4
Chester, New Jersey		--	3.5	3.6	3.2	3.0	3.3	3.1	3.3	3.4	3.3	3.2	2.5
New York, New York		--	--	--	--	--	2.9	2.8	--	3.0	3.7	3.2	2.9
Montgomery, Alabama		3.6	3.7	5.0	7.8	3.4	4.9	3.8	5.8	4.7	4.4	3.9	3.0
Miami, Florida		4.8	4.0	4.7	5.3	3.6	3.4	3.0	3.5	3.9	3.2	4.4	3.4
Mauna Loa, Hawaii		5.2	5.8	6.6	6.4	5.6	6.9	4.8	5.3	3.8	6.1	2.2	4.4
Guayaquil, Ecuador		3.8	3.0	2.0	2.3	1.7	1.2	1.6	1.3	1.5	2.1	2.1	2.5
Lima, Peru		4.3	4.1	3.6	3.4	3.1	2.6 ^a	2.2	3.2	3.4	4.6	4.6	4.4
Tutuila, Samoa		1.9	1.8	1.9	1.4	2.2	2.4	2.6	2.7	2.3	2.2	1.7	1.9
Chacaltaya, Bolivia		1.7	4.3	4.1	6.1	4.0	4.1	6.2	5.0	6.2	3.1 ^a	2.8 ^a	2.7 ^a
Reunion Island		--	--	--	--	--	--	--	--	--	--	4.6	3.9
Antofagasta, Chile		4.5	--	3.1	3.5	3.7	3.5	3.6	4.5	3.2	4.4	4.1	3.7
Pretoria, South Africa		--	--	--	--	--	--	--	--	--	--	5.8	5.3
Isla de Pascua-Easter Is.		2.6	2.1	2.5	2.4	1.9	1.7	1.5	1.5 ^a	2.3 ^a	2.2	1.8	2.9
Norfolk Island		3.1	4.5	3.4	2.8 ^a	1.6 ^b	3.5	3.5	3.3	3.1	3.6	4.2	5.7
Perth, Australia		3.9	4.5	3.5	3.9	3.0	3.3 ^a	2.3	2.4	3.0	2.8	4.1	3.7
Santiago, Chile		3.7	3.5	4.2	2.4	4.0	3.9	3.1	3.4	3.3 ^a	3.6	3.5 ^a	4.0
Cape Grim, Tasmania		2.7	3.5	3.0	2.8	2.7	2.1	1.7	1.6	2.4	2.4	3.0	2.8
Lower Hutt, N.Z.		3.5	3.0	2.9	2.3	1.6 ^a	1.8	1.8	1.6	2.2	2.5	2.9	3.3
Puerto Montt, Chile		1.9	2.9	1.9	2.1	1.4	1.7 ^a	1.2	1.3	1.6	1.6 ^a	1.7	2.0
Chatham Island		2.8	4.1	2.6	2.2 ^a	< 1.0	1.1	1.5	1.9	2.1	2.4	3.5	3.4
Invercargill, N.Z.		2.4	2.7	2.4	1.7 ^a	< 1.1	1.1	2.4	1.5	1.9	1.6	3.1	1.9
Falkland Islands		1.3	2.4	2.1	1.2 ^a	2.4 ^a	1.3	1.3	1.6	2.3	1.8	1.8	1.9
Punta Arenas, Chile		1.2	2.1	0.9 ^a	0.6	0.7	0.8	1.0	0.7	2.0 ^a	0.6	< 1.0	1.3
Marsh Base, Antarctica		--	--	< 3.4	< 6.2	2.0 ^a	1.1 ^a	1.1	1.3 ^a	1.6	1.0	2.6	1.2
Palmer Station, Antarctica		--	--	--	2.1	< 0.7	1.3	1.1	1.2	1.7	1.2	1.2	1.1
Mawson, Antarctica		4.5	4.8	< 8.4	< 10.0	< 4.4	< 4.3	5.4 ^a	3.6 ^a	2.6 ^a	5.0	4.5	4.0
South Pole Station		2.8	< 2.4	< 2.1	< 1.0	1.3 ^a	2.2	1.9	1.1	1.6 ^a	3.5	3.4	4.1

Note:

-- = No data

d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%

b = Uncertainty is between 50% and 100%

c = Uncertainty is greater than 100%

TABLE 7
BERYLLIUM-7 CONCENTRATIONS IN SURFACE AIR
(mBq m⁻³)

Site	1991:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	--	--	--	--	--	--	< 0.8	1.3	0.7	1.6	1.8	2.2	< 0.5
Barrow, Alaska	1.6	1.7	2.1	1.7	0.9	0.5	0.2	0.6	< 0.3	0.6	1.0	1.3	1.3
Constable Point, Greenland	--	--	--	--	--	--	--	--	--	2.3	3.1	3.4	3.4
Moosonee, Ontario	2.0	2.9	3.5	3.8	3.6	2.2	2.0	2.6	1.6	2.0	1.6	1.6	1.6
Beaverton, Oregon	1.9	2.3	1.8	2.1	1.5	1.3	1.8	2.0	2.7	4.0	1.8	1.8	1.8
Rexburg, Idaho	3.4	3.2	3.7	4.2	4.6	4.7	--	6.0	4.5	5.2	2.5	4.0	4.0
Chester, New Jersey	2.6	3.8	3.7	4.0	3.5	3.5	3.8	2.5	2.8	3.1	2.5	2.8	2.8
New York, New York	3.2	3.6	4.0	4.9	4.6	3.5	4.3	3.7	3.8	3.0	2.8	2.9	2.9
Montgomery, Alabama	3.0	4.2	4.0	5.6	3.5	3.6	2.9	4.7	3.9	4.6	--	4.2	4.2
Miami, Florida	3.1	4.6	4.1	2.9	4.2	2.6	2.8	2.8	2.8	3.4	4.2	3.9	3.9
Mauna Loa, Hawaii	6.6	6.4	5.4	5.9	7.1	4.0	5.3	4.1	5.0	4.3	4.2	5.3	5.3
Guayaquil, Ecuador	2.9	2.1	1.8	2.2	1.8	1.8	1.6	1.8	1.7	2.4	2.5	2.7	2.7
Lima, Peru	6.6	5.3	6.8	4.2	--	--	--	--	2.5	4.5	4.9	4.4	4.4
Tutuila, Samoa	1.3	1.1	1.7	1.1	2.3	1.6	2.2	2.2	2.2	2.0	1.2	--	--
Chacaltaya, Bolivia	3.8	2.1 ^a	2.9	3.6	4.8	5.9	5.6	5.3	5.2	5.1	5.6	4.5	4.5
Reunion Island	4.2	4.0	2.4	3.2	2.9	3.1	3.2	2.8	4.2	3.1	3.4	--	--
Antofagasta, Chile	3.6	3.7	4.1	3.4	2.8	3.8	4.3	4.1	3.6	5.1	4.1	5.0	5.0
Pretoria, South Africa	4.4	4.9	4.2	5.8	4.8	3.6	4.8	4.6	5.4	5.3	5.5	5.1	5.1
Isla de Pascua-Easter Is.	2.9	4.3	2.9	2.8	2.3	1.9	2.1	2.2	2.8	2.1	2.7	2.9	2.9
Norfolk Island	4.8	5.0	4.2	3.6	3.0	2.8	2.9	3.0	3.5	3.7	4.5	4.2	4.2
Perth, Australia	4.3	5.9	4.1	3.7	4.2	2.9	2.0	2.7	2.8	3.0	3.2	4.4	4.4
Santiago, Chile	3.2	4.1	2.8	2.6	3.4	3.4	2.8	2.8 ^a	2.4	3.1	--	4.2	4.2
Cape Grim, Tasmania	2.9	3.4	2.6	2.8	1.8	2.2	1.4	1.6	2.0	2.0	2.5	2.7	2.7
Lower Hutt, N.Z.	3.1	4.0	3.0	2.6	1.6	2.0	1.5	2.0	1.9	2.4	2.4	3.0	3.0
Puerto Montt, Chile	2.2	2.5	2.2	1.6	1.5 ^a	1.6	0.8	--	< 2.0	1.1	--	--	--
Chatham Island	3.4	3.5	3.7	2.6	2.3	2.1	2.0	1.8	1.9	4.0	2.2	3.2	3.2
Invercargill, N.Z.	2.1	3.1	2.2	1.6	1.5	1.2	2.0	1.2	1.2	1.9	2.0	2.2	2.2
Falkland Islands	2.1	2.6	1.8	2.3	1.2	1.6	1.5	1.2	1.5	1.5	1.4	1.6	1.6
Punta Arenas, Chile	1.1	1.7	1.0	0.9	0.7	0.9	0.7	0.7	0.7	0.8	1.2	1.0	1.0
Marsh Base, Antarctica	0.7 ^a	1.5	1.0	0.9	1.5	1.4	1.2	1.5	0.9	1.2	1.1	--	--
Palmer Station, Antarctica	0.9	0.9	1.4	0.9	1.6	2.0	1.0	1.2	0.8	1.3	1.2	1.5	1.5
Mawson, Antarctica	5.5	5.5	7.6	4.0	3.9	3.1	3.0	2.3	3.6	3.6	5.3	6.6	6.6
South Pole Station	4.6 ^a	4.2 ^a	2.5 ^a	2.7	2.3	2.0	1.9	2.7	2.1	4.0	3.9	6.7	6.7

Note:

-- = No data

d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%

b = Uncertainty is between 50% and 100%

c = Uncertainty is greater than 100%

TABLE 8
BERYLLIUM-7 CONCENTRATIONS IN SURFACE AIR
(mBq m⁻³)

Site	1992:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland		3.3	3.0	3.0	3.7	2.3	1.3	1.2	--	< 5.9	1.1	< 1.7	3.5
Barrow, Alaska		2.0	2.2	2.0	2.3	1.7	< 0.4	0.8	0.7	0.7	1.0	1.2	2.2
Constable Point, Greenland		--	--	--	--	--	0.8 ^a	1.2 ^a	1.5	1.1	1.5	1.5	3.3
Moosonee, Ontario		2.2	2.1	2.7	4.1	4.0	2.9	2.2	3.0	3.3	1.0	1.5	2.4
Beaverton, Oregon		2.2	1.6	3.7	2.5	5.0	2.2	1.7	3.6	2.6	2.4	1.6	1.4
Rexburg, Idaho		3.1	3.7	5.0	5.5	5.9	3.6	7.5	7.6	5.3	3.3	2.5	3.4
Chester, New Jersey		2.8	3.1	3.0	3.8	4.6	4.3	3.2	3.7	4.9	3.0	1.7	2.2
New York, New York		2.4 ^a	3.4	5.0	4.6	4.8	4.2	3.2	4.9	4.0	3.9	2.5	3.4
Montgomery, Alabama		3.7	4.6	5.7 ^a	5.7 ^a	5.4	6.7	5.0	3.6	5.4	--	--	2.3
Miami, Florida		4.7	2.8	4.1	4.3	5.2	1.9	4.0	1.9	--	4.2	3.4	4.7
Mauna Loa, Hawaii		5.8	6.6	7.3	9.2	5.8	8.3	6.8	4.0	3.3	4.1	4.8	4.3
Guayaquil, Ecuador		2.7	2.1	1.1	1.2	1.5	1.4	3.0	2.0	2.6	1.9	2.2	4.1
Lima, Peru		4.7	3.9	3.7	4.8	2.6	2.4	2.4	2.4	2.7	7.9	2.5	--
Tutuila, Samoa		--	1.4 ^a	1.5	1.2	2.6	2.7	2.2	1.8	2.8	3.1	1.8	1.6
Chacaltaya, Bolivia		3.6	9.3	2.6	6.1	5.1	4.9	4.9	5.1	6.5	5.0	3.9	3.4
Reunion Island		3.7	2.8	3.3	3.8	3.7	3.2	3.7	4.2	4.3	< 13.8	4.8	7.1
Antofagasta, Chile		4.4	4.1	4.0	4.7	4.2	4.1	6.7	4.7	4.9	3.1	4.2	4.5
Pretoria, South Africa		5.1	5.8	6.1	5.9	5.6	5.7	5.0	6.1	9.2	8.7	6.0	5.3
Isla de Pascua-Easter Is.		3.0	2.8	2.6 ^a	2.4	1.9	2.3 ^a	2.5	2.3	2.4	2.4	1.8	1.0
Norfolk Island		5.5	4.2	5.3	4.2	4.1	3.9	3.7	4.6	4.4	3.8	5.3	7.4 ^a
Perth, Australia		6.1	4.7	3.6	3.5	3.9	2.6	3.7	2.9	2.7	< 12.1	4.1	8.3
Santiago, Chile		4.8	3.7	3.1	3.7	3.1	2.7	4.9	3.3	2.7	3.3	3.7	3.4
Cape Point, South Africa		--	--	--	3.9	3.7	< 8.9	3.4	4.1	8.0 ^a	< 15.5	3.8	4.3
Cape Grim, Tasmania		3.3	2.8	4.0	3.2	2.3	2.3	2.6	2.5	2.3	3.2	3.1	< 1.5
Lower Hutt, N.Z.		3.9	3.4	3.0	3.2	2.2	2.6	1.9	1.9	2.2	< 13.2	< 3.8	4.6 ^a
Puerto Montt, Chile		2.3 ^a	1.7	2.4	1.5	1.0	1.0	0.9 ^a	1.3	1.4	1.2	1.4	1.7
Chatham Island		3.7	4.0	3.3	4.2	2.0	2.3	2.4	2.3 ^a	2.1	2.9	3.0	3.8
Invercargill, N.Z.		2.9	3.2	2.6	2.2	2.2	2.1	1.8	2.5	2.6	1.8	3.1	3.9 ^a
Marion Island		--	--	--	< 2.7	< 46.5	< 47.4	< 25.4	< 4.8	< 12.6	< 2.3	3.6 ^a	2.0 ^a
Falkland Islands		2.4	2.0	1.6	1.4	1.3 ^a	1.2	1.8	2.1	2.2	1.8	1.9	3.4 ^a
Punta Arenas, Chile		1.6	1.5	1.4	1.3	0.6	0.8	1.1	0.8	1.3	0.9	1.5	1.2
Marsh Base, Antarctica		1.3	--	--	1.2 ^a	2.1	2.1 ^a	2.7	1.1	1.8	< 16.8	< 2.1	1.3
Palmer Station, Antarctica	<	1.0	1.2	1.2	1.1	2.8 ^a	2.3	1.9	1.2	2.0	1.5	1.5	0.8 ^a
Mawson, Antarctica		6.6	5.8	< 11.5	7.1	14.1 ^a	< 4.0	9.6 ^a	5.8 ^a	4.1	6.9	6.4 ^a	8.3
South Pole Station		5.5	4.2 ^a	2.5	2.0 ^a	3.3	2.4	1.9	1.8	2.0	2.6	3.5	4.7

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 9
BERYLLIUM-7 CONCENTRATIONS IN SURFACE AIR
(mBq m⁻³)

Site	1993:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland		2.2	< 11.8	3.0	3.2	3.6	0.8	1.5	1.9	1.1	2.0	2.3	3.1
Barrow, Alaska		1.4	1.4	1.6	2.3	1.8	0.6	0.8 ^a	0.5	0.9	1.6	1.7	2.5
Constable Point, Greenland		2.9	3.8	2.9	2.9 ^a	--	--	--	--	--	--	--	--
Moosonee, Ontario		2.1	2.3	3.4	4.7	2.2	4.0	2.9	3.2	2.3	1.8	2.6	2.7
Beaverton, Oregon		3.4 ^a	2.9	2.9	1.8	--	1.7	1.4	2.4	4.1	2.8	2.8	1.9
Rexburg, Idaho		4.4	2.8	3.2	3.7	4.4	5.0	7.2	6.8	7.0	5.4	5.0	4.8
Chester, New Jersey		2.6	4.0	2.5	4.9	4.2	5.1	4.2	5.0	3.0	4.1	3.5	3.0
New York, New York		3.2	4.3	3.3	4.6	4.6	4.8	4.0	4.9	4.5	3.9	5.4	3.8
Montgomery, Alabama		4.5	5.3	5.4	6.0	5.9	5.3	5.3	4.4	3.6	4.6	4.5	4.1
Miami, Florida		3.5	4.1	4.0	6.7	5.0	2.9	--	4.4	4.0	2.3	4.4	5.8
Mauna Loa, Hawaii		4.7	8.0	7.5	7.1	7.2	7.1	7.0	5.5 ^b	5.0	6.0	7.2	7.0
Guayaquil, Ecuador		2.6	1.6	1.5	2.1	2.0	1.8	1.9	2.3 ^b	2.4	3.8	2.8	3.0
Lima, Peru		4.7	4.8	4.3	4.7	3.1	2.8	3.8	4.9	4.2	7.1	5.2	4.7
Tutuila, Samoa		1.3	2.2	1.3	0.8	2.0	2.5	3.3	2.5	3.2	3.7	2.5	2.0
Chacaltaya, Bolivia		1.8 ^a	3.9	3.3	4.0	5.7	6.0	6.8	7.8	5.4	4.9	4.8	2.8
Reunion Island		--	--	--	--	3.5	--	--	4.5	--	3.7	--	--
Antofagasta, Chile		3.6	4.2	3.4	4.0	3.7	5.0	5.4 ^a	5.7	5.4	6.0	4.8	4.7
Pretoria, South Africa		< 6.3	5.9 ^a	5.1	--	--	--	--	--	--	--	--	--
Isla de Pascua-Easter Is.		1.9	2.5	2.1	2.1	1.8	1.4	1.5	1.8	--	--	--	--
Norfolk Island		8.0	6.2	5.2	4.6	3.9	--	4.0	4.4	4.6	--	6.0	--
Perth, Australia		--	--	4.4	3.8	4.3	--	--	3.3	4.2	--	--	--
Durazno, Uruguay		--	--	5.2	3.2	3.6	3.1	--	3.6	5.1	4.2	5.4	6.2
Santiago, Chile		4.5	4.1	3.6	4.5	3.3	3.7	3.5	4.5	4.5	--	--	--
Cape Point, South Africa		--	--	--	--	--	--	--	--	--	--	--	--
Cape Grim, Tasmania		4.0	3.8	< 6.1	3.3	3.2	--	--	3.3	3.3	3.3	--	--
Lower Hutt, N.Z.		4.1	3.4	--	< 2.8	2.5	--	--	--	2.9	4.1	3.4	--
Puerto Montt, Chile		2.0 ^a	1.9	1.5	2.6	1.4	1.1	< 1.1	1.4	--	--	--	2.0
Chatham Island		3.5	6.2	--	2.8	3.2	--	--	2.4	2.6	3.4	3.4	3.3
Invercargill, N.Z.		3.3	--	--	2.4	2.5	5.2 ^a	--	3.0	2.9	3.2	--	--
Marion Island		< 1.2	3.8	--	--	--	--	--	--	--	--	--	--
Falkland Islands		2.2	--	--	2.1	2.1	--	--	1.8	2.5	2.2	--	--
Punta Arenas, Chile		1.4	1.6	1.6	1.3	0.9	1.5	1.1	1.0	--	--	--	--
Marsh Base, Antarctica		--	--	--	--	--	--	--	--	--	--	--	--
Palmer Station, Antarctica		1.2	--	--	--	--	--	--	1.7	--	--	--	--
Mawson, Antarctica		--	--	--	--	--	--	--	--	--	--	--	--
South Pole Station		6.8	--	--	--	--	--	--	--	--	--	5.9	4.7

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 10
ZIRCONIUM-95 CONCENTRATIONS IN SURFACE AIR
($\mu\text{Bq m}^{-3}$)

Site	1990:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	< 6.0	< 20.4	< 10.6	< 8.8	< 6.8	< 61.8	--	< 8.9	< 18.6	< 24.2	< 14.6	< 29.8	
Barrow, Alaska	< 6.6	< 3.3	< 3.1	< 2.1	< 4.0	< 6.8	< 6.0	< 4.0	< 16.2	< 11.8	< 5.9	< 9.8	
Constable Pt., Greenland	< 28.4	< 33.5	< 16.1	< 4.9	< 17.8	< 77.3	--	--	< 55.8	< 45.7	< 45.9	< 24.0	
Moosonee, Ontario	< 7.0	< 7.5	< 13.4	--	--	--	< 7.6	< 4.2	< 9.4	< 7.2	< 6.3	< 11.0	
Beaverton, Oregon	< 5.1	< 6.1	< 6.6	< 2.5	< 7.5	< 5.8	< 5.3	< 5.8	< 11.8	< 6.9	< 4.1	< 12.9	
Rexburg, Idaho	< 10.6	< 7.8	< 2.3	< 10.3	< 3.9	< 4.7	< 5.0	< 3.9	< 4.5	< 27.3	< 30.3	< 17.5	
Chester, New Jersey	--	< 14.2	< 4.2	< 8.3	< 3.1	< 4.5	< 5.3	< 6.6	< 9.4	< 18.1	< 11.9	< 6.4	
New York, New York	--	--	--	--	--	< 10.1	< 1.5	--	< 33.5	< 10.1	< 9.9	< 8.9	
Montgomery, Alabama	< 6.0	< 4.7	< 9.1	< 5.1	< 13.3	< 36.1	< 4.3	< 24.4	< 18.1	< 47.9	< 31.3	< 6.7	
Miami, Florida	< 10.5	< 5.6	< 6.2	< 7.9	< 7.6	< 8.4	< 4.0	< 16.8	< 4.9	< 7.7	< 2.8	< 9.2	
Mauna Loa, Hawaii	< 10.0	< 7.6	< 5.2	< 10.1	< 8.8	< 3.9	< 7.9	< 14.1	< 17.3	< 29.6	< 39.8	< 15.9	
Guayaquil, Ecuador	< 5.8	< 28.7	< 4.5	< 7.5	< 3.6	< 5.9	< 7.0	< 4.0	< 8.4	< 21.7	< 13.8	< 9.1	
Lima, Peru	< 7.1	< 9.1	< 4.1	< 6.4	< 13.8	< 79.1	< 7.0	< 5.0	< 24.8	< 29.4	< 13.3	< 11.9	
Tutuila, Samoa	< 5.0	< 5.9	< 7.2	< 5.4	< 5.0	< 10.5	< 7.8	< 4.5	< 11.3	< 14.1	< 28.9	< 9.9	
Chacaltaya, Bolivia	< 14.8	< 13.4	< 14.2	< 28.1	< 22.8	< 10.3	< 9.2	< 15.0	< **.*	< 81.4	< 88.2	< **.*	
Reunion Island	--	--	--	--	--	--	--	--	--	--	< **.*	< 34.3	
Antofagasta, Chile	< 8.2	--	< 7.2	< 11.4	< 14.2	< 5.0	< 2.9	< 12.0	< 11.0	< 23.2	< 16.0	< 14.5	
Pretoria, South Africa	--	--	--	--	--	--	--	--	--	--	< 52.7	< 26.1	
Isla de Pascua-Easter Is.	< 9.7	< 8.0	< 10.0	< 17.3	< 9.8	< 6.6	< 25.5	< 35.7	< 59.4	< 27.0	< 15.8	< 13.8	
Norfolk Island	< 26.3	< 48.1	< 21.2	< 75.2	< **.*	< 38.8	< 13.1	< 25.7	< 21.1	< 20.6	< 14.2	< 11.6	
Perth, Australia	< 21.9	< 22.7	< 35.3	< 98.4	< 80.8	< **.*	< 12.3	< 9.2	< 23.4	< 26.1	< 29.9	< 20.2	
Santiago, Chile	< 9.9	< 5.1	< 10.8	< 18.8	< 12.9	< 7.7	< 16.7	< 42.2	< **.*	< 53.4	< 72.0	< 53.8	
Cape Grim, Tasmania	< 16.4	< 16.9	< 26.2	< 60.3	< 80.3	< 32.2	< 12.6	< 6.5	< 11.9	< 40.0	< 54.8	< 27.8	
Lower Hutt, N.Z.	< 39.6	< 23.6	< 38.5	< 92.5	< 84.9	< 25.0	< 13.2	< 13.9	< 17.2	< 48.6	< 67.1	< 21.9	
Puerto Montt, Chile	< 10.9	< 5.1	< 12.5	< 19.6	< 14.3	< 42.9	< 29.3	< 16.0	< 31.1	< 47.1	< 23.7	< 17.6	
Chatham Island	< 33.8	< 26.6	< 36.8	< 79.4	< 95.2	< **.*	< 11.1	< 13.1	< 22.2	< 27.5	< 25.1	< 32.4	
Invercargill, N.Z.	< 16.5	< 16.7	< 33.6	< 90.4	< 92.1	< 22.3	< 13.5	< 10.5	< 17.4	< 19.3	< 14.8	< 14.1	
Falkland Islands	< 20.9	< 17.7	< 28.6	< 71.6	< 80.1	< 50.8	< 12.7	< 23.8	< 23.0	< 33.5	< 26.8	< 25.4	
Punta Arenas, Chile	< 18.0	< 8.3	< 25.6	< 8.0	< 23.5	< 5.8	< 29.1	< 16.1	< 58.9	< 16.4	< **.*	< 18.5	
Marsh Base, Antarctica	--	--	< **.*	< **.*	< 99.7	< 34.5	< 30.8	< 51.3	< 31.9	< 34.6	< 16.8	< 25.9	
Palmer Station, Antarctica	--	--	--	< 69.5	< 70.3	< 34.3	< 16.4	< 13.3	< 25.6	< 17.7	< 12.8	< 6.3	
Mawson, Antarctica	< 22.3	< **.*	< **.*	< **.*	< **.*	< **.*	< **.*	< **.*	< **.*	< 96.2	< **.*	< 58.7	
South Pole Station	< 6.2	< **.*	< **.*	< 88.1	< 51.5	< 52.7	< 37.9	< 17.6	< 26.3	< 13.4	< 8.6	< 35.7	

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 11
ZIRCONIUM-95 CONCENTRATIONS IN SURFACE AIR
($\mu\text{Bq m}^{-3}$)

Site	1991:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	--	--	--	--	--	--	< 99.1	< 4.6	< 15.4	< 6.2	< 3.4	< 7.1	< 51.6
Barrow, Alaska	< 16.8	< 11.8	< 12.2	< 12.0	< 6.8	< 8.7	< 5.5	< 2.5	< 31.5	< 5.9	< 3.6	< 8.1	
Constable Pt., Greenland	--	--	--	--	--	--	--	--	--	< 14.2	< 18.3	< 41.7	
Moosonee, Ontario	< 7.5	< 3.7	< 5.6	< 13.1	< 23.2	< 8.1	< 4.3	< 1.5	< 9.3	< 7.0	< 17.4	< 2.8	
Beaverton, Oregon	< 10.5	< 7.5	< 9.5	< 11.5	< 10.8	< 15.4	< 4.9	< 22.0	< 5.6	< 9.8	< 4.7	< 5.0	
Rexburg, Idaho	< 23.1	< 16.4	< 8.1	< 5.3	< 7.3	< 10.4	--	< 12.4	< 8.6	< 11.4	< 3.6	< 4.3	
Chester, New Jersey	< 6.1	< 1.5	< 3.0	< 5.7	< 10.7	< 8.0	< 8.7	< 6.3	< 23.4	< 11.8	< 5.9	< 7.7	
New York, New York	< 8.4	< 7.3	< 4.1	< 6.7	< 4.3	< 5.5	< 2.9	< 5.0	< 6.2	< 2.1	< 3.8	< 6.4	
Montgomery, Alabama	< 38.6	< 9.4	< 30.9	< 31.8	< 14.7	< 11.2	< 6.7	< 33.9	< 45.7	< 22.2	--	< 15.7	
Miami, Florida	< 7.2	< 2.9	< 5.6	< 10.4	< 8.5	< 10.9	< 35.9	< 8.9	< 9.3	< 11.1	< 14.9	< 8.6	
Mauna Loa, Hawaii	< 32.7	< 24.5	< 20.6	< 14.2	< 15.0	< 12.6	< 5.2	< 12.1	< 33.2	< 34.4	< 16.4	< 10.3	
Guayaquil, Ecuador	< 12.4	< 9.4	< 10.0	< 14.4	< 14.4	< 9.8	< 5.2	< 28.5	< 13.6	< 9.3	< 9.9	< 5.7	
Lima, Peru	< 38.7	< 2.9	< 26.6	< 13.1	--	--	--	--	< 37.9	< 7.2	< 8.2	< 17.2	
Tutuila, Samoa	< 11.0	< 9.0	< 31.5	< 11.0	< 4.3	< 6.9	< 5.7	< 13.4	< 11.6	< 13.3	< 8.6	--	
Chacaltaya, Bolivia	< 70.1	< 63.3	< 8.8	< 10.0	< 18.4	< 15.4	< 11.6	< 18.3	< 14.8	< 17.5	< 13.5	< 16.3	
Reunion Island	< 25.1	< 19.9	< 24.8	< 35.7	< 32.4	< 27.4	< 45.2	< 23.2	< 22.0	< 89.3	< 38.9	--	
Antofagasta, Chile	< 9.6	< 10.9	< 12.1	< 3.9	< 9.8	< 10.9	< 6.5	< 13.5	< 12.4	< 14.7	< 15.7	< 9.0	
Pretoria, South Africa	< 34.9	< 25.3	< 25.7	< 77.0	< 45.9	< 36.9	< 35.4	< 60.6	< 72.3	< 77.4	< 38.3	< 29.3	
Isla de Pascua-Easter Is.	< 13.1	< 48.2	< 17.8	< 10.7	< 65.1	< 16.9	< 8.6	< 21.0	< 27.6	< 10.6	< 31.0	< 17.2	
Norfolk Island	< 21.2	< 24.2	< 48.5	< 28.8	< 23.0	< 19.0	< 30.9	< 33.3	< 39.2	< 37.5	< 29.3	< 16.1	
Perth, Australia	< 46.8	< 30.8	< 15.4	< 40.3	< 41.2	< 26.0	< 22.1	< 30.3	< 25.8	< 30.9	< 31.4	< 19.8	
Santiago, Chile	< 73.5	< 51.7	< 8.3	< 27.0	< 60.4	< 15.6	< 18.6	< 88.1	< 25.3	< 5.4	--	< 14.6	
Cape Grim, Tasmania	< 19.2	< 11.6	< 32.5	< 30.8	< 36.2	< 31.8	< 34.3	< 44.2	< 35.1	< 26.6	< 27.9	< 10.8	
Lower Hutt, N.Z.	< 15.9	< 17.4	< 43.4	< 28.4	< 24.2	< 11.6	< 16.6	< 26.0	< 19.2	< 12.4	< 27.5	< 30.0	
Puerto Montt, Chile	< 42.8	< 15.4	< 15.4	< 28.0	< 49.5	< 11.8	< 12.1	--	< **.*	< 15.4	--	--	
Chatham Island	< 19.8	< 20.0	< 54.7	< 24.2	< 19.4	< 19.9	< 26.7	< 28.4	< 17.8	< 63.9	< 26.9	< 22.9	
Invercargill, N.Z.	< 16.3	< 17.5	< 15.0	< 29.8	< 25.7	< 14.4	< 17.3	< 31.8	< 21.0	< 49.0	< 27.6	< 16.6	
Falkland Islands	< 21.8	< 9.7	< 12.7	< 29.7	< 20.4	< 27.7	< 20.1	< 15.6	< 42.9	< 26.6	< 16.0	< 19.5	
Punta Arenas, Chile	< 20.0	< 22.8	< 9.5	< 18.5	< 19.9	< 17.0	< 13.5	< 11.6	< 12.8	< 5.4	< 15.1	< 12.1	
Marsh Base, Antarctica	< 29.6	< 42.9	< 47.5	< 20.8	< 74.0	< 20.6	< 30.2	< 36.8	< 11.5	< 45.3	< 26.4	--	
Palmer, Antarctica	< 16.7	< 5.9	< 27.4	< 21.7	< 7.7	< 22.4	< 14.7	< 30.1	< 34.3	< 20.7	< 13.4	< 21.6	
Mawson, Antarctica	< 41.6	< 28.0	< **.*	< **.*	< 69.3	< 69.2	< 50.6	< 25.8	< 32.2	< 24.3	< 10.8	< 41.1	
South Pole Station	< **.*	< **.*	< 98.1	< 52.4	< 32.6	< 13.7	< 38.9	< 26.3	< 15.3	< 13.1	< 15.0	< 4.9	

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 12
ZIRCONIUM-95 CONCENTRATIONS IN SURFACE AIR
($\mu\text{Bq m}^{-3}$)

Site	1992:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	< 4.9	< 13.0	< 14.1	< 11.6	< 9.7	< 8.9	< 16.5	--	< **.*	< 9.0	< **.*	< 12.7	
Barrow, Alaska	< 4.5	< 7.0	< 8.9	< 19.5	< 8.4	< 29.8	< 8.6	< 3.4	< 18.3	< 18.4	< 8.0	< 11.8	
Constable Pt., Greenland	--	--	--	--	--	< 36.6	< 50.5	< 23.7	< 25.2	< 15.5	< 8.8	< 14.1	
Moosonee, Ontario	< 7.5	< 2.2	< 16.5	< 8.1	< 6.9	< 5.6	< 14.2	< 6.0	< 5.9	< 7.1	< 4.9	< 4.7	
Beaverton, Oregon	< 32.2	< 11.1	< 6.1	< 24.1	< 4.2	< 11.5	< 12.1	< 5.5	< 10.9	< 7.0	< 4.8	< 7.4	
Rexburg, Idaho	< 8.6	< 48.4	< 14.0	< 81.0	< 51.3	< 39.1	< 14.9	< 17.0	< 7.1	< 7.1	< 5.5	< 5.7	
Chester, New Jersey	< 11.3	< 31.3	< 49.9	< 7.7	< 9.7	< 16.5	< 13.5	< 9.0	< 9.6	< 4.5	< 8.0	< 4.0	
New York, New York	< **.*	< 5.6	< 8.7	< 14.8	< 7.8	< 10.4	< 10.0	< 6.0	< 9.0	< 9.4	< 6.5	< 6.6	
Montgomery, Alabama	< 21.8	< 20.8	< **.*	< **.*	< 27.0	< 39.2	< 55.3	< 34.6	< 15.0	--	--	< 4.7	
Miami, Florida	< 7.3	< 2.7	< 13.5	< 6.0	< 3.0	< 10.6	< 29.3	< 14.5	--	< 12.2	< 22.6	< 7.6	
Mauna Loa, Hawaii	< 19.6	< 9.4	< 10.2	< 15.3	< 13.3	< 12.2	< 7.0	< 14.5	< 17.5	< 58.3	< 75.9	< 20.0	
Guayaquil, Ecuador	< 8.9	< 10.5	< 11.6	< 10.9	< 17.7	< 20.8	< 11.1	< 11.8	< 9.3	< 16.4	< 6.6	< 8.5	
Lima, Peru	< 9.5	< 8.2	< 7.7	< 17.9	< 3.8	< 12.0	< 9.8	< 15.1	< 9.4	< 20.9	< 7.2	--	
Tutuila, Samoa	--	< 38.0	< 10.6	< 12.3	< 12.3	< 27.6	< 7.0	< 23.9	< 17.7	< 13.5	< 2.9	< 9.1	
Chacaltaya, Bolivia	< 30.0	< 38.3	< 11.8	< 14.3	< 17.0	< 28.6	< 53.5	< 11.9	< 10.4	< 9.5	< 14.5	< 8.1	
Reunion Island	< 45.5	< 31.3	< 38.0	< 24.1	< 77.0	< 22.1	< 60.9	< 33.3	< 40.0	< **.*	< 24.8	< **.*	
Antofagasta, Chile	< 12.1	< 6.2	< 10.6	< 15.7	< 9.0	< 9.4	< 7.7	< 20.4	< 7.7	< 13.9	< 3.1	< 8.9	
Pretoria, South Africa	< 16.2	< 46.8	< 80.5	< 50.4	< 55.5	< 93.9	< 46.5	< 76.8	< **.*	< **.*	< **.*	< 40.7	
Isla de Pascua-Easter Is.	< 5.2	< 8.5	< **.*	< 16.0	< 40.0	< 38.2	< 16.5	< 28.8	< 22.8	< 9.1	< 23.0	< 9.5	
Norfolk Island	< 32.0	< 52.4	< 33.9	< 52.1	< 62.3	< 18.8	< 30.7	< 13.5	< 27.7	< 24.2	< 22.9	< **.*	
Perth, Australia	< 46.7	< 40.5	< 37.3	< 18.0	< 48.7	< 16.3	< 41.0	< 44.1	< 9.3	< **.*	< 23.6	< **.*	
Santiago, Chile	< 4.5	< 4.0	< 31.1	< 12.6	< 19.8	< 7.5	< 27.2	< 12.0	< 12.6	< 11.9	< 29.9	< 11.4	
Cape Point, South Africa	--	--	--	< 33.1	< 46.0	< **.*	< 55.6	< 50.4	< **.*	< **.*	< 22.1	< 26.3	
Cape Grim, Tasmania	< 20.3	< 35.2	< 27.4	< 18.6	< 39.0	< 52.8	< 38.3	< 77.0	< 18.4	< 34.9	< 21.4	< **.*	
Lower Hutt, N.Z.	< 37.0	< **.*	< 34.3	< 31.3	< 20.1	< 46.8	< 38.1	< 27.6	< **.*	< **.*	< **.*	< **.*	
Puerto Montt, Chile	< 89.2	< 20.0	< 57.4	< 10.6	< 19.3	< 7.9	< 24.0	< 5.9	< 16.2	< 5.3	< 20.4	< 4.4	
Chatham Island	< 20.6	< 23.8	< 25.6	< 45.5	< 32.6	< 27.6	< 19.8	< **.*	< 35.8	< 24.2	< 10.7	< 23.9	
Invercargill, N.Z.	< 35.0	< 63.5	< 37.5	< 31.7	< 69.2	< **.*	< 37.9	< 86.9	< 40.4	< 33.0	< 18.7	< **.*	
Marion Island	--	--	--	< **.*	< **.*	< **.*	< **.*	< **.*	< **.*	< **.*	< **.*	< 98.9	
Falkland Islands	< 11.8	< 30.2	< 58.4	< 24.2	< 85.6	< 35.7	< 29.4	< 65.6	< 50.1	< 16.4	< **.*	< **.*	
Punta Arenas, Chile	< 9.1	< 7.2	< 7.1	< 9.1	< 8.9	< 8.5	< 12.1	< 10.0	< 21.3	< 13.3	< 5.6	< 8.7	
Marsh Base, Antarctica	< 31.7	--	--	< **.*	< 78.8	< 87.8	< 49.9	< 25.1	< 49.0	< **.*	< **.*	< **.*	
Palmer, Antarctica	< **.*	< 14.2	< 36.4	< 28.2	< 50.2	< 79.8	< 42.2	< 23.6	< 18.1	< 24.4	< **.*	< 16.8	
Mawson, Antarctica	< 27.8	< **.*	< **.*	< **.*	< **.*	< **.*	< **.*	< **.*	< **.*	< **.*	< **.*	< **.*	
South Pole Station	< 98.6	< **.*	< **.*	< 74.8	< 86.2	< 68.9	< 39.5	< 19.1	< 14.3	< 11.2	< 10.0	< 6.1	

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 13
ZIRCONIUM-95 CONCENTRATIONS IN SURFACE AIR
($\mu\text{Bq m}^{-3}$)

Site	1993:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	< 3.5	< **.*	< 15.9	< 19.8	< 10.3	< 10.3	< 12.6	< 10.0	< 4.5	< 2.8	< 6.8	< 2.3	< 2.3
Barrow, Alaska	< 6.2	< 3.3	< 4.4	< 1.1	< 36.6	< 5.1	< 28.8	< 3.6	< 5.1	< 7.3	< 5.7	< 12.3	< 12.3
Constable Pt., Greenland	< 23.6	< 38.7	< 15.0	< 77.4	--	--	--	--	--	--	--	--	--
Moosonee, Ontario	< 9.3	< 8.7	< 6.1	< 4.0	< 6.6	< 11.2	< 5.8	< 13.0	< 3.8	< 7.3	< 3.7	< 8.7	< 8.7
Beaverton, Oregon	< **.*	< 4.6	< 28.7	< 8.1	--	< 18.8	< 9.6	< 11.3	< 4.9	< 7.4	< 3.9	< 18.1	< 18.1
Rexburg, Idaho	< 3.0	< 4.9	< 6.2	< 6.6	< 5.7	< 6.1	< 7.7	< 4.4	< 13.1	< 9.4	< 5.7	< 3.0	< 3.0
Chester, New Jersey	< 9.8	< 5.3	< 8.4	< 2.5	< 9.7	< 12.8	< 9.6	< 5.9	< 5.9	< 11.0	< 5.9	< 15.5	< 15.5
New York, New York	< 3.4	< 3.7	< 5.9	< 9.3	< 3.9	< 5.5	< 9.9	< 3.3	< 3.8	< 9.5	< 4.6	< 3.6	< 3.6
Montgomery, Alabama	< 59.2	< 30.5	< 22.3	< 7.3	< 8.1	< 22.1	< 34.1	< 11.9	< **.*	< 4.9	< 4.1	< 3.4	< 3.4
Miami, Florida	< 19.5	< 11.5	< 5.9	< 10.6	< 3.5	< 9.4	--	< 9.9	< 5.7	< 5.7	< 8.1	< 3.2	< 3.2
Mauna Loa, Hawaii	< 5.4	< 8.9	< 11.6	< 6.9	< 11.1	< 2.5	< 45.0	< 18.7	< 14.0	< 2.7	< 10.3	< 14.0	< 14.0
Guayaquil, Ecuador	< 4.1	< 5.2	< 8.7	< 5.2	< 9.2	< 13.0	< 5.8	< 11.6	< 14.3	< 16.4	< 9.2	< 8.1	< 8.1
Lima, Peru	< 7.7	< 6.4	< 8.1	< 5.4	< 6.6	< 8.4	< 54.9	< 4.0	< 9.3	< 6.4	< 4.9	< 16.2	< 16.2
Tutuila, Samoa	< 7.6	< 6.5	< 7.7	< 9.3	< 20.0	< 13.6	< 51.6	< 4.6	< 5.7	< 4.8	< 4.9	< 4.7	< 4.7
Chacaltaya, Bolivia	< 19.2	< 12.6	< 12.5	< 14.6	< 17.3	< 18.2	< 9.7	< 14.9	< 14.8	< 19.7	< 16.2	< 35.8	< 35.8
Reunion Island	--	--	--	--	< 20.1	--	--	< 19.9	--	< 82.6	--	--	--
Antofagasta, Chile	< 3.0	< 5.3	< 8.2	< 17.9	< 9.0	< 13.5	< **.*	< 8.6	< 3.7	< 10.0	< 4.6	< 10.7	< 10.7
Pretoria, South Africa	< **.*	< **.*	< 86.2	--	--	--	--	--	--	--	--	--	--
Isla de Pascua-Easter Is.	< 23.9	< 7.6	< 4.4	< 7.7	< 6.4	< 12.2	< 22.1	< 7.4	--	--	--	--	--
Norfolk Island	< 23.5	< 21.4	< **.*	< 29.7	< 13.4	--	< 90.0	< 17.0	< 34.4	--	< 18.7	--	--
Perth, Australia	--	--	< 25.4	< 15.4	< 35.9	--	--	< 20.2	< 16.5	--	--	--	--
Durazno, Uruguay	--	--	< 14.6	< 34.8	< 37.8	< 17.5	--	< 4.6	< 4.1	< 6.9	< 0.8	< 24.0	< 24.0
Santiago, Chile	< 6.4	< 15.5	< 9.8	< 19.8	< 8.7	< 22.8	< 17.4	< 26.9	< 7.1	--	--	--	--
Cape Point, South Africa	--	--	--	--	--	--	--	--	--	--	--	--	--
Cape Grim, Tasmania	< 32.1	< 36.1	< **.*	< 16.1	< 21.1	--	--	< 16.0	< 33.0	< 53.5	--	--	--
Lower Hutt, N.Z.	< 31.3	< 18.0	--	< **.*	< 15.5	--	--	--	< 18.3	< 53.0	< 20.0	--	--
Puerto Montt, Chile	< 61.9	< 9.4	< 11.5	< 80.7	< 13.8	< 12.0	< **.*	< 21.7	--	--	--	< 24.9	< 24.9
Chatham Island	< 16.3	< **.*	--	< 36.0	< 16.3	--	--	< 13.0	< 23.8	< 69.8	< 21.8	< 19.8	< 19.8
Invercargill, N.Z.	< 18.9	--	--	< 11.9	< 24.5	< **.*	--	< 38.1	< 19.6	< 35.5	--	--	--
Marion Island	< **.*	< 53.0	--	--	--	--	--	--	--	--	--	--	--
Falkland Islands	< 12.4	--	--	< 21.3	< 17.6	--	--	< 42.5	< 57.7	< 50.0	--	--	--
Punta Arenas, Chile	< 9.5	< 24.4	< 13.2	< 19.1	< 4.3	< 27.3	< 5.7	< 10.4	--	--	--	--	--
Marsh Base, Antarctica	--	--	--	--	--	--	--	--	--	--	--	--	--
Palmer, Antarctica	< 16.3	--	--	--	--	--	--	< 18.2	--	--	--	--	--
Mawson, Antarctica	--	--	--	--	--	--	--	--	--	--	--	--	--
South Pole Station	< 29.3	--	--	--	--	--	--	--	--	--	< 10.4	< 40.3	< 40.3

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 14
CESIUM-137 CONCENTRATIONS IN SURFACE AIR
($\mu\text{Bq m}^{-3}$)

Site	1990:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	<	1.5	< 2.7	< 1.4	< 1.2	< 1.4	< 2.3	--	< 2.9	< 1.4	< 2.3	< 2.1	< 3.0
Barrow, Alaska	<	1.6	< 1.0	< 0.9	< 0.6	< 0.8	< 1.1	< 1.5	< 1.3	< 1.1	< 1.0	< 0.5	< 1.1
Constable Pt., Greenland	<	2.7	< 3.1	< 3.5	2.9 ^a	< 3.9	< 3.5	--	--	< 1.7	< 3.9	< 2.7	< 1.9
Moosonee, Ontario	<	2.2	< 1.3	< 1.9	--	--	--	2.6 ^a	< 1.3	< 3.1	< 1.4	< 1.1	< 2.1
Beaverton, Oregon	<	1.6	< 2.3	< 2.3	< 0.9	< 2.3	< 1.5	< 1.8	< 1.5	< 1.4	< 1.1	< 0.9	< 2.4
Rexburg, Idaho	<	3.2	< 2.8	1.4 ^a	< 3.0	2.6 ^a	< 1.4	< 1.9	< 1.2	< 2.4	< 1.5	< 1.9	< 1.8
Chester, New Jersey	--	< 2.5	< 1.1	< 2.7	< 1.2	< 1.8	< 1.1	< 2.6	< 2.6	< 1.3	< 1.0	< 0.8	
New York, New York	--	--	--	--	--	--	< 2.4	< 0.6	--	< 1.9	< 0.7	< 1.1	< 1.3
Montgomery, Alabama	<	1.5	1.3 ^a	< 2.2	< 1.7	< 1.8	< 1.4	< 1.3	< 2.1	< 1.6	< 1.6	< 2.0	0.7 ^a
Miami, Florida	<	3.1	< 1.9	< 2.3	< 2.6	< 2.5	< 2.0	< 1.3	2.1 ^a	< 2.3	< 1.1	< 0.7	< 1.7
Mauna Loa, Hawaii	<	2.8	< 2.6	< 1.8	< 2.6	< 2.4	< 1.0	< 3.2	< 2.5	< 1.2	< 2.3	< 3.7	< 1.2
Guayaquil, Ecuador	<	1.4	< 3.1	< 1.5	< 1.5	< 1.1	< 1.3	< 2.6	< 1.0	< 0.6	< 1.9	< 1.8	< 1.7
Lima, Peru	<	2.0	< 1.9	< 1.4	< 1.8	< 3.0	< 3.0	< 2.5	< 1.4	< 1.4	< 2.5	< 1.6	< 1.6
Tutuila, Samoa	<	1.3	< 1.3	< 1.5	< 1.5	< 1.0	< 2.8	< 1.7	< 1.3	< 1.6	< 2.4	< 1.8	< 0.8
Chacaltaya, Bolivia	<	2.5	< 3.1	4.7 ^a	< 5.6	< 2.1	< 1.4	< 2.1	< 4.1	< 3.6	< 3.4	< 3.3	< 5.0
Reunion Island	--	--	--	--	--	--	--	--	--	--	--	< 4.5	< 4.0
Antofagasta, Chile	<	1.7	--	< 2.1	< 3.1	< 3.1	< 1.4	< 0.8	< 1.2	< 1.5	< 2.1	< 1.8	< 2.3
Pretoria, South Africa	--	--	--	--	--	--	--	--	--	--	--	< 7.4	< 5.1
Isla de Pascua-Easter Is.	<	2.3	2.5 ^a	< 1.6	< 2.4	< 1.9	< 2.8	< 0.8	< 1.7	< 3.1	< 2.2	< 1.7	< 2.1
Norfolk Island	<	2.5	< 3.3	< 1.9	< 1.6	< 1.8	< 1.8	< 2.9	< 3.3	< 3.2	< 2.7	< 2.9	< 2.6
Perth, Australia	<	2.2	< 2.1	< 2.8	< 1.8	< 1.7	< 2.9	< 3.3	< 3.5	< 2.7	< 2.7	< 3.9	< 3.7
Santiago, Chile	<	2.2	< 1.1	3.1 ^a	< 2.8	< 2.3	< 2.3	< 2.1	< 3.4	< 2.4	< 1.5	< 1.8	< 2.0
Cape Grim, Tasmania	<	2.1	< 1.9	< 1.7	< 1.4	< 1.5	< 2.0	< 3.0	< 1.9	< 2.6	< 1.5	< 1.8	< 2.3
Lower Hutt, N.Z.	<	2.3	< 1.8	< 1.5	< 1.8	< 1.8	< 1.5	< 2.8	< 3.4	< 2.9	< 2.9	< 2.1	< 3.1
Puerto Montt, Chile	<	1.5	< 1.3	< 2.3	< 3.1	< 2.5	< 1.5	< 1.9	2.2 ^a	< 0.9	< 1.6	< 1.3	< 1.2
Chatham Island	<	2.3	< 1.9	< 2.4	< 1.2	< 1.8	< 1.7	< 2.9	< 2.6	< 3.2	< 2.5	< 3.2	< 2.9
Invercargill, N.Z.	<	1.9	< 2.1	< 2.1	< 1.7	< 1.5	< 3.2	< 2.7	< 3.6	< 2.7	< 2.3	< 2.6	< 3.4
Falkland Islands	<	2.5	< 2.4	< 2.2	< 1.5	< 1.6	< 1.6	< 3.3	< 3.5	< 1.7	< 1.3	< 2.2	< 3.1
Punta Arenas, Chile	1.5 ^a	< 1.9	< 3.7	< 1.7	< 2.6	< 1.8	< 1.5	< 1.6	< 1.6	< 1.7	< 0.7	< 1.7	< 1.2
Marsh Base, Antarctica	--	--	< 19.4	< 1.8	< 1.7	< 1.6	< 1.6	< 1.6	< 2.2	< 1.8	< 2.1	< 2.1	< 1.3
Palmer Station, Antarctica	--	--	--	< 1.3	< 1.3	< 1.5	< 1.2	< 1.4	< 2.4	< 1.4	< 2.1	< 1.1	
Mawson, Antarctica	<	2.8	< 1.9	< 1.4	< 2.0	< 1.8	< 1.8	< 1.5	< 1.6	< 1.7	< 1.5	< 1.7	< 2.6
South Pole Station	<	1.2	< 1.9	< 1.7	< 1.6	< 1.1	< 1.7	< 1.4	< 1.2	< 2.1	< 1.7	< 1.3	< 3.3

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 15
CESIUM-137 CONCENTRATIONS IN SURFACE AIR
($\mu\text{Bq m}^{-3}$)

Site	1991:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland		--	--	--	--	--	< 4.4	< 0.8	< 0.8	< 1.2	< 0.6	< 1.3	< 2.2
Barrow, Alaska	<	2.6	< 2.5	< 1.1	< 1.4	< 1.1	< 1.1	< 1.7	< 0.9	< 2.2	< 0.7	< 0.6	< 2.1
Constable Pt., Greenland		--	--	--	--	--	--	--	--	--	--	< 1.8	< 4.7
Moosonee, Ontario	<	1.9	< 1.1	< 1.7	< 2.5	< 2.9	< 2.3	< 1.2	1.9	< 1.9	< 1.6	< 2.2	< 0.8
Beaverton, Oregon	<	2.7	< 2.5	< 2.3	< 2.2	< 1.8	< 2.7	< 1.5	< 2.8	1.5 ^a	< 1.6	< 0.9	< 1.3
Rexburg, Idaho	<	3.7	< 3.0	< 2.1	2.2 ^a	< 2.1	< 1.9	--	< 2.5	< 2.1	< 1.7	< 0.7	< 1.1
Chester, New Jersey	<	0.9	1.2	< 1.1	< 2.0	< 1.6	< 1.6	< 2.3	< 2.1	< 1.7	< 1.2	1.2 ^a	< 1.3
New York, New York	<	1.6	< 1.9	< 1.5	< 2.4	< 1.1	< 1.1	< 0.9	< 0.9	< 1.2	1.1 ^a	< 1.4	< 1.6
Montgomery, Alabama	<	4.6	< 1.5	< 2.5	< 2.6	< 1.2	< 1.8	< 1.7	< 1.8	< 2.5	< 1.7	--	< 1.5
Miami, Florida	<	1.7	1.6 ^a	< 1.8	< 3.2	< 2.6	< 2.5	< 3.3	< 2.5	< 1.3	< 2.3	< 2.6	< 1.9
Mauna Loa, Hawaii	<	4.0	< 3.4	< 1.5	< 1.7	< 2.4	< 3.1	< 1.3	< 2.4	< 3.3	< 3.0	< 2.8	< 1.8
Guayaquil, Ecuador	<	2.8	< 2.8	< 1.9	< 2.8	< 2.7	< 2.5	< 1.4	< 2.4	< 1.4	< 1.3	< 2.0	< 1.3
Lima, Peru	<	4.4	< 1.0	< 2.1	< 1.5	--	--	--	--	< 1.9	< 0.9	< 1.4	< 3.9
Tutuila, Samoa	<	1.5	< 1.7	< 2.6	< 1.3	< 0.8	< 1.0	< 1.5	< 1.2	< 1.3	< 2.2	< 1.4	--
Chacaltaya, Bolivia	<	4.9	< 5.2	< 1.6	< 1.2	< 3.1	< 4.3	< 1.2	< 2.1	< 1.8	< 2.5	< 2.7	< 3.0
Reunion Island	<	4.9	< 4.8	< 3.1	< 4.7	< 4.0	< 4.0	< 2.7	< 3.7	< 3.6	< 3.4	< 5.2	--
Antofagasta, Chile	<	2.0	< 3.3	< 3.2	< 0.8	< 1.2	< 1.8	< 1.5	< 3.0	< 1.6	< 1.7	< 3.0	< 1.8
Pretoria, South Africa	<	4.9	< 5.1	< 4.9	< 4.7	< 4.8	< 4.9	< 3.1	< 2.7	< 3.5	< 5.2	< 4.9	< 5.3
Isla de Pascua-Easter Is.	<	2.9	< 4.2	< 2.3	< 1.1	< 1.7	< 1.4	1.7 ^a	< 1.3	< 3.0	< 1.4	< 3.3	< 2.9
Norfolk Island	<	2.7	< 3.4	< 3.9	< 2.9	< 3.1	< 3.0	< 2.2	< 3.5	< 1.9	< 2.5	< 2.4	< 2.0
Perth, Australia	<	4.3	< 3.1	< 2.8	< 2.6	< 3.2	1.3 ^c	< 2.3	< 3.4	< 2.2	< 2.7	< 3.2	< 3.4
Santiago, Chile	<	3.8	< 4.1	< 1.4	< 2.5	< 3.7	< 1.3	< 2.1	< 3.4	< 2.1	< 0.8	--	< 1.9
Cape Grim, Tasmania	<	2.4	< 2.1	< 2.1	0.6 ^c	< 1.9	< 2.8	0.9 ^c	< 1.9	< 2.0	< 2.5	< 3.2	< 2.5
Lower Hutt, N.Z.	<	3.3	< 2.3	< 3.3	< 2.7	< 3.1	< 3.0	< 1.4	1.4 ^c	< 2.5	< 2.8	< 2.6	< 2.2
Puerto Montt, Chile	<	1.9	1.7 ^a	< 2.0	< 3.1	< 2.8	< 1.3	< 1.6	--	< 1.9	< 1.6	--	--
Chatham Island	<	2.3	< 3.2	< 3.9	< 2.7	< 2.8	< 3.9	< 1.6	< 2.8	< 2.7	< 3.7	< 2.4	< 2.7
Invercargill, N.Z.	<	2.4	< 2.8	< 2.8	< 2.8	< 3.9	< 2.9	< 1.9	< 2.4	< 2.5	< 2.2	< 2.4	0.5 ^c
Falkland Islands	<	3.4	< 2.2	< 1.9	< 3.5	< 2.8	< 1.6	< 1.5	< 1.5	< 1.7	< 1.3	< 1.8	< 2.3
Punta Arenas, Chile	<	1.7	< 2.2	< 1.1	< 1.9	< 1.6	< 1.5	< 2.3	< 1.4	< 1.2	< 0.7	< 1.7	< 1.1
Marsh Base, Antarctica		0.5 ^c	< 2.2	0.4 ^c	< 1.8	< 1.6	< 1.3	< 1.7	< 1.7	0.8 ^c	< 2.0	< 2.0	< 3.4
Palmer, Antarctica	<	2.5	< 1.3	< 1.3	< 1.6	< 1.4	1.0 ^c	0.9 ^c	< 1.4	< 1.3	< 1.5	< 1.4	--
Mawson, Antarctica	<	2.6	0.7 ^c	< 1.9	< 1.9	0.8 ^c	< 2.0	< 1.8	0.5 ^c	< 2.2	< 2.3	< 1.4	< 3.0
South Pole Station	<	1.7	< 1.9	< 1.7	< 1.6	< 1.4	< 0.9	< 2.5	< 2.7	< 2.3	< 1.2	< 2.1	< 0.9

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 16
CESIUM-137 CONCENTRATIONS IN SURFACE AIR
($\mu\text{Bq m}^{-3}$)

Site	1992:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	<	1.1	< 0.7	< 1.4	< 1.3	< 1.1	< 1.3	< 1.8	--	< 2.2	< 1.3	< 1.4	< 1.5
Barrow, Alaska	<	1.2	< 1.1	< 1.2	< 1.5	< 1.1	< 2.5	< 0.7	< 0.6	< 2.1	< 1.1	< 0.7	< 1.5
Constable Pt., Greenland	--	--	--	--	--	--	< 2.2	< 2.0	< 2.2	< 1.4	< 2.3	< 1.5	< 3.1
Moosonee, Ontario	<	2.0	1.1 ^a	< 2.2	< 2.5	< 1.1	2.0 ^a	< 2.1	< 1.3	< 1.3	< 1.6	< 1.3	< 1.5
Beaverton, Oregon	<	2.0	< 0.7	< 1.2	< 2.7	< 0.6	< 1.7	< 1.0	1.8	< 1.3	< 1.1	< 1.4	< 2.2
Rexburg, Idaho	<	2.2	< 2.5	< 1.7	< 2.6	< 3.0	< 2.8	< 1.5	< 2.8	< 1.6	< 1.4	< 1.3	< 0.7
Chester, New Jersey	<	2.3	< 2.2	< 1.1	< 1.4	< 2.6	< 2.2	< 1.4	< 0.7	< 1.3	< 0.8	< 2.0	< 1.0
New York, New York	<	1.2	< 1.5	1.4 ^a	< 2.2	< 1.2	< 1.2	< 1.5	< 1.3	< 1.4	< 1.6	< 1.4	< 1.1
Montgomery, Alabama	<	1.3	< 1.9	< 1.9	< 5.2	< 1.9	< 2.8	< 4.4	< 2.8	< 1.4	--	--	< 0.6
Miami, Florida	<	2.3	< 1.1	< 2.2	< 1.2	< 1.4	< 1.3	< 3.0	< 2.5	--	< 0.9	< 1.9	1.9 ^a
Mauna Loa, Hawaii	<	2.9	< 2.1	< 1.0	< 2.3	< 2.4	< 2.1	< 1.4	< 2.2	< 3.0	< 3.8	< 5.7	< 4.2
Guayaquil, Ecuador	<	1.6	< 2.4	< 2.6	< 3.1	< 1.4	< 1.3	< 2.9	< 1.6	< 1.1	< 2.6	< 1.8	< 2.6
Lima, Peru	<	2.7	< 2.6	< 1.6	< 2.7	< 0.7	< 1.6	< 2.5	< 1.4	< 1.6	< 3.0	< 1.4	--
Tutuila, Samoa	--	< 3.0	< 2.3	< 1.5	< 1.3	< 1.7	< 0.8	< 1.4	< 2.3	< 1.4	< 0.6	< 2.8	
Chacaltaya, Bolivia	<	6.2	< 6.0	< 1.7	< 2.8	< 1.6	< 2.4	< 4.4	< 1.2	< 1.5	< 2.1	< 3.9	< 1.3
Reunion Island	<	2.2	< 2.4	< 3.7	< 1.7	< 3.2	< 2.8	< 2.8	< 3.7	< 4.1	< 2.4	< 3.4	< 2.6
Antofagasta, Chile	<	2.6	< 1.3	< 1.7	< 2.8	< 1.9	< 1.6	< 1.4	< 3.0	< 1.5	< 2.1	< 0.7	< 3.0
Pretoria, South Africa	<	4.9	< 3.0	< 2.5	< 2.1	< 2.3	< 3.5	< 3.8	< 3.4	< 3.5	< 2.2	< 3.2	< 2.7
Isla de Pascua-Easter Is.	<	0.9	< 1.8	< 2.6	< 3.2	< 1.7	< 2.2	< 1.5	< 3.2	< 3.3	< 1.6	< 3.3	< 1.6
Norfolk Island	<	2.1	< 4.0	< 3.2	< 2.2	< 2.3	< 2.5	< 2.5	< 3.4	< 4.2	< 2.7	< 3.8	< 2.0
Perth, Australia	<	3.6	< 4.5	< 3.2	< 4.3	< 3.1	< 2.1	< 3.4	< 3.0	< 2.2	< 1.6	< 3.7	< 3.3
Santiago, Chile	<	0.7	< 1.0	< 2.6	< 3.6	< 1.6	< 0.9	< 2.1	< 1.6	< 1.7	< 1.4	< 3.0	< 2.2
Cape Point, South Africa	--	--	--	< 1.5	< 2.2	< 3.2	< 2.9	< 2.9	< 1.8	< 2.1	< 3.1	< 3.6	
Cape Grim, Tasmania	<	2.3	< 3.0	< 2.8	< 4.7	< 2.0	< 2.6	< 3.2	< 2.3	< 2.8	< 3.5	< 3.2	< 2.2
Lower Hutt, N.Z.	<	2.4	< 2.4	< 2.4	< 2.2	< 2.3	< 2.4	< 2.8	< 2.7	< 3.1	< 2.2	< 2.1	< 1.7
Puerto Montt, Chile	<	6.0	< 2.0	< 3.0	< 1.9	< 1.7	< 1.4	< 2.3	< 0.8	< 1.9	< 0.9	< 2.8	< 0.8
Chatham Island	<	2.5	< 2.3	< 2.1	< 3.1	< 1.9	< 1.9	< 2.3	< 2.1	< 3.9	< 3.2	< 2.1	< 3.9
Invercargill, N.Z.	<	1.9	< 5.4	< 5.0	< 7.7	< 2.2	< 4.3	< 2.8	< 6.1	< 6.8	< 3.1	< 3.8	< 1.7
Marion Island	--	--	--	< 2.7	< 1.8	< 2.6	< 1.8	< 2.2	< 2.5	< 2.2	< 2.4	< 1.8	
Falkland Islands	<	1.4	< 2.1	< 2.0	< 1.7	< 2.3	< 2.0	< 2.8	< 2.1	< 2.9	< 2.6	< 1.7	< 1.9
Punta Arenas, Chile	<	1.4	< 1.6	< 1.0	< 1.6	< 1.0	< 1.3	< 1.6	< 1.3	< 1.9	< 2.9	< 0.7	< 1.8
Marsh Base, Antarctica	<	1.4	--	--	< 1.4	< 1.7	< 1.9	< 1.9	< 1.8	< 2.3	< 2.2	< 1.5	< 1.6
Palmer, Antarctica	<	1.4	< 1.0	< 0.9	< 1.3	< 1.2	< 1.3	< 1.2	< 1.8	< 1.7	< 1.7	< 2.0	< 1.9
Mawson, Antarctica	<	2.0	< 2.0	< 2.2	< 1.7	< 1.8	< 2.2	< 2.0	< 2.0	< 1.8	< 1.9	< 2.3	< 2.5
South Pole Station	<	3.7	< 1.3	< 2.4	< 1.8	< 1.8	< 2.7	< 1.9	< 1.2	< 1.2	< 1.8	< 2.0	< 1.7

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 17
CESIUM-137 CONCENTRATIONS IN SURFACE AIR
($\mu\text{Bq m}^{-3}$)

Site	1993:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	< 0.9	< 2.3	< 2.0	< 2.0	< 0.6	< 1.1	< 1.0	< 1.4	< 0.8	< 0.8	< 1.3	< 0.6	< 0.6
Barrow, Alaska	< 1.3	< 0.9	< 1.1	< 0.9 ^a	< 1.9	< 0.5	< 0.6	< 0.7	< 1.1	< 2.0	< 0.6	< 1.7	
Constable Pt., Greenland	< 3.0	< 2.0	< 2.1	< 2.7	--	--	--	--	--	--	--	--	--
Moosonee, Ontario	< 2.3	< 2.5	< 1.4	< 1.2	< 1.5	< 1.1	< 0.8 ^a	< 2.2	< 0.9	< 1.9	< 1.2	< 2.2	
Beaverton, Oregon	< 2.5	< 1.2	< 1.7	< 1.1	--	< 1.8	< 1.3	< 2.7	< 1.4	< 1.6	< 1.1	< 2.1	
Rexburg, Idaho	< 0.7	< 1.6	< 1.4	< 2.0	< 1.1	< 1.8	< 1.3	< 0.7	< 2.7	< 1.8	< 1.7	< 1.2	
Chester, New Jersey	< 0.8	< 1.2	< 1.7	< 0.8	< 0.7	< 1.4	< 1.3	< 1.1	< 1.3	< 2.0	< 1.5	< 1.3	
New York, New York	< 0.8	< 1.2	< 1.6 ^a	< 1.2	< 0.7	< 1.4	< 1.6	< 0.6	< 1.1	< 1.4	< 1.5	< 1.4	
Montgomery, Alabama	< 2.8	< 1.6	< 1.6	< 1.2	< 1.5	< 1.4	< 2.2	< 1.4	< 22.3	< 1.5	< 1.4	< 1.6	
Miami, Florida	< 3.2	< 3.6	< 0.9	< 1.1	< 0.7	< 1.3 ^a	--	< 1.9	< 1.8	< 1.8	< 2.3	< 1.4	
Mauna Loa, Hawaii	< 1.2	< 2.1	< 2.0	< 2.0	< 1.4	< 0.8	< 4.1	< 3.4	< 2.5	< 0.8	< 3.1	< 3.6	
Guayaquil, Ecuador	< 0.8	< 1.5	< 1.7	< 1.5	< 1.3	< 1.5	< 0.8	< 2.1	< 2.5	< 2.5	< 2.6	< 2.2	
Lima, Peru	< 1.7	< 2.2	< 1.7	< 1.6	< 1.5	< 0.9	< 1.2	< 0.8	< 1.2	< 1.3	< 1.4	< 2.6	
Tutuila, Samoa	< 2.2	< 2.3	< 1.4	< 1.6	< 1.3	< 1.6	< 1.2	< 0.9	< 1.3	< 1.2	< 1.6	< 1.8	
Chacaltaya, Bolivia	< 4.2	< 3.0	< 3.0	< 2.5	< 2.3	< 1.9	< 1.2	< 2.3	< 2.6	< 4.0	< 4.1	< 4.6	
Reunion Island	--	--	--	--	< 2.9	--	--	< 3.2	--	< 4.1	--	--	
Antofagasta, Chile	< 0.6	< 1.4	< 1.5	< 3.0	< 1.5	< 1.4	< 2.4	< 1.8	< 0.8	< 2.7	< 1.4	< 3.0	
Pretoria, South Africa	< 3.4	< 3.2	< 3.8	--	--	--	--	--	--	--	--	--	
Isla de Pascua-Easter Is.	< 1.8	< 1.0	< 1.2	< 1.5	< 1.6	< 1.3	< 1.4	< 1.2	--	--	--	--	
Norfolk Island	< 3.1	< 3.2	< 2.2	< 2.5	< 2.6	--	< 3.1	< 3.1	< 4.2	--	< 2.9	--	
Perth, Australia	--	--	< 3.8	< 3.9	< 4.8	--	--	< 3.0	< 3.5	--	--	--	
Durazno, Uruguay	--	--	< 2.2	< 2.7	< 2.2	< 1.9	--	< 0.9	< 0.9	< 1.3	< 0.3	< 2.7	
Santiago, Chile	< 1.1	< 1.7	< 1.9	< 1.9	< 2.4	< 1.9	< 1.9	< 3.7	< 1.4	--	--	--	
Cape Point, South Africa	--	--	--	--	--	--	--	--	--	--	--	--	
Cape Grim, Tasmania	< 3.8	< 3.5	< 2.0	< 3.2	< 3.3	--	--	< 2.9	< 3.4	< 2.9	--	--	
Lower Hutt, N.Z.	< 3.4	< 3.0	--	< 3.3	< 3.4	--	--	< 2.9	< 2.9	< 2.8	< 2.4	--	
Puerto Montt, Chile	< 2.3	< 1.8	< 2.6	< 3.6	< 1.9	< 1.4	< 2.4	< 2.5	--	--	--	< 2.7	
Chatham Island	< 1.7	< 2.8	--	< 2.8	< 3.3	--	--	< 2.9	< 3.7	< 3.3	< 2.9	< 3.8	
Invercargill, N.Z.	< 2.9	--	--	< 2.9	< 3.7	< 2.1	--	< 3.4	< 3.5	< 3.2	--	--	
Marion Island	< 2.5	< 2.3	--	--	--	--	--	--	--	--	--	--	
Falkland Islands	< 2.0	--	--	< 2.3	< 3.0	--	--	< 2.8	< 5.6	< 2.1	--	--	
Punta Arenas, Chile	< 1.7	< 1.9	< 2.5	< 1.7	< 1.1	< 2.3	< 0.7	< 1.7	--	--	--	--	
Marsh Base, Antarctica	--	--	--	--	--	--	--	--	--	--	--	--	
Palmer, Antarctica	< 1.5	--	--	--	--	--	--	< 1.6	--	--	--	--	
Mawson, Antarctica	--	--	--	--	--	--	--	--	--	--	--	--	
South Pole Station	< 1.2	--	--	--	--	--	--	--	--	--	< 2.0	< 3.8	

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 18
CERIUM-144 CONCENTRATIONS IN SURFACE AIR
($\mu\text{Bq m}^{-3}$)

Site	1990:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	< 6.2	< 12.7	< 6.6	< 4.7	< 5.7	< 12.0	--	< 10.6	< 7.0	< 10.7	< 9.0	< 11.2	
Barrow, Alaska	< 6.5	< 3.3	< 3.3	< 2.4	< 3.2	< 3.5	< 5.7	< 4.7	< 4.7	< 3.9	< 1.8	< 5.3	
Constable Pt., Greenland	< 13.3	< 11.5	< 13.7	< 5.9	< 11.9	< 19.9	--	--	< 7.6	< 17.5	< 14.2	< 7.9	
Moosonee, Ontario	< 8.1	< 5.9	< 6.2	--	--	--	< 7.6	< 4.2	< 8.7	< 6.0	< 4.2	< 7.4	
Beaverton, Oregon	< 6.3	< 9.0	< 8.0	< 3.6	< 8.3	< 5.8	< 6.0	< 5.7	< 6.2	< 3.5	< 3.2	< 8.2	
Rexburg, Idaho	< 12.5	< 11.6	< 3.1	< 12.9	< 4.2	< 5.6	< 8.2	< 4.9	< 8.9	< 5.8	< 9.8	< 8.8	
Chester, New Jersey	--	< 11.2	< 4.1	< 10.8	< 4.6	< 6.7	< 4.4	< 10.3	< 10.2	< 6.9	< 4.5	< 3.1	
New York, New York	--	--	--	--	--	< 8.7	< 2.0	--	< 10.4	< 3.3	< 4.8	< 5.2	
Montgomery, Alabama	< 6.2	< 3.4	< 8.9	< 6.9	< 7.8	< 6.4	< 4.8	< 10.2	< 6.6	< 7.4	< 10.2	< 2.9	
Miami, Florida	< 13.1	< 7.9	< 8.7	< 11.2	< 9.6	< 7.5	< 4.8	< 7.3	< 9.7	< 3.8	< 2.4	< 7.5	
Mauna Loa, Hawaii	< 10.7	< 9.5	< 7.4	< 11.7	< 10.5	< 4.0	< 10.6	< 12.4	< 6.3	< 12.5	< 21.1	< 5.1	
Guayaquil, Ecuador	< 6.2	< 14.8	< 5.8	< 6.5	< 4.1	< 4.4	< 9.9	< 3.5	< 2.4	< 8.6	< 8.2	< 7.4	
Lima, Peru	< 7.9	< 8.2	< 4.9	< 7.3	< 12.8	< 15.6	< 10.3	< 5.8	< 6.1	< 12.5	< 8.1	< 7.7	
Tutuila, Samoa	< 4.5	< 5.0	< 6.5	< 5.8	< 4.4	< 11.3	< 6.5	< 5.5	< 7.2	< 10.7	< 9.3	< 4.0	
Chacaltaya, Bolivia	< 8.6	< 12.9	< 12.0	< 23.5	< 8.8	< 6.7	< 8.0	< 14.6	< 21.9	< 16.4	< 19.9	< 29.0	
Reunion Island	--	--	--	--	--	--	--	--	--	--	< 29.5	< 19.0	
Antofagasta, Chile	< 8.3	--	< 7.7	< 12.8	< 12.6	< 5.7	< 3.4	< 6.0	< 7.2	< 9.8	< 8.5	< 8.6	
Pretoria, South Africa	--	--	--	--	--	--	--	--	--	--	< 33.8	< 31.2	
Isla de Pascua-Easter Is.	< 8.2	< 7.3	< 7.5	< 8.4	< 7.9	< 7.3	< 3.7	< 7.6	< 17.9	< 11.1	< 6.4	< 9.7	
Norfolk Island	< 14.2	< 21.5	< 9.7	< 10.4	< 12.8	< 11.0	< 14.7	< 16.4	< 15.2	< 14.3	< 11.6	< 10.2	
Perth, Australia	< 12.3	< 12.8	< 15.0	< 14.4	< 13.4	< 20.7	< 15.1	< 13.2	< 12.7	< 13.9	< 19.3	< 17.2	
Santiago, Chile	< 7.5	< 3.8	< 8.6	< 12.6	< 8.8	< 8.0	< 9.9	< 19.0	< 17.7	< 9.5	< 8.9	< 12.3	
Cape Grim, Tasmania	< 9.3	< 10.8	< 10.7	< 9.3	< 9.8	< 10.9	< 13.5	< 7.0	< 12.7	< 8.3	< 11.6	< 10.2	
Lower Hutt, N.Z.	< 12.1	< 10.5	< 9.6	< 12.8	< 14.3	< 8.1	< 12.1	< 14.3	< 15.5	< 16.7	< 13.9	< 12.7	
Puerto Montt, Chile	< 5.4	< 5.3	< 9.9	< 11.3	< 9.2	< 7.3	< 9.5	< 7.7	< 4.3	< 7.0	< 6.9	< 6.5	
Chatham Island	< 12.2	< 10.3	< 11.6	< 9.5	< 11.6	< 14.7	< 13.2	< 14.3	< 17.1	< 13.0	< 13.8	< 16.2	
Invercargill, N.Z.	< 10.4	< 11.2	< 11.8	< 12.9	< 12.1	< 17.0	< 13.0	< 14.8	< 11.6	< 9.7	< 11.4	< 16.6	
Falkland Islands	< 10.8	< 12.7	< 12.0	< 11.2	< 10.0	< 10.6	< 14.3	< 14.7	< 8.6	< 9.0	< 10.5	< 13.3	
Punta Arenas, Chile	< 4.8	< 7.7	< 13.0	< 7.1	< 12.3	< 6.5	< 8.3	< 7.6	< 10.9	< 3.0	< 11.7	< 5.4	
Marsh Base, Antarctica	--	--	< **.*	< 18.3	< 12.3	< 9.8	< 7.9	< 13.3	< 9.7	< 9.7	< 12.6	< 6.7	
Palmer Station, Antarctica	--	--	--	< 10.2	< 8.5	< 8.2	< 6.9	< 7.0	< 12.7	< 7.4	< 9.4	< 4.6	
Mawson, Antarctica	< 15.2	< 17.6	< 15.6	< 21.6	< 17.2	< 15.6	< 13.1	< 13.4	< 11.7	< 10.8	< 11.6	< 15.6	
South Pole Station	< 4.2	< 15.1	< 14.0	< 11.1	< 6.1	< 10.6	< 6.6	< 4.8	< 8.1	< 8.0	< 5.0	< 12.3	

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 19
CERIUM-144 CONCENTRATIONS IN SURFACE AIR
($\mu\text{Bq m}^{-3}$)

Site	1991:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	--	--	--	--	--	--	< 26.4	< 2.9	< 4.7	< 4.7	< 2.6	< 5.9	< 13.3
Barrow, Alaska	< 11.3	< 10.4	< 5.4	< 6.9	< 3.6	< 5.1	< 5.9	< 2.7	< 8.7	< 3.3	< 2.1	< 9.9	
Constable Pt., Greenland	--	--	--	--	--	--	--	--	--	< 6.2	< 9.5	< 24.2	
Moosonee, Ontario	< 6.5	< 3.9	< 6.8	< 11.5	< 13.9	< 7.1	< 3.8	< 1.7	< 6.5	< 7.2	< 11.3	< 3.5	
Beaverton, Oregon	< 8.8	< 10.1	< 8.8	< 9.0	< 6.9	< 11.2	< 4.6	< 15.2	< 3.7	< 7.4	< 4.1	< 5.9	
Rexburg, Idaho	< 10.8	< 13.9	< 7.9	< 4.1	< 9.4	< 8.8	--	< 12.7	< 9.5	< 6.7	< 2.5	< **.*	
Chester, New Jersey	< 3.4	< 1.5	< 4.4	< 7.0	< 7.3	< 6.6	< 10.0	< 7.6	< 9.0	< 6.8	< 4.1	< 6.1	
New York, New York	< 6.3	< 6.3	< 5.9	< 9.8	< 4.4	< 4.3	< 3.6	< 3.8	< 5.4	< 3.0	< 5.3	< 6.1	
Montgomery, Alabama	< 19.9	< 6.8	< 13.7	< 12.4	< 5.2	< 7.2	< 7.4	< 10.0	< 14.7	< 10.1	--	< 8.2	
Miami, Florida	< 7.0	< 3.9	< 8.7	< 10.5	< 10.7	< 10.8	< 16.4	< 10.7	< 6.2	< 11.6	< 14.1	< 6.8	
Mauna Loa, Hawaii	< 18.6	< 13.0	< 6.6	< 7.1	< 11.9	< 11.0	< 4.8	< 10.3	< 11.7	< 11.8	< 10.7	< 7.3	
Guayaquil, Ecuador	< 12.1	< 12.5	< 7.4	< 12.4	< 11.0	< 10.8	< 4.4	< 13.4	< 7.1	< 6.3	< 7.6	< 4.6	
Lima, Peru	< 21.1	< 4.0	< 9.0	< 7.3	--	--	--	--	< 11.7	< 3.4	< 6.8	< 18.9	
Tutuila, Samoa	< 6.4	< 6.8	< 12.3	< 4.9	< 3.2	< 4.2	< 6.1	< 6.4	< 6.6	< 7.8	< 6.9	--	
Chacaltaya, Bolivia	< 27.2	< 27.1	< 6.8	< 4.5	< 13.9	< 14.6	< 5.0	< 10.1	< 9.1	< 12.3	< 12.3	< 14.2	
Reunion Island	< 24.2	< 19.8	< 14.6	< 24.2	< 19.5	< 19.2	< 13.4	< 17.1	< 15.7	< 23.0	< 23.1	--	
Antofagasta, Chile	< 8.7	< 14.0	< 12.9	< 3.5	< 5.8	< 8.0	< 5.6	< 13.1	< 8.1	< 7.0	< 14.7	< 8.6	
Pretoria, South Africa	< 23.2	< 22.9	< 20.8	< 23.2	< 23.7	< 24.1	< 18.3	< 17.2	< 20.2	< 28.3	< 24.5	< 23.7	
Isla de Pascua-Easter Is.	< 9.4	< 20.7	< 11.0	< 5.3	< 11.5	< 6.4	< 5.7	< 5.9	< 10.2	< 5.1	< 17.7	< 13.5	
Norfolk Island	< 13.1	< 15.2	< 21.2	< 15.7	< 14.3	< 13.0	< 13.7	< 17.1	< 12.0	< 15.5	< 13.1	< 10.8	
Perth, Australia	< 22.0	< 17.8	< 15.6	< 14.2	< 20.7	< 14.7	< 13.2	< 14.8	< 12.0	< 13.5	< 16.3	< 16.7	
Santiago, Chile	< 22.6	< 19.9	< 6.0	< 10.7	< 20.9	< 6.9	< 10.4	< 20.4	< 10.7	< 3.1	--	< 9.1	
Cape Grim, Tasmania	< 11.6	< 9.5	< 9.7	< 9.5	< 11.8	< 13.5	< 8.8	< 11.7	< 12.6	< 11.4	< 16.9	< 11.3	
Lower Hutt, N.Z.	< 13.3	< 12.2	< 19.5	< 14.5	< 14.8	< 13.3	< 7.4	< 13.5	< 10.2	< 12.3	< 13.0	< 13.0	
Puerto Montt, Chile	< 10.9	< 4.5	< 8.9	< 15.2	< 17.2	< 6.3	< 7.8	--	< 11.7	< 8.3	--	--	
Chatham Island	< 12.4	< 13.3	< 18.0	< 12.4	< 14.4	< 18.5	< 9.2	< 13.9	< 11.6	< 23.3	< 12.0	< 13.8	
Invercargill, N.Z.	< 12.8	< 14.0	< 12.1	< 13.3	< 17.2	< 14.5	< 11.2	< 13.6	< 13.1	< 12.4	< 11.3	< 9.5	
Falkland Islands	< 15.9	< 12.0	< 8.4	< 18.1	< 11.6	< 7.6	< 9.3	< 7.9	< 11.8	< 7.3	< 11.2	< 10.9	
Punta Arenas, Chile	< 8.7	< 10.7	< 5.1	< 8.9	< 8.7	< 7.6	< 7.2	< 6.7	< 4.8	< 3.5	< 8.6	< 5.5	
Marsh Base, Antarctica	< 8.5	< 12.5	< 11.4	< 9.6	< 9.8	< 7.5	< 11.0	< 9.3	< 7.0	< 10.8	< 11.2	--	
Palmer, Antarctica	< 10.7	< 6.0	< 6.7	< 7.0	< 6.5	< 6.2	< 5.9	< 8.4	< 9.1	< 7.2	< 6.9	< 7.2	
Mawson, Antarctica	< 17.4	< 15.9	< 14.3	< 13.9	< 11.8	< 13.0	< 11.9	< 8.0	< 12.4	< 11.0	< 6.3	< 16.6	
South Pole Station	< 17.7	< 15.4	< 13.5	< 11.6	< 9.3	< 4.9	< 14.8	< 13.9	< 11.2	< 5.5	< 10.4	< 3.6	

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 20
CERIUM-144 CONCENTRATIONS IN SURFACE AIR
($\mu\text{Bq m}^{-3}$)

Site	1992:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	< 5.3	< 3.1	< 4.7	< 5.1	< 5.6	< 4.8	< 8.6	--	< 16.4	< 5.2	< 11.6	< 6.6	
Barrow, Alaska	< 5.2	< 5.5	< 6.1	< 8.2	< 5.4	< 12.7	< 3.9	< 2.7	< 10.8	< 5.6	< 3.3	< 7.7	
Constable Pt., Greenland	--	--	--	--	--	< 9.6	< 12.6	< 9.6	< 5.9	< 10.5	< 5.8	< 14.4	
Moosonee, Ontario	< 9.4	< 3.1	< 10.5	< 11.1	< 4.4	< 3.7	< 10.0	< 5.5	< 4.9	< 5.8	< 4.7	< 5.9	
Beaverton, Oregon	< 10.8	< 2.8	< 5.6	< 12.7	< 2.8	< 6.4	< 4.2	< 2.9	< 5.5	< 4.6	< 5.6	< 8.9	
Rexburg, Idaho	< 10.2	< 16.7	< 8.7	< 18.2	< 17.2	< 11.3	< 8.1	< 12.2	< 6.0	< 7.0	< 5.1	< 3.0	
Chester, New Jersey	< 10.8	< 13.0	< 6.9	< 6.5	< 11.0	< 11.1	< 7.4	< 3.0	< 6.8	< 3.8	< 6.6	< 3.6	
New York, New York	< 8.4	< 7.1	< 4.0	< 11.8	< 5.2	< 5.9	< 7.2	< 5.9	< 6.6	< 7.7	< 6.2	< 5.4	
Montgomery, Alabama	< 7.4	< 10.2	< 11.6	< 34.0	< 10.8	< 15.6	< 24.5	< 12.2	< 7.3	--	--	< 2.5	
Miami, Florida	< 10.0	< 4.4	< 11.0	< 5.5	< 6.1	< 4.8	< 14.5	< 11.6	--	< 3.8	< 10.4	< 4.6	
Mauna Loa, Hawaii	< 11.9	< 10.1	< 4.0	< 12.1	< 11.3	< 10.7	< 5.3	< 10.8	< 11.1	< 22.9	< 29.8	< 18.0	
Guayaquil, Ecuador	< 8.0	< 11.9	< 12.0	< 12.8	< 8.0	< 7.5	< 12.1	< 7.7	< 5.4	< 13.0	< 6.7	< 11.9	
Lima, Peru	< 12.5	< 12.1	< 7.4	< 14.0	< 3.1	< 8.3	< 11.2	< 6.0	< 5.6	< 13.2	< 5.2	--	
Tutuila, Samoa	--	< 16.3	< 10.3	< 5.1	< 5.4	< 10.0	< 3.9	< 8.2	< 11.7	< 7.5	< 2.1	< 11.0	
Chacaltaya, Bolivia	< 28.7	< 31.4	< 8.5	< 13.8	< 6.5	< 13.3	< 24.7	< 5.0	< 7.3	< 7.3	< 13.4	< 6.3	
Reunion Island	< 11.5	< 13.4	< 18.4	< 9.5	< 19.8	< 13.8	< 16.1	< 18.9	< 25.7	< 27.2	< 18.2	< 25.7	
Antofagasta, Chile	< 12.3	< 5.3	< 8.1	< 13.7	< 8.3	< 8.0	< 6.7	< 14.0	< 5.3	< 8.7	< 2.8	< 13.4	
Pretoria, South Africa	< 18.6	< 16.0	< 17.3	< 14.0	< 17.3	< 28.7	< 20.4	< 20.3	< 26.0	< 21.1	< 24.7	< 20.8	
Isla de Pascua-Easter Is.	< 4.1	< 5.9	< 18.7	< 14.8	< 8.7	< 11.1	< 8.1	< 16.5	< 16.2	< 5.7	< 15.3	< 7.6	
Norfolk Island	< 12.4	< 21.2	< 17.2	< 12.1	< 17.7	< 13.2	< 14.4	< 15.7	< 19.6	< 15.7	< 21.1	< 19.9	
Perth, Australia	< 19.3	< 23.2	< 16.8	< 16.2	< 15.3	< 11.0	< 21.2	< 18.8	< 11.2	< 21.6	< 22.4	< 27.8	
Santiago, Chile	< 2.6	< 4.3	< 10.9	< 17.0	< 9.9	< 3.5	< 12.6	< 6.1	< 6.6	< 6.8	< 16.9	< 9.8	
Cape Point, South Africa	--	--	--	< 9.5	< 12.4	< 32.9	< 18.3	< 19.2	< 16.9	< 26.6	< 16.5	< 16.4	
Cape Grim, Tasmania	< 15.7	< 13.8	< 13.6	< 17.8	< 10.2	< 13.7	< 16.9	< 19.5	< 14.1	< 19.8	< 16.9	< 18.2	
Lower Hutt, N.Z.	< 14.6	< 15.8	< 11.8	< 11.5	< 12.3	< 16.3	< 16.8	< 14.0	< 24.6	< 29.0	< 24.5	< 16.7	
Puerto Montt, Chile	< 33.5	< 9.8	< 16.4	< 8.4	< 6.6	< 4.9	< 8.3	< 2.9	< 9.3	< 4.0	< 13.5	< 3.8	
Chatham Island	< 13.0	< 10.2	< 10.5	< 18.0	< 10.1	< 9.8	< 10.5	< 19.0	< 21.7	< 19.8	< 9.3	< 18.7	
Invercargill, N.Z.	< 11.1	< 32.2	< 24.0	< 28.7	< 15.6	< 28.9	< 14.4	< 33.2	< 33.9	< 15.4	< 17.3	< 15.2	
Marion Island	--	--	--	< 45.3	< 31.2	< 44.4	< 27.9	< 24.1	< 30.7	< 18.2	< 21.6	< 15.3	
Falkland Islands	< 6.6	< 12.5	< 12.0	< 8.5	< 14.7	< 11.2	< 15.9	< 14.0	< 19.8	< 11.8	< 12.0	< 20.6	
Punta Arenas, Chile	< 6.8	< 6.8	< 4.7	< 8.0	< 4.9	< 6.2	< 7.6	< 5.1	< 10.1	< 11.9	< 2.8	< 7.6	
Marsh Base, Antarctica	< 8.9	--	--	< 13.0	< 12.9	< 14.5	< 14.7	< 11.4	< 17.4	< 34.9	< 15.8	< 13.9	
Palmer, Antarctica	< 10.5	< 5.0	< 7.5	< 7.2	< 11.1	< 11.1	< 9.0	< 10.5	< 10.0	< 11.1	< 21.9	< 10.5	
Mawson, Antarctica	< 12.3	< 31.3	< 25.2	< 16.9	< 21.2	< 22.3	< 20.5	< 19.2	< 17.1	< 24.8	< 21.6	< 20.7	
South Pole Station	< 23.1	< 8.0	< 18.0	< 9.6	< 12.7	< 17.3	< 11.4	< 5.5	< 5.1	< 8.5	< 9.2	< 7.9	

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 21
CERIUM-144 CONCENTRATIONS IN SURFACE AIR
($\mu\text{Bq m}^{-3}$)

Site	1993:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	<	3.9	< 24.7	< 10.1	< 10.3	< 2.8	< 5.1	< 4.6	< 6.3	< 3.6	< 3.5	< 6.2	< 2.8
Barrow, Alaska	<	5.5	< 3.3	< 4.6	< 2.1	< 10.2	< 2.1	< 3.6	< 2.5	< 4.5	< 9.0	< 3.0	< 9.2
Constable Pt., Greenland	<	15.3	< 10.4	< 10.1	< 15.9	--	--	--	--	--	--	--	--
Moosonee, Ontario	<	9.6	< 10.4	< 6.5	< 4.9	< 6.9	< 4.8	< 3.6	< 10.3	< 3.1	< 6.4	< 5.3	< 9.5
Beaverton, Oregon	<	19.8	< 4.5	< 9.1	< 4.5	--	< 7.5	< 6.5	< 11.3	< 6.4	< 7.1	< 4.4	< 10.4
Rexburg, Idaho	<	3.4	< 7.1	< 6.4	< 8.8	< 4.2	< 7.5	< 5.7	< 3.5	< 13.4	< 7.9	< 6.8	< 5.2
Chester, New Jersey	<	4.3	< 5.3	< 8.0	< 3.6	< 2.9	< 6.8	< 6.3	< 5.0	< 6.3	< 9.9	< 6.2	< 6.7
New York, New York	<	3.6	< 5.3	< 3.8	< 5.2	< 2.8	< 6.1	< 10.5	< 2.8	< 4.4	< 6.3	< 6.6	< 6.0
Montgomery, Alabama	<	12.5	< 7.6	< 7.4	< 5.0	< 8.9	< 7.4	< 9.6	< 5.5	< **.*	< 6.7	< 6.2	< 6.1
Miami, Florida	<	15.0	< 17.0	< 3.9	< 5.6	< 3.0	< 4.4	--	< 9.2	< 7.4	< 7.6	< 9.1	< 5.4
Mauna Loa, Hawaii	<	5.3	< 9.9	< 8.0	< 8.1	< 6.7	< 3.4	< 17.9	< 17.5	< 11.5	< 3.1	< 12.3	< 17.5
Guayaquil, Ecuador	<	3.2	< 5.5	< 8.0	< 6.5	< 5.1	< 7.3	< 3.1	< 11.5	< 11.8	< 11.1	< 10.8	< 10.6
Lima, Peru	<	7.0	< 9.2	< 7.8	< 7.3	< 6.8	< 4.6	< 7.0	< 3.6	< 5.9	< 6.5	< 6.3	< 12.0
Tutuila, Samoa	<	9.3	< 10.7	< 6.5	< 6.9	< 7.2	< 8.2	< 7.6	< 3.9	< 5.4	< 5.8	< 6.6	< 7.6
Chacaltaya, Bolivia	<	20.1	< 12.7	< 13.1	< 12.4	< 9.5	< 9.7	< 5.0	< 11.3	< 12.4	< 19.8	< 19.6	< 22.9
Reunion Island	--	--	--	--	< 16.6	--	--	< 16.4	--	< 30.2	--	--	--
Antofagasta, Chile	<	2.5	< 6.4	< 6.2	< 14.0	< 5.6	< 7.5	< 17.4	< 8.7	< 3.8	< 12.0	< 6.4	< 13.1
Pretoria, South Africa	<	33.4	< 27.1	< 23.1	--	--	--	--	--	--	--	--	--
Isla de Pascua-Easter Is.	<	10.4	< 5.0	< 4.8	< 7.3	< 7.0	< 5.3	< 6.5	< 4.4	--	--	--	--
Norfolk Island	<	18.3	< 16.7	< 17.0	< 14.7	< 15.1	--	< 26.5	< 16.2	< 23.1	--	< 16.4	--
Perth, Australia	--	--	< 18.6	< 19.8	< 30.3	--	--	< 19.0	< 17.3	--	--	--	--
Durazno, Uruguay	--	--	< 10.5	< 11.4	< 9.5	< 10.2	--	< 4.3	< 3.9	< 5.2	< 0.9	< 11.8	--
Santiago, Chile	<	4.5	< 7.8	< 8.6	< 10.3	< 10.7	< 9.3	< 9.5	< 17.3	< 5.5	--	--	--
Cape Point, South Africa	--	--	--	--	--	--	--	--	--	--	--	--	--
Cape Grim, Tasmania	<	16.5	< 18.1	< 20.4	< 17.3	< 15.8	--	--	< 16.9	< 18.1	< 21.0	--	--
Lower Hutt, N.Z.	<	18.2	< 12.7	--	< 26.8	< 17.6	--	--	< 14.4	< 17.6	< 12.4	--	--
Puerto Montt, Chile	<	14.5	< 6.1	< 11.6	< 20.4	< 7.7	< 5.2	< 16.8	< 13.3	--	--	--	< 13.9
Chatham Island	<	10.8	< 28.6	--	< 14.8	< 16.4	--	--	< 15.5	< 18.4	< 22.7	< 14.7	< 19.4
Invercargill, N.Z.	<	16.9	--	--	< 14.4	< 20.4	< 18.1	--	< 17.5	< 18.7	< 21.9	--	--
Marion Island	<	21.3	< 15.4	--	--	--	--	--	--	--	--	--	--
Falkland Islands	<	9.3	--	--	< 15.2	< 15.5	--	--	< 18.5	< 27.7	< 13.9	--	--
Punta Arenas, Chile	<	7.8	< 10.0	< 11.0	< 7.8	< 3.5	< 13.0	< 3.4	< 7.6	--	--	--	--
Marsh Base, Antarctica	--	--	--	--	--	--	--	--	--	--	--	--	--
Palmer, Antarctica	<	8.5	--	--	--	--	--	--	< 9.6	--	--	--	--
Mawson, Antarctica	--	--	--	--	--	--	--	--	--	--	--	--	--
South Pole Station	<	5.8	--	--	--	--	--	--	--	--	--	< 9.4	< 18.9

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 22
LEAD-210 CONCENTRATIONS IN SURFACE AIR
(mBq m⁻³)

Site	1990:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland		0.31	0.38	0.58	0.45	0.23	0.14	--	0.09 ^a	0.14	0.21	0.41	0.41
Barrow, Alaska		0.86	1.04	1.00	0.54	0.22	0.08	0.06	0.09	0.09	0.27	0.61	0.81
Constable Point, Greenland		0.30	0.31	0.96	0.22	0.16 ^a	0.08 ^a	--	--	0.17	0.25	0.60	0.57
Moosonee, Ontario		0.77	0.78	0.38	--	--	--	0.36	0.36	0.19	0.32	0.78	0.90
Beaverton, Oregon		0.30	0.25	0.28	0.26	0.15	0.11	0.18	0.25	0.65	0.34	0.23	0.76
Rexburg, Idaho		0.64	0.65	0.66	0.58	0.43	0.54	0.78	0.77	0.83	0.65	0.53	1.73
Chester, New Jersey		--	0.60	0.66	0.52	0.36	0.44	0.50	0.59	0.62	0.63	0.85	0.59
New York, New York		--	--	--	--	--	0.39	0.42	--	0.54	0.61	0.80	0.84
Montgomery, Alabama		0.59	0.58	0.81	0.90	0.45	0.83	0.72	1.63	1.36	1.12	1.13	0.85
Miami, Florida		0.45	0.29	0.46	0.58	0.44	0.40	0.37	0.54	0.47	0.41	0.52	0.35
Mauna Loa, Hawaii		0.19	0.27	0.38	0.48	0.39	0.55	0.33	0.26	0.19	0.26	0.08 ^a	0.18
Guayaquil, Ecuador		0.66	0.36	0.53	0.68	0.70	0.57	0.72	0.53	0.44	0.35	0.41	0.42
Lima, Peru		0.35	0.32	0.53	0.48	0.63	0.86	0.51	0.61	0.39	0.32	0.39	0.35
Tutuila, Samoa		0.05	0.05	0.03	0.04	0.06	0.10 ^a	0.07 ^a	0.09	0.08	0.10 ^a	0.05 ^a	0.05
Chacaltaya, Bolivia		0.22	0.18	0.26	0.84	0.47	0.31	0.48	0.43	0.44	0.36	0.26	0.26
Reunion Island		--	--	--	--	--	--	--	--	--	--	0.12 ^a	0.12 ^a
Antofagasta, Chile		0.33	--	0.47	0.44	0.72	0.97	0.64	0.73	0.27	0.30	0.32	0.24
Pretoria, South Africa		--	--	--	--	--	--	--	--	--	--	0.59	0.50
Isla de Pascua-Easter Is.		0.05 ^a	0.05	0.05	0.08 ^a	0.08	0.03 ^a	0.03	0.04 ^a	0.06 ^a	0.08 ^a	0.05 ^a	0.05 ^a
Norfolk Island		0.06	0.12	0.08	0.12	0.07	0.08	0.09 ^a	0.11	0.09 ^a	0.12	0.10	0.20
Perth, Australia		0.15	0.35	0.29	0.25	0.30	0.33	0.20	0.11	0.27	0.20	0.17	0.17
Santiago, Chile		0.23	0.28	0.39	0.30	0.76	0.85	0.55	0.58	0.25	0.30	0.23	0.18
Cape Grim, Tasmania		0.04	0.07	0.07	0.11	0.17	0.11	0.13	0.03 ^a	0.10	0.08	0.08	0.08
Lower Hutt, N.Z.		0.08	0.11	0.09	0.10	0.06	0.07	0.08 ^a	0.06 ^a	0.10	0.08 ^a	0.06	0.08 ^a
Puerto Montt, Chile		0.03	0.08	0.05	0.13	0.04 ^a	0.07	0.07 ^a	0.06 ^a	0.07	0.04 ^a	0.04 ^a	0.04 ^a
Chatham Island		0.03 ^a	0.07	0.05 ^a	0.06	0.05 ^a	0.04 ^a	0.04 ^a	0.04 ^a	0.10 ^a	0.05 ^a	0.12	0.06 ^a
Invercargill, N.Z.		0.04	0.07	0.07	0.04 ^a	0.04 ^a	0.08 ^a	0.23	0.08 ^a	0.09	0.05 ^a	0.07 ^a	0.03 ^b
Falkland Islands		0.03	0.03	0.03 ^a	0.01 ^b	0.06	0.10	0.11	0.07 ^a	0.05 ^a	0.04	0.04 ^a	0.05 ^a
Punta Arenas, Chile		0.02 ^a	0.04	0.03 ^a	0.01	0.05 ^a	0.03	0.04 ^a	0.02 ^b	0.06 ^a	0.01 ^a	0.01 ^b	0.01 ^b
Marsh Base, Antarctica		--	--	< 0.17	0.02 ^b	0.02 ^b	0.01 ^c	0.02 ^b	0.01 ^c	0.02 ^a	0.02 ^b	0.05 ^a	0.01 ^b
Palmer Station, Antarctica		--	--	--	0.02 ^a	0.01 ^b	0.01 ^b	0.02 ^a	0.02 ^a	0.03 ^a	0.01 ^c	0.01 ^c	0.01 ^b
Mawson, Antarctica		0.04 ^a	0.02 ^b	0.01 ^b	0.02 ^a	0.02 ^a	0.03 ^a	0.04 ^a	0.02 ^a	0.03 ^a	0.04 ^a	0.03 ^a	0.03 ^b
South Pole Station		0.03	0.02 ^b	0.02 ^b	0.03 ^a	0.01 ^b	0.02 ^b	0.02 ^a	0.01 ^b	0.02 ^b	0.04 ^a	0.03 ^a	0.04 ^a

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 23
LEAD-210 CONCENTRATIONS IN SURFACE AIR
(mBq m⁻³)

Site	1991:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland	--	--	--	--	--	--	0.13 ^a	0.10	0.07 ^a	0.16	0.21	0.30	0.13 ^a
Barrow, Alaska	1.09	1.10	0.59	0.48	0.17	0.07	0.07	0.05 ^a	0.09	0.11	0.21	0.55	0.86
Constable Point, Greenland	--	--	--	--	--	--	--	--	--	--	0.29	0.40	0.31
Moosonee, Ontario	1.47	0.88	0.81	0.50	0.33	0.24	0.19	0.40	0.21	0.29	0.48	0.55 ^a	0.55 ^a
Beaverton, Oregon	0.59	0.44	0.19	0.35	0.20	0.16	0.26	0.28	0.45	0.67	0.50 ^a	0.68 ^a	0.68 ^a
Raxburg, Idaho	1.30	0.83	0.38	0.53	0.40	0.46	--	0.78	0.72	0.95	0.85	1.10	1.10
Chester, New Jersey	0.69	0.61	0.50	0.49	0.46	0.43	0.55	0.62	0.51 ^b	0.63	0.68	0.65	0.65
New York, New York	1.01	0.71	0.55	0.57	0.65	0.42	0.73	0.75	0.87	0.63	0.89	0.81	0.81
Montgomery, Alabama	0.93	0.62	0.75	0.81	0.49	0.54	0.64	0.96	0.96 ^b	0.90	--	0.69	0.69
Miami, Florida	0.28	0.43	0.45	0.33	0.46	0.25	0.25	0.31	0.38	0.38	0.61	0.38	0.38
Mauna Loa, Hawaii	0.29	0.27	0.35	0.51	0.50	0.23	0.31	0.20	0.25	0.21	0.14	0.17	0.17
Guayaquil, Ecuador	0.61	0.42	0.47	0.65	0.74	0.73	0.83	0.62	0.54	0.48	0.53	0.55	0.55
Lima, Peru	0.47	0.41	0.80	0.60	--	--	--	--	0.45	0.33	0.35	0.23	0.23
Tutuila, Samoa	0.04 ^a	0.04 ^a	0.05 ^a	0.03 ^a	0.06	0.06	0.08	0.07 ^a	0.10	0.09	0.05 ^a	--	--
Chacaltaya, Bolivia	0.26	0.23 ^a	0.21	0.30	0.37	0.31	0.54	0.48 ^a	0.41	0.36	0.31	0.24	0.24
Reunion Island	0.10 ^a	0.16 ^a	0.06 ^a	0.06 ^a	0.08 ^a	0.08 ^a	0.11	0.09	0.21	0.07 ^a	0.12	--	--
Antofagasta, Chile	0.30	0.33	0.39	0.46	0.64	0.63	0.80	0.44	0.39	0.37	0.25	0.24	0.24
Pretoria, South Africa	0.43	0.47	0.54	0.81	0.98	1.07	1.16	0.94	0.91	0.63	0.57	0.43	0.43
Isla de Pascua-Easter Is.	0.07 ^a	0.12 ^a	0.06 ^a	0.06	0.04 ^a	0.03 ^a	0.06	0.06	0.08 ^a	0.07	0.08 ^a	0.05 ^a	0.05 ^a
Norfolk Island	0.12	0.10 ^a	0.07 ^a	0.08 ^a	0.08 ^a	0.09 ^a	0.14	0.10	0.15	0.11 ^a	0.10	0.08 ^a	0.08 ^a
Perth, Australia	0.23	0.19	0.27	0.40	0.48	0.18	0.13	0.24	0.14	0.22	0.14	0.25	0.25
Santiago, Chile	0.13 ^a	0.27	0.41	0.47	0.75	0.47	0.44	0.37	0.27	0.26	--	0.20	0.20
Cape Grim, Tasmania	0.06 ^a	0.03 ^a	0.05 ^a	0.09	0.15	0.13	0.09	0.05	0.11	0.07	0.05 ^a	0.06 ^a	0.06 ^a
Lower Hutt, N.Z.	0.05 ^a	0.10	0.08 ^a	0.07 ^a	0.12	0.09 ^a	0.06	0.08	0.08	0.09	0.05 ^a	0.05 ^a	0.05 ^a
Puerto Montt, Chile	0.04 ^a	0.04	0.06 ^a	0.08 ^a	0.06 ^a	0.12	0.04 ^a	--	0.04 ^a	0.03 ^a	--	--	--
Chatham Island	0.06 ^a	0.07 ^a	0.04 ^b	0.07 ^a	0.05 ^a	0.06 ^a	0.05	0.05	0.06	0.08 ^a	0.05 ^a	0.05 ^a	0.05 ^a
Invercargill, N.Z.	0.04 ^a	0.05 ^a	0.08 ^a	0.06 ^a	0.09 ^a	0.05 ^a	0.12	0.04 ^a	0.06 ^a	0.04 ^a	0.04 ^a	0.04 ^a	0.05 ^a
Falkland Islands	0.06 ^a	0.04 ^a	0.03 ^a	0.05 ^a	0.09	0.03 ^a	0.08	0.05	0.05 ^a	0.04	0.02 ^a	0.04 ^a	0.04 ^a
Punta Arenas, Chile	0.02 ^b	0.02 ^c	0.03 ^a	0.03 ^a	0.04 ^a	0.04 ^a	0.06 ^a	0.03 ^a	0.03 ^a	0.02 ^a	0.02 ^b	0.02 ^b	0.01 ^b
Marsh Base, Antarctica	0.01 ^c	0.01 ^c	< 0.02	0.01 ^c	0.02 ^a	0.02 ^b	0.03 ^a	0.03	0.02 ^a	0.02 ^a	0.02 ^a	0.02 ^c	--
Palmer Station, Antarctica	0.02 ^b	0.01 ^b	0.01 ^c	0.01 ^c	0.02 ^a	0.02 ^a	0.02 ^b	0.02 ^a	0.01 ^b	0.02 ^b	0.01 ^b	0.03 ^a	0.03 ^a
Mawson, Antarctica	0.04 ^a	0.04 ^a	0.04	0.02 ^a	0.02 ^a	0.02 ^a	0.02 ^a	0.03	0.03 ^a	0.03 ^c	0.04	0.04 ^a	0.04 ^a
South Pole Station	0.04 ^a	0.03 ^a	0.01 ^c	0.02 ^a	0.02 ^b	0.01 ^b	0.01 ^b	0.04 ^a	0.03 ^b	0.03 ^a	0.03 ^b	0.06	0.06

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 24
LEAD-210 CONCENTRATIONS IN SURFACE AIR
(mBq m⁻³)

Site	1992:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland		0.59	0.46	0.37	0.37	0.28	0.10	--	0.03 ^c	0.19	0.14	0.24	0.48
Barrow, Alaska		0.78	1.07	0.78	0.48	0.27 ^a	0.08 ^a	0.07 ^a	0.06 ^a	0.08 ^a	0.29	0.38	1.27
Constable Point, Greenland		--	--	--	--	--	0.09	0.08 ^a	0.13	0.10	0.12 ^c	0.20	0.31
Moosonee, Ontario		0.63	0.68 ^b	0.74	0.50	0.45	0.15	0.15	0.27	0.42 ^a	0.28	0.41	0.75
Beaverton, Oregon		0.48 ^a	0.56	0.48	0.23	0.37	0.32	0.20	0.34	0.34	0.41 ^b	0.42	0.38
Rexburg, Idaho		0.88 ^b	0.73	0.69	0.43 ^b	0.54	0.37	0.49	0.74	0.60	0.51	1.07	0.75
Chester, New Jersey		0.61 ^a	0.52	0.52	0.37	0.37	0.37	0.48	0.51	0.54	0.55	0.36	0.62
New York, New York		0.53	0.64	0.59	0.45	0.44	0.38	0.40	0.49	0.46	0.66	0.53	0.54
Montgomery, Alabama		0.75	0.72	0.80	0.67	0.73	1.05	0.66	0.70	0.81 ^a	--	--	0.60
Miami, Florida		0.50	0.29 ^a	0.44	0.39	0.49	0.24	0.56	0.17 ^a	--	0.51	0.25	0.48
Mauna Loa, Hawaii		0.31	0.36 ^b	0.56	0.63	0.43	0.48	0.39	0.16	0.20	0.15 ^a	0.19 ^a	0.13 ^a
Guayaquil, Ecuador		0.59	0.38	0.23	0.29	0.47 ^a	0.49	0.79	0.52 ^b	0.52	0.33	0.39	0.42
Lima, Peru		0.31	0.28	0.36 ^a	0.44	0.42	0.41	0.28	0.33	0.31	0.61	0.22	--
Tutuila, Samoa		--	0.04 ^b	0.02 ^b	0.04	0.07	0.09 ^a	0.04 ^a	0.06	0.09 ^a	0.11	0.06	0.05 ^a
Chacaltaya, Bolivia		0.18 ^a	0.25 ^a	0.21 ^a	0.34	0.40	0.45	0.39	0.35 ^a	0.34	0.34	0.29	0.18
Reunion Island		0.12	0.07	0.07 ^a	0.09	0.09 ^a	0.10	0.15 ^a	0.15	0.12	0.20	0.16	0.14
Antofagasta, Chile		0.24	0.26	0.33	0.41	0.44	0.54	0.71	0.43 ^b	0.49	0.25	0.25	0.19
Pretoria, South Africa		0.50	0.53	0.52	0.97	0.93	1.05	0.98	0.86	1.10	0.64	0.44	0.50
Isla de Pascua-Easter Is.		0.05 ^a	0.04 ^a	0.03 ^b	0.04 ^a	0.03 ^a	0.05 ^a	0.04 ^a	0.05 ^b	0.06 ^a	0.06	0.02 ^b	0.01 ^b
Norfolk Island		0.07	0.13	0.08	0.08	0.13	0.11	0.13	0.18	0.15	0.09	0.19	0.10
Perth, Australia		0.37	0.25	0.28 ^a	0.41	0.36 ^a	0.20	0.31	0.21	0.11	0.23	0.17	0.21
Santiago, Chile		0.32	0.23	0.32	0.39	0.29	0.34	0.52	0.44	0.36 ^a	0.20	0.20	0.13
Cape Point, South Africa		--	--	--	0.10	0.16	0.18	0.18	0.27	0.09	0.07	0.08	0.06 ^a
Cape Grim, Tasmania		0.04 ^a	0.05 ^a	0.11	0.15	0.08	0.15	0.13	0.08	0.05 ^a	0.08 ^a	0.07 ^a	0.07
Lower Hutt, N.Z.		0.08	0.06 ^a	0.07	0.13	0.09	0.09	0.13	0.08	0.07 ^a	0.08	0.10	0.08
Puerto Montt, Chile		0.07 ^b	0.02 ^b	0.03 ^a	0.04 ^a	0.03 ^a	0.03	0.08	0.06	0.05 ^a	0.02 ^a	0.05 ^a	0.01 ^b
Chatham Island		0.05 ^a	0.04 ^a	0.04 ^a	0.06 ^a	0.03 ^a	0.07	0.07	0.04 ^a	0.02 ^b	0.06 ^a	0.05 ^a	0.04 ^a
Invercargill, N.Z.		0.06	0.05 ^a	0.04 ^b	0.08 ^b	0.01 ^b	0.12	0.05 ^a	0.07 ^b	0.07 ^b	0.05 ^a	0.11	0.05 ^a
Marion Island		--	--	--	0.04 ^b	0.03 ^a	0.06 ^a	0.03 ^a	0.04 ^a	0.01 ^c	0.03 ^a	0.05 ^a	0.02 ^b
Falkland Islands		0.05 ^a	0.04	0.04 ^a	0.06	0.03 ^a	0.03 ^a	0.09	0.15	0.06 ^a	0.03 ^a	0.04 ^a	0.06
Punta Arenas, Chile		0.02 ^a	0.01 ^c	0.02 ^a	0.03 ^a	0.06 ^a	0.03 ^a	0.03 ^a	0.04	0.03 ^a	0.02 ^b	0.02	0.02 ^b
Marsh Base, Antarctica		0.01 ^c	--	--	0.01 ^c	0.02 ^a	0.02 ^c	0.01 ^b	0.02 ^a	0.03 ^a	0.01 ^b	0.01 ^b	0.01 ^c
Palmer Station, Antarctica		0.01 ^c	0.01 ^c	0.01 ^b	0.01 ^b	0.02 ^a	0.02 ^a	0.01 ^b	0.02 ^b	0.02 ^a	0.02 ^b	0.02 ^c	0.01 ^c
Mawson, Antarctica		0.04 ^a	0.03 ^a	0.03 ^a	0.02 ^a	0.04 ^a	0.03 ^a	0.04 ^a	0.03 ^a	0.02 ^a	0.03 ^b	0.03 ^a	0.06 ^b
South Pole Station		0.05 ^a	0.02 ^a	0.01 ^a	0.01 ^b	0.03 ^a	0.03 ^b	0.02 ^b	0.01 ^b	0.01 ^b	0.01 ^c	0.01 ^c	0.03 ^a

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 25
LEAD-210 CONCENTRATIONS IN SURFACE AIR
(mBq m⁻³)

Site	1993:	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Thule, Greenland		0.38	0.25	0.38	0.35	0.25	0.05	0.10	0.12	0.08	0.15	0.27 ^b	0.30
Barrow, Alaska		0.78	0.80	0.67	0.38	0.26	0.05	0.11	0.06	0.09	0.23	0.35	0.59
Constable Point, Greenland		0.25 ^a	0.39	0.30	0.35	--	--	--	--	--	--	--	--
Moosonee, Ontario		0.71	0.68	0.60	0.55	0.13	0.22	0.24	0.32	0.21	0.22	0.52	0.66
Beaverton, Oregon		0.97	1.12	0.31	0.13	--	0.11	0.14	0.27	0.63	0.66	1.03	0.60
Rexburg, Idaho		0.75 ^a	0.95	0.80	0.24 ^a	0.35	0.37	0.39	0.46	0.72	0.73	1.01	1.27
Chester, New Jersey		0.56	0.71	0.40 ^a	0.30	0.33	0.44	0.47	0.62	0.37	0.52	0.62 ^a	0.66
New York, New York		0.54	0.56	0.54	0.40	0.36	0.49	0.47	0.56	0.50	0.47	0.99	0.76
Montgomery, Alabama		0.92	0.86	0.68	0.55	0.66	0.61	0.70	0.67	0.58	0.77	0.88	0.77
Miami, Florida		0.21	0.35 ^a	0.44	0.46 ^a	0.39	0.33	--	0.49	0.27	0.19 ^c	0.36	0.52
Mauna Loa, Hawaii		0.17 ^a	0.31	0.49	0.54	0.43	0.49	0.27 ^a	0.18	0.23	0.26	0.22	0.21
Guayaquil, Ecuador		0.42	0.34	0.28 ^a	0.45	0.62	0.62	0.66	0.56	0.49 ^a	0.49	0.37	0.44
Lima, Peru		0.33	0.31 ^a	0.35	0.51	0.47	0.55	0.58	0.52	0.38	0.44	0.23	0.22
Tutuila, Samoa		0.03 ^a	0.05 ^a	0.02 ^b	0.02 ^b	0.05 ^a	0.04 ^a	0.05	0.05 ^c	0.09	0.08	0.08	0.05
Chacaltaya, Bolivia		0.10 ^a	0.23 ^a	0.25 ^a	0.32	0.34	0.27	0.45	0.35	0.40	0.32	0.35	0.27 ^a
Reunion Island		--	--	--	--	0.13	--	--	0.12	--	0.10 ^a	--	--
Antofagasta, Chile		0.21	0.28	0.44	0.44 ^b	0.53	0.76	0.67	0.54	0.37	0.34 ^a	0.19	0.30
Pretoria, South Africa		0.50	0.42	0.56	--	--	--	--	--	--	--	--	--
Isla de Pascua-Easter Is.		0.04 ^a	0.01 ^c	0.03 ^a	0.03 ^a	0.02 ^b	0.01 ^b	0.01 ^b	0.02 ^a	--	--	--	--
Norfolk Island		0.25	0.09	0.07 ^a	0.12	0.09	--	0.07 ^a	0.13	0.14	--	0.09	--
Perth, Australia		--	--	0.26	0.39	0.73	--	--	0.19	0.30	--	--	--
Durazno, Uruguay		--	--	0.40	0.32	0.27	0.50	--	0.44	0.23	0.25	0.21 ^a	0.22
Santiago, Chile		0.20	0.30	0.24	0.44	0.24	0.35	0.30	0.44	0.31	--	--	--
Cape Point, South Africa		--	--	--	--	--	--	--	--	--	--	--	--
Cape Grim, Tasmania		0.08	0.08	0.08 ^a	0.21	0.20	--	--	0.21	0.15	0.06 ^a	--	--
Lower Hutt, N.Z.		0.05 ^a	0.07	--	0.13	0.12	--	--	--	0.08 ^a	0.10 ^a	0.05 ^a	--
Puerto Montt, Chile		0.04 ^a	0.03 ^a	0.03 ^b	0.05	0.02 ^a	0.03 ^a	0.03 ^b	0.06 ^a	--	--	--	0.03 ^b
Chatham Island		0.05	0.04 ^a	--	0.04 ^b	0.12	--	--	0.06 ^a	0.07 ^a	0.09 ^b	0.05 ^a	0.05 ^a
Invercargill, N.Z.		0.04 ^a	--	--	0.08	0.11	0.07	--	0.09 ^a	0.06 ^a	0.09	--	--
Marion Island		0.02 ^b	0.02 ^b	--	--	--	--	--	--	--	--	--	--
Falkland Islands		0.03 ^a	--	--	0.05	0.10 ^a	--	--	0.07 ^a	0.05 ^b	0.05 ^a	--	--
Punta Arenas, Chile		0.01 ^c	0.01 ^c	0.01 ^c	0.04 ^a	0.04	0.09 ^a	0.03	0.04 ^a	--	--	--	--
Marsh Base, Antarctica		--	--	--	--	--	--	--	--	--	--	--	--
Palmer Station, Antarctica		0.01 ^b	--	--	--	--	--	--	0.02 ^a	--	--	--	--
Mawson, Antarctica		--	--	--	--	--	--	--	--	--	--	--	--
South Pole Station		0.03 ^a	--	--	--	--	--	--	--	--	--	0.03 ^a	0.02 ^c

Note:

-- = No data
d = Doubtful validity

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%
b = Uncertainty is between 50% and 100%
c = Uncertainty is greater than 100%

TABLE 26
ANNUAL MEAN CONCENTRATIONS OF BERYLLIUM-7
(mBq m⁻³)

Site	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Thule, Greenland	--	--	--	--	--	--	--	--	2.5	1.9	2.0	--	2.5	2.3
Barrow, Alaska	1.7	1.5	1.6	1.7	1.8	2.0	1.8	1.3	1.4	0.8	1.2	1.1	1.5	1.4
Constable Point	--	--	--	--	--	--	--	--	--	--	2.4	--	1.6	--
Moosonee, Ontario	2.8	2.6	3.2	2.9	3.4	3.5	3.4	2.9	2.4	2.3	2.1	2.4	2.6	2.8
Beaverton, Oregon	2.1	2.3	2.4	2.7	3.7	3.6	2.3	2.3	2.2	1.8	1.7	2.1	2.6	2.6
Rexburg, Idaho	5.0	4.8	4.5	4.9	5.6	6.3	6.4	6.5	5.5	5.0	4.6	4.2	4.7	5.0
Chester, New Jersey	4.4	3.9	3.8	4.2	4.1	4.9	4.6	4.5	3.9	3.2	3.2	3.2	3.4	3.8
New York, New York	4.0	4.7	5.1	4.9	5.3	5.5	5.1	4.9	3.9	--	3.1	3.7	3.9	4.3
Montgomery, Alabama	--	--	--	--	--	--	--	--	--	--	4.5	4.0	4.8	4.9
Miami, Florida	4.7	5.1	3.9	4.6	5.9	5.5	5.5	5.3	4.3	3.8	3.9	3.4	3.8	4.3
Mauna Loa, Hawaii	6.9	6.5	6.5	7.7	8.6	8.1	8.3	8.1	6.8	5.3	5.3	5.3	5.9	6.6
Guayaquil, Ecuador	1.8	1.6	1.5	0.9	2.4	3.0	2.5	2.5	2.6	2.1	2.1	2.1	2.1	2.3
Lima, Peru	4.1	4.2	5.1	6.5	5.1	5.7	5.4	4.6	4.5	4.0	3.6	4.9	3.6	4.5
Tutuila, Samoa	2.2	2.3	2.5	3.0	2.7	2.7	2.7	3.1	2.1	2.2	2.1	1.7	2.1	2.3
Chacaltaya, Bolivia	5.8	5.0	5.3	6.6	5.0	4.9	5.4	5.4	5.1	4.4	4.2	4.5	5.0	4.8
Reunion Island	--	--	--	--	--	--	--	--	--	--	--	3.3	4.0	--
Antofagasta, Chile	3.3	4.1	3.0	3.6	3.6	3.9	4.3	4.3	3.4	3.1	3.8	4.0	4.5	4.7
Pretoria, S. Africa	--	--	--	--	--	--	--	--	--	--	--	4.9	6.2	--
Easter Island	4.3	--	3.5	3.0	3.3	3.8	3.6	3.0	2.6	2.1	2.1	2.7	2.3	1.9
Norfolk Island	--	--	--	4.8	4.3	4.8	5.0	4.9	4.2	3.7	3.5	3.8	4.7	5.2
Perth, Australia	--	--	--	3.8	3.9	5.1	4.7	4.6	4.0	3.4	3.4	3.6	4.2	--
Durazno, Uruguay	--	--	--	--	--	--	--	--	--	--	--	--	--	4.4
Santiago, Chile	4.5	4.3	4.2	5.2	7.0	6.7	--	3.7	--	4.5	3.6	3.2	3.5	4.0
Cape Point, S. Africa	--	--	--	--	--	--	--	--	--	--	--	--	4.5	--
Cape Grim, Tasmania	--	--	--	3.2	2.9	3.8	3.3	3.3	3.0	2.7	2.6	2.3	2.9	3.5
Lower Hutt, N. Z.	--	--	--	--	--	--	--	--	2.9	2.5	2.5	2.5	2.9	3.4
Puerto Montt, Chile	2.2	2.0	1.8	1.8	2.0	2.7	3.3	3.0	2.6	2.1	1.8	1.7	1.5	1.7
Chatham Island	--	--	--	--	3.2	3.4	3.2	3.5	3.2	2.5	2.5	2.7	3.0	3.4
Invercargill, N. Z.	--	--	--	2.1	2.6	2.9	2.6	2.7	2.3	1.9	2.1	1.9	2.6	3.2
Marion Islands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Falkland Islands	--	--	--	--	--	--	--	2.5	2.0	1.7	1.8	1.7	1.9	2.1
Punta Arenas, Chile	0.9	0.9	0.9	0.8	1.0	2.0	2.0	2.7	1.4	1.3	1.1	1.0	1.2	1.3
Marsh, Antarctica	--	--	--	0.9	1.5	--	--	1.6	0.8	0.5	1.5	1.2	1.7	--
Palmer Station	--	--	--	--	--	--	--	--	--	--	1.3	1.2	1.6	--
Mawson, Antarctica	--	--	--	--	--	--	--	6.2	5.5	4.5	4.3	4.5	7.5	--
South Pole Station	4.9	5.4	5.7	4.5	5.1	--	2.9	4.0	2.4	2.3	2.4	3.3	3.0	--

Note:

-- = No data

TABLE 27
ANNUAL MEAN CONCENTRATIONS OF LEAD-210
(mBq m⁻³)

Site	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Thule, Greenland	--	--	--	--	--	--	--	--	0.25	0.26	0.30	0.16	0.30	0.22
Barrow, Alaska	--	--	0.40	0.54	0.55	0.52	0.35	0.29	0.32	0.34	0.47	0.45	0.47	0.37
Constable Point	--	--	--	--	--	--	--	--	--	--	0.36	--	0.15	--
Moosonee, Ontario	--	--	0.75	0.57	0.72	0.64	0.53	0.41	0.32	0.50	0.54	0.53	0.45	0.42
Beaverton, Oregon	--	--	--	--	--	--	0.46	0.36	0.26	0.33	0.31	0.40	0.38	0.51
Rexburg, Idaho	--	--	--	--	--	--	0.88	0.87	0.64	0.74	0.73	0.75	0.65	0.67
Chester, New Jersey	--	--	--	--	--	--	--	--	0.24	0.54	0.58	0.57	0.48	0.50
New York, New York	--	--	--	--	--	--	0.67	0.57	0.48	--	0.60	0.72	0.51	0.54
Montgomery, Alabama	--	--	--	--	--	--	--	--	--	--	0.91	0.75	0.75	0.72
Miami, Florida	--	--	--	--	--	--	0.43	0.50	0.35	0.37	0.44	0.38	0.39	0.36
Mauna Loa, Hawaii	--	--	0.43	0.43	0.43	0.61	0.43	0.37	0.28	0.25	0.30	0.28	0.33	0.32
Guayaquil, Ecuador	--	--	--	--	--	--	--	--	--	--	0.53	0.60	0.45	0.48
Lima, Peru	--	--	--	--	--	--	--	--	--	--	0.48	0.46	0.36	0.41
Tutuila, Samoa	--	--	--	--	--	--	--	--	--	--	0.06	0.06	0.06	0.05
Chacaltaya, Bolivia	--	--	0.45	0.49	0.56	0.58	0.39	0.34	0.35	0.37	0.38	0.33	0.31	0.30
Reunion Island	--	--	--	--	--	--	--	--	--	--	--	0.10	0.12	--
Antofagasta, Chile	--	--	--	--	--	--	--	--	--	--	0.49	0.44	0.38	0.42
Pretoria, S. Africa	--	--	--	--	--	--	--	--	--	--	--	0.74	0.75	--
Easter Island	--	--	--	--	--	--	--	--	--	--	0.05	0.07	0.04	0.02
Norfolk Island	--	--	--	0.11	0.14	0.17	0.12	0.11	0.07	0.08	0.10	0.10	0.12	0.12
Perth, Australia	--	--	--	0.43	0.38	0.50	0.35	0.33	0.20	0.23	0.23	0.24	0.26	--
Durazno, Uruguay	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31
Santiago, Chile	--	--	--	--	--	--	--	--	--	--	0.41	0.37	0.31	0.31
Cape Point, S. Africa	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--
Cape Grim, Tasmania	--	--	--	0.13	0.14	0.16	0.10	0.13	0.08	0.08	0.09	0.08	0.09	0.13
Lower Hutt, N. Z.	--	--	--	--	--	--	--	--	0.05	0.08	0.08	0.08	0.09	0.09
Puerto Montt, Chile	--	--	--	--	--	--	--	--	--	--	0.06	0.06	0.04	0.04
Chatham Island	--	--	--	--	0.14	0.15	0.05	0.07	0.04	0.04	0.06	0.06	0.05	0.06
Invercargill, N. Z.	--	--	--	0.07	0.11	0.14	0.07	0.06	0.04	0.06	0.07	0.06	0.06	0.08
Marion Island	--	--	--	--	--	--	--	--	--	--	--	--	0.03	--
Falkland Islands	--	--	--	--	--	--	--	0.05	0.02	0.05	0.05	0.05	0.06	0.06
Punta Arenas, Chile	--	--	--	--	--	--	--	--	--	--	0.03	0.03	0.03	0.03
Marsh, Antarctica	--	--	--	--	--	--	--	--	--	--	0.02	0.02	0.01	--
Palmer Station	--	--	--	--	--	--	--	--	--	--	0.02	0.02	0.01	--
Mawson, Antarctica	--	--	--	--	--	--	--	0.03	0.03	0.03	0.03	0.03	0.03	--
South Pole Station	--	0.06	0.05	0.06	--	--	0.04	0.03	0.02	0.03	0.02	0.03	0.02	0.03

Note:

-- = No data

TABLE 28
SUMMARY STATISTICS OF BERYLLIUM-7 CONCENTRATIONS
(mBq m⁻³)

Site	Median	Mean	Standard Deviation	Min. Value	Max. Value	# of Data Points
Thule, Greenland	2.72	2.91	1.46	0.598	8.13	116
Barrow, Alaska	1.57	1.63	0.837	0.188	4.02	203
Constable Point	2.37	2.42	1.10	0.607	5.71	25
Moosonee, Ontario	2.87	2.97	0.969	0.408	6.22	268
Beaverton, Oregon	2.26	2.35	0.877	0.773	6.93	178
Rexburg, Idaho	5.08	5.25	1.68	2.18	9.95	177
Chester, New Jersey	3.88	4.00	1.10	1.52	7.80	205
New York, New York	4.32	4.44	1.07	2.39	8.92	267
Montgomery, Alabama	4.45	4.52	1.04	2.29	7.80	48
Miami, Florida	4.78	5.00	1.59	1.86	11.9	259
Mauna Loa, Hawaii	7.00	7.04	1.89	1.73	12.3	265
Guayaquil, Ecuador	1.77	1.92	0.77	0.185	4.67	270
Lima, Peru	4.44	4.73	1.77	0.23	14.3	266
Tutuila, Samoa	2.33	2.46	0.849	0.776	5.16	203
Chacaltaya, Bolivia	5.25	5.28	2.10	0.822	12.9	273
Reunion Island	3.67	3.75	0.88	2.38	7.06	27
Antofagasta, Chile	4.09	4.10	1.02	0.69	8.37	259
Pretoria, S. Africa	5.37	5.54	1.13	3.56	9.23	28
Easter Island	2.52	2.68	0.971	0.802	7.10	256
Norfolk Island	4.22	4.41	1.22	1.06	7.96	126
Perth, Australia	3.87	4.06	1.24	1.34	8.26	126
Durazno, Uruguay	4.17	4.40	1.03	3.13	6.19	9
Santiago, Chile	4.50	4.69	1.48	1.36	10.5	249
Cape Point, S. Africa	3.91	4.48	1.47	3.41	8.01	7
Cape Grim, Tasmania	2.87	2.99	0.861	1.35	5.90	129
Lower Hutt, N. Z.	2.64	2.73	0.761	1.45	4.61	67
Puerto Montt, Chile	2.07	2.22	0.768	0.804	4.70	257
Chatham Island	2.97	3.04	0.933	1.09	6.17	120
Invercargill, N. Z.	2.32	2.42	0.77	0.99	5.19	123
Marion Islands	3.58	3.13	0.787	2.03	3.80	3
Falkland Islands	1.85	1.90	0.473	1.14	3.36	72
Punta Arenas, Chile	1.16	1.25	0.488	0.508	3.09	252
Marsh, Antarctica	1.28	1.41	0.490	0.743	2.72	27
Palmer Station	1.21	1.38	0.453	0.783	2.78	33
Mawson, Antarctica	4.76	5.38	2.11	2.30	14.1	60
South Pole Station	3.77	4.02	1.90	0.443	11.1	240

TABLE 29
SUMMARY STATISTICS OF LEAD-210 CONCENTRATIONS

(mBq m⁻³)

Site	Median	Mean	Standard Deviation	Min. Value	Max. Value	# of Data Points
Thule, Greenland	0.242	0.275	0.174	0.045	0.833	77
Barrow, Alaska	0.310	0.443	0.362	0.024	1.27	145
Constable Point	0.298	0.311	0.203	0.077	0.958	26
Moosonee, Ontario	0.481	0.519	0.265	0.058	1.47	161
Beaverton, Oregon	0.315	0.373	0.214	0.085	1.12	88
Rexburg, Idaho	0.703	0.740	0.311	0.241	1.97	93
Chester, New Jersey	0.513	0.496	0.172	0.132	1.06	69
New York, New York	0.569	0.592	0.166	0.213	1.09	107
Montgomery, Alabama	0.758	0.808	0.229	0.449	1.63	48
Miami, Florida	0.398	0.400	0.117	0.161	0.690	102
Mauna Loa, Hawaii	0.341	0.364	0.163	0.056	1.20	159
Guayaquil, Ecuador	0.413	0.417	0.173	0.125	0.832	82
Lima, Peru	0.345	0.359	0.176	0.006	0.856	79
Tutuila, Samoa	0.052	0.056	0.026	0.007	0.137	67
Chacaltaya, Bolivia	0.369	0.390	0.160	0.050	1.09	160
Reunion Island	0.114	0.115	0.038	0.060	0.211	28
Antofagasta, Chile	0.328	0.358	0.198	0.044	0.968	72
Pretoria, S. Africa	0.592	0.708	0.243	0.422	1.16	29
Easter Island	0.036	0.042	0.022	0.006	0.124	74
Norfolk Island	0.099	0.113	0.053	0.027	0.315	126
Perth, Australia	0.274	0.319	0.174	0.053	1.09	126
Durazno, Uruguay	0.273	0.314	0.099	0.211	0.497	9
Santiago, Chile	0.312	0.352	0.201	0.021	1.21	71
Cape Point, S. Africa	0.102	0.132	0.064	0.063	0.267	9
Cape Grim, Tasmania	0.088	0.107	0.062	0.017	0.302	130
Lower Hutt, N. Z.	0.077	0.076	0.026	0.002	0.132	70
Puerto Montt, Chile	0.043	0.051	0.029	0.013	0.192	70
Chatham Island	0.053	0.070	0.047	0.004	0.242	121
Invercargill, N. Z.	0.064	0.074	0.041	0.002	0.260	124
Marion Islands	0.029	0.031	0.013	0.014	0.057	11
Falkland Islands	0.041	0.048	0.026	0.003	0.145	71
Punta Arenas, Chile	0.023	0.028	0.019	0.004	0.102	69
Marsh, Antarctica	0.016	0.017	0.009	0.006	0.047	29
Palmer Station	0.016	0.015	0.006	0.006	0.029	35
Mawson, Antarctica	0.028	0.029	0.010	0.004	0.059	71
South Pole Station	0.031	0.039	0.030	0.001	0.237	143

TABLE 30
SAMPLING SITES FOR WHICH WEEKLY DATA ARE OBTAINED

Sampling Site	Latitude	Longitude	Elevation (m)
Barrow, Alaska	71:10 N	156:30 W	4
New York City, New York	40:44 N	74:00 W	56
Mauna Loa, Hawaii	19:28 N	155:36 W	3401
Reunion Island*	21:10 S	55:50 E	181
Pretoria, S. Africa*	25:45 S	28:12 E	1400
Norfolk Island*	29:00 S	168:00 E	10
Perth, Australia*	32:00 S	116:00 E	100
Cape Point, S. Africa*	34:22 S	18:30 E	274
Cape Grim, Tasmania, Australia*	41:00 S	145:00 E	50
Lower Hutt, New Zealand*	41:12 S	174:54 E	10
Chatham Island	44:00 S	176:00 W	100
Invercargill, New Zealand	46:26 S	168:21 E	10
Marion Island*	46:55 S	37:45 E	10
Falkland Islands	51:49 S	58:27 W	68
Marsh, Antarctica*	62:11 S	58:59 W	10
Palmer, Antarctica*	64:46 S	64:04 W	30
Mawson, Antarctic Station*	67:36 S	62:53 E	10

*Sampling sites of RAMP

TABLE 31
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT BARROW, ALASKA DURING 1990-1993

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
1/ 3/90- 1/ 8/90	12.5	1.6	0.94	< 11.9	< 1.8	< 7.5
1/ 8/90- 1/16/90	20.0	1.7	0.72	< 22.2	< 1.8	< 8.5
1/16/90- 1/23/90	17.4	1.3	0.75	< 24.9	< 2.2	< 10.0
1/23/90- 1/29/90	15.0	1.2	0.47	< 11.4	< 1.0	< 4.5
1/29/90- 2/ 5/90	15.6	2.4	0.75	< 18.5	< 2.2	< 12.7
2/ 5/90- 2/12/90	19.4	1.5	0.59	< 14.3	< 1.0	< 7.3
2/12/90- 2/22/90	20.3	1.7	1.00	< 9.5	< 1.0	< 4.6
2/22/90- 2/26/90	12.3	2.0	1.10	< 12.1	< 1.5	< 9.1
2/26/90- 3/ 6/90	17.7	1.9	1.07	< 9.2	< 1.2	< 6.9
3/ 6/90- 3/16/90	23.2	1.9	1.16	< 5.8	< 0.8	< 4.7
3/16/90- 3/27/90	25.5	1.8	0.50	< 17.4	< 1.0	< 5.0
3/27/90- 4/ 5/90	23.1	1.4	0.58	< 22.1	< 1.1	< 5.6
4/ 5/90- 4/10/90	11.4	2.5	0.39	< 15.5	< 1.1	< 7.5
4/10/90- 4/17/90	16.1	1.5	0.35	< 27.6	< 1.3	< 9.4
4/17/90- 4/23/90	14.5	1.3 ^a	0.36	< 65.3	< 1.4	< 9.0
4/23/90- 5/ 1/90	18.4	1.8	0.42	< 48.0	< 1.1	< 6.8
5/ 1/90- 5/ 7/90	13.5	1.4 ^a	0.33	< 98.2	< 2.8	< 16.7
5/ 7/90- 5/16/90	19.7	< 0.6	0.20	< 47.3	< 1.6	< 10.2
5/16/90- 5/22/90	13.6	0.8	0.16	< 19.6	< 1.4	< 6.8
5/22/90- 5/29/90	15.6	0.5 ^a	0.09	< 21.3	< 1.5	< 7.3
5/29/90- 6/ 4/90	13.3	0.5 ^a	0.05	< 16.7	< 1.4	< 9.2
6/ 4/90- 6/12/90	17.8	0.9 ^a	0.05 ^a	< 31.4	< 1.6	< 12.1
6/12/90- 6/18/90	--	--	--	--	--	--
6/18/90- 6/25/90	15.1	0.7	0.06 ^a	< 13.8	< 2.9	< 11.5
6/25/90- 7/ 3/90	17.4	1.7	0.16	< 8.2	< 2.3	< 12.5
7/ 3/90- 7/ 9/90	13.1	0.6	0.07 ^a	< 11.4	< 3.5	< 14.2
7/ 9/90- 7/17/90	17.2	0.5	0.06 ^a	< 6.1	< 2.3	< 11.0
7/17/90- 7/24/90	14.9	0.5	0.05	< 7.2	< 1.3	< 6.5
7/24/90- 7/30/90	13.1	0.4	0.03 ^a	< 8.7	< 1.4	< 5.8
7/30/90- 8/ 9/90	21.8	0.7	0.08	< 3.4	< 0.6	< 2.1
8/ 9/90- 8/13/90	8.8	0.5 ^a	0.10 ^a	< 16.8	< 3.5	< 17.9
8/13/90- 8/21/90	19.3	1.0	0.10	< 4.3	< 0.8	< 3.1
8/21/90- 8/29/90	17.4	0.3	0.03 ^a	< 7.2	< 1.7	< 6.6
8/29/90- 9/ 4/90	13.1	0.5	0.07 ^a	< 11.0	< 2.8	< 13.5
9/ 4/90- 9/12/90	17.7	0.9	0.06 ^a	< 7.1	< 2.8	< 9.3
9/12/90- 9/17/90	10.9	1.1	0.14	< 9.8	< 2.8	< 14.3
9/17/90- 9/25/90	15.7	0.7	0.09 ^a	< 8.7	< 3.0	< 9.1
9/25/90-10/ 1/90	13.4	0.8	0.08	< 28.5	< 1.4	< 7.1
10/ 1/90-10/ 9/90	17.7	0.8	0.18	< 17.7	< 2.6	< 11.5
10/ 9/90-10/15/90	13.2	0.4	0.13	< 8.3	< 1.4	< 8.0
10/15/90-10/23/90	16.1	0.8	0.22	< 15.8	< 2.8	< 11.6
10/23/90-10/29/90	15.9	1.5	0.31	< 15.0	< 2.8	< 14.8
10/29/90-11/ 5/90	16.2	0.9	0.39	< 18.6	< 3.4	< 11.8
11/ 5/90-11/15/90	23.7	< 0.2	0.03	< 8.1	< 2.2	< 7.7
11/15/90-11/20/90	12.2	1.6 ^a	0.62	< 97.6	< 2.0	< 11.9
11/20/90-11/28/90	17.4	1.7 ^a	0.54	< 60.4	< 1.2	< 8.0
11/28/90-12/ 4/90	14.8	2.3	0.46	< 10.8	< 1.2	< 7.4
12/ 4/90-12/13/90	22.0	1.9	0.74	< 12.6	< 1.5	< 9.5
12/13/90-12/20/90	16.5	2.2	0.60	< 30.1	< 2.4	< 12.0
12/20/90-12/27/90	18.8	1.6	0.98	< 16.4	< 1.7	< 10.7
12/27/90- 1/ 3/91	16.8	1.5	0.61	< 3.8	< 0.5	< 2.8

TABLE 31 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
1/ 3/91- 1/11/91	19.6	2.0	0.81	< 18.9	< 2.5	< 9.7
1/11/91- 1/23/91	30.0	2.0	1.18	< 7.3	< 1.2	< 7.2
1/23/91- 2/ 1/91	22.4	2.1	1.21	< 2.6	< 0.7 ^a	< 1.6
2/ 1/91- 2/ 9/91	17.7	1.0	1.45	< 24.9	< 2.5	< 11.7
2/ 9/91- 2/20/91	27.6	2.3	1.04	< 12.6	< 1.9	< 7.9
2/20/91- 2/28/91	21.7	2.0	0.68	< 12.5	< 1.6	< 9.6
2/28/91- 3/ 4/91	9.5	2.7 ^a	0.57	< 98.1	< 5.3	< 25.4
3/ 4/91- 3/11/91	17.2	1.8	0.70	< 17.1	< 0.8	< 4.4
3/11/91- 3/20/91	22.5	1.6	0.59	< 12.8	< 0.6	< 3.2
3/20/91- 3/26/91	14.7	2.6	0.56	< 25.2	< 1.6	< 8.1
3/26/91- 4/ 3/91	16.7	2.9	0.48	< 21.6	< 1.5	< 7.3
4/ 3/91- 4/ 9/91	17.6	1.9 ^a	0.46	< 60.5	< 5.0	< 15.8
4/ 9/91- 4/16/91	16.3	1.8	0.47	< 34.0	< 2.7	< 11.6
4/16/91- 4/24/91	18.3	2.4	0.56	< 24.2	< 1.9	< 13.0
4/24/91- 5/ 1/91	13.6	1.9	0.34	< 41.3	< 3.3	< 15.0
5/ 1/91- 5/ 7/91	15.7	0.8 ^a	0.18	< 20.8	< 2.5	< 15.1
5/ 7/91- 5/15/91	17.5	1.1	0.14	< 26.7	< 2.5	< 11.0
5/15/91- 5/22/91	15.7	0.8 ^a	0.09 ^a	< 21.6	< 2.7	< 11.0
5/22/91- 5/29/91	15.3	0.5 ^a	0.08 ^a	< 23.2	< 2.5	< 11.3
5/29/91- 6/ 4/91	13.7	0.4 ^a	0.05 ^a	< 28.2	< 3.6	< 13.0
6/ 4/91- 6/11/91	15.8	0.6 ^a	0.02 ^b	< 19.6	< 2.6	< 11.4
6/11/91- 6/19/91	15.6	0.4	0.02 ^b	< 11.7	< 1.9	< 10.9
6/19/91- 6/25/91	15.2	0.8	0.10 ^a	< 15.4	< 2.9	< 14.3
6/25/91- 7/ 2/91	15.4	0.8	0.04 ^a	< 18.0	< 2.2	< 8.7
7/ 2/91- 7/ 9/91	15.3	0.2 ^a	0.01 ^b	< 7.5	< 1.4	< 5.4
7/ 9/91- 7/16/91	15.3	0.2	0.03	< 5.7	< 0.8	< 3.4
7/16/91- 7/23/91	15.6	0.5 ^a	0.08	< 15.5	< 2.2	< 9.5
7/23/91- 7/30/91	15.4	0.2 ^a	0.03 ^a	< 10.3	< 2.4	< 12.4
7/30/91- 8/ 7/91	17.2	1.4	0.15	< 15.3	< 2.6	< 16.4
8/ 7/91- 8/12/91	11.2	< 0.2	0.01 ^c	< 19.6	< 3.3	< 13.0
8/12/91- 8/24/91	24.7	0.3	0.05	< 6.0	< 0.9	< 3.7
8/24/91- 8/28/91	10.7	0.3	0.04	< 9.5	< 2.0	< 8.3
8/28/91- 9/ 3/91	13.8	1.4	0.19	< 19.4	< 3.3	< 14.8
9/ 3/91- 9/12/91	17.9	0.5 ^a	0.05 ^b	< 28.8	< 1.4	< 10.0
9/12/91- 9/17/91	13.2	< 0.4	0.12 ^b	< 40.1	< 2.0	< 9.9
9/17/91- 9/27/91	22.2	0.6	0.13	< 31.9	< 1.8	< 8.8
9/27/91-10/ 7/91	20.8	0.3	0.09	< 9.7	< 0.7	< 3.2
10/ 7/91-10/15/91	20.8	0.8	0.23	< 25.3	< 1.9	< 9.1
10/15/91-10/22/91	16.1	0.4 ^a	0.18	< 31.5	< 2.5	< 12.2
10/22/91-10/29/91	16.0	0.9	0.50	< 13.8	< 1.3	< 5.6
10/29/91-11/ 5/91	16.1	1.5	0.51	< 19.5	< 3.2	< 18.4
11/ 5/91-11/12/91	16.7	1.3	0.64 ^a	< 15.3	< 2.6	< 9.7
11/12/91-11/19/91	17.5	1.1	0.40	< 21.0	< 2.8	< 16.7
11/19/91-11/26/91	17.5	1.4	1.09	< 18.9	< 2.9	< 12.7
11/26/91-12/ 3/91	17.0	1.7	0.69	< 16.7	< 3.3	< 13.5
12/ 3/91-12/10/91	17.4	1.7	0.78	< 29.1	< 2.8	< 12.9
12/10/91-12/17/91	16.1	1.9	0.78	< 19.6	< 3.0	< 18.2
12/17/91-12/24/91	18.4	1.2	1.01	< 6.8	< 2.2	< 10.7
12/24/91-12/31/91	17.5	1.5	1.24 ^b	< 16.1	< 2.5	< 10.9
12/31/91- 1/ 7/92	16.0	1.4	1.00	< 16.1	< 2.9	< 13.2
1/ 7/92- 1/14/92	17.2	2.3	0.74	< 9.1	< 2.8	< 13.1
1/14/92- 1/21/92	17.5	2.1	0.71	< 7.0	< 2.2	< 11.6
1/21/92- 1/28/92	17.6	2.8	0.95	< 9.2	< 2.4	< 9.3
1/28/92- 2/ 4/92	17.6	2.0	1.28	< 27.9	< 2.8	< 13.6
2/ 4/92- 2/11/92	17.1	1.8	1.30 ^a	< 33.0	< 3.4	< 13.6
2/11/92- 2/18/92	17.2	2.1	1.24 ^b	< 23.2	< 3.2	< 12.9
2/18/92- 2/25/92	17.5	3.1	0.62	< 16.3	< 1.4	< 7.1

TABLE 31 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ca
		(mBq m ⁻³)		(μBq m ⁻³)		
2/25/92- 3/ 3/92	17.6	1.9	1.04	< 16.4	< 1.5	< 6.7
3/ 3/92- 3/10/92	17.4	2.2	0.92	< 22.3	< 2.7	< 17.1
3/10/92- 3/17/92	16.8	2.2	0.76	< 12.8	< 2.9	< 16.9
3/17/92- 3/25/92	17.0	2.1	0.81	< 26.3	< 2.9	< 13.8
3/25/92- 4/ 2/92	21.0	1.5	0.65	< 21.9	< 3.0	< 11.6
4/ 2/92- 4/ 7/92	12.1	< 0.5	0.59	< 45.7	< 2.4	< 12.0
4/ 7/92- 4/14/92	17.2	2.5	0.54	< 70.0	< 1.7	< 10.3
4/14/92- 4/22/92	18.7	3.0	0.42	< 59.0	< 2.4	< 13.7
4/22/92- 4/28/92	14.2	2.0	0.41	< 26.7	< 1.9	< 9.1
4/28/92- 5/ 5/92	16.7	1.1 ^a	0.33	< 58.9	< 2.9	< 21.8
5/ 5/92- 5/12/92	15.9	2.2	0.47 ^a	< 54.1	< 2.3	< 14.0
5/12/92- 5/19/92	15.6	1.1	0.22	< 32.2	< 3.2	< 13.7
5/19/92- 5/26/92	15.4	1.2	0.13	< 15.1	< 1.4	< 6.6
5/26/92- 6/ 2/92	16.0	1.1	0.10	< 32.2	< 1.5	< 8.1
6/ 2/92- 6/ 9/92	16.2	< 0.8	0.08 ^a	< 62.8	< 2.8	< 22.8
6/ 9/92- 6/16/92	15.6	< 1.3	0.07 ^a	< **.*	< 3.3	< 21.8
6/16/92- 6/23/92	15.7	1.3 ^a	0.15	< 63.4	< 2.3	< 19.9
6/23/92- 6/30/92	15.4	0.6 ^a	0.07	< 50.9	< 2.6	< 19.6
6/30/92- 7/ 7/92	15.1	1.1 ^a	0.09	< 51.6	< 3.3	< 18.7
7/ 7/92- 7/14/92	15.3	1.3	0.11	< 39.8	< 3.1	< 22.1
7/14/92- 7/22/92	18.0	0.5	0.06 ^a	< 27.7	< 2.1	< 10.8
7/22/92- 7/28/92	13.1	< 0.7	0.06 ^a	< 75.4	< 3.0	< 25.2
7/28/92- 8/ 4/92	15.6	0.6	0.05	< 15.2	< 1.6	< 10.7
8/ 4/92- 8/12/92	18.1	0.4	0.06 ^a	< 11.3	< 2.0	< 8.8
8/12/92- 8/18/92	13.5	0.8	0.07 ^a	< 15.9	< 2.9	< 11.4
8/18/92- 8/26/92	17.3	1.4	0.15	< 34.1	< 1.4	< 8.8
8/26/92- 9/ 1/92	13.2	0.6	0.08	< 3.9	< 0.7	< 4.0
9/ 1/92- 9/11/92	22.3	0.5 ^a	0.08 ^a	< 25.0	< 1.8	< 15.0
9/11/92- 9/16/92	10.9	< 0.4	0.04 ^a	< 53.3	< 3.7	< 19.5
9/16/92- 9/22/92	14.1	1.1	0.12 ^a	< 10.9	< 0.9	< 4.6
9/22/92- 9/29/92	16.4	0.8	0.16	< 27.7	< 2.8	< 14.8
9/29/92-10/ 7/92	18.1	< 16.6	0.19	< **.*	< 1.3	< 22.8
10/ 7/92-10/16/92	20.8	< 5.3	0.24	< **.*	< 0.6	< 7.4
10/16/92-10/23/92	16.3	< 3.7	0.57	< **.*	< 2.4	< 26.3
10/23/92-10/28/92	12.0	< 10.3	0.54	< **.*	< 2.2	< 23.7
10/28/92-11/ 5/92	18.9	< 2.4	0.69	< **.*	< 1.3	< 12.6
11/ 5/92-11/12/92	16.8	< 2.2	0.15	< **.*	< 1.4	< 12.2
11/12/92-11/19/92	17.2	< 4.0	0.44	< **.*	< 1.4	< 17.8
11/19/92-12/ 4/92	36.2	< 2.7	0.37	< **.*	< 1.0	< 12.9
12/ 4/92-12/14/92	24.2	1.7	1.27	< 11.8	< 1.0	< 6.8
12/14/92-12/22/92	19.8	< 1.9	1.26	< **.*	< 1.9	< 19.3
12/22/92-12/29/92	17.4	3.6 ^a	1.42	< **.*	< 1.5	< 15.4
12/29/92- 1/ 7/93	20.7	1.2	0.50	< 18.7	< 2.5	< 15.0
1/ 7/93- 1/14/93	16.7	1.5	0.82	< 21.7	< 2.4	< 16.4
1/14/93- 1/22/93	20.0	1.4	1.36 ^a	< 9.1	< 1.1	< 5.0
1/22/93- 1/29/93	17.2	--	1.17	< **.*	< 1.3	< 24.6
1/29/93- 2/ 5/93	17.9	1.5	1.27	< 9.8	< 2.5	< 11.4
2/ 5/93- 2/17/93	27.0	1.9	0.54	< 3.4	< 1.0	< 4.1
2/17/93- 2/23/93	14.1	1.1	0.33	< 10.6	< 3.4	< 12.7
2/23/93- 3/ 1/93	16.4	1.2	0.96	< 6.0	< 2.9	< 15.5
3/ 1/93- 3/ 8/93	17.5	1.1	0.80	< 16.9	< 2.7	< 16.2
3/ 8/93- 3/15/93	17.7	1.1	0.45	< 11.7	< 2.2	< 9.4
3/15/93- 3/22/93	16.8	1.5	0.85	< 14.0	< 2.6	< 10.9
3/22/93- 4/ 1/93	24.3	2.2	0.85	< 4.6	< 1.1	< 4.9
4/ 1/93- 4/ 8/93	16.8	3.3	0.52	< 1.4	< 0.7	< 3.7
4/ 8/93- 4/15/93	16.5	2.7	0.55	< 4.9	< 3.2	< 14.2
4/15/93- 4/21/93	14.2	1.9	0.57	< 4.0	< 2.2	< 11.0

TABLE 31 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)			(μBq m ⁻³)	
4/21/93- 4/30/93	21.0	2.8	0.45	1.2 ^a	< 0.4	< 5.0
4/30/93- 5/ 8/93	16.3	2.5	0.43	< 1.6	< 0.6	< 2.8
5/ 8/93- 5/17/93	22.4	1.4	0.26	< 1.4	< 0.4	< 2.0
5/17/93- 5/23/93	16.1	2.4	0.24	< 2.1	< 0.8	< 2.8
5/23/93- 6/ 1/93	17.9	< 1.4	0.13	< **.*	< 1.3	< 10.4
6/ 1/93- 6/ 9/93	15.5	< 0.6	0.04	< 57.4	< 0.7	< 5.3
6/ 9/93- 6/15/93	15.2	< 1.3	0.07 ^a	< **.*	< 1.7	< 12.1
6/15/93- 6/22/93	15.5	< 1.0	0.04 ^b	< 90.5	< 2.1	< 19.6 ^b
6/22/93- 7/ 2/93	21.8	--	0.06	< 81.4	< 1.1	9.1 ^b
7/ 2/93- 7/ 9/93	15.3	--	--	--	--	--
7/ 9/93- 7/16/93	15.3	--	--	--	--	--
7/16/93- 7/22/93	13.0	--	--	--	--	--
7/22/93- 7/29/93	13.5	--	--	--	--	--
7/29/93- 8/ 9/93	26.1	0.4	0.05	< 9.3	< 1.4	< 9.3
8/ 9/93- 8/17/93	17.1	0.6	0.04 ^a	< 13.9	< 2.8	< 15.8
8/17/93- 8/23/93	13.5	0.8	0.14	< 26.2	< 3.7	< 15.4
8/23/93- 9/ 1/93	20.6	0.5	0.12	< 11.2	< 2.0	< 7.9
9/ 1/93- 9/ 8/93	15.0	0.5 ^a	0.05 ^a	< 23.5	< 2.7	< 11.8
9/ 8/93- 9/17/93	20.6	1.0	0.13	< 13.3	< 2.2	< 10.6
9/17/93- 9/23/93	13.3	0.6	0.07 ^a	< 17.9	< 2.8	< 12.6
9/23/93-10/ 5/93	24.8	1.2	0.15	< 10.3	< 1.9	< 8.8
10/ 5/93-10/12/93	17.6	2.1 ^a	0.22	< 51.9	< 2.6	< 13.4
10/12/93-10/15/93	6.4	5.9 ^a	0.43	< **.*	< 5.5	< 35.2
10/15/93-10/21/93	13.8	1.6 ^a	0.16 ^a	< 77.7	< 3.3	< 20.6
10/21/93-10/28/93	15.9	2.0	0.38	< 42.0	< 3.2	< 16.3
10/28/93-11/ 2/93	11.8	1.3 ^a	0.29	< 63.9	< 4.3	< 31.1
11/ 2/93-11/ 8/93	13.9	--	0.39	< **.*	< 3.7	< 21.8
11/ 8/93-11/16/93	16.5	3.1	0.59	< 67.6	< 1.5	< 5.3
11/16/93-11/22/93	16.5	1.5 ^a	0.63	< 88.4	< 3.1	< 18.0
11/22/93-12/ 2/93	21.6	2.3 ^a	0.41	< 78.7	< 2.2	< 13.2
12/ 2/93-12/ 8/93	17.2	2.3	0.62	< 33.1	< 2.6	< 17.1
12/ 8/93-12/16/93	17.4	2.7	0.67	< 45.4	< 2.9	< 13.9
12/16/93-12/27/93	26.6	2.9	0.58	< 20.2	< 0.8	< 2.7
12/27/93- 1/ 3/94	16.4	4.5	0.80	< 27.9	< 2.6	< 18.5

Note:

-- = No data

Uncertainty is < 20% except:

- a = Uncertainty is between 20% and 50%
- b = Uncertainty is between 50% and 100%
- c = Uncertainty is greater than 100%

TABLE 32
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT NEW YORK CITY, NEW YORK DURING 1990-1993

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
5/ 3/90- 5/14/90	15.4	3.8	0.36	< 3.1	< 1.4	< 4.7
5/14/90- 5/18/90	6.7	< 2.3	0.36	< **.*	4.4 ^b	< 28.3
5/18/90- 5/25/90	11.0	< 0.9	0.14	< **.*	< 2.9	< 19.2
5/25/90- 6/ 1/90	10.7	3.9 ^a	0.35	< **.*	< 2.7	< 20.0
6/ 1/90- 6/ 8/90	10.2	4.6	0.39	< 89.2	< 1.8	< 15.5
6/ 8/90- 6/15/90	11.4	4.2	0.40	< **.*	< 2.8	< 18.3
6/15/90- 6/25/90	15.7	2.8	0.38	< 9.8	< 2.3	< 9.4
6/25/90- 6/29/90	6.2	3.3 ^a	0.55	< **.*	< 5.1	< 39.1
6/29/90- 7/ 9/90	15.8	3.4	0.49	< 12.0	< 3.6	< 16.2
7/ 9/90- 7/16/90	10.1	4.1	0.41	< 17.0	< 5.7	< 25.1
7/16/90- 7/20/90	6.3	6.5	1.22	< 20.0	< 5.2	< 27.6
7/20/90- 7/27/90	11.0	1.6	0.35	< 14.2	< 4.7	< 20.6
7/27/90- 8/ 8/90	18.6	3.2	0.36	< 12.5	< 3.1	< 14.2
8/ 8/90- 8/24/90	25.1	3.9	0.60	< 8.4	< 2.6	< 9.0
8/24/90- 9/17/90	--	--	--	--	--	--
9/17/90- 9/21/90	6.1	3.5	0.42	< 24.5	< 8.0	< 30.7
9/21/90- 9/27/90	9.7	2.9	0.47	< 10.7	< 4.2	< 20.3
9/27/90-10/ 3/90	9.4	3.4	0.71	< 27.5	< 5.9	< 26.6
10/ 3/90-10/11/90	12.8	4.3	0.66	< 11.8	< 2.7	< 14.9
10/11/90-10/18/90	10.9	3.2	0.54	< 23.5	< 5.2	< 27.2
10/18/90-10/26/90	12.3	4.5	0.54	< 10.9	< 1.8	< 8.1
10/26/90-11/ 2/90	10.8	3.1	0.67	< 11.3	< 2.3	< 9.2
11/ 2/90-11/23/90	24.0	3.7	1.05	< 16.9	< 2.9	< 13.0
11/23/90-11/30/90	11.2	4.3	0.79	< 33.9	< 5.4	< 25.3
11/30/90-12/ 6/90	9.4	3.5	0.81	< 36.7	< 6.4	< 27.1
12/ 6/90-12/17/90	14.2	4.1	1.04	< 27.9	< 4.0	< 17.2
12/17/90-12/19/90	3.4	3.8 ^a	0.85 ^a	< **.*	< 22.7	< **.*
12/19/90-12/27/90	12.7	3.5	0.94	< 25.2	< 4.2	< 19.4
12/27/90- 1/ 3/91	11.5	2.2	0.71	< 21.6	< 5.0	< 26.4
1/ 3/91- 1/10/91	11.6	2.8	0.67	< 21.6	< 4.8	< 25.5
1/10/91- 1/17/91	11.1	2.6	0.50	< 62.1	< 5.0	< 26.4
1/17/91- 1/18/91	--	--	--	--	--	--
1/18/91- 1/24/91	11.3	4.4	0.88	< 18.3	< 4.6	< 25.9
1/24/91- 1/30/91	9.0	3.9	0.85	< 15.8	< 3.3	< 14.4
1/30/91- 2/ 6/91	11.2	4.6	1.02	< 17.1	< 5.1	< 18.4
2/ 6/91- 2/13/91	11.1	4.0	0.76	< 17.3	< 5.7	< 19.7
2/13/91- 2/20/91	11.0	3.6	0.56	< 16.1	< 5.7	< 21.7
2/20/91- 2/27/91	--	--	--	--	--	--
2/27/91- 3/ 6/91	10.8	3.6	0.54	< 14.9	< 5.6	< 19.3
3/ 6/91- 3/14/91	12.8	4.9	0.74	< 23.8	< 4.6	< 21.3
3/14/91- 3/20/91	9.8	3.1	0.40	< 54.5	< 8.4	< 35.5
3/20/91- 3/25/91	7.5	3.9	0.42	< 81.6	< 3.8	< 23.8
3/25/91- 4/ 1/91	10.9	3.9	0.51	< 61.4	< 2.9	< 15.6
4/ 1/91- 4/ 3/91	--	--	--	--	--	--
4/ 3/91- 4/ 8/91	7.2	4.6	0.79	< **.*	< 5.2	< 27.3
4/ 8/91- 4/18/91	14.0	4.5	0.54	< 55.5	< 3.5	< 27.0
4/18/91- 4/25/91	12.2	3.1	0.36	< 40.8	< 2.6	< 16.3
4/25/91- 5/ 1/91	--	--	--	--	--	--
5/ 1/91- 5/ 8/91	10.7	2.6	0.34	< 65.5	< 5.0	< 26.4

TABLE 32 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
5/ 8/91- 5/15/91	10.7	3.3	0.59	< 50.6	< 3.4	< 17.4
5/15/91- 5/22/91	10.6	5.4	0.53	< 59.8	< 5.5	< 23.3
5/22/91- 5/30/91	11.8	4.8	0.59	< 25.2	< 2.1	< 12.7
5/30/91- 6/ 5/91	9.4	2.9	0.42	< 76.7	< 6.4	< 51.9
6/ 5/91- 6/12/91	10.7	3.8	0.46	< 73.3	< 5.1	< 25.6
6/12/91- 6/19/91	10.5	3.7	0.43	< 35.1	< 4.7	< 22.7
6/19/91- 6/26/91	10.7	3.0	0.40	< 38.2	< 3.3	< 15.6
6/26/91- 7/ 3/91	11.1	5.6	0.60	< 29.4	< 4.9	< 27.6
7/ 3/91- 7/10/91	10.7	4.1	0.44	< 29.1	< 4.8	< 23.7
7/10/91- 7/17/91	10.5	5.1	0.53	< 54.2	< 8.8	< 34.9
7/17/91- 7/27/91	15.0	5.0	0.93	< 20.6	< 3.3	< 20.6
7/27/91- 8/ 1/91	7.6	4.2	0.65	< 37.5	< 7.4	< 34.8
8/ 1/91- 8/ 8/91	10.5	2.8	0.57	< 24.5	< 4.7	< 23.2
8/ 8/91- 8/14/91	9.2	2.7	0.40	< 29.1	< 5.6	< 24.5
8/14/91- 8/22/91	12.1	4.2	0.77	< 16.0	< 2.9	< 13.2
8/22/91- 8/29/91	10.8	3.4	0.65	< 14.7	< 3.0	< 17.8
8/29/91- 9/13/91	--	--	--	--	--	--
9/13/91- 9/19/91	9.4	4.1	0.87	< 31.1	< 5.7	< 27.9
9/19/91- 9/27/91	--	--	--	--	--	--
9/27/91-10/ 4/91	10.9	4.5	0.63	< 12.9	< 3.1	< 16.6
10/ 4/91-10/ 9/91	7.9	3.5	0.61	< 16.6	< 3.6	< 16.3
10/ 9/91-10/17/91	12.8	3.7	0.64	< 11.0	< 3.0	< 11.5
10/17/91-10/25/91	12.6	4.2	0.92	< 9.6	< 2.7	< 13.3
10/25/91-10/30/91	7.9	3.9	0.79	< 13.9	< 4.0	< 15.4
10/30/91-11/ 6/91	10.9	3.1	0.91	< 5.7	< 1.9	< 6.9
11/ 6/91-11/13/91	11.0	2.7	0.67	< 8.0	< 3.0	< 13.9
11/13/91-11/20/91	10.6	3.1	0.97	< 8.8	< 3.2	< 16.2
11/20/91-11/27/91	11.1	1.8	0.36	< 10.9	< 5.0	< 17.2
11/27/91-12/ 4/91	11.0	3.1	0.70	< 3.6	< 1.6	< 8.1
12/ 4/91-12/11/91	11.3	2.4	1.05	< 6.4	< 2.9	< 10.5
12/11/91-12/18/91	10.8	3.2	0.80	< 11.4	< 5.3	< 24.0
12/18/91-12/26/91	13.0	3.3	0.70	< 11.0	< 4.8	< 16.1
12/26/91- 1/ 2/92	9.1	5.1	0.95	< 10.9	8.0 ^a	< 13.5
1/ 2/92- 1/ 8/92	15.3	< **.*	0.45	< **.*	< 2.5	< 69.9
1/ 8/92- 1/10/92	--	--	--	--	--	--
1/10/92- 1/13/92	4.4	< 5.0	0.55	< **.*	< 6.0	< 48.2
1/13/92- 1/16/92	4.9	< 2.0	0.28	< **.*	< 2.3	< 23.8
1/16/92- 1/22/92	10.0	--	--	--	--	--
1/22/92- 1/30/92	--	--	--	--	--	--
1/30/92- 2/ 7/92	10.4	5.4	0.51	< 3.9	< 0.7	< 3.3
2/ 7/92- 2/12/92	13.1	4.0	0.51	< 17.5	< 2.7	< 11.6
2/12/92- 2/19/92	8.4	3.9	0.89	< 9.4	< 1.9	< 10.3
2/19/92- 2/27/92	11.9	2.2	0.58	< 51.3	< 6.7	< 40.0
2/27/92- 3/ 4/92	15.2	1.9	0.58	< 21.0	< 2.3	< 13.6
3/ 4/92- 3/11/92	17.2	2.7	0.47	< 9.5	< 1.0	< 5.3
3/11/92- 3/18/92	17.6	5.7	0.57	< 25.0	< 3.1	< 19.1
3/18/92- 3/25/92	16.6	3.8	0.50	< 29.9	< 3.6	< 16.3
3/25/92- 4/ 1/92	16.2	5.5	0.42	< 36.1	< 4.5	< 27.7
4/ 1/92- 4/ 8/92	16.5	4.6	0.43	< 19.6	< 1.1	< 5.7
4/ 8/92- 4/15/92	16.4	5.0	0.58	< 45.3	< 2.9	< 17.3
4/15/92- 4/16/92	--	--	--	--	--	--
4/16/92- 4/22/92	17.4	3.1	0.30	< 71.7	< 3.4	< 17.3

TABLE 32 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
4/22/92- 4/30/92	5.5	4.0	0.59	< 87.9	< 5.8	< 28.7
4/30/92- 5/ 1/92	--	--	--	--	--	--
5/ 1/92- 5/ 6/92	12.5	3.0	0.34	< 63.1	< 3.5	< 20.9
5/ 6/92- 5/13/92	17.3	2.6	0.27	< 19.5	< 1.9	< 8.9
5/13/92- 5/20/92	16.8	3.3	0.30	< 27.5	< 2.7	< 11.8
5/20/92- 5/27/92	15.5	5.1	0.42	< 13.9	< 1.5	< 6.7
5/27/92- 6/ 3/92	16.6	3.0	0.29	< 11.6	< 1.3	< 5.8
6/ 3/92- 6/10/92	16.6	2.4	0.41	< 17.6	< 1.8	< 8.2
6/10/92- 6/17/92	16.3	4.8	0.41	< 11.2	< 1.3	< 5.8
6/17/92- 6/24/92	17.3	4.6	0.30	< 23.4	< 2.2	< 9.9
6/24/92- 7/ 1/92	16.2	5.3	0.68	< 25.8	< 3.5	< 17.2
7/ 1/92- 7/ 8/92	16.5	2.4	0.31	< 14.3	< 2.9	< 16.3
7/ 8/92- 7/23/92	18.0	3.4	0.69 ^b	< 10.9	< 1.9	< 7.8
7/23/92- 7/30/92	17.4	4.0	0.46	< 14.4	< 3.0	< 12.0
7/30/92- 8/ 5/92	14.8	4.4	0.44	< 19.9	< 2.8	< 13.0
8/ 5/92- 8/12/92	16.7	5.3	0.58	< 26.3	< 4.3	< 22.8
8/12/92- 8/19/92	17.2	3.1	0.31	< 19.9	< 3.2	< 12.9
8/19/92- 8/26/92	17.3	5.2	0.65	< 17.9	< 3.3	< 15.8
8/26/92- 9/ 3/92	18.9	4.0	0.65	< 16.4	< 2.9	< 12.1
9/ 3/92- 9/ 9/92	15.1	3.3	0.50	< 37.4	< 2.8	< 19.2
9/ 9/92- 9/16/92	16.9	5.2	0.40	< 25.2	< 3.3	< 17.3
9/16/92- 9/23/92	17.7	4.6	0.66	< 36.0	< 3.0	< 15.6
9/23/92- 9/30/92	10.2	3.5	0.33	< 20.2	< 2.9	< 20.4
9/30/92-10/ 7/92	10.0	4.7	0.70	< 95.6	< 8.2	< 39.8
10/ 7/92-10/14/92	10.6	5.3	0.68 ^a	< 39.2	< 6.5	< 28.1
10/14/92-10/21/92	10.4	4.8	0.81	< 36.3	< 6.8	< 41.8
10/21/92-10/28/92	10.5	2.6	0.69	< 82.5	< 8.0	< 38.2
10/28/92-11/ 4/92	10.0	2.7	0.63 ^b	< 60.6	< 6.8	< 47.5
11/ 4/92-11/12/92	14.4	2.7	0.36 ^a	< 12.6	< 2.3	< 14.2
11/12/92-11/18/92	9.3	3.0	0.66	< 45.5	< 7.5	< 35.0
11/18/92-11/25/92	10.6	4.1	0.46	< 29.5	< 7.1	< 41.6
11/25/92-12/ 2/92	10.7	2.1	0.76	< 32.2	< 5.9	< 38.8
12/ 2/92-12/ 9/92	10.9	2.7	0.61	< 42.9	< 5.8	< 27.9
12/ 9/92-12/16/92	10.8	3.8	0.50	< 43.9	< 7.3	< 31.6
12/16/92-12/23/92	10.7	3.8	0.91	< 18.7	< 6.7	< 34.9
12/23/92-12/30/92	10.3	4.8	0.85	< 6.0	< 2.0	< 7.9
12/30/92- 1/ 6/93	10.3	3.9	0.53	< 29.2	< 6.8	< 41.3
1/ 6/93- 1/13/93	10.7	4.3	0.93	< 37.8	< 7.2	< 33.7
1/13/93- 1/20/93	11.3	1.9	0.78 ^a	< 18.0	< 4.7	< 21.4
1/20/93- 1/27/93	10.4	3.1	0.55 ^a	< 32.7	< 8.0	< 31.3
1/27/93- 2/ 3/93	10.9	5.0	0.74	< 25.9	< 6.7	< 36.9
2/ 3/93- 2/10/93	10.8	6.5	0.68	< 20.2	< 5.3	< 29.9
2/10/93- 2/17/93	17.8	3.8	0.48	< 22.4	< 2.4	< 13.8
2/17/93- 2/24/93	18.3	4.2	0.80	< 19.4	< 2.4	< 16.3
2/24/93- 3/ 3/93	15.2	5.9	0.87	< 13.4	< 2.3	< 10.5
3/ 3/93- 3/10/93	16.8	--	0.70	< **. *	< 4.3	< 53.7
3/10/93- 3/17/93	17.9	--	0.52	< **. *	< 1.1	< 8.1
3/17/93- 3/24/93	17.4	--	0.66	< **. *	< 2.0	< 15.0
3/24/93- 3/31/93	--	--	--	--	--	--
3/31/93- 4/ 7/93	17.2	2.9	0.31	< 36.6	< 2.9	< 14.9
4/ 7/93- 4/14/93	17.3	3.0	0.25	< 26.4	< 2.9	< 19.5
4/14/93- 4/21/93	17.4	5.6	0.41	< 30.3	< 3.0	< 17.6

TABLE 32 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Co
		(mBq m ⁻³)		(μBq m ⁻³)		
4/21/93- 4/28/93	17.8	6.0	0.37	< 23.6	< 2.7	< 14.8
4/28/93- 5/ 5/93	17.1	4.7	0.35	< 13.5	< 2.4	< 12.9
5/ 5/93- 5/11/93	14.4	3.8	0.38	< 17.3	< 3.0	< 17.8
5/11/93- 5/19/93	19.5	5.4	0.40	< 8.4	< 1.7	< 10.5
5/19/93- 5/26/93	17.1	5.8	0.52	< 15.8	< 3.1	< 18.7
5/26/93- 6/ 2/93	17.5	4.9	0.30	< 6.0	< 1.3	< 6.5
6/ 2/93- 6/ 9/93	10.6	5.8	0.39	< 24.7	< 5.6	< 33.7
6/ 9/93- 6/16/93	10.7	5.0	0.44	< 28.9	< 6.2	< 24.6
6/16/93- 6/23/93	10.2	4.1	0.76	< 34.7	< 7.2	< 33.4
6/23/93- 6/30/93	10.5	5.7	0.47	< 23.1	< 6.1	< 35.2
6/30/93- 7/ 7/93	10.5	--	0.66	< **.*	< 6.7	< 73.9
7/ 7/93- 7/13/93	14.1	--	--	--	--	--
7/13/93- 7/14/93	--	--	--	--	--	--
7/14/93- 7/21/93	17.0	--	0.33	< **.*	< 3.9	< 63.5
7/21/93- 7/28/93	16.8	--	--	--	--	--
7/28/93- 8/ 4/93	16.4	4.1	0.65	< 28.7	< 3.4	< 15.9
8/ 4/93- 8/11/93	--	--	--	--	--	--
8/11/93- 8/18/93	16.7	5.3	0.62	< 18.5	< 2.4	< 17.1
8/18/93- 8/25/93	16.2	6.3	0.59	< 23.2	< 2.7	< 16.7
8/25/93- 9/ 1/93	17.0	6.6	1.07	< 16.7	< 2.5	< 13.2
9/ 1/93- 9/ 8/93	17.2	4.7	0.59	< 17.9	< 3.2	< 15.2
9/ 8/93- 9/15/93	17.5	5.5	0.56	< 16.8	< 2.7	< 15.2
9/15/93- 9/22/93	0.8	8.0	1.39 ^a	< **.*	< 65.2	< **.*
9/22/93- 9/29/93	17.6	4.3	0.65	< 8.9	< 1.7	< 7.8
9/29/93-10/ 6/93	17.7	3.7	0.39	< 48.8	< 4.1	< 30.2
10/ 6/93-10/13/93	15.7	4.5 ^a	0.69	< **.*	< 6.5	< 37.0
10/13/93-10/20/93	17.1	6.6	0.88	< **.*	< 6.5	< 45.1
10/20/93-10/27/93	3.3	< 3.7	0.69 ^a	< **.*	< 20.9	< **.*
10/27/93-11/ 3/93	8.3	8.0	0.94	< **.*	< 9.5	< 79.5
11/ 3/93-11/10/93	16.9	4.4 ^a	0.79	< **.*	< 3.4	< 21.5
11/10/93-11/17/93	17.1	4.5	0.98	< **.*	< 1.5	< 7.1
11/17/93-11/24/93	13.6	6.4	1.01	< 52.6	< 5.2	< 39.0
11/24/93-12/ 1/93	17.7	3.8 ^a	0.67	< **.*	< 1.8	< 8.1
12/ 1/93-12/ 8/93	7.9	6.9 ^a	0.79	< **.*	< 3.7	< 17.6
12/ 8/93-12/15/93	17.5	--	--	--	--	--
12/15/93-12/22/93	18.1	2.9	0.60	< 35.2	< 1.1	< 6.7
12/22/93-12/29/93	18.2	4.1 ^a	0.60	< **.*	< 4.0	< 24.9

Note:

-- = No data

Uncertainty is < 20% except:

- a = Uncertainty is between 20% and 50%
- b = Uncertainty is between 50% and 100%
- c = Uncertainty is greater than 100%

TABLE 33
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT MAUNA LOA, HAWAII DURING 1990-1993

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
1/ 2/90- 1/ 8/90	7.3	6.8	0.17	< 28.3	< 2.2	< 15.6
1/ 8/90- 1/16/90	10.1	4.9	0.16	< 38.2	< 2.8	< 16.5
1/16/90- 1/22/90	7.7	1.4	0.02	< 18.7	< 1.7	< 7.9
1/22/90- 2/ 1/90	12.7	6.1	0.14	< 12.4	< 1.4	< 8.7
2/ 1/90- 2/ 8/90	8.9	4.2	0.10	< 17.9	< 1.5	< 7.1
2/ 8/90- 2/15/90	9.1	8.3	0.30	< 35.7	< 3.4	< 22.1
2/15/90- 2/22/90	8.9	6.4	0.31	< 18.0	< 3.4	< 20.5
2/22/90- 3/ 7/90	15.2	6.0	0.25	< 7.7	< 1.4	< 6.5
3/ 7/90- 3/13/90	8.8	5.5	0.16	< 54.8	< 2.8	< 14.8
3/13/90- 3/22/90	11.2	6.9	0.40	< 36.9	< 1.9	< 10.9
3/22/90- 4/ 2/90	13.8	7.2	0.41	< 24.2	< 1.6	< 11.4
4/ 2/90- 4/ 9/90	8.6	6.8	0.40	< **.*	< 2.6	< 23.0
4/ 9/90- 4/16/90	8.6	7.6	0.44	< **.*	< 2.5	< 16.6
4/16/90- 4/23/90	8.6	7.7	0.49	< **.*	< 2.4	< 15.0
4/23/90- 5/ 1/90	9.8	5.3	0.36	< **.*	< 2.2	< 15.1
5/ 1/90- 5/ 8/90	8.8	8.9	0.44	< **.*	< 2.6	< 15.3
5/ 8/90- 5/15/90	8.7	5.5 ^a	0.42	< **.*	< 4.1	< 23.7
5/15/90- 5/22/90	8.9	7.7	0.41	< **.*	< 2.7	< 17.3
5/22/90- 6/ 1/90	12.3	6.5	0.48	< 83.0	< 3.6	< 26.4
6/ 1/90- 6/ 8/90	8.7	6.1	0.46	< **.*	< 4.0	< 22.7
6/ 8/90- 6/15/90	8.8	8.8	0.47	< 72.6	< 2.7	< 15.2
6/15/90- 6/22/90	8.5	6.8 ^a	0.41	< **.*	< 4.8	< 27.0
6/22/90- 7/ 2/90	12.3	6.5	0.39	< 12.1	< 4.1	< 20.7
7/ 2/90- 7/ 9/90	8.9	6.4	0.56	< 19.5	< 5.2	< 20.2
7/ 9/90- 7/16/90	8.9	5.8	0.27	< 18.5	< 5.6	< 21.3
7/16/90- 7/23/90	8.9	3.8	0.15 ^a	< 13.0	< 4.2	< 18.0
7/23/90- 8/ 1/90	11.2	5.2	0.26	< 8.7	< 2.9	< 19.9
8/ 1/90- 8/ 8/90	8.7	4.6	0.16	< 22.8	< 3.4	< 15.7
8/ 8/90- 8/15/90	8.6	5.9	0.29	< 24.6	< 3.8	< 16.1
8/15/90- 8/22/90	8.5	5.6	0.20	< 6.2	< 1.6	< 6.1
8/22/90- 8/31/90	11.1	5.5	0.26	< 18.7	< 3.5	< 19.8
8/31/90- 9/ 7/90	8.5	4.8	0.17	< 15.5	< 4.0	< 19.5
9/ 7/90- 9/14/90	8.7	4.8	0.18	< 14.9	< 3.9	< 14.9
9/14/90- 9/21/90	8.7	2.2	0.14 ^a	< 19.8	< 3.9	< 17.5
9/21/90- 9/28/90	8.6	4.5	0.19	< 9.9	< 3.3	< 13.2
9/28/90-10/ 9/90	13.6	6.4	0.28	< 41.5	< 3.3	< 21.3
10/ 9/90-10/15/90	7.5	6.4	0.23	< 51.5	< 4.2	< 27.7
10/15/90-10/22/90	8.6	3.9	0.16	< 34.8	< 2.0	< 10.3
10/22/90-11/ 1/90	12.2	7.0	0.19	< 22.8	< 1.6	< 7.9
11/ 1/90-11/ 8/90	8.8	4.0	0.13 ^a	< 52.5	< 5.2	< 23.8
11/ 8/90-11/15/90	8.5	3.1	0.09 ^a	< 47.2	< 5.5	< 31.6
11/15/90-11/23/90	8.8	2.7	0.07 ^a	< 30.6	< 2.7	< 11.9
11/23/90-11/30/90	8.7	2.9	0.06 ^a	< 46.4	< 4.6	< 21.2
11/30/90-12/ 7/90	9.1	5.4	0.14	< **.*	< 2.3	< 14.5
12/ 7/90-12/14/90	8.7	5.4	0.12 ^a	< 71.7	< 4.0	< 21.5
12/14/90-12/24/90	12.7	1.2 ^a	0.05 ^a	< 50.1	< 2.6	< 14.3
12/24/90-12/31/90	8.9	7.6	0.34	< 72.3	< 3.9	< 20.2
12/31/90- 1/ 8/91	10.2	6.9	0.21	< 40.9	< 3.0	< 21.3
1/ 8/91- 1/15/91	9.0	6.1	0.21	< 19.9	< 1.9	< 12.5
1/15/91- 1/22/91	8.8	7.2	0.26	< 28.8	< 2.1	< 11.4
1/22/91- 2/ 1/91	12.5	5.9	0.25	< 36.0	< 2.9	< 15.7

TABLE 33 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ca
		(mBq m ⁻³)		(μBq m ⁻³)		
2/ 1/91- 2/ 8/91	8.8	5.4	0.18	< 45.1	< 4.1	< 20.0
2/ 8/91- 2/15/91	8.6	6.4	0.21	< 41.5	< 4.5	< 22.3
2/15/91- 2/22/91	8.7	5.1	0.26	< 15.6	< 2.1	< 13.1
2/22/91- 3/ 1/91	8.8	11.0	0.31	< 29.7	< 4.5	< 26.7
3/ 1/91- 3/ 8/91	8.5	8.2	0.43	< 71.0	< 2.3	< 13.4
3/ 8/91- 3/15/91	8.9	< 0.5	0.05 ^a	< 54.5	< 2.4	< 13.1
3/15/91- 3/22/91	8.9	4.1	0.18	< **,*	< 3.5	< 23.4
3/22/91- 4/ 1/91	12.6	8.0	0.46	< 34.5	< 1.7	< 12.4
4/ 1/91- 4/ 8/91	8.6	8.8	0.52	< 55.5	< 2.1	< 17.6
4/ 8/91- 4/15/91	8.7	4.8	0.27	< 68.2	< 4.5	< 23.2
4/15/91- 4/22/91	8.6	7.7	0.53 ^a	< 23.4	< 1.1	< 9.0
4/22/91- 5/ 2/91	11.4	8.1	0.57	< 38.8	< 2.8	< 14.3
5/ 2/91- 5/ 8/91	8.6	9.4	0.39	< 79.1	< 5.5	< 24.3
5/ 8/91- 5/15/91	8.7	7.0	0.32	< 80.2	< 4.8	< 27.5
5/15/91- 5/22/91	8.7	5.8	0.43 ^a	< 73.6	< 4.3	< 33.8
5/22/91- 5/31/91	11.3	6.3	0.40	< 18.3	< 1.1	< 6.2
5/31/91- 6/ 7/91	8.7	5.5	0.36	< 49.3	< 6.0	< 24.1
6/ 7/91- 6/14/91	8.8	7.2	0.33	< 21.0	2.8	< 6.2
6/14/91- 6/21/91	8.6	7.5	0.32	< 26.8	< 4.7	< 25.2
6/21/91- 7/ 1/91	12.4	4.9	0.26	< 16.2	< 2.6	< 15.8
7/ 1/91- 7/ 8/91	8.9	5.1	0.18 ^a	< 35.0	< 4.5	< 20.4
7/ 8/91- 7/15/91	8.6	5.9	0.28	< 32.4	< 4.3	< 21.6
7/15/91- 7/23/91	8.8	4.9	0.28	< 30.6	< 6.0	< 22.3
7/23/91- 8/ 1/91	12.5	5.9	0.30	< 23.5	< 3.5	< 14.6
8/ 1/91- 8/15/91	17.3	4.3	0.19	< 26.1	< 2.5	< 12.0
8/15/91- 8/22/91	8.8	5.0	0.27	< 39.7	< 5.9	< 27.9
8/22/91- 8/30/91	10.0	4.4	0.26	< 49.4	< 6.0	< 23.6
8/30/91- 9/ 9/91	12.5	5.4	0.17	< 49.1	< 1.9	< 10.8
9/ 9/91- 9/16/91	8.7	9.2	0.39	< 58.5	< 3.2	< 15.4
9/16/91- 9/23/91	8.8	5.8	0.33	< 28.4	< 2.6	< 11.7
9/23/91-10/ 1/91	9.9	6.8	0.38	< 42.5	< 2.4	< 18.7
10/ 1/91-10/ 8/91	8.7	6.7	0.41	< 23.1	< 2.7	< 11.3
10/ 8/91-10/15/91	8.7	4.9	0.26	< 23.9	< 3.3	< 14.2
10/15/91-10/22/91	8.7	5.4	0.26	< 47.3	< 5.3	< 31.3
10/22/91-11/ 1/91	12.5	5.0	0.16	< 28.2	< 3.9	< 14.4
11/ 1/91-11/ 8/91	8.8	< 0.3	0.23	< 15.8	< 2.6	< 10.4
11/ 8/91-11/15/91	8.9	4.4	0.14	< 12.8	< 2.5	< 9.3
11/15/91-11/22/91	8.8	5.1	0.14	< 14.4	< 2.5	< 9.4
11/22/91-12/ 2/91	12.8	4.7	0.13 ^b	< 8.0	< 1.4	< 5.9
12/ 2/91-12/ 9/91	8.8	6.5	0.14	< 12.7	< 1.2	< 5.6
12/ 9/91-12/16/91	9.0	3.9	0.09	< 36.7	< 4.3	< 20.5
12/16/91-12/23/91	8.6	--	--	--	--	--
12/23/91-12/31/91	10.1	6.4	0.33	< 29.5	< 4.6	< 19.2
12/31/91- 1/ 8/92	10.1	5.9	0.32	< 18.7	< 2.3	< 14.1
1/ 8/92- 1/15/92	9.0	4.3	0.27	< 67.1	< 5.0	< 27.2
1/15/92- 1/22/92	8.9	6.6	0.25	< 54.2	< 6.4	< 26.7
1/22/92- 1/31/92	11.3	5.5	0.20 ^a	< 40.9	< 5.2	< 21.1
1/31/92- 2/ 7/92	8.8	6.9	0.42	< 16.2	< 2.6	< 15.4
2/ 7/92- 2/14/92	9.0	5.9	0.40	< 19.3	< 2.5	< 11.2
2/14/92- 2/21/92	8.8	6.1	0.24	< 37.5	< 5.3	< 31.5
2/21/92- 3/ 2/92	12.5	6.7	0.27	< 18.0	< 3.8	< 23.1
3/ 2/92- 3/ 9/92	8.8	8.9	0.54	< 16.3	< 1.5	< 7.2
3/ 9/92- 3/16/92	8.6	9.3	0.54	< 26.2	< 3.0	< 18.5

TABLE 33 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Ba	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Co
		(mBq m ⁻³)		(μBq m ⁻³)		
3/16/92- 3/23/92	8.9	9.0	0.58	< 78.0	< 6.5	< 31.1
3/23/92- 4/ 1/92	11.2	6.4	0.48	< 33.5	< 3.6	< 22.7
4/ 1/92- 4/ 8/92	8.8	6.6	0.56	< 57.5	< 6.1	< 26.2
4/ 8/92- 4/15/92	9.0	9.6	0.74	< 22.7	< 2.6	< 16.2
4/15/92- 4/22/92	8.8	8.3	0.64	< 38.9	< 5.9	< 24.9
4/22/92- 5/ 1/92	11.4	8.8	0.57	< 16.5	< 2.3	< 10.3
5/ 1/92- 5/ 8/92	8.8	8.1	0.52	< 30.6	< 5.2	< 32.1
5/ 8/92- 5/15/92	8.8	6.9	0.45	< 16.7	< 2.7	< 12.1
5/15/92- 5/22/92	8.8	4.4	0.36	< 27.2	< 4.0	< 20.5
5/22/92- 6/ 1/92	12.5	4.3	0.45	< 8.5	< 1.8	< 10.0
6/ 1/92- 6/ 8/92	8.8	< 3.2	0.58	< **.*	< 6.3	< 41.2
6/ 8/92- 6/15/92	8.6	8.9	0.49	< **.*	< 4.9	< 43.1
6/15/92- 6/22/92	8.7	6.7	0.39	< **.*	< 5.5	< 33.8
6/22/92- 7/ 1/92	11.4	7.2	0.46 ^a	< 42.9	< 4.8	< 23.2
7/ 1/92- 7/ 8/92	8.6	5.8	0.33	< 30.8	< 5.7	< 23.6
7/ 8/92- 7/15/92	8.7	8.3	0.35	< 20.0	< 4.2	< 23.6
7/15/92- 7/22/92	6.5	8.2	0.46	< 43.7	< 7.2	< 31.3
7/22/92- 7/31/92	11.4	5.8	0.28	< 26.7	< 3.9	< 16.9
7/31/92- 8/ 7/92	8.7	6.7	0.39	< 47.0	< 5.8	< 27.2
8/ 7/92- 8/14/92	8.9	3.6	0.14	< 20.5	< 2.8	< 12.1
8/14/92- 8/21/92	8.7	4.7	0.18	< 29.0	< 6.1	< 21.0
8/21/92- 9/ 1/92	13.8	6.3	0.30	< 25.5	< 2.7	< 14.4
9/ 1/92- 9/ 8/92	8.9	3.4	0.15	< 41.4	< 5.1	< 23.4
9/ 8/92- 9/15/92	8.8	2.0	0.09 ^a	< 45.3	< 5.9	< 25.3
9/15/92- 9/22/92	9.0	5.7	0.22	< 26.0	< 4.1	< 29.5
9/22/92-10/ 1/92	11.5	5.5	0.29	< 11.0	< 1.8	< 8.9
10/ 1/92-10/ 8/92	8.4	< 15.5	0.17	< **.*	< 4.8	< 43.1
10/ 8/92-10/15/92	8.7	< 9.7	0.10	< **.*	< 3.0	< 30.3
10/15/92-10/22/92	8.6	< 18.5	0.20	< **.*	< 2.4	< 26.6
10/22/92-10/30/92	9.9	< 12.9	0.30	< **.*	< 2.7	< 37.3
10/30/92-11/ 6/92	8.8	3.3	0.11	< 55.3	< 2.7	< 15.5
11/ 6/92-11/13/92	8.5	< 12.5	0.18	< **.*	< 4.4	< 54.7
11/13/92-11/20/92	8.7	5.9	0.28	< **.*	< 1.3	< 15.6
11/20/92-12/ 1/92	--	--	--	--	--	--
12/ 1/92-12/ 8/92	8.9	6.4	0.16	< 28.0	< 4.3	< 28.1
12/ 8/92-12/15/92	8.7	6.0	0.14	< 26.7	< 3.0	< 19.4
12/15/92-12/22/92	9.2	4.6	0.12 ^a	< 32.7	< 6.1	< 24.4
12/22/92-12/31/92	11.1	3.0	0.08	< 22.4	< 3.8	< 16.4
12/31/92- 1/22/93	28.1	7.2	0.34	< 9.1	< 1.3	< 9.2
1/22/93- 2/ 1/93	12.7	6.3	0.22	< 28.2	< 4.3	< 19.4
2/ 1/93- 2/ 8/93	8.9	6.3	0.25	< 34.6	< 5.2	< 26.6
2/ 8/93- 2/16/93	10.3	8.0	0.30	< 24.4	< 4.8	< 27.5
2/16/93- 2/22/93	7.7	8.3	0.35	< 17.4	< 3.6	< 23.1
2/22/93- 3/ 1/93	8.9	9.7	0.51	< 23.0	< 4.4	< 19.6
3/ 1/93- 3/ 8/93	9.0	9.1	0.46	< 27.8	< 4.8	< 31.9
3/ 8/93- 3/15/93	9.2	7.0	0.44	< 39.2	< 5.8	< 25.3
3/15/93- 3/22/93	8.9	6.7	0.34	< 17.3	< 3.8	< 23.0
3/22/93- 4/ 1/93	12.9	9.9	0.56	< 7.2	< 1.7	< 10.5
4/ 1/93- 4/ 8/93	9.0	8.2	0.60	< 17.3	< 4.2	< 25.3
4/ 8/93- 4/15/93	9.0	9.9	0.58 ^a	< 20.5	< 5.1	< 30.8
4/15/93- 4/22/93	9.0	7.1	0.54	< 9.7	< 2.7	< 11.4
4/22/93- 4/30/93	10.2	7.3	0.43	< 19.7	< 5.7	< 22.5
4/30/93- 5/ 7/93	8.8	9.4	0.48	< 22.8	< 4.7	< 28.7

TABLE 33 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
5/ 7/93- 5/14/93	9.1	5.6	0.40	< 23.6	< 5.1	< 22.2
5/14/93- 5/21/93	9.0	6.4	0.52	< 27.2	< 5.0	< 23.5
5/21/93- 6/ 1/93	14.0	7.4	0.57	< 11.1	< 3.1	< 17.8
6/ 1/93- 6/ 8/93	8.7	6.4	0.41	< 23.4	< 4.5	< 31.7
6/ 8/93- 6/15/93	8.8	7.4	0.64	< 25.2	< 4.4	< 24.8
6/15/93- 6/22/93	8.8	9.0	0.59	< 14.9	< 3.9	< 24.7
6/22/93- 7/ 1/93	11.0	8.9	0.49	< 20.3	< 4.0	< 18.4
7/ 1/93- 7/ 8/93	8.6	--	--	--	--	--
7/ 8/93- 7/15/93	8.3	--	--	--	--	--
7/15/93- 7/22/93	8.2	--	0.20	< **,*	< 1.7	< 11.8
7/22/93- 8/ 2/93	--	--	--	--	--	--
8/ 2/93- 8/ 9/93	8.7	6.9	0.24 ^a	< 36.3	< 4.7	< 25.8
8/ 9/93- 8/17/93	8.7	6.6	0.23	< 14.4	< 2.4	< 11.0
8/17/93- 8/23/93	8.6	6.1	0.23	< 20.3	< 4.2	< 26.1
8/23/93- 9/ 1/93	11.3	5.8	0.13	< 15.4	< 3.9	< 23.0
9/ 1/93- 9/ 8/93	8.7	7.3	0.31	< 18.8	< 2.4	< 10.9
9/ 8/93- 9/15/93	8.6	6.3	0.33	< 25.2	< 3.6	< 17.2
9/15/93- 9/22/93	8.7	6.3	0.28	< 36.4	< 4.7	< 21.0
9/22/93-10/ 1/93	11.4	4.3	0.17	< 29.0	< 3.9	< 19.7
10/ 1/93-10/ 8/93	8.7	5.3	0.21	< 37.6	< 5.5	< 34.5
10/ 8/93-10/15/93	8.7	7.0	0.41	< 35.9	< 4.2	< 21.4
10/15/93-10/22/93	8.9	9.4	0.41	< 44.3	< 5.3	< 27.0
10/22/93-11/ 1/93	12.5	5.5	0.27	< 18.2	< 2.9	< 18.9
11/ 1/93-11/ 8/93	8.9	9.7	0.26	< 62.7	< 4.2	< 22.0
11/ 8/93-11/15/93	8.8	9.5	0.27	< 57.9	< 4.7	< 23.2
11/15/93-11/22/93	8.7	9.0	0.25 ^a	< 61.6	< 5.8	< 35.2
11/22/93-12/ 1/93	11.3	6.3	0.19 ^a	< 49.5	< 3.5	< 21.8
12/ 1/93-12/ 8/93	8.9	8.7	0.32	< **,*	< 2.3	< 9.1
12/ 8/93-12/15/93	8.8	6.2 ^a	0.27	< **,*	< 4.9	< 45.0
12/15/93-12/22/93	8.8	7.7	0.13 ^a	< **,*	< 4.6	< 40.6
12/22/93-12/30/93	10.2	8.1 ^a	0.19 ^a	< **,*	< 4.5	< 27.9

Note:

-- = No data

Uncertainty is < 20% except:

- a = Uncertainty is between 20% and 50%
- b = Uncertainty is between 50% and 100%
- c = Uncertainty is greater than 100%

TABLE 34
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT REUNION ISLAND DURING 1990-1993

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/ 5/90-11/ 7/90	2.5	< 8.4	0.05 ^c	< **.*	< 15.3	< **.*
11/ 7/90-11/14/90	8.2	3.9	0.07 ^a	< **.*	< 3.8	< 31.1
11/14/90-11/21/90	9.2	4.8	0.10 ^a	< **.*	< 7.3	< 37.2
11/21/90-11/28/90	7.8	5.0	0.22	< 51.8	< 4.7	< 21.9
11/28/90-12/ 5/90	8.1	5.1	0.13 ^a	< **.*	< 10.9	< 46.9
12/ 5/90-12/12/90	8.7	3.7	0.12 ^a	< 68.2	< 8.1	< 49.0
12/12/90-12/19/90	8.9	3.0	0.15 ^a	< 75.0	< 8.5	< 42.6
12/19/90-12/26/90	8.2	4.3	0.11 ^a	< 72.6	< 10.8	< 46.1
12/26/90- 1/ 2/91	8.4	3.7	0.11 ^a	< 54.3	< 4.7	< 22.2
1/ 2/91- 1/ 9/91	8.4	3.7	0.10 ^b	< 58.0	< 9.2	< 53.3
1/ 9/91- 1/17/91	9.6	4.4	0.13 ^a	< 39.7	< 8.4	< 45.2
1/17/91- 1/23/91	7.7	5.2	0.12 ^b	< 47.1	< 9.7	< 53.1
1/23/91- 1/30/91	8.3	3.8	0.07 ^b	< 53.7	< 11.6	< 41.0
1/30/91- 2/ 6/91	8.6	3.6	0.12 ^b	< 41.3	< 8.9	< 32.7
2/ 6/91- 2/13/91	8.1	4.1	0.15 ^a	< 36.3	< 9.0	< 47.4
2/13/91- 2/20/91	8.2	3.0	0.28 ^a	< 42.2	< 10.0	< 38.7
2/20/91- 2/27/91	8.5	5.2	0.10 ^b	< 38.6	< 10.4	< 38.3
2/27/91- 3/ 6/91	8.5	3.0	0.08 ^b	< 51.7	< 8.2	< 33.7
3/ 6/91- 3/13/91	7.8	2.3	0.07 ^a	< 19.4	< 3.2	< 13.1
3/13/91- 3/20/91	9.1	2.2	0.06 ^b	< 33.8	< 5.7	< 36.1
3/20/91- 3/27/91	8.5	2.4	0.04 ^c	< 50.4	< 8.2	< 38.8
3/27/91- 4/ 3/91	8.5	2.0 ^a	0.07 ^b	< 92.8	< 7.4	< 34.3
4/ 3/91- 4/10/91	8.6	4.0	0.05 ^b	< 57.4	< 8.1	< 44.9
4/10/91- 4/17/91	7.9	2.2 ^a	0.10 ^a	< 79.8	< 9.2	< 42.6
4/17/91- 4/24/91	--	--	--	--	--	--
4/24/91- 5/ 2/91	9.2	3.3	0.03 ^c	< 42.4	< 6.6	< 38.0
5/ 2/91- 5/ 9/91	9.0	2.4 ^a	0.06 ^b	< 91.7	< 9.0	< 41.4
5/ 9/91- 5/17/91	9.3	2.5	0.09 ^a	< 44.8	< 6.2	< 39.8
5/17/91- 5/23/91	7.0	3.7	0.05 ^b	< 56.2	< 9.3	< 39.9
5/23/91- 5/30/91	9.1	3.3	0.12 ^a	< 57.0	< 6.5	< 34.0
5/30/91- 6/ 6/91	8.5	3.4	0.09 ^b	< 64.0	< 8.2	< 49.7
6/ 6/91- 6/13/91	8.0	2.9	0.12 ^a	< 58.0	< 9.4	< 38.0
6/13/91- 6/20/91	8.5	3.1	0.02 ^c	< 49.5	< 6.5	< 29.3
6/20/91- 6/27/91	9.4	3.0	0.10 ^a	< 46.0	< 7.4	< 33.5
6/27/91- 7/ 4/91	7.5	2.4	0.03 ^a	< 29.5	< 2.9	< 19.3
7/ 4/91- 7/11/91	8.6	3.3	0.12 ^b	< 67.8	< 9.1	< 39.6
7/11/91- 7/18/91	8.2	3.3	0.13 ^a	< 76.4	< 5.0	< 22.6
7/18/91- 7/23/91	8.5	3.4	0.09	< 58.6	< 2.6	< 13.9
7/23/91- 7/25/91	--	--	--	--	--	--
7/25/91- 8/ 1/91	8.3	3.7 ^a	0.17	< **.*	< 7.5	< 43.1
8/ 1/91- 8/ 8/91	9.0	2.6	0.09 ^a	< 51.9	< 9.1	< 37.3
8/ 8/91- 8/15/91	8.5	2.0	0.08 ^a	< 46.5	< 6.7	< 30.6
8/15/91- 8/22/91	8.7	3.0	0.08 ^a	< 52.6	< 7.0	< 32.3
8/22/91- 8/30/91	9.0	3.4	0.10 ^a	< 31.1	< 6.1	< 36.3
8/30/91- 9/ 5/91	8.1	4.1	0.11 ^a	< 58.6	< 9.7	< 40.1
9/ 5/91- 9/13/91	9.4	4.1	0.26	< 46.6	< 7.5	< 35.8
9/13/91- 9/20/91	8.4	3.3	0.13 ^a	< 44.7	< 8.6	< 38.5
9/20/91- 9/26/91	7.3	6.0	0.38	< 48.8	< 5.3	< 22.7

TABLE 34 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)	(mBq m ⁻³)	(μBq m ⁻³)	(μBq m ⁻³)	(μBq m ⁻³)
9/26/91-10/ 3/91	8.8	4.0	0.18 ^a	< 45.0	< 8.6	< 35.1
10/ 3/91-10/10/91	7.8	2.8	0.09 ^a	< **.*	< 5.1	< 40.1
10/10/91-10/18/91	9.5	3.3	0.05 ^a	< 88.7	< 4.3	< 22.4
10/18/91-11/ 8/91	--	--	--	--	--	--
11/ 8/91-11/16/91	9.5	3.4	0.11 ^a	< 59.0	< 8.6	< 41.4
11/16/91-11/22/91	7.7	3.8	0.13 ^a	< 76.7	< 10.1	< 42.1
11/22/91-11/28/91	9.8	2.9	0.12 ^a	< 65.1	< 8.3	< 36.2
11/28/91-12/ 5/91	5.9	3.7	0.13	< **.*	< 6.6	< 47.0
1/ 2/92- 1/ 9/92	8.8	3.6	0.07	< 87.6	< 4.6	< 22.4
1/ 9/92- 1/17/92	8.9	3.5	0.11	< 55.3	< 2.2	< 12.1
1/17/92- 1/23/92	7.5	4.0	0.11 ^a	< **.*	< 5.4	< 29.7
1/23/92- 1/30/92	8.6	3.8	0.17	< 90.1	< 4.5	< 23.8
1/30/92- 2/ 6/92	8.5	3.4	0.12	< 61.3	< 4.6	< 31.3
2/ 6/92- 2/13/92	8.7	1.6	0.06 ^a	< 75.5	< 4.1	< 22.4
2/13/92- 2/20/92	8.3	1.5	0.03 ^a	< 61.0	< 5.5	< 24.1
2/20/92- 2/27/92	8.1	4.9	0.07 ^a	< 49.2	< 4.3	< 28.7
2/27/92- 3/ 5/92	7.2	2.5	0.09 ^a	< **.*	< 9.0	< 41.0
3/ 5/92- 3/12/92	8.4	< 0.8	0.04 ^b	< 95.0	< 8.7	< 38.2
3/12/92- 3/19/92	8.3	4.1	0.09 ^a	< **.*	< 9.8	< 45.4
3/19/92- 3/26/92	8.2	3.6	0.05 ^b	< 72.1	< 9.0	< 55.5
3/26/92- 4/ 2/92	8.5	2.8	0.10	< 18.0	< 2.4	< 10.6
4/ 2/92- 4/ 9/92	8.2	3.8	0.07	< 34.2	< 2.6	< 12.4
4/ 9/92- 4/16/92	8.6	3.4	0.06	< 39.6	< 2.7	< 12.6
4/16/92- 4/23/92	7.9	4.3	0.06 ^a	< 39.7	< 4.0	< 26.2
4/23/92- 4/30/92	8.4	3.5	0.19	< 70.4	< 4.1	< 20.8
4/30/92- 5/ 7/92	8.6	2.7	0.05 ^b	< 67.5	< 7.5	< 44.8
5/ 7/92- 5/14/92	8.5	< 2.5	0.11 ^c	< **.*	< 8.5	< 57.4
5/14/92- 5/21/92	8.5	3.5	0.11 ^a	< 41.0	< 4.8	< 27.6
5/21/92- 5/28/92	8.5	4.8	0.09	< 14.0	< 2.2	< 12.4
5/28/92- 6/ 4/92	8.3	3.3	0.08	< 17.6	< 3.1	< 17.1
6/ 4/92- 6/11/92	8.4	< 0.5	0.05 ^a	< 35.0	< 4.2	< 26.0
6/11/92- 6/18/92	8.5	2.8	0.06 ^a	< 57.9	< 5.8	< 37.9
6/18/92- 6/25/92	8.7	3.5	0.16	< 72.6	< 8.6	< 36.1
6/25/92- 7/ 2/92	8.7	3.2	0.15 ^a	< 44.9	< 7.6	< 32.1
7/ 2/92- 7/ 9/92	8.5	2.9	0.08 ^a	< 35.1	< 4.1	< 18.1
7/ 9/92- 7/16/92	8.6	< 2.9	0.32 ^a	< **.*	< 8.4	< 54.1
7/16/92- 7/23/92	8.5	4.4	0.14 ^a	< 86.3	< 5.2	< 25.6
7/23/92- 7/30/92	8.5	3.7	0.09	< 22.5	< 2.2	< 14.4
7/30/92- 8/ 6/92	8.5	4.8	0.13 ^a	< 76.3	< 7.9	< 57.0
8/ 6/92- 8/13/92	8.4	4.2	0.15 ^a	< 90.2	< 9.4	< 42.3
8/13/92- 8/20/92	8.5	3.8	0.12	< 39.8	< 3.9	< 20.4
8/20/92- 8/27/92	8.5	4.3	0.23 ^a	< 81.1	< 9.0	< 42.0
8/27/92- 9/ 3/92	8.5	3.9	0.15	< 74.6	< 9.1	< 41.3
9/ 3/92- 9/10/92	8.1	3.5	0.05 ^c	< 74.9	< 9.1	< 62.7
9/10/92- 9/17/92	8.5	4.5	0.09 ^a	< **.*	< 6.4	< 48.9
9/17/92- 9/24/92	8.6	4.6	0.14 ^a	< 62.5	< 7.9	< 52.3
9/24/92-10/ 1/92	8.5	4.5	0.20	< 53.7	< 9.1	< 38.8
10/ 1/92-10/ 8/92	8.6	< 45.6	0.30	< **.*	< 4.4	< 58.0
10/ 8/92-10/15/92	8.3	< 22.2	0.15	< **.*	< 4.3	< 49.0
10/15/92-10/22/92	8.5	< 9.4	0.13 ^a	< **.*	< 6.2	< 62.8
10/22/92-10/29/92	8.5	< 19.7	0.20	< **.*	< 4.0	< 45.7

TABLE 34 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Co
		(mBq m ⁻³)		(μBq m ⁻³)		
10/29/92-11/ 5/92	8.5	6.5	0.39	< 71.7	< 7.8	< 50.2
11/ 5/92-11/12/92	8.5	3.9	0.11	< 32.2	< 4.0	< 25.1
11/12/92-11/19/92	8.5	3.7	0.11 ^a	< 76.9	< 7.6	< 39.3
11/19/92-11/26/92	8.3	3.5	0.09 ^a	< 37.9	< 6.4	< 42.0
11/26/92-12/ 3/92	8.4	6.5	0.09 ^a	< 42.2	< 10.9	< 42.4
12/ 3/92-12/10/92	8.4	7.6	0.18	< **.*	< 3.9	< 39.8
12/10/92-12/17/92	8.5	6.5	0.13 ^a	< **.*	< 4.5	< 28.2
12/17/92-12/24/92	8.5	< 9.6	0.12	< **.*	< 6.3	< 77.9
12/24/92-12/31/92	9.1	< 4.7	0.11 ^a	< **.*	< 5.9	< 46.0
1/ 7/93- 1/14/93	8.7	< 7.6	0.22 ^a	< **.*	< 4.6	< 40.6
1/14/93- 1/21/93	7.6	< 15.5	0.26 ^a	< **.*	< 8.0	< 69.3
1/21/93- 1/28/93	8.2	---	0.56	< **.*	< 4.5	< 61.0
1/28/93- 2/ 4/93	8.6	---	0.20	< **.*	< 4.6	< 53.8
2/ 4/93- 2/11/93	8.6	---	0.12 ^a	< **.*	< 3.9	< 68.1
2/11/93- 2/18/93	3.5	---	0.11 ^a	< **.*	< 5.0	< 44.7
2/18/93- 2/26/93	---	---	---	---	---	---
2/26/93- 3/ 4/93	6.4	---	0.05 ^b	< **.*	< 5.7	< 94.7
3/ 4/93- 3/11/93	8.9	< 14.9	0.05 ^b	< **.*	< 3.8	< 42.9
3/11/93- 3/18/93	9.1	---	0.08 ^a	< **.*	< 4.0	< 47.7
3/18/93- 3/25/93	9.1	3.3	0.10 ^a	< 34.4	< 6.0	< 38.2
3/25/93- 4/ 1/93	9.1	2.3	0.09 ^a	< 38.6	< 7.1	< 42.4
4/ 1/93- 4/ 8/93	9.1	---	---	---	---	---
4/ 8/93- 4/15/93	---	---	---	---	---	---
4/15/93- 4/22/93	8.8	---	---	---	---	---
4/22/93- 4/29/93	8.8	---	---	---	---	---
4/29/93- 5/ 6/93	9.4	2.9	0.08	< 25.0	< 3.7	< 22.9
5/ 6/93- 5/13/93	9.1	2.8	0.09 ^a	< 54.1	< 6.3	< 39.8
5/13/93- 5/20/93	9.1	4.6	0.25 ^a	< 50.0	< 7.9	< 46.4
5/20/93- 5/27/93	9.1	3.1	0.09 ^a	< 42.5	< 5.8	< 39.6
5/27/93- 6/ 3/93	9.0	4.2	0.13 ^a	< 46.8	< 7.6	< 31.8
6/ 3/93- 6/10/93	8.7	---	---	---	---	---
6/10/93- 6/17/93	8.9	---	---	---	---	---
6/17/93- 6/24/93	9.4	---	---	---	---	---
6/24/93- 7/ 1/93	9.1	---	---	---	---	---
7/ 1/93- 7/ 8/93	8.9	---	---	---	---	---
7/ 8/93- 7/15/93	8.5	---	0.10 ^a	< **.*	< 6.8	< 90.6
7/15/93- 7/22/93	8.7	---	---	---	---	---
7/22/93- 7/29/93	8.9	---	0.13 ^a	< **.*	< 6.2	< 85.6
7/29/93- 8/ 5/93	9.0	4.5	0.15 ^a	< 47.5	< 7.0	< 30.2
8/ 5/93- 8/12/93	8.5	4.1	0.15 ^a	< 57.3	< 8.3	< 37.3
8/12/93- 8/19/93	9.4	6.2	0.12 ^a	< 44.7	< 8.6	< 47.4
8/19/93- 8/27/93	10.3	4.6	0.14 ^a	< 38.4	< 5.9	< 27.6
8/27/93- 9/ 3/93	8.7	2.8	0.06 ^a	< 29.3	< 5.5	< 37.3
9/ 3/93- 9/10/93	9.1	< 1.9	0.09 ^a	< **.*	< 5.2	< 45.1
9/10/93- 9/16/93	7.8	< 4.1	0.09 ^b	< **.*	< 9.8	< 85.6
9/16/93- 9/23/93	9.0	4.6	0.15	< 66.7	< 1.1	< 4.2
9/23/93- 9/30/93	9.0	2.8	0.06 ^a	< 74.0	< 2.4	< 20.9
9/30/93-10/ 7/93	9.2	---	0.11 ^b	< **.*	< 8.5	< 55.1
10/ 7/93-10/14/93	9.0	3.6 ^a	0.08 ^b	< **.*	< 7.4	< 59.8
10/14/93-10/21/93	9.0	4.1 ^a	0.08 ^b	< **.*	< 7.5	< 48.2
10/21/93-10/28/93	8.4	3.4 ^a	0.13 ^a	< **.*	< 6.0	< 47.8

TABLE 34 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
10/28/93-11/ 4/93	9.1	--	0.09 ^b	< **.*	< 6.9	< 74.3
11/ 4/93-11/11/93	9.0	6.2 ^a	0.13 ^a	< **.*	< 4.7	< 30.5
11/11/93-11/18/93	9.0	5.2 ^a	0.06 ^a	< **.*	< 3.8	< 34.0
11/18/93-11/25/93	8.9	8.8 ^a	0.07 ^b	< **.*	< 6.3	< 48.2
11/25/93-12/ 2/93	9.0	5.2 ^a	0.05 ^c	< **.*	< 8.0	< 52.5
12/ 2/93-12/ 9/93	9.0	3.9	0.10 ^a	< 29.8	< 6.7	< 38.7
12/ 9/93-12/16/93	8.9	5.9	0.13 ^a	< 35.1	< 7.4	< 46.9
12/16/93-12/23/93	8.5	2.8 ^b	0.01 ^c	< 31.2	< 7.3	< 30.6
12/23/93-12/30/93	9.0	3.3	0.17 ^a	< 33.9	< 7.4	< 34.9

Note:

-- = No data

Uncertainty is < 20% except:

- a = Uncertainty is between 20% and 50%
- b = Uncertainty is between 50% and 100%
- c = Uncertainty is greater than 100%

TABLE 35
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT PRETORIA, SOUTH AFRICA DURING 1990-1993

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Co
		(mBq m ⁻³)		(μBq m ⁻³)		
11/15/90-11/19/90	4.0	4.1	0.47 ^a	< **.*	< 18.1	< 78.4
11/19/90-11/26/90	7.4	6.4	0.63	< 58.6	< 9.2	< 52.5
11/26/90-12/ 3/90	7.6	6.0	0.62	< 49.8	< 8.5	< 36.8
12/ 3/90-12/10/90	7.5	4.7	0.38 ^a	< 49.4	< 9.5	< 59.9
12/10/90- 1/ 2/91	24.7	5.5	0.54	< 16.3	< 3.7	< 17.7
1/ 2/91- 1/ 8/91	6.6	4.0	0.47 ^a	< 55.5	< 10.7	< 48.3
1/ 8/91- 1/14/91	6.5	5.9	0.42 ^a	< 29.7	< 10.6	< 57.7
1/14/91- 1/21/91	7.8	2.7	0.37	< 37.6	< 5.0	< 21.6
1/21/91- 1/28/91	7.4	5.3	0.45 ^a	< **.*	< 11.6	< 49.5
1/28/91- 2/ 4/91	7.6	3.6	0.40 ^a	< 44.7	< 10.3	< 46.5
2/ 4/91- 2/11/91	7.6	4.2	0.37 ^a	< 46.5	< 10.3	< 56.0
2/11/91- 2/18/91	7.8	4.9	0.53	< 45.8	< 10.8	< 40.6
2/18/91- 2/25/91	7.3	6.9	0.59	< 63.3	< 8.8	< 38.2
2/25/91- 3/ 4/91	7.7	5.6	0.88	< 59.4	< 11.3	< 44.9
3/ 4/91- 3/11/91	7.6	4.9	0.54	< 61.2	< 12.0	< 50.8
3/11/91- 3/18/91	7.7	2.2	0.26 ^a	< 55.6	< 10.9	< 44.9
3/18/91- 3/25/91	7.7	3.2	0.42	< 69.9	< 11.4	< 46.2
3/25/91- 4/ 2/91	8.8	5.1	0.58	< 34.5	< 7.8	< 45.5
4/ 2/91- 4/ 8/91	6.6	4.7 ^a	0.47 ^a	< **.*	< 12.6	< 57.8
4/ 8/91- 4/15/91	7.7	4.8	0.69	< 47.4	< 3.2	< 21.2
4/15/91- 4/22/91	7.7	6.5	0.94	< **.*	< 12.4	< 61.2
4/22/91- 4/29/91	7.6	7.2	1.07	< **.*	< 5.5	< 33.2
4/29/91- 5/ 6/91	7.5	5.2	1.21	< **.*	< 10.4	< 47.5
5/ 6/91- 5/13/91	7.7	6.3	0.97	< 93.9	< 11.1	< 62.8
5/13/91- 5/20/91	7.5	3.3	0.61	< 98.5	< 10.0	< 44.1
5/20/91- 5/27/91	7.1	5.5	1.19	< **.*	< 12.3	< 61.0
5/27/91- 6/ 3/91	7.5	3.8	0.91	< 97.6	< 9.8	< 46.0
6/ 3/91- 6/10/91	7.5	3.5	0.86	< 66.2	< 9.9	< 60.9
6/10/91- 6/17/91	7.6	3.0	0.82	< 88.6	< 9.0	< 40.8
6/17/91- 6/24/91	7.6	3.8	1.04 ^a	< 76.9	< 8.2	< 39.7
6/24/91- 7/ 1/91	7.7	4.0	1.56	< 60.3	< 11.6	< 48.0
7/ 1/91- 7/ 8/91	7.6	5.1	1.46	< **.*	< 5.6	< 26.0
7/ 8/91- 7/15/91	7.8	4.9	1.26	< 70.8	< 8.5	< 55.8
7/15/91- 7/22/91	6.9	3.8	0.98	< 38.3	< 5.4	< 23.7
7/22/91- 7/29/91	7.5	5.2	0.97	< 59.5	< 4.6	< 31.4
7/29/91- 8/ 5/91	7.2	4.2	0.85	< **.*	< 5.4	< 42.3
8/ 5/91- 8/12/91	7.5	3.7	0.90	< 68.0	< 3.0	< 16.3
8/12/91- 8/19/91	6.8	4.2	0.78	< **.*	< 6.0	< 34.5
8/19/91- 8/26/91	7.6	6.7	1.07	< **.*	< 8.7	< 59.1
8/26/91- 9/ 2/91	7.7	4.3	1.11	< 92.5	< 5.1	< 25.9
9/ 2/91- 9/ 9/91	7.2	4.9	1.05	< **.*	< 8.8	< 47.3
9/ 9/91- 9/16/91	7.7	5.3	0.94	< **.*	< 5.5	< 31.2
9/16/91- 9/23/91	7.5	6.5	0.96	< **.*	< 7.3	< 50.6
9/23/91- 9/30/91	7.7	5.0	0.71	< 96.4	< 5.2	< 27.7
9/30/91-10/ 7/91	7.4	6.6	0.70	< **.*	< 11.4	< 53.6
10/ 7/91-10/14/91	7.7	5.3	0.60	< **.*	< 7.6	< 61.0
10/14/91-10/21/91	7.7	4.3	0.56	< **.*	< 10.6	< 47.4
10/21/91-10/28/91	7.7	4.9	0.65	< 95.1	< 11.1	< 62.7

TABLE 35 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
10/28/91-11/ 4/91	7.6	5.2	0.78	< 90.1	< 9.3	< 64.1
11/ 4/91-11/11/91	7.7	7.5	0.67	< 82.9	< 10.1	< 64.9
11/11/91-11/18/91	7.7	< 1.1	0.49	< 96.4	< 13.1	< 44.7
11/18/91-11/25/91	7.6	4.5	0.44	< 76.9	< 9.6	< 48.7
11/25/91-12/ 2/91	7.7	4.7	0.44	< 79.8	< 11.5	< 47.3
12/ 2/91-12/ 9/91	7.7	4.6	0.49	< 57.1	< 10.2	< 45.0
12/ 9/91- 1/ 6/92	30.5	5.3	0.42	< 13.0	< 2.5	< 14.5
1/ 6/92- 1/13/92	7.8	4.6	0.38	< 36.3	< 8.9	< 33.4
1/13/92- 1/20/92	7.7	4.5	0.46	< 25.9	< 5.7	< 21.2
1/20/92- 1/27/92	7.6	5.2	0.53	< 32.5	< 10.9	< 49.2
1/27/92- 2/ 3/92	7.6	6.1	0.63	< 34.0	< 12.2	< 39.5
2/ 3/92- 2/10/92	7.6	7.2	0.64	< **.*	< 8.4	< 41.4
2/10/92- 2/17/92	7.7	6.0	0.37	< 97.1	< 5.2	< 27.7
2/17/92- 2/24/92	7.7	4.7	0.46	< 60.9	< 4.4	< 31.3
2/24/92- 3/ 2/92	7.7	5.1	0.63	< 65.9	< 4.9	< 24.3
3/ 2/92- 3/ 9/92	7.6	6.4	0.35 ^a	< **.*	< 4.7	< 37.9
3/ 9/92- 3/16/92	7.8	6.1	0.49	< **.*	< 5.3	< 32.3
3/16/92- 3/23/92	7.5	6.3	0.67	< **.*	< 4.6	< 28.9
3/23/92- 3/30/92	7.8	5.7	0.57	< **.*	< 4.9	< 38.4
3/30/92- 4/ 7/92	8.9	5.7	0.69 ^b	< 50.8	< 2.5	< 13.0
4/ 7/92- 4/13/92	6.9	6.7	0.80	< 98.9	< 5.2	< 40.1
4/13/92- 4/21/92	8.9	5.4 ^a	1.13	< **.*	< 5.2	< 32.6
4/21/92- 4/27/92	6.7	6.1	1.30	< 79.1	< 2.7	< 16.8
4/27/92- 5/ 4/92	7.7	7.3	0.51	< **.*	< 4.8	< 42.5
5/ 4/92- 5/11/92	7.2	5.6	0.85	< 54.2	< 4.3	< 28.2
5/11/92- 5/18/92	7.2	6.0	1.21	< **.*	< 5.2	< 45.9
5/18/92- 5/25/92	7.2	5.0	1.27	< **.*	< 6.5	< 38.7
5/25/92- 6/ 1/92	7.4	4.3	0.82	< 86.8	< 4.3	< 35.0
6/ 1/92- 6/ 8/92	7.3	5.2	1.31	< 84.8	< 4.5	< 24.5
6/ 8/92- 6/15/92	7.4	4.6	0.91	< 66.3	< 4.7	< 25.2
6/15/92- 6/22/92	5.5	7.7 ^a	1.33	< **.*	< 11.2	< **.*
6/22/92- 6/29/92	7.3	5.8	0.74	< 61.8	< 5.1	< 33.1
6/29/92- 7/ 6/92	7.2	4.2	0.96	< 67.6	< 9.3	< 40.3
7/ 6/92- 7/13/92	7.3	3.2	0.67	< 75.4	< 7.6	< 35.0
7/13/92- 7/20/92	7.3	5.1	1.08	< 63.4	< 8.6	< 48.4
7/20/92- 7/27/92	7.5	5.4	1.32	< **.*	< 10.4	< 63.0
7/27/92- 8/ 3/92	7.7	7.0	0.89	< 49.6	< 5.1	< 35.0
8/ 3/92- 8/10/92	8.1	5.5	0.78	< 15.3	< 2.0	< 8.7
8/10/92- 8/17/92	7.4	5.0	0.97	< 92.3	< 8.5	< 48.3
8/17/92- 8/24/92	7.5	7.6 ^a	1.13	< **.*	< 8.9	< 56.5
8/24/92- 8/31/92	8.0	6.3	0.57	< **.*	< 5.1	< 30.9
8/31/92- 9/ 7/92	7.6	< 6.0	1.18	< **.*	< 9.9	< 62.8
9/ 7/92- 9/14/92	7.7	< 4.0	1.15	< **.*	< 6.8	< 52.6
9/14/92- 9/21/92	7.4	9.2	1.43	< **.*	< 5.1	< 36.4
9/21/92- 9/28/92	7.7	< 4.1	0.64 ^b	< **.*	< 5.1	< 52.9
9/28/92-10/ 5/92	7.9	< 17.0	0.78	< **.*	< 2.3	< 37.3
10/ 5/92-10/12/92	8.0	< 14.5	0.46	< **.*	< 4.7	< 60.7
10/12/92-10/19/92	7.6	11.2	0.69	< **.*	< 2.3	< 18.7
10/19/92-10/26/92	7.8	< 14.5	0.78	< **.*	< 2.5	< 27.9
10/26/92-11/ 2/92	7.8	6.2	0.52	< **.*	< 9.0	< 69.7
11/ 2/92-11/ 9/92	7.9	< 9.4	0.50	< **.*	< 5.1	< 43.9

TABLE 35 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Co
		(mBq m ⁻³)		(μBq m ⁻³)		
11/ 9/92-11/16/92	7.9	5.8	0.49	< 38.5	< 2.2	< 16.7
11/16/92-11/23/92	7.9	5.6	0.35	< **.*	< 9.2	< 69.1
11/23/92-11/30/92	7.8	6.7	0.44	< **.*	< 6.5	< 52.2
11/30/92-12/ 7/92	7.7	6.3	0.65	< 78.2	< 5.0	< 39.8
12/ 7/92- 1/ 4/93	31.0	5.1	0.46	< 22.5	< 1.7	< 11.7
1/ 4/93- 1/11/93	7.8	< 10.9	0.68	< **.*	< 4.6	< 45.3
1/11/93- 1/18/93	7.8	< 14.6	0.46	< **.*	< 7.1	< 68.1
1/18/93- 1/25/93	7.9	< 12.9	0.40	< **.*	< 7.1	< 81.3
1/25/93- 2/ 1/93	7.9	< 11.7	0.47	< **.*	< 7.6	< 67.2
2/ 1/93- 2/ 8/93	7.9	< 3.8	0.62	< **.*	< 6.5	< 49.3
2/ 8/93- 2/15/93	7.9	< 4.4	0.52	< **.*	< 6.8	< 53.8
2/15/93- 2/22/93	7.9	< 2.7	0.30	< **.*	< 4.5	< 43.5
2/22/93- 3/ 1/93	7.9	5.9 ^a	0.26	< **.*	< 6.9	< 67.3
3/ 1/93- 3/ 8/93	8.0	4.4	0.29	< 86.1	< 3.9	< 32.6
3/ 8/93- 3/15/93	8.0	6.9	0.64	< **.*	< 6.7	< 41.7
3/15/93- 3/22/93	8.0	3.8 ^a	0.48	< **.*	< 9.9	< 53.6
3/22/93- 3/29/93	7.9	5.3 ^a	0.82	< **.*	< 8.5	< 53.6
3/29/93- 4/13/93	17.1	--	--	--	--	--
4/13/93- 4/19/93	6.8	--	--	--	--	--
4/19/93- 4/26/93	7.9	--	--	--	--	--
4/26/93- 5/ 3/93	7.9	--	--	--	--	--
5/ 3/93- 5/10/93	7.9	--	--	--	--	--
5/10/93- 5/17/93	7.9	--	--	--	--	--
5/17/93- 5/24/93	7.5	--	--	--	--	--
5/24/93- 6/ 1/93	8.5	--	--	--	--	--
6/ 1/93- 6/ 7/93	6.8	--	--	--	--	--
6/ 7/93- 6/14/93	7.2	--	--	--	--	--
6/14/93- 6/21/93	7.2	--	--	--	--	--
6/21/93- 6/28/93	7.5	--	--	--	--	--
6/28/93- 7/ 5/93	7.6	--	--	--	--	--
7/ 5/93- 7/12/93	8.3	--	--	--	--	--
7/12/93- 7/19/93	6.5	--	--	--	--	--
7/19/93- 7/26/93	8.1	--	0.96	< **.*	< 10.0	< **.*
7/26/93- 8/ 2/93	7.4	--	--	--	--	--
8/ 2/93- 8/ 9/93	8.1	7.5 ^a	0.98	< **.*	< 4.3	< 45.7
8/ 9/93- 8/16/93	7.9	6.3 ^a	0.82	< **.*	< 5.2	< 36.3
8/16/93- 8/23/93	8.1	6.4 ^a	0.73	< **.*	< 5.1	< 50.0
8/23/93- 8/30/93	7.7	5.9	0.77	< 61.2	< 2.1	< 17.8
8/30/93- 9/ 6/93	8.1	4.2 ^a	0.60	< **.*	< 6.3	< 57.4
9/ 6/93- 9/13/93	7.9	5.8 ^a	0.75	< **.*	< 3.9	< 15.1
9/13/93- 9/20/93	7.3	7.0 ^a	0.90	< **.*	< 4.3	< 19.7
9/20/93- 9/27/93	5.6	12.3 ^a	1.01	< **.*	< 13.2	< 81.8
9/27/93-10/ 4/93	8.1	6.3 ^a	0.57	< **.*	< 7.2	< 58.7
10/ 4/93-10/11/93	8.1	4.2 ^a	0.51	< **.*	< 9.0	< 50.7
10/11/93-10/18/93	8.1	4.1 ^a	0.57	< **.*	< 7.6	< 59.5
10/18/93-10/25/93	8.1	4.9 ^a	0.62	< **.*	< 8.5	< 44.8
10/25/93-11/ 1/93	8.1	5.9 ^a	0.64	< **.*	< 7.2	< 41.4
11/ 1/93-11/ 8/93	8.0	4.0 ^a	0.31	< **.*	< 2.9	< 14.4
11/ 8/93-11/15/93	8.0	6.5 ^a	0.46	< **.*	< 6.5	< 62.6
11/15/93-11/22/93	8.0	7.1 ^a	0.43	< **.*	< 3.6	< 17.5
11/22/93-11/29/93	8.0	4.2 ^a	0.31	< **.*	< 4.3	< 30.2

TABLE 35 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/29/93-12/ 6/93	8.0	--	0.61	< **.*	< 9.4	< 91.7
12/ 6/93- 1/ 3/94	31.6	4.4	0.45	< 94.2	< 1.1	< 4.6

Note:

-- = No data

Uncertainty is < 20% except:

- a = Uncertainty is between 20% and 50%
- b = Uncertainty is between 50% and 100%
- c = Uncertainty is greater than 100%

TABLE 36
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT NORFOLK ISLAND DURING 1990-1993

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/28/89- 1/ 4/90	8.3	2.8	0.10	< 26.2	< 3.5	< 14.4
1/ 4/90- 1/11/90	8.3	4.0	0.05 ^a	< 42.3	< 5.7	< 32.0
1/11/90- 1/18/90	8.2	3.3	0.07 ^a	< 84.7	< 6.4	< 32.5
1/18/90- 1/25/90	8.4	1.9 ^a	0.05 ^a	< 66.6	< 6.1	< 35.9
1/25/90- 2/ 1/90	7.9	3.6	0.04 ^a	< 56.6	< 5.4	< 37.7
2/ 1/90- 2/ 8/90	8.4	5.3	0.15 ^a	< **.*	< 7.4	< 40.2
2/ 8/90- 2/15/90	8.4	4.5	0.19 ^a	< 87.8	< 7.3	< 51.0
2/15/90- 2/22/90	8.2	4.2	0.06 ^b	< 91.4	< 6.7	< 49.1
2/22/90- 3/ 1/90	8.4	4.2	0.08 ^a	< 76.8	< 3.9	< 27.9
3/ 1/90- 3/ 8/90	7.9	2.7	0.06	< 31.2	< 3.7	< 16.7
3/ 8/90- 3/15/90	8.0	2.6	0.12	< 53.6	< 4.2	< 20.9
3/15/90- 3/22/90	8.3	2.9	0.04 ^b	< 52.5	< 4.4	< 26.5
3/22/90- 3/29/90	8.4	5.2	0.09	< 24.4	< 2.1	< 9.6
3/29/90- 4/ 5/90	8.5	2.4 ^a	0.11	< **.*	< 3.1	< 19.7
4/ 5/90- 4/12/90	8.8	< 2.6	0.24	< **.*	< 4.1	< 27.2
4/12/90- 4/19/90	8.7	4.5	0.05 ^a	< **.*	< 3.3	< 26.4
4/19/90- 4/26/90	8.7	2.6	0.09	< 75.8	< 2.3	< 14.0
4/26/90- 5/ 3/90	8.7	4.7 ^a	0.11 ^a	< **.*	< 4.0	< 25.7
5/ 3/90- 5/10/90	8.5	< 3.3	0.09 ^a	< **.*	< 4.2	< 30.1
5/10/90- 5/17/90	8.6	2.7 ^a	0.04 ^b	< **.*	< 3.6	< 29.1
5/17/90- 5/24/90	8.2	1.9 ^a	0.04 ^a	< **.*	< 4.0	< 26.4
5/24/90- 5/31/90	8.5	3.4	0.10	< 80.2	< 2.0	< 12.5
5/31/90- 6/ 7/90	8.7	4.4	0.11 ^a	< **.*	< 3.4	< 21.9
6/ 7/90- 6/14/90	8.6	2.3 ^a	0.04 ^b	< 93.4	< 3.4	< 20.4
6/14/90- 6/21/90	8.6	2.8	0.04 ^b	< 47.5	< 3.3	< 23.2
6/21/90- 6/28/90	8.5	4.4	0.12 ^a	< 24.1	< 3.7	< 22.3
6/28/90- 7/ 5/90	8.4	3.5	0.09 ^b	< 25.7	< 7.7	< 38.7
7/ 5/90- 7/12/90	8.5	4.1	0.09 ^b	< 40.0	< 7.0	< 41.4
7/12/90- 7/20/90	9.8	3.1	0.09 ^a	< 34.2	< 7.0	< 27.9
7/20/90- 7/26/90	7.4	3.4	0.10 ^a	< 27.8	< 7.2	< 35.7
7/26/90- 8/ 2/90	8.6	3.2	0.06	< 6.9	< 1.8	< 9.1
8/ 2/90- 8/ 9/90	8.5	3.5	0.12 ^a	< 25.0	< 6.4	< 27.0
8/ 9/90- 8/16/90	8.7	4.2	0.19 ^a	< 20.5	< 6.4	< 31.5
8/16/90- 8/23/90	8.8	2.9	0.07 ^a	< 20.1	< 6.3	< 23.6
8/23/90- 8/30/90	8.8	2.7 ^a	0.06 ^b	< 95.4	< 6.9	< 44.9
8/30/90- 9/ 6/90	8.7	3.5	0.12 ^a	< 54.5	< 7.2	< 30.7
9/ 6/90- 9/13/90	8.6	2.5	0.05 ^a	< 23.4	< 3.4	< 19.5
9/13/90- 9/20/90	8.7	3.2	0.05 ^b	< 35.7	< 7.1	< 39.2
9/20/90- 9/27/90	8.8	3.2	0.15 ^a	< 48.0	< 6.8	< 29.0
9/27/90-10/ 4/90	8.7	3.2	0.05 ^b	< 28.2	< 5.3	< 29.9
10/ 4/90-10/11/90	8.7	2.7	0.07 ^a	< 43.6	< 5.9	< 34.7
10/11/90-10/18/90	8.7	3.8	0.08 ^b	< 63.2	< 7.3	< 42.9
10/18/90-10/25/90	8.7	4.5	0.24 ^a	< 58.2	< 7.4	< 32.2
10/25/90-11/ 1/90	8.8	4.0	0.14	< 23.4	< 2.7	< 11.7
11/ 1/90-11/ 8/90	8.8	5.6	0.19	< 16.8	< 3.2	< 18.2
11/ 8/90-11/15/90	8.7	2.6	0.05 ^b	< 35.5	< 7.2	< 25.7
11/15/90-11/22/90	8.8	3.6	0.04 ^a	< 13.7	< 2.9	< 15.9
11/22/90-11/29/90	8.8	4.9	0.11 ^a	< 38.7	< 7.9	< 29.9

TABLE 36 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/29/90-12/ 6/90	8.7	5.0	0.16 ^a	< 25.7	< 5.8	< 23.0
12/ 6/90-12/13/90	8.7	5.5	0.16 ^a	< 34.0	< 6.8	< 27.6
12/13/90-12/20/90	8.7	6.4	0.19	< 13.1	< 3.5	< 13.4
12/20/90-12/27/90	8.7	5.8	0.31	< 12.3	< 3.5	< 14.0
12/27/90- 1/ 3/91	8.7	6.3	0.16 ^a	< 19.0	< 5.7	< 27.9
1/ 3/91- 1/10/91	8.7	4.3	0.08 ^a	< 20.5	< 6.0	< 22.5
1/10/91- 1/17/91	8.5	4.5	0.09 ^a	< 60.7	< 6.4	< 40.7
1/17/91- 1/24/91	8.5	4.3	0.16 ^a	< 72.5	< 6.8	< 31.5
1/24/91- 1/31/91	8.6	4.4	0.09 ^a	< 38.0	< 3.9	< 18.2
1/31/91- 2/ 7/91	8.5	4.9	0.09 ^b	< 59.4	< 8.1	< 35.9
2/ 7/91- 2/14/91	8.5	7.0	0.19	< 24.2	< 3.1	< 14.5
2/14/91- 2/21/91	8.5	1.6 ^a	0.03 ^c	< 52.3	< 7.1	< 33.5
2/21/91- 2/28/91	8.5	6.5	0.11 ^a	< 49.6	< 7.7	< 32.5
2/28/91- 3/ 7/91	8.9	4.5	0.08 ^a	< 69.3	< 5.1	< 35.5
3/ 7/91- 3/14/91	8.7	4.4	0.07 ^a	< 74.4	< 3.8	< 27.2
3/14/91- 3/21/91	8.5	4.1	0.04 ^c	< 88.1	< 7.3	< 36.5
3/21/91- 3/28/91	8.5	4.2	0.09 ^a	< 92.7	< 7.4	< 38.1
3/28/91- 4/ 4/91	8.5	3.7 ^a	0.09 ^a	< **.*	< 7.8	< 37.9
4/ 4/91- 4/11/91	8.5	3.4	0.06 ^b	< 58.6	< 7.2	< 42.0
4/11/91- 4/18/91	8.5	3.9	0.04 ^c	< 54.9	< 5.7	< 29.7
4/18/91- 4/25/91	8.6	3.6	0.08 ^a	< 40.9	< 6.1	< 26.1
4/25/91- 5/ 2/91	8.6	3.1	0.12 ^a	< 42.0	< 5.6	< 37.0
5/ 2/91- 5/ 9/91	8.7	2.7	0.02 ^c	< 49.4	< 5.8	< 23.6
5/ 9/91- 5/16/91	8.5	3.0	0.12 ^a	< 55.7	< 8.7	< 35.5
5/16/91- 5/23/91	8.6	3.0	0.09 ^a	< 35.6	< 5.4	< 34.5
5/23/91- 5/30/91	8.6	3.5	0.10 ^a	< 40.4	< 3.3	< 15.8
5/30/91- 6/ 6/91	8.7	2.9	0.06 ^b	< 44.2	< 5.9	< 29.1
6/ 6/91- 6/13/91	8.5	3.1	0.06 ^a	< 31.9	< 3.5	< 21.9
6/13/91- 6/20/91	8.5	2.7	0.10 ^a	< 42.6	< 6.6	< 27.0
6/20/91- 6/27/91	8.5	2.7	0.13 ^a	< 31.1	< 6.8	< 24.9
6/27/91- 7/ 4/91	8.5	2.0	0.04 ^a	< 50.6	< 3.8	< 19.1
7/ 4/91- 7/11/91	8.5	2.7	0.13	< 74.7	< 5.3	< 38.6
7/11/91- 7/18/91	8.6	2.6	0.15	< 70.9	< 3.8	< 18.9
7/18/91- 7/25/91	8.5	3.8	0.25	< 65.5	< 7.0	< 46.3
7/25/91- 8/ 1/91	8.6	3.3	0.12	< 79.8	< 3.0	< 17.3
8/ 1/91- 8/ 8/91	8.5	4.1	0.12 ^a	< 73.2	< 6.8	< 45.4
8/ 8/91- 8/15/91	8.6	2.3	0.08 ^a	< 76.0	< 6.2	< 27.3
8/15/91- 8/22/91	8.5	2.9	0.11 ^a	< 54.7	< 8.5	< 35.3
8/22/91- 8/29/91	8.6	2.5	0.09 ^a	< 60.3	< 5.8	< 25.0
8/29/91- 9/ 5/91	8.5	3.5	0.17	< **.*	< 3.9	< 29.8
9/ 5/91- 9/12/91	8.6	3.3	0.08	< 67.3	< 3.8	< 28.7
9/12/91- 9/19/91	8.5	3.3	0.19	< 77.3	< 4.5	< 22.9
9/19/91- 9/26/91	8.5	3.5	0.12	< 85.2	< 3.3	< 17.9
9/26/91-10/ 3/91	8.5	3.8	0.20	< 90.0	< 5.4	< 32.4
10/ 3/91-10/10/91	8.7	4.1	0.14 ^a	< 86.6	< 5.9	< 39.0
10/10/91-10/17/91	8.6	4.7	0.04 ^b	< 81.6	< 5.0	< 37.8
10/17/91-10/24/91	8.5	3.0	0.11 ^c	< 70.7	< 4.5	< 21.6
10/24/91-10/31/91	8.5	2.9	0.15	< 57.4	< 4.2	< 20.2
10/31/91-11/ 7/91	8.5	3.7	0.08 ^a	< 42.8	< 4.8	< 30.2
11/ 7/91-11/14/91	8.5	4.3	0.20	< 70.6	< 6.7	< 31.5
11/14/91-11/21/91	8.5	4.6	0.06 ^a	< 70.2	< 3.6	< 18.8

TABLE 36 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Co
		(mBq m ⁻³)		(μBq m ⁻³)		
11/21/91-11/28/91	8.5	5.3	0.07	< 44.0	< 3.1	< 21.6
11/28/91-12/ 5/91	8.5	4.9	0.12	< 18.4	< 1.6	< 7.4
12/ 5/91-12/12/91	8.5	3.0	0.07 ^a	< 32.8	< 3.3	< 14.6
12/12/91-12/19/91	8.5	4.4	0.10 ^a	< 58.8	< 7.2	< 44.6
12/19/91-12/26/91	7.9	4.6	0.04 ^a	< 34.9	< 4.1	< 17.0
12/26/91- 1/ 2/92	8.4	4.3	0.07 ^c	< 19.7	< 3.5	< 19.4
1/ 2/92- 1/ 9/92	8.2	6.0	0.07 ^a	< 65.1	< 3.7	< 26.7
1/ 9/92- 1/16/92	7.9	5.0	0.08 ^a	< 66.5	< 4.4	< 22.6
1/16/92- 1/30/92	16.9	5.5	0.08	< 22.8	< 1.9	< 12.4
1/30/92- 2/ 6/92	8.4	4.6	0.08	< 74.1	< 5.1	< 25.6
2/ 6/92- 2/13/92	8.5	4.5	0.15	< 79.9	< 7.4	< 47.6
2/13/92- 2/20/92	8.4	3.6	0.16 ^a	< **.*	< 7.9	< 44.3
2/20/92- 2/27/92	8.6	< 1.5	0.13 ^a	< **.*	< 10.7	< 47.7
2/27/92- 3/ 5/92	8.4	5.5	0.05 ^c	< **.*	< 8.8	< 62.2
3/ 5/92- 3/12/92	8.5	4.4	0.13 ^a	< 87.0	< 10.1	< 43.4
3/12/92- 3/19/92	8.5	5.5	0.09 ^a	< 90.9	< 6.8	< 34.1
3/19/92- 3/26/92	8.6	7.0	0.05 ^a	< 18.8	< 1.8	< 8.4
3/26/92- 4/ 2/92	8.7	3.9	0.10 ^a	< 41.2	< 4.6	< 20.3
4/ 2/92- 4/ 9/92	8.7	4.5	0.08 ^a	< **.*	< 4.8	< 32.0
4/ 9/92- 4/16/92	8.8	3.4	0.06 ^a	< 70.3	< 4.8	< 23.3
4/16/92- 4/23/92	8.7	4.7	0.11	< 28.1	< 2.4	< 16.0
4/23/92- 4/30/92	8.7	4.0	0.07 ^a	< 63.4	< 4.4	< 22.9
4/30/92- 5/ 7/92	8.7	2.8	0.10	< 66.1	< 3.8	< 27.9
5/ 7/92- 5/14/92	8.7	5.4	0.08 ^a	< **.*	< 6.7	< 47.4
5/14/92- 5/21/92	8.7	5.0	0.23	< **.*	< 3.7	< 37.3
5/21/92- 5/28/92	8.7	3.0	0.10	< **.*	< 3.7	< 24.4
5/28/92- 6/ 4/92	8.4	2.6	0.06	< 36.2	< 4.3	< 18.9
6/ 4/92- 6/11/92	8.7	3.8	0.14	< 29.9	< 3.8	< 23.0
6/11/92- 6/18/92	8.7	5.6	0.12 ^a	< 58.4	< 7.3	< 45.3
6/18/92- 6/25/92	8.7	3.4	0.08 ^a	< 28.1	< 3.9	< 23.5
6/25/92- 7/ 2/92	8.7	3.9	0.14 ^a	< 49.1	< 7.0	< 28.5
7/ 2/92- 7/ 9/92	8.8	4.7	0.26	< 33.6	< 2.3	< 12.0
7/ 9/92- 7/16/92	8.9	3.3	0.05 ^a	< 42.8	< 3.9	< 19.6
7/16/92- 7/23/92	8.9	3.8	0.10	< 35.9	< 3.8	< 23.4
7/23/92- 7/30/92	8.7	2.9	0.12 ^a	< **.*	< 8.0	< 47.1
7/30/92- 8/ 6/92	8.8	4.6	0.31	< 37.0	< 8.3	< 44.2
8/ 6/92- 8/13/92	8.8	5.1	0.20 ^a	< 27.8	< 8.2	< 42.9
8/13/92- 8/20/92	8.6	5.8	0.09 ^a	< 19.9	< 3.8	< 16.2
8/20/92- 8/27/92	8.7	3.0	0.11 ^a	< 32.6	< 8.1	< 30.2
8/27/92- 9/ 3/92	8.5	4.7	0.20 ^a	< 31.2	< 8.5	< 33.8
9/ 3/92- 9/10/92	8.7	4.0	0.25 ^a	< 58.8	< 9.0	< 40.5
9/10/92- 9/17/92	8.7	4.4	0.11 ^a	< 64.3	< 9.0	< 43.7
9/17/92- 9/24/92	8.7	3.2	0.08 ^b	< 49.1	< 6.9	< 33.7
9/24/92-10/ 1/92	8.7	5.9	0.13 ^a	< 47.5	< 8.5	< 37.9
10/ 1/92-10/ 8/92	8.6	3.5	0.07 ^a	< 48.9	< 4.3	< 21.8
10/ 8/92-10/15/92	8.8	3.1	0.05 ^a	< 32.9	< 4.5	< 21.2
10/15/92-10/22/92	8.8	4.6	0.09 ^a	< 75.2	< 8.5	< 53.4
10/22/92-10/29/92	8.7	4.0	0.14	< 14.9	< 2.0	< 13.1
10/29/92-11/ 5/92	8.7	6.8	0.36	< 72.5	< 10.5	< 45.2
11/ 5/92-11/12/92	8.6	6.2	0.22	< 43.8	< 7.3	< 52.0
11/12/92-11/19/92	8.6	3.9	0.11 ^a	< 49.2	< 6.9	< 47.7

TABLE 36 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/19/92-11/26/92	8.7	4.6	0.08 ^a	< 45.9	< 8.6	< 40.8
11/26/92-12/ 3/92	8.7	4.8	0.20 ^a	< 37.4	< 8.1	< 48.8
12/ 3/92-12/10/92	8.7	< 6.1	0.07 ^a	< ***	< 4.3	< 50.1
12/10/92-12/17/92	8.7	4.0	0.07	< ***	< 1.8	< 19.5
12/17/92-12/24/92	8.7	7.7	0.07 ^a	< ***	< 4.0	< 44.9
12/24/92-12/31/92	8.7	10.6 ^a	0.18 ^a	< ***	< 4.7	< 37.4
12/31/92- 1/ 7/93	8.6	7.1	0.26	< 38.4	< 4.9	< 22.0
1/ 7/93- 1/14/93	8.6	8.7	0.15 ^a	< 59.6	< 8.1	< 54.7
1/14/93- 1/21/93	8.9	7.9	0.12	< 33.6	< 4.7	< 22.3
1/21/93- 1/28/93	9.0	8.1	0.46	< 51.6	< 6.4	< 36.7
1/28/93- 2/ 4/93	8.9	10.8	0.08 ^a	< 35.4	< 5.6	< 35.9
2/ 4/93- 2/11/93	9.1	6.4	0.08 ^a	< 43.5	< 4.0	< 29.6
2/11/93- 2/18/93	8.9	4.4	0.13	< 41.1	< 7.7	< 35.8
2/18/93- 2/25/93	8.9	3.1	0.07 ^a	< 49.8	< 7.2	< 31.5
2/25/93- 3/ 4/93	9.0	< 14.0	0.07 ^b	< ***	< 4.4	< 61.5
3/ 4/93- 3/11/93	9.0	< 5.8	0.08 ^a	< ***	< 2.2	< 20.6
3/11/93- 3/18/93	8.9	5.7	0.06 ^c	< 32.8	< 5.8	< 38.6
3/18/93- 3/25/93	9.0	5.4	0.06 ^b	< 42.7	< 7.1	< 30.2
3/25/93- 4/ 1/93	9.1	4.6	0.09 ^a	< 31.0	< 3.5	< 24.0
4/ 1/93- 4/ 8/93	8.9	4.7	0.09 ^a	< 64.8	< 6.0	< 41.7
4/ 8/93- 4/15/93	9.0	5.2	0.11	< 50.9	< 3.3	< 19.0
4/15/93- 4/22/93	9.0	4.5	0.20 ^a	< 75.5	< 6.0	< 31.5
4/22/93- 4/29/93	9.0	4.3	0.08 ^a	< 40.5	< 3.9	< 19.0
4/29/93- 5/ 6/93	9.1	3.9	0.09	< 28.6	< 4.2	< 27.7
5/ 6/93- 5/13/93	9.0	3.5	0.05 ^c	< 35.0	< 4.9	< 23.8
5/13/93- 5/20/93	9.1	3.2	0.07 ^a	< 26.0	< 5.0	< 31.5
5/20/93- 5/27/93	9.1	4.1	0.10 ^a	< 27.9	< 6.0	< 35.7
5/27/93- 6/ 3/93	9.1	4.7	0.14 ^a	< 31.6	< 8.0	< 45.9
6/ 3/93- 6/10/93	9.1	--	--	--	--	--
6/10/93- 6/17/93	9.1	--	--	--	--	--
6/17/93- 6/24/93	9.1	--	--	--	--	--
6/24/93- 7/ 1/93	9.0	--	--	--	--	--
7/ 1/93- 7/ 8/93	8.9	3.5 ^a	0.05 ^a	< ***	< 4.2	< 39.8
7/ 8/93- 7/15/93	9.0	4.4	0.07 ^a	< ***	< 4.1	< 36.4
7/15/93- 7/22/93	8.8	4.2 ^a	0.11 ^a	< ***	< 7.3	< 58.2
7/22/93- 7/29/93	8.8	4.5 ^a	0.12 ^a	< ***	< 2.2	< 10.1
7/29/93- 8/ 5/93	8.7	5.3	0.15 ^a	< 46.5	< 7.7	< 36.8
8/ 5/93- 8/12/93	8.9	4.3	0.17 ^a	< 43.3	< 7.5	< 32.0
8/12/93- 8/19/93	9.1	5.3	0.15 ^a	< 29.4	< 5.7	< 23.3
8/19/93- 8/26/93	8.9	3.4	0.08 ^a	< 35.7	< 7.1	< 44.4
8/26/93- 9/ 2/93	9.0	3.7	0.12 ^a	< 32.5	< 6.6	< 40.6
9/ 2/93- 9/ 9/93	8.9	4.8	0.07 ^a	< 69.6	< 7.7	< 54.1
9/ 9/93- 9/16/93	8.9	5.7	0.13 ^a	< 80.7	< 8.6	< 41.9
9/16/93- 9/23/93	9.0	3.8	0.25 ^a	< 68.9	< 9.3	< 39.2
9/23/93- 9/30/93	8.9	4.0	0.09 ^a	< 53.2	< 7.8	< 48.0
9/30/93-10/ 7/93	9.0	4.2	0.17	< 63.2	< 1.9	< 15.9
10/ 7/93-10/14/93	8.9	6.5 ^a	0.11 ^b	< ***	< 7.7	< 67.0
10/14/93-10/21/93	8.9	--	0.09 ^b	< ***	< 3.9	< 17.5
10/21/93-10/28/93	8.9	5.9	0.12 ^a	< ***	< 2.1	< 8.2
10/28/93-11/ 4/93	8.9	5.8	0.09 ^a	< 41.6	< 6.0	< 39.2
11/ 4/93-11/11/93	8.9	6.3	0.11	< 27.4	< 3.5	< 25.1

TABLE 36 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/11/93-11/18/93	8.9	4.8	0.05 ^b	< 39.8	< 6.6	< 30.1
11/18/93-11/25/93	8.8	6.5	0.11 ^a	< 55.5	< 8.3	< 51.1
11/25/93-12/ 2/93	8.8	6.6	0.06 ^b	< 39.5	< 6.9	< 31.4
12/ 2/93-12/ 9/93	8.6	7.2	0.04 ^b	< **.*	< 2.2	< 9.5
12/ 9/93-12/16/93	8.5	8.5	0.15 ^a	< **.*	< 7.0	< 41.8
12/16/93-12/23/93	8.7	7.7	0.08 ^b	< 76.4	< 5.9	< 29.5
12/23/93-12/30/93	8.6	5.0	0.24	< 62.5	< 5.5	< 39.8

Note:

-- = No data

Uncertainty is < 20% except:

- a = Uncertainty is between 20% and 50%
- b = Uncertainty is between 50% and 100%
- c = Uncertainty is greater than 100%

TABLE 37
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT PERTH, AUSTRALIA DURING 1990-1993

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
1/ 5/90- 1/12/90	8.6	3.5	0.12	< 20.4	< 3.1	< 17.1
1/12/90- 1/19/90	8.5	3.8	0.20	< 64.0	< 5.8	< 28.4
1/19/90- 1/26/90	8.7	4.1	0.20	< 51.5	< 5.3	< 34.4
1/26/90- 2/ 2/90	8.4	4.3	0.07	< 21.4	< 2.4	< 10.7
2/ 2/90- 2/ 9/90	8.6	5.2	0.30	< 64.9	< 5.5	< 36.4
2/ 9/90- 2/16/90	8.6	5.2	0.32	< 42.5	< 3.7	< 23.0
2/16/90- 2/23/90	8.8	2.6	0.15	< 43.7	< 3.8	< 18.1
2/23/90- 3/ 2/90	8.2	4.9	0.63	< 17.3	< 3.6	< 20.3
3/ 2/90- 3/ 9/90	8.7	3.6	0.44	< 89.6	< 8.0	< 36.5
3/ 9/90- 3/16/90	8.7	3.5	0.19	< 36.1	< 5.2	< 32.2
3/16/90- 3/23/90	8.7	3.9	0.29	< 63.3	< 3.8	< 28.2
3/23/90- 3/30/90	8.7	3.1	0.24	< 81.2	< 4.3	< 21.2
3/30/90- 4/ 6/90	8.8	4.2	0.39	< 51.7	< 3.5	< 23.5
4/ 6/90- 4/12/90	7.4	4.3 ^a	0.39	< **.*	< 4.2	< 28.8
4/12/90- 4/20/90	10.0	3.3 ^a	0.19	< **.*	< 2.0	< 17.6
4/20/90- 4/27/90	8.4	< 2.9	0.06 ^a	< **.*	< 4.1	< 40.4
4/27/90- 5/ 4/90	8.5	2.4 ^a	0.22	< **.*	< 3.7	< 30.1
5/ 4/90- 5/10/90	6.7	4.2 ^a	0.32	< **.*	< 4.6	< 39.0
5/10/90- 5/18/90	10.0	3.6 ^a	0.41	< **.*	< 3.5	< 31.7
5/18/90- 5/25/90	8.9	< 2.4	0.32	< **.*	< 3.9	< 26.0
5/25/90- 6/ 1/90	9.1	2.0 ^a	0.19	< 93.4	< 2.1	< 18.3
6/ 1/90- 6/ 8/90	9.1	< 3.7	0.51	< **.*	< 6.7	< 59.2
6/ 8/90- 6/15/90	8.6	3.3 ^a	0.09 ^a	< **.*	< 3.4	< 21.5
6/15/90- 6/22/90	8.7	< 2.6	0.39	< **.*	< 6.2	< 38.8
6/22/90- 6/29/90	8.6	< 2.0	0.32	< **.*	< 5.9	< 37.2
6/29/90- 7/ 6/90	9.0	1.5	0.21 ^a	< 27.5	< 7.3	< 38.9
7/ 6/90- 7/13/90	8.9	2.3	0.37	< 28.1	< 7.4	< 26.7
7/13/90- 7/20/90	7.5	2.7	0.05 ^b	< 33.1	< 8.1	< 36.3
7/20/90- 7/27/90	9.0	2.0	0.08 ^b	< 27.1	< 7.5	< 35.2
7/27/90- 8/ 3/90	9.0	3.3	0.28	< 20.0	< 5.8	< 29.9
8/ 3/90- 8/10/90	8.9	2.3	0.12 ^a	< 17.4	< 5.9	< 19.5
8/10/90- 8/17/90	8.7	2.9	0.10 ^a	< 19.2	< 7.7	< 25.2
8/17/90- 8/24/90	8.8	2.4	0.10 ^a	< 19.3	< 7.9	< 33.9
8/24/90- 8/31/90	8.9	2.2	0.12 ^a	< 17.8	< 6.5	< 24.7
8/31/90- 9/ 7/90	8.8	2.8	0.62	< 42.9	< 7.8	< 30.7
9/ 7/90- 9/14/90	8.9	2.5	0.17	< 21.9	< 2.7	< 11.9
9/14/90- 9/21/90	8.9	3.9	0.15 ^a	< 40.9	< 6.1	< 36.8
9/21/90- 9/28/90	8.8	2.7	0.15	< 68.7	< 2.1	< 11.9
9/28/90-10/ 5/90	8.9	3.3	0.43	< 50.4	< 7.3	< 30.5
10/ 5/90-10/12/90	8.9	1.7 ^a	0.14 ^a	< 86.6	< 7.5	< 45.0
10/12/90-10/19/90	8.9	3.5	0.09	< 25.4	< 1.8	< 8.8
10/19/90-10/26/90	9.0	3.0	0.26	< 51.3	< 5.6	< 33.4
10/26/90-11/ 2/90	9.0	2.6	0.07 ^b	< 60.8	< 5.9	< 26.1
11/ 2/90-11/ 9/90	8.8	3.4	0.10 ^b	< 68.5	< 8.8	< 33.7
11/ 9/90-11/16/90	9.0	3.8	0.23 ^a	< 69.9	< 7.8	< 39.6
11/16/90-11/23/90	8.9	4.0	0.07 ^b	< 53.7	< 7.5	< 40.3
11/23/90-11/30/90	8.7	5.5	0.29	< 43.0	< 6.9	< 39.9
11/30/90-12/ 7/90	8.8	3.5	0.11 ^a	< 47.5	< 8.2	< 33.7

TABLE 37 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/ 7/90-12/14/90	8.9	4.4	0.33 ^a	< 48.8	< 8.5	< 36.0
12/14/90-12/21/90	8.9	3.3	0.20 ^a	< 41.0	< 8.3	< 46.1
12/21/90- 1/ 7/91	21.8	3.6	0.11 ^a	< 14.9	< 2.8	< 12.5
1/ 7/91- 1/11/91	5.1	5.4	0.26 ^a	< **.*	< 12.0	< 59.8
1/11/91- 1/18/91	8.8	3.1	0.20 ^a	< 61.9	< 7.4	< 44.8
1/18/91- 1/25/91	8.9	3.9	0.25 ^a	< 73.4	< 7.2	< 32.5
1/25/91- 2/ 1/91	8.9	5.2	0.21 ^a	< 63.7	< 6.8	< 33.3
2/ 1/91- 2/ 5/91	9.3	--	--	--	--	--
2/ 5/91- 2/ 8/91	3.8	7.9	0.18 ^a	< 97.4	< 7.5	< 51.6
2/ 8/91- 2/15/91	8.7	5.5	0.14 ^a	< 54.5	< 6.1	< 30.3
2/15/91- 2/22/91	8.8	5.4	0.17 ^a	< 48.9	< 7.0	< 33.6
2/22/91- 3/ 1/91	8.4	6.0	0.27	< 17.8	< 3.3	< 19.2
3/ 1/91- 3/ 8/91	9.0	3.0	0.35	< 18.0	< 3.3	< 14.4
3/ 8/91- 3/15/91	8.8	5.7	0.24	< 17.4	< 3.4	< 14.4
3/15/91- 3/22/91	8.7	4.1	0.26 ^a	< 34.9	< 6.5	< 39.8
3/22/91- 3/28/91	7.9	3.5	0.23 ^a	< 44.3	< 7.7	< 43.6
3/28/91- 4/ 5/91	9.8	3.1	0.22	< 59.9	< 2.9	< 15.7
4/ 5/91- 4/12/91	8.8	3.2 ^a	0.36	< **.*	< 7.2	< 37.7
4/12/91- 4/19/91	8.7	4.6	0.46	< 87.8	< 7.8	< 38.5
4/19/91- 4/26/91	9.0	3.6	0.48	< 98.1	< 3.9	< 21.3
4/26/91- 5/ 3/91	8.9	3.9	0.51	< 77.2	< 5.6	< 37.1
5/ 3/91- 5/10/91	8.9	3.7 ^a	0.26 ^a	< **.*	< 6.2	< 36.8
5/10/91- 5/17/91	8.9	5.2	0.54	< **.*	< 6.2	< 50.7
5/17/91- 5/24/91	8.9	4.4	0.79	< 39.3	< 7.2	< 41.9
5/24/91- 6/ 1/91	8.9	3.4	0.34	< 42.9	< 6.0	< 34.0
6/ 1/91- 6/ 7/91	8.6	2.3	0.16	< 64.6	< 3.8	< 18.0
6/ 7/91- 6/14/91	8.5	3.0	0.21	< 27.3	< 3.2	< 13.9
6/14/91- 6/21/91	3.5	3.8	0.30	< 62.9	< 8.5	< 49.4
6/21/91- 6/28/91	9.0	3.0	0.13	< 43.4	4.3 ^a	< 21.9
6/28/91- 7/ 5/91	8.8	2.7	0.12 ^a	< 51.6	< 7.0	< 43.1
7/ 5/91- 7/12/91	8.2	< 0.2	0.01 ^c	< 30.8	< 3.9	< 16.9
7/12/91- 7/19/91	8.8	2.2	0.26	< 58.7	< 4.1	< 18.8
7/19/91- 7/26/91	8.9	1.1	0.14	< 47.3	< 4.0	< 19.8
7/26/91- 8/ 2/91	7.4	2.3	0.14	< 54.2	< 6.0	< 38.2
8/ 2/91- 8/ 9/91	8.8	2.6	0.14	< 60.9	< 3.4	< 16.1
8/ 9/91- 8/16/91	8.9	2.3	0.38	< 61.9	< 6.7	< 33.2
8/16/91- 8/23/91	9.0	3.2	0.28	< 73.9	< 8.5	< 33.3
8/23/91- 8/30/91	9.0	2.7	0.16	< 40.9	< 7.6	< 31.7
8/30/91- 9/ 6/91	8.9	4.2	0.19	< 37.1	< 1.8	< 13.3
9/ 6/91- 9/13/91	8.9	2.3	0.13	< 34.6	< 3.2	< 13.4
9/13/91- 9/20/91	8.9	2.0	0.05 ^a	< 52.0	< 6.0	< 33.9
9/20/91- 9/27/91	9.0	2.7	0.19	< 73.2	< 5.2	< 27.8
9/27/91-10/ 4/91	8.8	3.1	0.15 ^a	< **.*	< 7.2	< 37.4
10/ 4/91-10/11/91	8.9	2.1	0.22	< 19.7	< 3.0	< 16.9
10/11/91-10/18/91	8.8	4.2	0.47	< 69.8	< 7.6	< 36.1
10/18/91-10/25/91	8.9	2.0	0.10 ^a	< 66.4	< 7.1	< 33.1
10/25/91-11/ 1/91	8.8	3.6	0.17	< 50.2	< 3.0	< 20.9
11/ 1/91-11/ 8/91	8.8	2.6	0.06 ^a	< 65.5	< 6.8	< 43.6
11/ 8/91-11/15/91	9.0	2.8	0.17	< 70.2	< 6.5	< 31.1
11/15/91-11/22/91	9.0	3.7	0.11 ^a	< 60.0	< 6.0	< 25.3
11/22/91-11/29/91	9.0	3.8	0.21	< 54.4	< 5.9	< 26.8

TABLE 37 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/29/91-12/ 6/91	8.8	3.5	0.14 ^a	< 67.5	< 6.8	< 43.6
12/ 6/91-12/13/91	9.1	4.2	0.21	< 34.3	< 9.8	< 41.8
12/13/91-12/20/91	9.0	5.0	0.25	< 21.5	< 5.2	< 26.7
12/20/91- 1/10/92	26.6	4.5	0.29 ^a	< 8.8	< 2.7	< 9.0
1/10/92- 1/17/92	8.9	5.5	0.34	< 78.7	< 4.8	< 23.8
1/17/92- 1/24/92	9.0	4.8	0.18	< 92.7	< 7.4	< 36.0
1/24/92- 1/31/92	6.8	8.5	0.65	< 69.4	< 6.1	< 38.3
1/31/92- 2/ 7/92	6.7	4.8	0.34	< 99.7	< 12.7	< 69.8
2/ 7/92- 2/14/92	9.0	3.5	0.38	< 96.9	< 7.5	< 41.6
2/14/92- 2/21/92	9.1	5.4	0.15	< 35.8	< 5.0	< 20.5
2/21/92- 2/28/92	9.1	5.4	0.17 ^a	< 74.7	< 8.7	< 39.4
2/28/92- 3/ 6/92	9.1	4.9	0.24	< 67.9	< 3.7	< 18.7
3/ 6/92- 3/13/92	9.0	3.6	0.18	< 96.9	< 8.0	< 34.8
3/13/92- 3/20/92	9.1	2.9	0.26	< **.*	< 9.3	< 43.0
3/20/92- 3/27/92	9.0	2.7	0.21 ^a	< 92.4	< 8.4	< 56.7
3/27/92- 4/ 3/92	9.1	3.9	0.49 ^b	< 40.4	< 4.6	< 20.5
4/ 3/92- 4/10/92	9.1	2.7	0.25	< 42.2	< 8.0	< 32.5
4/10/92- 4/16/92	7.8	3.1	0.49	< 39.7	< 7.7	< 30.9
4/16/92- 4/24/92	10.4	3.8	0.46	< 28.9	< 8.8	< 29.4
4/24/92- 5/ 1/92	9.1	4.4	0.46	< 31.7	< 9.4	< 35.9
5/ 1/92- 5/ 4/92	9.3	--	--	--	--	--
5/ 4/92- 5/ 8/92	5.4	3.1	0.11 ^a	< 62.8	< 4.6	< 22.8
5/ 8/92- 5/15/92	6.5	4.4	0.44 ^c	< 75.3	< 6.2	< 28.2
5/15/92- 5/22/92	6.5	5.2	0.59	< 93.7	< 6.7	< 32.1
5/22/92- 5/29/92	9.1	2.4 ^a	0.21	< **.*	< 6.5	< 37.4
5/29/92- 6/ 5/92	9.2	2.4	0.25	< 54.8	< 6.3	< 30.7
6/ 5/92- 6/12/92	9.1	3.1	0.41	< 15.0	< 2.0	< 8.7
6/12/92- 6/19/92	9.1	2.2	0.09	< 35.0	< 3.9	< 18.4
6/19/92- 6/26/92	9.1	3.0	0.20 ^a	< 39.6	< 5.8	< 37.9
6/26/92- 7/ 3/92	9.2	2.5	0.03 ^b	< 24.1	< 3.5	< 14.8
7/ 3/92- 7/10/92	9.1	3.6	0.37	< 79.4	< 6.4	< 34.3
7/10/92- 7/17/92	9.2	4.1	0.15	< 35.3	< 4.6	< 28.7
7/17/92- 7/24/92	9.2	3.3	0.35	< 91.0	< 7.4	< 55.7
7/24/92- 7/31/92	9.2	3.8	0.37	< **.*	< 7.8	< 45.4
7/31/92- 8/ 7/92	9.1	3.3	0.21 ^a	< 74.7	< 7.2	< 55.4
8/ 7/92- 8/14/92	9.0	3.2 ^a	0.08 ^a	< **.*	< 4.2	< 26.8
8/14/92- 8/21/92	9.2	2.0	0.21 ^a	< 33.2	< 4.2	< 19.3
8/21/92- 8/28/92	9.2	3.3	0.36	< 62.5	< 7.3	< 38.8
8/28/92- 9/ 4/92	9.2	2.7	0.09 ^a	< 35.8	< 8.4	< 47.2
9/ 4/92- 9/11/92	9.1	2.6	0.10	< 17.8	< 3.8	< 14.9
9/11/92- 9/18/92	9.1	2.6	0.19	< 12.9	< 3.4	< 18.4
9/18/92- 9/25/92	9.1	2.2	0.06	< 9.6	< 1.7	< 10.2
9/25/92-10/ 2/92	9.1	3.5	0.12	< 17.0	< 3.6	< 14.3
10/ 2/92-10/ 9/92	9.2	< 3.3	0.06 ^a	< **.*	< 3.1	< 34.2
10/ 9/92-10/16/92	9.3	< 16.5	0.31	< **.*	< 1.8	< 21.2
10/16/92-10/23/92	9.1	< 32.9	0.37	< **.*	< 3.2	< 40.9
10/23/92-10/30/92	9.2	< 31.1	0.19	< **.*	< 4.1	< 64.4
10/30/92-11/ 6/92	9.1	4.3	0.22	< 53.3	< 8.7	< 41.0
11/ 6/92-11/13/92	9.0	3.5	0.21	< 41.7	< 6.5	< 49.6
11/13/92-11/20/92	9.2	3.9	0.17 ^a	< 53.2	< 7.1	< 47.2
11/20/92-11/27/92	9.2	4.7	0.07 ^a	< 38.7	< 7.1	< 40.6

TABLE 37 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/27/92-12/ 4/92	9.0	< 10.2	0.16 ^a	< **.*	< 4.1	< 41.9
12/ 4/92-12/11/92	8.9	8.5 ^a	0.35	< **.*	< 8.7	< 69.3
12/11/92-12/18/92	9.0	8.0	0.22	--	--	--
12/18/92- 1/ 8/93	26.9	< 3.8	0.18	< **.*	< 2.3	< 19.3
1/ 8/93- 1/15/93	8.9	--	0.20	< **.*	< 4.2	< 73.4
1/15/93- 1/22/93	8.9	--	0.11 ^a	< **.*	< 4.0	< 72.8
1/22/93- 1/29/93	8.9	--	0.16 ^a	< **.*	< 4.3	< 86.0
1/29/93- 2/ 5/93	8.8	< 13.7	0.25	< **.*	< 5.5	< 54.8
2/ 5/93- 2/12/93	9.0	< 6.0	0.16	< **.*	< 2.3	< 31.1
2/12/93- 2/19/93	9.0	--	0.23 ^a	< **.*	< 3.7	< 29.2
2/19/93- 2/26/93	9.0	--	0.15 ^a	< **.*	< 4.1	< 63.4
2/26/93- 3/ 5/93	6.2	< 0.9	0.38	< 48.1	< 6.3	< 41.2
3/ 5/93- 3/12/93	8.8	4.4	0.28	< 53.2	< 7.3	< 44.8
3/12/93- 3/19/93	6.0	4.1	0.22 ^a	< 73.2	< 10.6	< 48.9
3/19/93- 3/26/93	9.1	4.1	0.13 ^a	< 46.6	< 8.8	< 33.2
3/26/93- 4/ 2/93	9.1	4.9	0.27	< 58.5	< 8.7	< 37.4
4/ 2/93- 4/ 8/93	7.8	2.8	0.27	< 28.4	< 8.0	< 43.7
4/ 8/93- 4/16/93	8.1	5.1	0.60	< 36.9	< 8.6	< 44.2
4/16/93- 4/23/93	9.1	3.6	0.33	< 27.0	< 6.3	< 37.6
4/23/93- 4/30/93	9.2	3.8	0.36	< 29.7	< 7.6	< 31.1
4/30/93- 5/ 7/93	8.9	3.0	0.46	< 59.8	< 5.9	< 31.6
5/ 7/93- 5/14/93	9.3	4.4	1.29	< **.*	< 14.7	< 99.3
5/14/93- 5/21/93	9.3	4.8	0.36	< 49.1	< 8.0	< 49.3
5/21/93- 5/28/93	9.2	5.1	0.77	< 43.9	< 7.4	< 36.6
5/28/93- 6/ 4/93	9.2	--	--	--	--	--
6/ 4/93- 6/11/93	9.4	--	--	--	--	--
6/11/93- 6/18/93	9.3	--	--	--	--	--
6/18/93- 6/25/93	9.3	--	--	--	--	--
6/25/93- 7/ 2/93	9.3	--	--	--	--	--
7/ 2/93- 7/ 9/93	9.2	--	--	--	--	--
7/ 9/93- 7/16/93	9.3	--	0.19 ^a	< **.*	< 7.7	< 83.2
7/16/93- 7/23/93	9.3	--	--	--	--	--
7/23/93- 7/30/93	9.3	--	--	--	--	--
7/30/93- 8/ 6/93	9.3	4.8	0.07 ^b	< 54.3	< 7.3	< 49.9
8/ 6/93- 8/13/93	9.3	3.8	0.20 ^a	< 15.1	< 1.9	< 12.6
8/13/93- 8/20/93	9.4	1.7	0.31	< 48.9	< 6.9	< 42.7
8/20/93- 8/27/93	9.3	3.2	0.17	< 46.9	< 7.7	< 48.3
8/27/93- 9/ 3/93	9.1	3.0	0.18 ^a	< 48.9	< 7.9	< 47.2
9/ 3/93- 9/10/93	9.1	3.6	0.20 ^a	< 43.0	< 8.4	< 37.4
9/10/93- 9/17/93	9.1	6.0	0.63	< 37.7	< 6.3	< 30.4
9/17/93- 9/24/93	9.2	3.2	0.14 ^a	< 29.4	< 8.4	< 44.9
9/24/93-10/ 1/93	9.2	3.8	0.23	< 15.0	< 3.7	< 20.4
10/ 1/93-10/ 8/93	9.3	3.3 ^a	0.13 ^a	< **.*	< 4.0	< 35.2
10/ 8/93-10/15/93	9.2	6.6 ^a	0.24	< **.*	< 4.0	< 26.4
10/15/93-10/22/93	9.2	4.3	0.23	< 62.9	< 1.7	< 11.4
10/22/93-10/29/93	9.2	--	0.09 ^b	< **.*	< 7.8	< 69.2
10/29/93-11/ 5/93	9.2	3.1 ^a	0.11 ^a	< **.*	< 1.8	< 9.1
11/ 5/93-11/12/93	9.1	--	0.30	< **.*	< 6.0	< 36.1
11/12/93-11/19/93	9.1	3.7 ^b	0.32 ^a	< **.*	< 7.4	< 48.6
11/19/93-11/26/93	9.3	--	--	--	--	--
11/26/93-12/ 3/93	9.1	5.2	0.10 ^a	< **.*	< 4.3	< 35.3

TABLE 37 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/ 3/93-12/10/93	9.1	7.0	0.20	< 94.9	< 3.7	< 21.9
12/10/93-12/17/93	9.0	6.0	0.18 ^a	< **.*	< 6.5	< 50.1
12/17/93-12/24/93	8.7	4.5	0.23	< **.*	< 3.2	< 11.8

Note:

-- = No data

Uncertainty is < 20% except:

- a = Uncertainty is between 20% and 50%
- b = Uncertainty is between 50% and 100%
- c = Uncertainty is greater than 100%

TABLE 38
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT CAPE POINT, SOUTH AFRICA DURING 1990-1993

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
2/27/92- 3/ 4/92	7.0	< **.*	0.06 ^b	< **.*	< 5.7	< **.*
3/ 4/92- 4/ 8/92	--	--	--	--	--	--
4/ 8/92- 4/15/92	8.8	4.1	0.10	< 62.4	< 2.5	< 13.7
4/15/92- 4/22/92	9.0	3.1	0.12	< 53.4	< 2.3	< 12.4
4/22/92- 4/29/92	8.6	4.6	0.09	< 55.4	< 2.8	< 21.7
4/29/92- 5/ 6/92	9.0	3.3	0.05	< 81.3	< 3.4	< 20.0
5/ 6/92- 5/13/92	8.6	4.5	0.43	< 92.6	< 4.1	< 22.5
5/13/92- 5/20/92	8.5	< 1.6	0.24 ^b	< **.*	< 6.7	< 40.0
5/20/92- 5/27/92	8.4	3.1	0.02 ^b	< 78.0	< 4.8	< 24.0
5/27/92- 6/ 3/92	8.7	4.0	0.05 ^a	< 61.0	< 4.0	< 27.6
6/ 3/92- 6/10/92	--	--	--	--	--	--
6/10/92- 6/17/92	9.2	< 19.9	0.34	< **.*	< 7.3	< 66.1
6/17/92- 6/24/92	8.8	< 13.7	0.14 ^a	< **.*	< 4.4	< 46.4
6/24/92- 7/ 1/92	9.2	< 11.6	0.05 ^a	< **.*	< 4.2	< 56.8
7/ 1/92- 7/ 8/92	8.5	4.4	0.37	< **.*	< 7.2	< 41.0
7/ 8/92- 7/15/92	8.4	2.4	0.08 ^a	< **.*	< 5.6	< 31.2
7/15/92- 7/22/92	8.8	3.2	0.17	< 84.3	< 3.5	< 29.2
7/22/92- 7/29/92	9.3	3.6	0.10 ^a	< 88.6	< 5.9	< 43.1
7/29/92- 8/ 5/92	9.3	5.6	0.36	< **.*	< 3.7	< 32.1
8/ 5/92- 8/12/92	9.2	3.6	0.06 ^b	< **.*	< 7.8	< 49.7
8/12/92- 8/19/92	9.2	3.9	0.26	< 92.6	< 7.1	< 55.1
8/19/92- 8/26/92	9.4	3.8	0.29 ^a	< 99.4	< 7.8	< 40.5
8/26/92- 9/ 2/92	9.2	3.7	0.37	< 68.3	< 4.1	< 31.7
9/ 2/92- 9/ 9/92	9.2	< 5.3	0.05 ^a	< **.*	< 4.0	< 45.6
9/ 9/92- 9/16/92	9.2	< 4.9	0.06 ^a	< **.*	< 3.7	< 33.9
9/16/92- 9/23/92	9.2	< 2.2	0.08	< **.*	< 2.0	< 16.7
9/23/92- 9/30/92	9.5	8.0 ^a	0.15	< **.*	< 4.2	< 32.6
9/30/92-10/ 7/92	9.3	< 27.5	0.14	< **.*	< 4.1	< 65.8
10/ 7/92-10/14/92	7.9	< 15.5	0.09	< **.*	< 3.8	< 52.6
10/14/92-10/21/92	11.2	< **.*	0.04 ^a	< **.*	< 2.0	< 20.7
10/21/92-10/28/92	9.3	< 19.2	0.01 ^c	< **.*	< 6.1	< 61.7
10/28/92-11/ 4/92	9.4	3.6	0.11 ^a	< 54.1	< 7.5	< 35.1
11/ 4/92-11/11/92	9.4	2.6	0.07 ^a	< 36.1	< 5.6	< 28.2
11/11/92-11/18/92	9.3	3.7	0.05 ^a	< 27.9	< 4.9	< 24.0
11/18/92-11/25/92	9.8	3.7	0.04 ^b	< 67.5	< 7.7	< 38.0
11/25/92-12/ 2/92	9.1	5.7	0.14 ^a	< 51.5	< 8.5	< 52.2
12/ 2/92-12/ 9/92	9.3	2.9	0.10 ^a	< 67.8	< 8.0	< 36.7
12/ 9/92-12/17/92	10.5	4.7	0.06 ^a	< 34.1	< 5.5	< 26.4
12/17/92-12/23/92	8.1	4.0	0.03 ^b	< 50.2	< 7.2	< 31.8
12/23/92-12/30/92	9.6	5.7	0.06 ^b	< 52.4	< 7.9	< 35.3
12/30/92- 1/ 6/93	9.1	< 4.1	0.12	< **.*	< 5.1	< 52.5
1/ 6/93- 1/13/93	8.8	7.1	0.10	< **.*	< 2.2	< 16.1
1/13/93- 1/22/93	9.1	7.2	0.07 ^b	< **.*	< 3.5	< 33.4
1/22/93- 4/28/93	--	--	--	--	--	--
4/28/93- 5/ 5/93	8.6	--	0.23	< **.*	< 2.2	< 22.8
5/ 5/93- 5/12/93	8.8	--	0.11 ^a	< **.*	< 3.6	< 29.9
5/12/93- 5/21/93	9.1	--	0.24	< **.*	< 2.0	< 27.7
5/21/93- 5/24/93	--	--	--	--	--	--

TABLE 38 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
5/24/93- 6/ 2/93	7.6	--	0.06 ^b	< **.*	< 5.3	< 72.2
6/ 2/93- 6/15/93	14.7	--	0.18 ^a	< **.*	< 4.6	< 61.4
6/15/93- 6/22/93	8.8	--	0.11 ^a	< **.*	< 4.4	< 63.4
6/22/93- 6/29/93	8.8	--	0.56	< **.*	< 3.0	< 19.7
6/29/93- 7/ 2/93	--	--	--	--	--	--
7/ 2/93- 7/20/93	21.2	2.9 ^a	0.26	< **.*	< 0.9	< 4.9
7/20/93- 7/30/93	12.3	7.8 ^a	0.40	< **.*	< 3.2	< 26.6
7/30/93- 8/ 6/93	9.0	2.7 ^a	0.06 ^a	< **.*	< 1.9	< 9.4
8/ 6/93- 8/13/93	8.9	--	0.12 ^a	< **.*	< 3.6	< 28.0
8/13/93- 8/20/93	8.2	5.0 ^a	0.28	< **.*	< 5.0	< 46.7
8/20/93- 8/27/93	8.8	6.1 ^a	0.21	< **.*	< 2.3	< 9.8
8/27/93- 9/ 3/93	8.8	4.1 ^a	0.31	< **.*	< 2.1	< 15.5
9/ 3/93- 9/10/93	9.0	--	0.08 ^a	< **.*	< 3.5	< 32.3
9/10/93- 9/17/93	8.5	3.1	0.09 ^a	< 99.0	< 8.7	< 59.0
9/17/93- 9/24/93	8.8	4.8	0.09 ^b	< 82.1	< 8.2	< 40.9
9/24/93-10/ 1/93	8.8	4.3	0.05 ^b	< 39.4	< 4.1	< 20.5
10/ 1/93-10/ 8/93	8.8	3.7 ^a	0.20 ^a	< **.*	< 4.2	< 16.4
10/ 8/93-10/15/93	9.0	4.0 ^a	0.06 ^b	< **.*	< 5.1	< 32.2
10/15/93-10/22/93	8.9	3.5	0.10 ^a	< **.*	< 2.6	< 10.3
10/22/93-10/29/93	8.7	4.4 ^a	0.08 ^b	< **.*	< 8.6	< 71.6
10/29/93-11/ 5/93	8.9	4.5	0.06 ^b	< **.*	< 4.5	< 36.7
11/ 5/93-11/12/93	9.0	--	0.14 ^a	< **.*	< 7.5	< 66.2
11/12/93-11/19/93	8.9	5.8 ^a	0.11 ^a	< **.*	< 6.1	< 57.0
11/19/93-11/26/93	8.7	3.5 ^a	--	< **.*	< 2.9	< 11.5
11/26/93-12/ 3/93	8.9	--	0.05 ^b	< **.*	< 4.2	< 32.0
12/ 3/93-12/ 9/93	7.5	5.9 ^a	0.10 ^b	< **.*	< 6.5	< 38.1
12/ 9/93-12/17/93	10.0	5.0 ^a	0.06 ^c	< **.*	< 8.0	< 40.8
12/17/93-12/24/93	8.7	6.6	0.11 ^b	< **.*	< 7.0	< 60.9
12/24/93- 1/ 3/94	12.6	3.6	0.06 ^a	< 50.2	< 1.9	< 6.3

Note:

-- = No data

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%

b = Uncertainty is between 50% and 100%

c = Uncertainty is greater than 100%

TABLE 39
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT CAPE GRIM, AUSTRALIA DURING 1990-1993

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/29/89- 1/ 5/90	8.6	2.3	0.03 ^a	< 40.7	< 6.4	< 27.3
1/ 5/90- 1/12/90	8.7	3.8	0.05	< 17.4	< 1.6	< 10.6
1/12/90- 1/19/90	8.6	2.1	0.03	< 36.0	< 3.2	< 16.1
1/19/90- 1/26/90	8.5	2.5	0.04 ^a	< 54.2	< 6.4	< 27.2
1/26/90- 2/ 2/90	9.1	2.7	0.05	< 22.4	< 2.8	< 17.6
2/ 2/90- 2/ 9/90	8.9	4.0	0.04	< 21.7	< 2.7	< 17.2
2/ 9/90- 2/16/90	8.4	3.8	0.07 ^a	< 38.2	< 5.4	< 32.9
2/16/90- 2/23/90	8.7	4.3	0.09	< 14.2	< 2.1	< 12.3
2/23/90- 3/ 2/90	8.9	1.9	0.08 ^a	< 49.0	< 3.6	< 17.9
3/ 2/90- 3/ 9/90	8.8	2.8	0.10	< 24.7	< 2.3	< 14.0
3/ 9/90- 3/16/90	8.8	3.1	0.01 ^c	< 73.2	< 3.8	< 28.0
3/16/90- 3/23/90	8.8	2.7	0.05 ^a	< 52.9	< 3.5	< 18.7
3/23/90- 3/30/90	9.0	3.6	0.10 ^a	< 46.6	< 3.2	< 22.0
3/30/90- 4/ 6/90	9.2	2.7 ^a	0.06 ^a	< **.*	< 2.3	< 16.0
4/ 6/90- 4/12/90	7.6	4.5 ^a	0.16	< **.*	< 3.6	< 23.3
4/12/90- 4/20/90	10.3	2.0	0.15	< 54.9	< 1.8	< 14.8
4/20/90- 4/27/90	8.9	2.5 ^a	0.08 ^a	< 93.8	< 3.1	< 18.7
4/27/90- 5/ 4/90	8.9	2.3 ^a	0.08	< 87.7	< 1.8	< 16.1
5/ 4/90- 5/11/90	8.9	3.0 ^a	0.20	< **.*	< 3.6	< 22.6
5/11/90- 5/18/90	9.1	3.2 ^a	0.08 ^a	< **.*	< 3.8	< 26.2
5/18/90- 5/27/90	12.5	< 1.5	0.09 ^a	< **.*	< 2.7	< 18.0
5/27/90- 6/ 1/90	5.4	2.5 ^a	0.59	< **.*	< 3.9	< 24.6
6/ 1/90- 6/ 8/90	8.3	1.7 ^a	0.09 ^a	< **.*	< 4.0	< 23.0
6/ 8/90- 6/15/90	9.5	3.1	0.14 ^a	< 64.6	< 4.7	< 26.1
6/15/90- 6/22/90	9.0	1.7	0.06 ^a	< 28.4	< 3.7	< 22.0
6/22/90- 6/29/90	9.0	2.0	0.17	< 34.8	< 3.1	< 14.5
6/29/90- 7/ 6/90	9.0	1.6	0.06 ^b	< 33.1	< 6.9	< 32.6
7/ 6/90- 7/13/90	8.4	1.6	0.12 ^a	< 29.5	< 6.6	< 34.0
7/13/90- 7/19/90	8.7	2.2	0.24	< 22.3	< 5.0	< 30.7
7/19/90- 7/27/90	9.0	2.0	0.15 ^a	< 26.7	< 6.4	< 24.8
7/27/90- 8/ 3/90	9.0	1.1	0.06 ^b	< 27.6	< 7.6	< 27.2
8/ 3/90- 8/10/90	8.9	1.5	0.02 ^b	< 14.2	< 3.8	< 13.2
8/10/90- 8/17/90	9.4	1.3	0.02 ^c	< 18.7	< 5.6	< 21.0
8/17/90- 8/24/90	9.2	1.8	0.07 ^a	< 10.5	< 3.3	< 12.6
8/24/90- 8/31/90	8.5	2.0	0.02	< 3.5	< 0.6	< 2.5
8/31/90- 9/ 6/90	8.2	2.0	0.02 ^b	< 11.2	< 2.3	< 12.4
9/ 6/90- 9/14/90	9.6	2.6	0.15 ^a	< 34.0	< 6.5	< 26.6
9/14/90- 9/21/90	8.5	3.0	0.15 ^a	< 29.2	< 7.0	< 38.0
9/21/90- 9/27/90	9.1	2.0	0.07 ^a	< 11.9	< 3.1	< 16.6
9/27/90-10/ 5/90	9.2	2.8	0.08 ^a	< 67.8	< 2.2	< 12.9
10/ 5/90-10/12/90	9.3	2.7 ^a	0.05 ^a	< **.*	< 3.7	< 22.1
10/12/90-10/19/90	9.2	2.2	0.09 ^a	< 58.9	< 3.1	< 16.0
10/19/90-10/26/90	9.1	1.7 ^a	0.04 ^a	< 94.3	< 3.4	< 19.3
10/26/90-11/ 2/90	9.1	2.7	0.17	< 85.5	< 4.2	< 20.6
11/ 2/90-11/10/90	9.5	3.5 ^a	0.16	< **.*	< 3.6	< 24.4
11/10/90-11/16/90	7.8	3.3	0.06 ^a	< 37.4	< 3.2	< 20.9
11/16/90-11/23/90	6.1	2.1	0.01 ^c	< 65.6	< 4.6	< 31.2
11/23/90-12/ 3/90	13.1	2.8	0.07	< 33.5	< 2.5	< 11.6

TABLE 39 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/ 3/90-12/ 7/90	4.9	4.8	0.31	< 45.8	< 3.3	< 16.0
12/ 7/90-12/14/90	9.3	2.2 ^a	0.04 ^b	< 79.0	< 6.0	< 26.0
12/14/90-12/21/90	9.3	2.6	0.05	< 14.8	< 1.7	< 7.5
12/21/90-12/28/90	9.3	2.4	0.03 ^c	< 61.3	< 5.8	< 26.0
12/28/90- 1/ 4/91	8.2	3.2	0.11	< 31.2	< 3.7	< 16.0
1/ 4/91- 1/11/91	9.4	1.9 ^a	0.08 ^a	< 72.6	< 8.2	< 33.9
1/11/91- 1/18/91	8.9	3.5	0.03 ^b	< 17.4	< 3.2	< 17.8
1/18/91- 1/25/91	8.2	4.1	0.06 ^b	< 46.2	< 6.0	< 37.4
1/25/91- 2/ 1/91	9.0	2.1	0.02 ^c	< 22.5	< 3.5	< 14.3
2/ 1/91- 2/ 8/91	9.0	3.6	0.04 ^b	< 20.5	< 3.3	< 13.5
2/ 8/91- 2/15/91	8.1	3.8	0.02 ^c	< 31.0	< 3.7	< 23.5
2/15/91- 2/21/91	9.0	2.7	0.03 ^b	< 14.5	< 3.5	< 13.3
2/21/91- 2/28/91	8.4	3.4	0.03 ^c	< 23.6	< 5.8	< 22.6
2/28/91- 3/ 8/91	8.9	3.6	0.06 ^b	< 23.8	< 5.5	< 22.4
3/ 8/91- 3/15/91	9.2	2.1	0.01 ^b	< 7.3	< 1.7	< 8.9
3/15/91- 3/22/91	9.1	2.1 ^a	0.06 ^a	< 80.2	< 3.9	< 19.8
3/22/91- 3/28/91	8.0	2.4 ^a	0.05 ^a	< 99.0	< 4.5	< 23.0
3/28/91- 4/ 4/91	10.2	2.4	0.06 ^a	< 64.8	< 2.7	< 15.2
4/ 4/91- 4/12/91	9.2	3.4	0.09 ^a	< 66.3	< 3.4	< 17.1
4/12/91- 4/19/91	8.9	2.7	0.06	< 44.6	3.2 ^a	< 10.3
4/19/91- 4/26/91	9.2	2.7 ^a	0.07 ^b	< **.*	< 7.3	< 34.6
4/26/91- 5/ 3/91	9.0	2.7	0.17	< 47.0	< 2.7	< 19.8
5/ 3/91- 5/10/91	8.8	2.4 ^a	0.20	< **.*	< 5.2	< 29.4
5/10/91- 5/17/91	9.1	1.2	0.02 ^a	< 47.9	< 2.4	< 18.3
5/17/91- 5/23/91	9.0	1.9	0.36	< 28.5	< 3.2	< 18.6
5/23/91- 5/31/91	9.2	1.7	< 0.05	< 59.1	< 3.4	< 26.1
5/31/91- 6/ 6/91	7.5	1.9 ^a	0.25 ^a	< 67.0	< 9.5	< 37.9
6/ 6/91- 6/14/91	9.7	1.8	0.05 ^a	< 23.7	< 2.7	< 16.5
6/14/91- 6/21/91	8.1	3.2	0.16	< 53.5	< 3.6	< 26.2
6/21/91- 6/28/91	8.6	1.9	0.09	< 91.0	< 3.9	< 22.4
6/28/91- 7/ 4/91	8.6	1.3 ^a	0.20	< **.*	< 4.2	< 23.0
7/ 4/91- 7/12/91	9.0	1.3 ^a	0.06	< **.*	< 3.7	< 21.2
7/12/91- 7/19/91	8.7	1.4	0.12	< 42.2	4.6 ^a	< 11.2
7/19/91- 7/25/91	9.0	1.5	0.01 ^c	< 31.1	< 2.1	< 13.9
7/25/91- 8/ 2/91	9.2	1.3	0.07 ^a	< 66.3	< 3.6	< 24.9
8/ 2/91- 8/ 9/91	8.1	1.9 ^a	0.04 ^a	< **.*	< 3.5	< 23.5
8/ 9/91- 8/16/91	9.0	1.2	0.04 ^a	< 48.7	< 3.4	< 17.0
8/16/91- 8/23/91	9.3	1.5	0.10	< 53.6	< 3.3	< 15.7
8/23/91- 8/30/91	9.2	1.7	0.03 ^b	< 53.4	< 4.9	< 33.0
8/30/91- 9/ 6/91	5.7	2.1 ^a	0.05 ^a	< 94.4	< 5.4	< 38.4
9/ 6/91- 9/13/91	8.9	2.0	0.10	< 31.4	< 2.9	< 12.5
9/13/91- 9/20/91	9.0	1.8	0.20	< 40.9	< 3.0	< 20.9
9/20/91- 9/27/91	8.0	2.2	0.06 ^a	< 89.7	< 4.0	< 21.4
9/27/91-10/ 7/91	12.6	2.0	0.04 ^b	< 65.1	< 3.9	< 20.1
10/ 7/91-10/11/91	5.1	1.8 ^b	0.03 ^c	< 57.7	< 7.2	< 28.2
10/11/91-10/18/91	9.2	< 0.4	0.11	< 29.6	< 2.7	< 17.6
10/18/91-10/25/91	9.1	2.2 ^a	0.11 ^a	< 83.5	< 6.8	< 33.2
10/25/91-11/ 1/91	8.9	2.0	0.04 ^b	< 46.7	< 6.0	< 24.8
11/ 1/91-11/ 8/91	9.3	2.5	0.06 ^b	< 57.3	< 7.0	< 31.8
11/ 8/91-11/15/91	9.1	1.7	0.04 ^a	< 34.7	< 5.5	< 29.9
11/15/91-11/22/91	8.5	3.5	0.05 ^b	< 75.8	< 5.6	< 27.7

TABLE 39 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/22/91-11/29/91	8.4	2.4	0.05 ^b	< 46.6	< 7.3	< 43.2
11/29/91-12/ 5/91	8.9	2.0	0.01 ^b	< 14.0	< 2.8	< 14.4
12/ 5/91-12/13/91	8.7	--	--	--	--	--
12/13/91-12/20/91	8.9	1.2	0.03 ^a	< 16.1	< 3.0	< 17.2
12/20/91-12/27/91	8.7	3.0	0.14 ^a	< 31.2	< 5.5	< 23.8
12/27/91- 1/ 3/92	8.9	4.6	0.05 ^b	< 20.7	< 6.9	< 31.2
1/ 3/92- 1/ 9/92	7.3	3.1	0.02 ^b	< 46.3	< 3.9	< 26.6
1/ 9/92- 1/17/92	8.1	2.4	0.02 ^a	< 26.6	< 2.6	< 11.9
1/17/92- 1/23/92	7.0	3.9	0.11 ^a	< 59.9	< 7.5	< 54.8
1/23/92- 1/31/92	10.5	3.8	0.02 ^a	< 10.5	< 1.5	< 8.9
1/31/92- 2/ 7/92	6.3	3.0	0.03 ^b	< 58.9	< 6.2	< 27.8
2/ 7/92- 2/14/92	9.3	1.9	0.04 ^b	< 95.8	< 7.3	< 32.7
2/14/92- 2/21/92	9.2	3.9	0.10 ^a	< 79.8	< 6.2	< 32.0
2/21/92- 2/28/92	9.0	2.6 ^a	0.03 ^a	< 27.4	< 2.8	< 12.5
2/28/92- 3/ 6/92	9.1	3.1	0.15	< 31.5	< 3.6	< 23.1
3/ 6/92- 3/13/92	8.8	4.8	0.13 ^a	< **.*	< 8.7	< 45.1
3/13/92- 3/20/92	9.4	2.8	0.05 ^b	< 60.9	< 7.1	< 32.1
3/20/92- 3/27/92	9.2	3.7	0.17	< 20.7	< 2.5	< 11.1
3/27/92- 4/ 3/92	8.6	5.6	0.06 ^b	< 52.7	< 7.3	< 29.2
4/ 3/92- 4/10/92	9.3	3.7	0.14	< 28.5	< 8.3	< 41.2
4/10/92- 4/16/92	7.9	4.3	0.23 ^a	< 47.2	< 9.5	< 36.6
4/16/92- 4/24/92	10.4	2.5	0.13 ^a	< 34.4	< 9.3	< 29.0
4/24/92- 5/ 1/92	9.0	2.7	0.11 ^a	< 35.7	< 10.4	< 33.9
5/ 1/92- 5/ 8/92	8.9	< 0.4	< 0.05	< 36.0	< 4.1	< 18.0
5/ 8/92- 5/15/92	9.3	2.5	0.11 ^a	< 30.4	< 3.5	< 15.9
5/15/92- 5/21/92	7.8	2.4 ^a	0.07 ^a	< **.*	< 5.4	< 31.5
5/21/92- 5/29/92	10.6	2.0	0.12	< 36.2	< 1.6	< 9.5
5/29/92- 6/ 5/92	9.0	< 1.8	0.30	< **.*	< 6.9	< 42.7
6/ 5/92- 6/12/92	9.3	1.5 ^a	0.03 ^b	< 89.3	< 3.8	< 23.7
6/12/92- 6/19/92	9.0	3.0	0.11	< 44.2	< 4.0	< 19.7
6/19/92- 6/26/92	9.0	2.6	0.15	< 29.7	< 3.6	< 22.4
6/26/92- 7/ 3/92	9.0	2.2 ^a	0.15 ^a	< 98.4	< 8.4	< 37.3
7/ 3/92- 7/10/92	9.5	2.5	0.05	< 27.4	< 1.6	< 12.6
7/10/92- 7/17/92	8.9	2.9	0.12 ^a	< **.*	< 9.6	< 44.7
7/17/92- 7/24/92	9.2	2.3	0.19	< 44.6	< 3.5	< 25.8
7/24/92- 7/31/92	9.5	3.0	0.16 ^a	< 91.0	< 7.5	< 41.9
7/31/92- 8/ 7/92	9.2	3.1	0.14	< 62.9	< 1.7	< 15.4
8/ 7/92- 8/14/92	9.2	< 2.1	0.05 ^a	< **.*	< 6.0	< 51.4
8/14/92- 8/21/92	9.2	< 2.1	0.09 ^a	< **.*	< 5.6	< 50.8
8/21/92- 8/28/92	9.2	1.9 ^a	0.07 ^a	< **.*	< 3.9	< 24.8
8/28/92- 9/ 4/92	9.3	1.2	0.08 ^a	< 47.5	< 6.4	< 29.7
9/ 4/92- 9/10/92	8.9	2.6	0.07 ^a	< 37.2	< 5.0	< 23.7
9/10/92- 9/18/92	9.3	2.7	0.03 ^b	< 38.8	< 4.8	< 21.8
9/18/92- 9/25/92	9.5	2.0	0.06 ^b	< 35.8	< 6.7	< 44.2
9/25/92-10/ 2/92	8.9	3.0	0.03 ^c	< 44.7	< 7.3	< 32.9
10/ 2/92-10/ 9/92	9.2	2.1	0.09 ^a	< 67.1	< 7.0	< 33.4
10/ 9/92-10/15/92	8.9	2.0	0.08 ^c	< 38.0	< 1.9	< 15.3
10/15/92-10/23/92	9.3	3.0	0.05 ^b	< 96.5	< 8.9	< 40.8
10/23/92-10/29/92	9.0	5.7	0.11 ^a	< 64.9	< 7.7	< 57.0
10/29/92-11/ 6/92	9.3	2.5	0.07 ^b	< 50.0	< 6.7	< 47.6
11/ 6/92-11/12/92	9.1	3.2	0.06 ^a	< 54.7	< 7.6	< 35.9

TABLE 39 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/12/92-11/20/92	9.4	3.5	0.13 ^a	< 63.9	< 7.6	< 39.3
11/20/92-11/27/92	9.2	2.8	0.03 ^b	< 26.5	< 5.0	< 29.8
11/27/92-12/ 3/92	8.9	3.4	0.06 ^b	< 34.0	< 7.6	< 33.9
12/ 3/92-12/10/92	9.2	< 3.3	0.05 ^a	< **.*	< 2.5	< 22.0
12/10/92-12/18/92	9.4	< 2.0	0.08 ^a	< **.*	< 5.0	< 42.6
12/18/92-12/23/92	7.6	< 1.6	0.13	< **.*	< 5.1	< 42.2
12/23/92-12/31/92	9.4	< 4.4	0.04 ^b	< **.*	< 3.9	< 35.0
12/31/92- 1/ 7/93	10.0	2.7	0.10 ^a	< 75.8	< 6.9	< 33.0
1/ 7/93- 1/15/93	9.6	3.2	0.03 ^b	< 73.0	< 7.4	< 31.4
1/15/93- 1/22/93	9.2	4.7	0.17 ^a	< 68.1	< 10.3	< 40.9
1/22/93- 1/29/93	9.2	5.4	0.04 ^a	< 26.4	< 3.9	< 24.1
1/29/93- 2/ 5/93	9.0	5.0	0.12 ^a	< 69.9	< 3.5	< 21.4
2/ 5/93- 2/12/93	9.4	4.5	0.06 ^a	< 49.8	< 3.6	< 27.4
2/12/93- 2/18/93	8.9	2.3	0.08 ^a	< 98.3	< 10.3	< 43.3
2/18/93- 2/25/93	9.1	3.4	0.07 ^b	< 61.3	< 7.7	< 46.2
2/25/93- 3/ 5/93	9.4	< 6.8	0.01 ^c	< **.*	< 2.0	< 20.8
3/ 5/93- 3/11/93	9.1	< 12.3	0.08 ^a	< **.*	< 4.1	< 40.8
3/11/93- 3/18/93	9.0	--	0.12	< **.*	< 2.1	< 14.9
3/18/93- 3/26/93	9.3	< 11.6	0.14 ^a	< **.*	< 3.9	< 40.3
3/26/93- 4/ 2/93	9.3	--	0.06 ^b	< **.*	< 5.7	< **.*
4/ 2/93- 4/ 8/93	8.0	2.8	0.10 ^a	< 35.5	< 6.1	< 28.9
4/ 8/93- 4/16/93	10.3	3.6	0.22	< 23.7	< 7.5	< 39.2
4/16/93- 4/23/93	9.3	3.5	0.27	< 42.1	< 6.9	< 41.8
4/23/93- 4/30/93	9.1	3.2	0.25	< 23.6	< 4.1	< 26.1
4/30/93- 5/ 7/93	9.3	3.8	0.33 ^b	< 52.2	< 7.5	< 33.1
5/ 7/93- 5/14/93	9.2	3.5	0.07 ^b	< 42.0	< 6.2	< 28.8
5/14/93- 5/21/93	9.3	2.6	0.25 ^a	< 32.9	< 6.1	< 37.4
5/21/93- 5/28/93	9.1	2.8	0.13 ^a	< 39.0	< 6.1	< 25.4
5/28/93- 6/ 4/93	9.2	--	--	--	--	--
6/ 4/93- 6/11/93	9.0	--	--	--	--	--
6/11/93- 6/18/93	8.7	--	--	--	--	--
6/18/93- 6/25/93	9.0	--	--	--	--	--
6/25/93- 7/ 2/93	9.0	--	--	--	--	--
7/ 2/93- 7/ 9/93	9.1	--	--	--	--	--
7/ 9/93- 7/16/93	9.7	--	--	--	--	--
7/16/93- 7/23/93	8.9	--	--	--	--	--
7/23/93- 7/30/93	8.8	--	--	--	--	--
7/30/93- 8/ 6/93	9.6	3.0	0.11 ^a	< 35.6	< 6.4	< 32.9
8/ 6/93- 8/13/93	9.2	3.5	0.19	< 26.5	< 6.6	< 38.8
8/13/93- 8/20/93	9.4	2.8	0.12 ^a	< 28.5	< 6.2	< 42.3
8/20/93- 8/27/93	9.5	4.2	0.39	< 40.4	< 6.8	< 41.4
8/27/93- 9/ 3/93	9.5	3.0	0.25	< 44.7	< 6.6	< 31.9
9/ 3/93- 9/10/93	9.6	2.7	0.17 ^a	< 62.7	< 8.5	< 37.3
9/10/93- 9/17/93	9.4	2.8	0.07 ^b	< 87.6	< 7.3	< 39.2
9/17/93- 9/24/93	9.4	2.1	0.05 ^c	< 51.7	< 4.1	< 22.6
9/24/93-10/ 1/93	9.3	5.7	0.31	< 55.7	< 6.4	< 42.2
10/ 1/93-10/ 8/93	9.2	4.6	0.11 ^a	< 88.0	< 5.3	< 39.6
10/ 8/93-10/15/93	5.4	1.8 ^a	0.01 ^c	< **.*	< 6.1	< 33.8
10/15/93-10/22/93	9.2	2.4 ^a	0.04 ^b	< 71.4	< 3.5	< 27.3
10/22/93-10/29/93	9.6	3.6 ^a	0.04 ^c	< **.*	< 7.6	< 59.7
10/29/93-11/ 5/93	9.1	3.0 ^a	0.06 ^b	< 84.9	< 6.9	< 47.0

TABLE 39 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/ 5/93-11/12/93	8.6	--	0.02 ^c	< **.*	< 6.9	< 42.3
11/12/93-11/19/93	9.4	2.4 ^a	0.09 ^b	< 68.1	< 6.6	< 48.5
11/19/93-11/26/93	7.3	3.7	0.01 ^c	< 95.1	< 5.1	< 39.7
11/26/93-12/ 3/93	7.3	3.7 ^a	0.08 ^b	< **.*	< 7.8	< 70.7
12/ 3/93-12/10/93	8.4	5.3 ^a	0.06 ^b	< **.*	< 4.1	< 27.7
12/10/93-12/17/93	6.9	--	0.13 ^b	< **.*	< 9.7	< 88.0
12/17/93-12/23/93	8.0	--	0.06 ^b	< **.*	< 4.8	< 32.2
12/23/93-12/31/93	9.2	2.2	0.03 ^a	< 54.0	< 0.9	< 3.7

Note:

-- = No data

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%

b = Uncertainty is between 50% and 100%

c = Uncertainty is greater than 100%

TABLE 40
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT LOWER HUTT, NEW ZEALAND DURING 1990-1993

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
1/ 5/90- 1/12/90	8.8	2.7	0.05	< 25.0	< 3.4	< 20.2
1/12/90- 1/19/90	8.6	3.4	0.05	< 62.7	< 4.0	< 19.2
1/19/90- 1/26/90	8.7	4.0 ^a	0.12 ^a	< **.*	< 7.1	< 36.7
1/26/90- 2/ 1/90	8.4	3.9	0.10	< 25.8	< 2.2	< 14.5
2/ 1/90- 2/ 9/90	9.1	3.5	0.09 ^a	< 55.0	< 3.5	< 23.8
2/ 9/90- 2/15/90	8.3	2.5	0.12	< 42.7	< 4.0	< 19.0
2/15/90- 2/22/90	8.7	3.3	0.13	< 36.8	< 3.8	< 16.5
2/22/90- 3/ 2/90	9.2	2.7	0.10 ^a	< 52.0	< 3.2	< 23.8
3/ 2/90- 3/ 9/90	8.6	2.2 ^a	0.10 ^a	< **.*	< 4.2	< 24.4
3/ 9/90- 3/16/90	9.0	2.6	0.06 ^a	< 54.1	< 3.5	< 25.6
3/16/90- 3/22/90	8.9	3.0	0.07	< 30.0	< 2.0	< 10.0
3/22/90- 3/30/90	9.5	3.9	0.12	< 22.7	< 1.7	< 11.3
3/30/90- 4/ 6/90	9.0	< 3.0	0.07 ^a	< **.*	< 4.0	< 26.8
4/ 6/90- 4/12/90	7.7	< 2.5	0.12 ^a	< **.*	< 5.8	< 36.1
4/12/90- 4/19/90	9.8	< 2.3	0.10 ^a	< **.*	< 3.3	< 30.8
4/19/90- 4/27/90	9.1	2.0	0.09	< 57.9	< 1.8	< 14.4
4/27/90- 5/ 3/90	8.5	2.7 ^a	0.11 ^a	< **.*	< 3.4	< 29.5
5/ 3/90- 5/11/90	9.4	< 2.9	0.12 ^a	< **.*	< 3.6	< 35.6
5/11/90- 5/18/90	8.7	1.7 ^a	0.02 ^c	< **.*	< 3.5	< 22.5
5/18/90- 5/25/90	8.8	1.5 ^a	0.06 ^a	< **.*	< 3.5	< 21.0
5/25/90- 6/ 1/90	8.9	< 1.8	0.06 ^a	< **.*	< 3.7	< 32.2
6/ 1/90- 6/ 7/90	8.8	1.7	0.08 ^a	< 41.6	< 3.2	< 15.3
6/ 7/90- 6/15/90	9.1	< 0.7	0.05 ^b	< 83.8	< 3.4	< 18.4
6/15/90- 6/22/90	8.9	1.9	0.07 ^a	< 30.7	< 2.9	< 18.6
6/22/90- 6/28/90	8.7	1.8	0.09	< 16.0	< 1.8	< 11.0
6/28/90- 7/ 5/90	9.0	1.5	0.09 ^a	< 38.7	< 6.3	< 27.7
7/ 5/90- 7/12/90	9.0	1.2	0.04 ^b	< 25.6	< 4.6	< 19.6
7/12/90- 7/19/90	9.1	1.4	0.07 ^a	< 30.8	< 6.2	< 26.3
7/19/90- 7/27/90	9.3	2.3	0.14 ^a	< 25.9	< 6.1	< 24.1
7/27/90- 8/ 2/90	8.6	2.4	0.05 ^b	< 24.2	< 7.2	< 35.0
8/ 2/90- 8/ 9/90	9.1	2.3	0.09 ^b	< 23.5	< 7.0	< 29.1
8/ 9/90- 8/16/90	8.9	1.7	0.05 ^b	< 21.2	< 6.3	< 27.4
8/16/90- 8/24/90	9.2	0.7	0.03 ^b	< 27.0	< 3.6	< 15.3
8/24/90- 9/ 8/90	19.0	2.6	0.09 ^a	< 28.6	< 3.5	< 14.7
9/ 8/90- 9/13/90	7.4	2.5	0.20 ^a	< 46.6	< 7.1	< 45.2
9/13/90- 9/21/90	9.0	1.5	0.05 ^b	< 28.5	< 5.5	< 30.2
9/21/90- 9/27/90	8.9	1.9	0.09 ^a	< 30.8	< 6.6	< 25.2
9/27/90-10/ 1/90	--	--	--	--	--	--
10/ 1/90-10/ 7/90	8.7	1.7	0.07 ^a	< 34.7	< 8.3	< 28.2
10/ 7/90-10/11/90	--	--	--	--	--	--
10/11/90-10/19/90	9.5	2.1 ^a	0.09 ^a	< 94.8	< 3.2	< 18.7
10/19/90-10/25/90	9.0	3.5 ^a	0.11 ^a	< **.*	< 6.5	< 50.7
10/25/90-11/ 1/90	8.1	2.7 ^a	0.05 ^a	< 88.6	< 3.8	< 27.2
11/ 1/90-11/ 8/90	10.1	< 2.1	0.07 ^a	< **.*	< 3.3	< 29.9
11/ 8/90-11/15/90	9.0	3.0 ^a	0.06 ^a	< **.*	< 6.1	< 31.0
11/15/90-11/22/90	9.1	3.5 ^a	0.05 ^a	< **.*	< 3.4	< 31.1
11/22/90-11/29/90	9.2	2.2	0.05 ^a	< 79.1	< 2.7	< 16.2
11/29/90-12/ 6/90	9.0	4.3	0.08 ^b	< 59.4	< 7.6	< 32.3

TABLE 40 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/ 6/90-12/14/90	9.5	3.4	0.12 ^a	< 52.0	< 7.9	< 31.9
12/14/90-12/21/90	9.1	3.1	0.07 ^a	< 25.1	< 3.5	< 15.0
12/21/90- 1/ 2/91	16.8	2.7	0.07 ^a	< 28.7	< 4.3	< 17.0
1/ 2/91- 1/10/91	10.2	3.4	0.06 ^a	< 19.4	< 3.0	< 13.5
1/10/91- 1/17/91	9.2	2.3	0.03 ^c	< 37.9	< 7.8	< 30.8
1/17/91- 1/24/91	9.3	3.3	0.05 ^b	< 32.5	< 7.0	< 29.4
1/24/91- 2/ 1/91	9.1	3.5	0.04 ^c	< 34.4	< 7.4	< 28.6
2/ 1/91- 2/ 7/91	8.7	3.6	0.06 ^b	< 28.6	< 6.6	< 37.9
2/ 7/91- 2/15/91	9.3	4.2	0.21	< 56.3	< 3.1	< 16.7
2/15/91- 2/25/91	12.8	4.2	0.06 ^a	< 19.7	< 4.4	< 21.2
2/25/91- 3/ 1/91	5.6	3.7	0.05 ^b	< 20.7	< 3.4	< 14.4
3/ 1/91- 3/ 8/91	9.0	2.7 ^a	0.05 ^b	< **. *	< 7.9	< 49.4
3/ 8/91- 3/15/91	9.1	3.5	0.08 ^a	< 69.8	< 6.4	< 28.3
3/15/91- 3/22/91	9.0	2.9 ^a	0.10 ^a	< 87.6	< 6.6	< 47.2
3/22/91- 4/ 1/91	13.9	2.8	0.10 ^a	< 53.7	< 5.2	< 24.0
4/ 1/91- 4/ 4/91	3.8	< 1.8	0.05 ^b	< **. *	< 7.8	< 65.4
4/ 4/91- 4/11/91	9.2	2.3	< 0.04	< 57.3	< 5.1	< 32.6
4/11/91- 4/18/91	8.9	4.2	0.19 ^a	< 72.0	< 6.7	< 29.0
4/18/91- 4/25/91	9.0	1.6	0.05 ^a	< 50.0	< 4.2	< 19.1
4/25/91- 5/ 2/91	9.1	2.4	0.04 ^b	< 43.6	< 5.0	< 32.9
5/ 2/91- 5/ 9/91	8.9	1.4 ^a	0.09 ^a	< 70.7	< 7.6	< 34.5
5/ 9/91- 5/16/91	9.1	1.7	0.10 ^a	< 39.0	< 6.1	< 36.8
5/16/91- 5/23/91	9.0	1.6	0.08 ^b	< 35.6	< 6.3	< 26.3
5/23/91- 5/30/91	8.9	1.7	0.22	< 39.6	< 3.5	< 15.7
5/30/91- 6/ 7/91	9.5	2.6	0.12 ^a	< 32.6	< 7.1	< 27.1
6/ 7/91- 6/13/91	8.8	2.1	0.09 ^a	< 24.9	< 7.3	< 36.7
6/13/91- 6/20/91	9.1	1.8	0.10 ^a	< 10.0	< 3.0	< 15.1
6/20/91- 6/27/91	9.1	1.5	0.05 ^b	< 19.3	< 5.7	< 22.8
6/27/91- 7/ 4/91	9.1	1.5	0.04 ^a	< 28.2	< 3.4	< 14.2
7/ 4/91- 7/12/91	9.5	2.0	0.11	< 47.5	< 2.9	< 20.3
7/12/91- 7/18/91	8.8	1.1 ^a	0.10	< 45.9	< 3.0	< 13.9
7/18/91- 7/26/91	9.5	1.2	0.04 ^a	< 37.1	< 3.5	< 15.8
7/26/91- 8/ 2/91	9.1	1.5	0.03 ^a	< 17.4	< 2.9	< 17.8
8/ 2/91- 8/ 8/91	8.7	1.8	0.08 ^a	< 52.1	5.9 ^a	< 18.3
8/ 8/91- 8/15/91	9.1	2.3	0.07 ^a	< 31.7	< 4.5	< 30.1
8/15/91- 8/22/91	9.1	1.4 ^a	0.06 ^a	< 63.8	< 5.6	< 24.3
8/22/91- 8/29/91	9.1	2.4	0.13 ^a	< 54.9	< 6.7	< 32.8
8/29/91- 9/ 5/91	9.4	1.5	0.12	< 65.7	< 6.4	< 24.5
9/ 5/91- 9/12/91	9.2	2.8	0.15	< 45.8	< 6.0	< 25.4
9/12/91- 9/19/91	9.1	1.6	0.08 ^a	< 35.2	< 5.8	< 22.9
9/19/91- 9/26/91	9.2	2.3	0.02 ^c	< 33.0	< 5.9	< 24.8
9/26/91-10/ 3/91	9.3	1.5	0.03 ^b	< 21.4	< 3.5	< 14.0
10/ 3/91-10/11/91	9.6	2.2	0.12 ^a	< 31.7	< 7.1	< 29.8
10/11/91-10/17/91	9.2	2.6	0.06 ^b	< 19.8	< 5.2	< 26.3
10/17/91-10/24/91	9.1	2.2	0.05 ^a	< 8.9	< 1.9	< 6.9
10/24/91-10/31/91	9.2	2.5	0.11 ^a	< 31.4	< 6.6	< 27.9
10/31/91-11/ 7/91	9.2	1.8 ^b	0.04 ^a	< 67.1	< 5.2	< 25.9
11/ 7/91-11/14/91	9.2	< 0.7	0.03 ^b	< 59.1	< 5.8	< 34.2
11/14/91-11/21/91	9.3	3.2	0.08 ^a	< 59.1	< 6.2	< 26.9
11/21/91-11/29/91	9.5	2.2	0.05 ^a	< 25.2	< 2.8	< 12.4
11/29/91-12/ 5/91	8.7	2.4	0.01 ^c	< 79.8	< 5.1	< 36.0

TABLE 40 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(\mu Bq m ⁻³)		
12/ 5/91-12/12/91	9.0	2.6	0.07 ^c	< 26.3	< 1.6	< 7.9
12/12/91-12/19/91	9.0	3.0	0.05 ^a	< 60.0	< 3.6	< 19.1
12/19/91-12/28/91	10.5	4.2	0.08 ^a	< 87.0	< 6.5	< 30.7
12/28/91- 1/ 3/92	7.8	2.5	0.03 ^b	< 64.6	< 6.1	< 38.8
1/ 3/92- 1/ 9/92	8.9	3.7	0.07 ^a	< 72.1	< 3.8	< 20.1
1/ 9/92- 1/16/92	9.2	3.9	0.11 ^a	< 87.1	< 6.1	< 29.8
1/16/92- 1/24/92	9.2	3.5	0.06 ^a	< 83.5	< 5.2	< 39.1
1/24/92- 1/30/92	8.7	4.5	0.07	< 46.0	< 3.5	< 24.2
1/30/92- 2/ 6/92	9.0	2.8	0.03 ^c	< 71.4	< 3.7	< 18.8
2/ 6/92- 2/14/92	9.3	4.0	0.08 ^a	< 65.5	< 4.2	< 21.4
2/14/92- 2/21/92	9.0	3.4	0.07 ^a	< **.*	< 6.8	< 34.8
2/21/92- 2/28/92	9.2	< 12.2	0.07 ^a	< **.*	< 3.2	< 44.4
2/28/92- 3/ 5/92	8.7	2.7	0.07	< 42.2	< 2.7	< 18.5
3/ 5/92- 3/12/92	9.3	3.3	0.11	< 92.4	< 4.5	< 24.3
3/12/92- 3/19/92	9.2	2.6	0.04 ^a	< 77.1	< 4.3	< 21.5
3/19/92- 3/28/92	10.7	2.9	0.06 ^a	< 52.8	< 3.7	< 16.9
3/28/92- 4/ 3/92	7.9	3.7	0.07 ^b	< **.*	< 8.7	< 42.2
4/ 3/92- 4/10/92	9.5	3.2	0.07 ^a	< 88.5	< 6.5	< 31.9
4/10/92- 4/16/92	9.0	3.2	0.20	< 67.1	< 1.9	< 11.6
4/16/92- 4/23/92	9.2	3.3	0.12	< 40.1	< 3.6	< 16.6
4/23/92- 4/30/92	9.2	2.9	0.12	< 41.0	< 4.3	< 26.2
4/30/92- 5/10/92	12.1	2.5	0.14 ^a	< 54.3	< 4.6	< 23.0
5/10/92- 5/14/92	6.2	2.5	0.07	< 26.0	< 3.3	< 14.3
5/14/92- 5/21/92	9.1	1.8	0.05 ^a	< 27.9	< 3.6	< 20.7
5/21/92- 5/28/92	9.3	2.2	0.08	< 45.4	< 6.1	< 35.2
5/28/92- 6/ 5/92	9.5	3.4 ^a	0.10 ^a	< **.*	< 6.4	< 47.0
6/ 5/92- 6/12/92	9.3	2.6	0.09 ^a	< 37.1	< 3.5	< 23.8
6/12/92- 6/18/92	8.6	2.8 ^a	0.03 ^b	< **.*	< 4.2	< 28.8
6/18/92- 6/25/92	9.2	1.2	0.13	< 51.9	< 4.0	< 18.4
6/25/92- 7/ 2/92	9.2	2.7	0.12 ^a	< 72.0	< 7.4	< 52.1
7/ 2/92- 7/ 9/92	9.3	1.9	0.22	< 74.9	< 4.8	< 24.3
7/ 9/92- 7/16/92	9.3	1.3	0.07 ^a	< 51.0	< 3.4	< 17.7
7/16/92- 7/23/92	9.2	2.1 ^a	0.14 ^a	< **.*	< 7.5	< 41.9
7/23/92- 7/30/92	9.1	2.5	0.08 ^a	< 66.2	< 5.8	< 42.8
7/30/92- 8/ 6/92	9.2	2.2	0.10	< 23.3	< 2.0	< 9.9
8/ 6/92- 8/13/92	9.1	2.8	0.12 ^a	< **.*	< 8.8	< 41.1
8/13/92- 8/20/92	9.1	0.9	0.03 ^b	< 33.0	< 3.9	< 24.2
8/20/92- 8/27/92	9.1	2.5	0.04 ^a	< 41.4	< 4.3	< 29.7
8/27/92- 9/ 3/92	9.2	1.1	0.11 ^a	< 61.8	< 8.3	< 40.0
9/ 3/92- 9/11/92	9.4	2.3	0.12 ^a	< **.*	< 6.7	< 44.5
9/11/92- 9/17/92	8.8	< **.*	0.08 ^b	< **.*	< 4.4	< 68.5
9/17/92- 9/24/92	9.1	1.7 ^a	0.02 ^b	< 56.9	< 5.7	< 29.7
9/24/92-10/ 1/92	9.1	2.8 ^a	0.06 ^b	< **.*	< 7.6	< 46.2
10/ 1/92-10/ 8/92	9.1	< 3.8	0.07 ^a	< **.*	< 3.8	< 41.4
10/ 8/92-10/15/92	9.2	< 33.0	0.09	< **.*	< 4.3	< 69.4
10/15/92-10/22/92	9.2	--	0.10 ^a	< **.*	< 5.3	< 60.4
10/22/92-10/30/92	9.6	< 21.7	0.05 ^a	< **.*	< 4.0	< 56.8
10/30/92-11/ 5/92	8.8	< 7.2	0.14	< **.*	< 4.5	< 53.5
11/ 5/92-11/12/92	9.2	< 5.4	0.10	< **.*	< 3.3	< 40.7
11/12/92-11/20/92	10.6	< 3.7	0.05 ^c	< **.*	< 1.3	< 17.4
11/20/92-11/26/92	7.7	< 15.5	0.09 ^a	< **.*	< 7.7	< 94.8

TABLE 40 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be		^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)			(μBq m ⁻³)		
11/26/92-12/ 3/92	9.2	<	4.6	0.15 ^a	< **.*	< 4.0	< 34.6
12/ 3/92-12/10/92	9.0	<	6.2	0.10 ^a	< **.*	< 3.5	< 31.0
12/10/92-12/17/92	9.4		4.2 ^a	0.07	< **.*	< 1.6	< 14.0
12/17/92-12/25/92	10.6		5.0 ^a	0.08 ^a	< **.*	< 1.8	< 14.3
12/25/92- 1/ 1/93	7.9	<	5.7	0.06 ^a	< **.*	< 5.1	< 55.5
1/ 1/93- 1/ 7/93	8.9		3.7	0.03 ^a	< 52.9	< 4.5	< 22.6
1/ 7/93- 1/14/93	9.0		3.4	0.05 ^a	< 39.0	< 3.5	< 17.0
1/14/93- 1/21/93	9.1		5.8	0.06 ^b	< 63.7	< 8.1	< 52.3
1/21/93- 1/28/93	9.0		3.5	0.05 ^b	< 85.5	< 9.1	< 41.8
1/28/93- 2/ 5/93	9.4		3.2	0.04 ^a	< 41.0	< 6.6	< 27.7
2/ 5/93- 2/11/93	8.9		3.9	0.08 ^a	< 49.7	< 8.5	< 35.3
2/11/93- 2/18/93	9.3		3.9	0.07 ^a	< 24.0	< 3.9	< 16.4
2/18/93- 2/28/93	13.2		2.8	0.10	< 20.8	< 3.8	< 17.1
2/28/93- 3/ 4/93	5.1		5.7	0.20	< 64.8	< 9.0	< 60.4
3/ 4/93- 3/11/93	9.4		--	0.10 ^a	< **.*	< 3.9	< 52.0
3/11/93- 3/19/93	9.6	<	15.2	0.14 ^a	< **.*	< 5.4	< 53.2
3/19/93- 3/25/93	8.8		--	0.09 ^a	< **.*	< 4.1	< 75.1
3/25/93- 4/ 2/93	9.5		3.9 ^a	0.07 ^c	< **.*	< 3.4	< 26.9
4/ 2/93- 4/ 7/93	7.7	<	7.1	0.15 ^a	< **.*	< 8.3	< 59.6
4/ 7/93- 4/15/93	10.3	<	4.2	0.08 ^a	< **.*	< 4.5	< 38.5
4/15/93- 4/23/93	9.1	<	5.5	0.11 ^a	< **.*	< 6.3	< 63.8
4/23/93- 4/29/93	8.9	<	4.7	0.20	< **.*	< 6.1	< 48.2
4/29/93- 5/ 6/93	9.2		2.6	0.17 ^a	< 35.3	< 8.4	< 46.2
5/ 6/93- 5/13/93	9.2		2.9	0.11 ^a	< 37.2	< 7.2	< 47.3
5/13/93- 5/21/93	9.7		1.6	0.04 ^b	< 33.6	< 5.7	< 27.7
5/21/93- 5/27/93	8.9		2.8	0.14 ^a	< 41.2	< 9.2	< 36.0
5/27/93- 6/ 4/93	9.6		2.8	0.17 ^a	< 23.5	< 6.2	< 35.5
6/ 4/93- 6/11/93	9.2		--	--	--	--	--
6/11/93- 6/17/93	9.1		--	--	--	--	--
6/17/93- 6/25/93	9.6		--	--	--	--	--
6/25/93- 7/ 5/93	14.2		--	--	--	--	--
7/ 5/93- 7/ 9/93	4.5		--	--	--	--	--
7/ 9/93- 7/16/93	9.3		--	--	--	--	--
7/16/93- 7/22/93	9.2		--	--	--	--	--
7/22/93- 7/30/93	9.4		--	0.19 ^a	< **.*	< 7.1	< 83.4
7/30/93- 8/ 5/93	9.4		--	0.09 ^b	< **.*	< 6.1	< 63.1
8/ 5/93- 8/12/93	9.4		--	0.14 ^a	< **.*	< 5.5	< 49.3
8/12/93- 8/20/93	9.4		--	0.05 ^b	< **.*	< 5.3	< 40.9
8/20/93- 8/23/93	3.7		--	0.07 ^c	< **.*	< 14.7	< **.*
8/23/93- 8/27/93	5.2		--	0.16 ^a	< **.*	< 10.0	< **.*
8/27/93- 9/ 6/93	13.3		4.1	0.13 ^a	< 44.8	< 5.5	< 24.9
9/ 6/93- 9/ 9/93	5.1		2.1	0.07 ^b	< 45.9	< 6.4	< 28.6
9/ 9/93- 9/16/93	9.2		2.1	0.06 ^b	< 44.5	< 7.5	< 48.3
9/16/93- 9/24/93	9.0		2.6	0.02 ^c	< 36.0	< 6.9	< 27.6
9/24/93-10/ 1/93	9.3		2.8	0.09 ^a	< 31.2	< 5.7	< 25.2
10/ 1/93-10/ 7/93	9.1		5.7 ^a	0.25 ^a	< **.*	< 6.5	< 38.7
10/ 7/93-10/18/93	14.1		2.8 ^a	0.06 ^a	< 83.8	< 3.5	< 32.4
10/18/93-10/27/93	12.1		3.5 ^a	0.04 ^b	< 90.5	< 4.2	< 25.2
10/27/93-11/ 3/93	9.2		5.2	0.07 ^b	< **.*	< 6.8	< 42.2
11/ 3/93-11/ 9/93	7.9		3.5	0.06 ^b	< 63.9	< 7.6	< 38.5
11/ 9/93-11/17/93	10.3		3.7	0.05	< 18.0	< 2.9	< 18.4

TABLE 40 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/17/93-11/24/93	8.1	3.0	0.03 ^b	< 29.4	< 4.1	< 20.2
11/24/93-12/ 2/93	10.5	3.1	0.06 ^a	< 33.2	< 3.0	< 15.2
12/ 2/93-12/ 9/93	9.3	4.1 ^a	0.03 ^c	< **.*	< 3.8	< 23.9
12/ 9/93-12/15/93	8.0	--	0.09 ^b	< **.*	< 8.2	< 58.3
12/15/93-12/22/93	9.2	3.0 ^a	0.04 ^c	< **.*	< 5.4	< 34.6
12/22/93-12/30/93	10.7	--	0.10 ^a	< **.*	< 6.2	< 51.3

Note:

-- = No data

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%

b = Uncertainty is between 50% and 100%

c = Uncertainty is greater than 100%

TABLE 41
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT CHATHAM ISLAND DURING 1990-1993

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/28/89- 1/ 4/90	8.9	2.9	0.03 ^a	< 35.1	< 4.2	< 18.7
1/ 4/90- 1/11/90	9.1	2.3 ^a	0.03 ^a	< 88.0	< 5.1	< 28.6
1/11/90- 1/18/90	9.1	2.9	0.03	< 41.5	< 3.1	< 21.0
1/18/90- 1/25/90	9.1	3.0	0.01 ^a	< 57.2	< 5.2	< 33.3
1/25/90- 2/ 1/90	8.9	2.8 ^a	0.07 ^a	< **.*	< 7.1	< 31.0
2/ 1/90- 2/ 8/90	9.0	5.6	0.10 ^a	< 70.1	< 4.2	< 20.5
2/ 8/90- 2/15/90	9.1	3.4	0.05	< 25.2	< 2.1	< 10.3
2/15/90- 2/22/90	8.8	3.8	0.10	< 30.8	< 3.3	< 21.3
2/22/90- 3/ 1/90	8.9	3.7	0.03 ^b	< 69.5	< 5.0	< 26.4
3/ 1/90- 3/ 8/90	9.0	2.3 ^a	0.06 ^b	< 86.0	< 6.6	< 32.5
3/ 8/90- 3/15/90	8.8	2.4	0.05 ^a	< 59.5	< 4.4	< 21.3
3/15/90- 3/22/90	9.0	2.9	0.03 ^b	< 58.3	< 3.6	< 17.4
3/22/90- 3/29/90	9.1	2.8	0.08 ^a	< 85.7	< 3.5	< 18.4
3/29/90- 4/ 5/90	9.0	< 2.5	0.02 ^c	< **.*	< 3.5	< 24.1
4/ 5/90- 4/12/90	9.1	2.9 ^a	0.07	< **.*	< 2.3	< 15.7
4/12/90- 4/19/90	9.1	2.7 ^a	0.06 ^a	< **.*	< 3.2	< 32.6
4/19/90- 4/26/90	9.0	1.1 ^a	0.03 ^a	< **.*	< 2.0	< 13.0
4/26/90- 5/ 3/90	8.6	2.1 ^a	0.09	< **.*	< 2.0	< 13.4
5/ 3/90- 5/10/90	8.5	< 2.2	0.07 ^a	< **.*	< 4.1	< 26.9
5/10/90- 5/17/90	8.9	< 2.2	0.06 ^a	< **.*	< 3.4	< 21.9
5/17/90- 5/24/90	8.8	< 1.3	0.04 ^a	< **.*	< 2.5	< 16.4
5/24/90- 5/31/90	8.8	< 1.9	0.04 ^b	< **.*	< 3.9	< 25.9
5/31/90- 6/ 7/90	9.0	1.5 ^a	0.06 ^a	< 85.1	< 3.0	< 17.2
6/ 7/90- 6/14/90	8.7	0.5 ^a	0.01 ^c	< 34.3	< 2.9	< 18.4
6/14/90- 6/21/90	8.9	< 12.1	0.04 ^b	< **.*	< 3.8	< 47.0
6/21/90- 6/28/90	8.7	1.3	0.05 ^b	< 40.7	< 3.8	< 24.2
6/28/90- 7/ 5/90	8.8	1.2	0.03 ^c	< 28.8	< 6.2	< 25.1
7/ 5/90- 7/12/90	8.8	1.4	0.03 ^c	< 20.3	< 5.6	< 30.9
7/12/90- 7/19/90	9.0	1.4	0.03 ^c	< 22.6	< 6.8	< 32.2
7/19/90- 7/26/90	8.7	1.7	0.05 ^b	< 18.2	< 6.2	< 23.1
7/26/90- 8/ 2/90	8.8	1.9	0.05 ^b	< 31.5	< 7.2	< 34.7
8/ 2/90- 8/ 9/90	8.9	2.4	0.06 ^b	< 23.1	< 6.7	< 33.4
8/ 9/90- 8/16/90	8.5	2.1	0.05 ^b	< 24.9	< 5.7	< 33.4
8/16/90- 8/23/90	6.6	1.7	0.04 ^b	< 31.9	< 4.2	< 26.3
8/23/90- 8/30/90	8.6	1.1	0.02 ^c	< 23.2	< 3.1	< 17.9
8/30/90- 9/ 6/90	8.8	2.9	0.06 ^b	< 51.4	< 4.8	< 23.0
9/ 6/90- 9/13/90	8.9	1.8	0.15 ^a	< 41.7	< 7.0	< 42.0
9/13/90- 9/20/90	8.7	1.3 ^a	0.09 ^a	< 52.3	< 7.3	< 31.2
9/20/90- 9/27/90	8.7	2.4	0.09 ^a	< 27.1	< 5.8	< 37.2
9/27/90-10/ 4/90	8.7	2.8 ^a	0.05 ^b	< 87.5	< 7.0	< 33.5
10/ 4/90-10/11/90	8.8	1.3	0.04 ^a	< 41.4	< 2.4	< 12.2
10/11/90-10/18/90	9.1	2.9	0.09 ^a	< 51.2	< 6.3	< 39.3
10/18/90-10/25/90	8.8	2.7	0.04 ^b	< 52.4	< 3.8	< 18.8
10/25/90-11/ 1/90	8.9	2.3 ^a	0.05 ^b	< 64.7	< 7.0	< 32.3
11/ 1/90-11/ 8/90	8.8	3.3	0.05 ^a	< 25.5	< 2.2	< 14.3
11/ 8/90-11/15/90	8.8	4.7	0.22	< 63.6	< 7.2	< 30.6
11/15/90-11/22/90	8.4	3.3	0.14 ^a	< 58.0	< 7.9	< 30.9
11/22/90-11/29/90	8.8	2.6	0.06 ^b	< 45.1	< 6.2	< 30.7

TABLE 41 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/29/90-12/ 6/90	9.2	2.4	0.02 ^c	< 34.8	< 6.2	< 36.3
12/ 6/90-12/13/90	9.1	3.3	0.13	< 46.7	< 3.3	< 15.4
12/13/90-12/20/90	9.0	3.8	0.07 ^b	< 92.4	< 7.7	< 34.2
12/20/90-12/27/90	9.0	4.0	0.03 ^c	< 69.7	< 5.2	< 38.2
12/27/90- 1/ 3/91	8.8	2.7	0.05 ^b	< 52.8	< 5.4	< 35.2
1/ 3/91- 1/10/91	8.8	3.3	0.11 ^a	< 58.8	< 6.1	< 27.4
1/10/91- 1/17/91	9.0	2.6	0.07	< 26.1	< 2.5	< 11.4
1/17/91- 1/24/91	8.8	4.5	0.04 ^b	< 31.9	< 3.7	< 16.8
1/24/91- 1/31/91	8.9	4.0	0.06 ^b	< 43.3	< 6.8	< 37.6
1/31/91- 2/ 7/91	9.0	3.6	0.03 ^c	< 44.7	< 7.4	< 28.9
2/ 7/91- 2/14/91	8.7	4.2	0.12 ^a	< 36.7	< 6.5	< 26.9
2/14/91- 2/21/91	9.1	3.3	0.07 ^b	< 41.3	< 5.8	< 25.5
2/21/91- 2/28/91	9.0	3.1	0.05 ^b	< 36.2	< 5.8	< 24.8
2/28/91- 3/ 7/91	8.6	3.1 ^a	0.02 ^c	< 98.5	< 5.7	< 28.3
3/ 7/91- 3/14/91	9.2	3.8	0.04 ^b	< 81.2	< 6.5	< 30.9
3/14/91- 3/21/91	8.9	4.1 ^a	0.06 ^b	< **.*	< 8.0	< 33.7
3/21/91- 3/28/91	9.2	1.5 ^a	0.03 ^a	< **.*	< 3.6	< 23.1
3/28/91- 4/ 4/91	8.8	2.5	0.03 ^b	< 38.9	< 2.7	< 13.0
4/ 4/91- 4/11/91	8.8	2.5	0.05 ^b	< 68.5	< 8.0	< 35.7
4/11/91- 4/18/91	8.5	3.1	0.19	< 42.0	< 3.6	< 17.9
4/18/91- 4/25/91	8.8	2.0 ^a	0.06 ^b	< 67.3	< 7.7	< 30.6
4/25/91- 5/ 2/91	8.9	2.8	0.03 ^c	< 46.1	< 5.6	< 33.5
5/ 2/91- 5/ 9/91	8.3	2.2	0.01 ^c	< 46.8	< 4.0	< 25.0
5/ 9/91- 5/16/91	9.0	2.2	0.11 ^a	< 46.3	< 6.4	< 26.1
5/16/91- 5/23/91	8.4	1.8	0.04 ^c	< 32.1	< 5.4	< 31.8
5/23/91- 5/30/91	7.7	2.8	0.04 ^b	< 25.1	< 6.1	< 31.8
5/30/91- 6/ 6/91	7.7	2.1	0.08 ^b	< 50.9	< 8.9	< 44.6
6/ 6/91- 6/13/91	7.5	1.9	0.03 ^b	< 17.0	< 3.7	< 20.2
6/13/91- 6/20/91	7.4	2.4	0.10 ^b	< 48.3	< 9.4	< 33.5
6/20/91- 6/27/91	7.3	2.1	0.01 ^c	< 33.7	< 7.8	< 43.9
6/27/91- 7/ 4/91	7.7	1.6	0.02 ^b	< 74.8	< 2.7	< 20.8
7/ 4/91- 7/11/91	7.8	3.1	0.10	< 37.1	< 2.1	< 9.9
7/11/91- 7/18/91	7.6	1.9	0.05 ^a	< 53.3	< 4.0	< 26.5
7/18/91- 7/25/91	7.4	2.1	0.04 ^b	< 64.3	< 4.2	< 21.1
7/25/91- 8/ 1/91	7.4	1.7	0.05 ^a	< 61.4	< 4.4	< 20.2
8/ 1/91- 8/ 8/91	7.6	1.7	0.06	< 47.0	< 4.3	< 20.1
8/ 8/91- 8/15/91	7.5	2.6	0.07 ^a	< 57.0	< 6.3	< 38.4
8/15/91- 8/22/91	7.8	1.3	0.03 ^a	< 39.2	< 3.9	< 17.2
8/22/91- 8/29/91	7.9	1.7 ^a	0.03 ^a	< 76.5	< 6.9	< 29.8
8/29/91- 9/ 5/91	8.0	1.3	0.04 ^a	< 33.9	< 3.8	< 22.6
9/ 5/91- 9/12/91	7.7	2.8	0.07 ^a	< 22.1	< 3.6	< 21.9
9/12/91- 9/19/91	7.8	2.0	0.07 ^a	< 24.1	< 3.2	< 18.7
9/19/91- 9/26/91	7.7	2.0	0.06 ^a	< 65.3	< 10.0	< 35.2
9/26/91-10/ 3/91	7.6	1.6	0.08 ^a	< 38.2	< 6.4	< 27.2
10/ 3/91-10/10/91	5.8	4.8	0.17 ^a	< **.*	< 9.2	< 61.6
10/10/91-10/17/91	--	--	--	--	--	--
10/17/91-10/24/91	7.6	3.3	0.06 ^a	< **.*	< 4.8	< 25.6
10/24/91-10/31/91	7.9	4.1	0.04 ^a	< 68.2	< 4.0	< 20.9
10/31/91-11/ 7/91	7.7	2.4	0.06 ^a	< 51.5	< 3.2	< 16.4
11/ 7/91-11/14/91	7.6	1.3	0.02 ^b	< 27.4	< 3.4	< 19.6
11/14/91-11/21/91	7.7	3.0	0.07 ^a	< 60.4	< 3.8	< 21.4

TABLE 41 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be		^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)			($\mu\text{Bq m}^{-3}$)		
11/21/91-11/28/91	7.6	<	0.9	0.04 ^b	< 67.0	< 7.5	< 34.3
11/28/91-12/ 5/91	7.7		2.3	0.03 ^a	< 19.3	< 1.5	< 7.4
12/ 5/91-12/12/91	7.8		1.9	0.05 ^b	< 88.9	< 8.3	< 38.2
12/12/91-12/18/91	7.5		2.9	0.06 ^a	< 38.4	< 3.9	< 17.0
12/18/91-12/26/91	7.1		4.8	0.07 ^a	< 27.8	< 3.9	< 23.1
12/26/91- 1/ 2/92	7.6		3.9	0.06 ^b	< 50.7	< 8.6	< 48.8
1/ 2/92- 1/ 9/92	7.7		3.1	0.05 ^b	< 57.6	< 5.9	< 29.9
1/ 9/92- 1/16/92	7.3		5.1	0.04 ^a	< 34.7	< 3.8	< 16.4
1/16/92- 1/23/92	7.2		2.9	0.05 ^a	< 27.7	< 3.6	< 15.5
1/23/92- 1/30/92	7.5		3.6	0.07 ^a	< 38.4	< 6.0	< 35.9
1/30/92- 2/ 6/92	7.5		4.8	0.06 ^a	< 62.5	< 3.8	< 19.2
2/ 6/92- 2/13/92	7.3		3.0	< 0.04 ^b	< 58.8	< 7.3	< 28.9
2/13/92- 2/20/92	7.5		4.3	0.04 ^b	< 26.1	< 2.4	< 15.9
2/20/92- 2/27/92	6.4		3.9	0.04 ^a	< 31.8	< 2.9	< 13.9
2/27/92- 3/ 5/92	7.3		3.0	0.02 ^b	< 70.2	< 4.3	< 22.8
3/ 5/92- 3/12/92	6.6		3.7	0.09 ^a	< 90.2	< 7.3	< 33.5
3/12/92- 3/19/92	7.6		2.7	0.02 ^a	< 17.9	< 1.6	< 10.3
3/19/92- 3/26/92	7.5		2.9	0.02 ^b	< 43.4	< 4.2	< 19.2
3/26/92- 4/ 2/92	7.4		4.5	0.05 ^a	< 33.2	< 4.3	< 25.2
4/ 2/92- 4/ 9/92	3.2		5.1	0.06 ^b	< ** *	< 9.8	< 52.4
4/ 9/92- 4/16/92	7.7		3.4	0.05 ^a	< 62.9	< 3.5	< 17.9
4/16/92- 4/23/92	8.5		4.3	0.05 ^b	< 76.5	< 5.9	< 40.6
4/23/92- 4/30/92	6.4		4.5	0.06 ^a	< 39.7	< 3.1	< 20.7
4/30/92- 5/ 7/92	7.8		2.4	0.06 ^a	< 63.3	< 3.6	< 18.2
5/ 7/92- 5/14/92	7.5		2.2	0.02 ^b	< 82.1	< 4.6	< 24.2
5/14/92- 5/21/92	7.4		1.8	0.02 ^a	< 54.6	< 2.0	< 17.2
5/21/92- 5/28/92	7.4		1.5	0.02 ^b	< 57.4	< 4.0	< 20.1
5/28/92- 6/11/92	14.2		2.9	0.12 ^a	< 58.5	< 4.5	< 22.1
6/11/92- 6/18/92	7.8		1.9	0.04 ^a	< 39.3	< 3.9	< 17.4
6/18/92- 6/26/92	8.4		2.0	0.03 ^b	< 37.7	< 3.6	< 15.9
6/26/92- 7/ 3/92	7.6		2.1	0.07	< 75.8	< 2.5	< 21.9
7/ 3/92- 7/ 9/92	6.7		2.4	0.18 ^b	< 31.4	< 3.5	< 15.6
7/ 9/92- 7/16/92	8.0		2.9	0.04 ^b	< 54.8	< 6.5	< 27.2
7/16/92- 7/23/92	7.2		2.5	0.05 ^a	< 30.8	< 3.8	< 22.4
7/23/92- 7/30/92	7.4		1.7	0.04 ^a	< 36.0	< 3.7	< 16.6
7/30/92- 8/ 6/92	7.4	<	4.5	0.06 ^a	< ** *	< 4.6	< 52.9
8/ 6/92- 8/13/92	7.2		2.3 ^a	0.07	< ** *	< 2.6	< 27.1
8/13/92- 8/20/92	7.7		--	0.03 ^b	< ** *	< 4.2	< 42.6
8/20/92- 8/27/92	7.9	<	4.1	0.04 ^b	< ** *	< 6.6	< 48.8
8/27/92- 9/ 3/92	7.6	<	2.9	0.01 ^c	< ** *	< 4.7	< 35.6
9/ 3/92- 9/10/92	7.9		1.4	0.01 ^c	< 40.3	< 4.1	< 28.7
9/10/92- 9/18/92	8.0		2.4	0.02 ^c	< 44.3	< 4.8	< 21.9
9/18/92- 9/25/92	7.5		2.6	0.04 ^b	< ** *	< 10.5	< 51.6
9/25/92-10/ 1/92	7.7		2.0	0.03 ^c	< 65.4	< 9.8	< 59.7
10/ 1/92-10/ 8/92	8.8		4.6	0.10 ^b	< 28.2	< 3.7	< 16.7
10/ 8/92-10/15/92	9.4		1.8 ^a	0.05 ^b	< 65.2	< 7.6	< 54.2
10/15/92-10/22/92	9.2		2.7	0.06 ^b	< 61.1	< 8.6	< 52.1
10/22/92-10/29/92	9.2		2.5	0.04 ^a	< 23.6	< 3.8	< 17.9
10/29/92-11/ 5/92	9.3		2.7	0.07 ^a	< 24.2	< 4.1	< 18.8
11/ 5/92-11/12/92	9.2		3.7	0.03 ^c	< 29.4	< 5.8	< 25.6
11/12/92-11/19/92	9.3		2.4	0.05	< 14.5	< 2.7	< 12.3

TABLE 41 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/19/92-11/26/92	9.2	1.5	0.01 ^c	< 20.0	< 4.1	< 16.7
11/26/92-12/ 3/92	8.7	4.9	0.10 ^a	< 28.3	< 6.1	< 27.0
12/ 3/92-12/10/92	9.4	3.4	0.08 ^a	< 52.1	< 6.5	< 28.8
12/10/92-12/17/92	8.9	3.7	0.02 ^c	< 34.9	< 4.8	< 31.0
12/17/92-12/24/92	9.2	3.8	0.02 ^c	< 58.2	< 10.6	< 40.4
12/24/92-12/31/92	9.1	4.4	0.03 ^c	< 42.4	< 8.1	< 46.6
12/31/92- 1/ 7/93	9.9	2.6	0.03 ^a	< 41.3	< 4.0	< 18.7
1/ 7/93- 1/14/93	8.5	3.1	0.04 ^a	< 22.9	< 2.1	< 10.4
1/14/93- 1/21/93	8.8	4.6	0.08	< 16.1	< 1.8	< 12.2
1/21/93- 1/28/93	8.9	3.9	0.04 ^b	< 42.1	< 4.8	< 35.2
1/28/93- 2/ 4/93	8.9	< 5.0	0.01 ^c	< **.*	< 3.9	< 43.6
2/ 4/93- 2/11/93	3.4	< 9.4	0.13 ^a	< **.*	< 9.1	< 97.8
2/11/93- 2/18/93	8.3	6.7 ^a	0.03 ^b	< **.*	< 3.4	< 29.5
2/18/93- 2/25/93	9.3	5.6 ^a	0.03 ^b	< 44.4	< 3.8	< 27.1
2/25/93- 3/ 4/93	8.8	< 4.2	0.05 ^b	< **.*	< 3.9	< 31.4
3/ 4/93- 3/11/93	8.9	--	0.01 ^c	< **.*	< 3.7	< 48.9
3/11/93- 3/18/93	9.2	--	0.03 ^c	< **.*	< 4.4	< 51.8
3/18/93- 3/25/93	9.0	--	0.06 ^c	< **.*	< 7.8	< **.*
3/25/93- 4/ 1/93	9.2	--	0.03 ^c	< **.*	< 4.5	< 64.5
4/ 1/93- 4/ 8/93	8.8	4.1	0.12 ^a	< **.*	< 8.7	< 43.8
4/ 8/93- 4/15/93	8.9	2.4	0.03 ^a	< 19.8	< 2.0	< 13.4
4/15/93- 4/22/93	8.9	2.4	0.02 ^c	< 51.0	< 3.6	< 19.5
4/22/93- 4/29/93	8.9	2.1 ^a	< 0.07	< 75.8	< 5.9	< 32.0
4/29/93- 5/ 5/93	8.5	2.6	0.11	< 23.3	< 4.3	< 26.9
5/ 5/93- 5/13/93	6.0	4.4	0.04 ^b	< 51.3	< 10.2	< 42.7
5/13/93- 5/20/93	7.1	3.4	0.08 ^b	< 39.7	< 8.4	< 51.0
5/20/93- 5/27/93	8.4	3.7	0.20 ^a	< 39.0	< 7.5	< 35.4
5/27/93- 6/ 3/93	9.3	2.2	0.19	< 19.1	< 4.7	< 18.3
6/ 3/93- 6/10/93	9.5	--	--	--	--	--
6/10/93- 6/17/93	8.4	--	--	--	--	--
6/17/93- 6/24/93	8.8	--	--	--	--	--
6/24/93- 7/ 1/93	8.4	--	--	--	--	--
7/ 1/93- 7/ 8/93	6.4	--	--	--	--	--
7/ 8/93- 7/15/93	8.6	--	--	--	--	--
7/15/93- 7/22/93	9.1	--	0.15 ^a	< **.*	< 3.3	< 23.9
7/22/93- 7/29/93	9.3	--	0.10 ^b	< **.*	< 6.6	< **.*
7/29/93- 8/ 5/93	9.0	1.8	0.03 ^b	< 37.3	< 5.5	< 28.0
8/ 5/93- 8/12/93	9.3	1.4	0.03 ^b	< 18.5	< 4.1	< 24.1
8/12/93- 8/19/93	9.3	2.6	0.08 ^a	< 30.0	< 6.9	< 45.5
8/19/93- 8/26/93	8.2	2.0	0.03 ^c	< 35.2	< 9.0	< 39.1
8/26/93- 9/ 2/93	6.1	4.4	0.14 ^a	< 18.7	< 5.9	< 32.4
9/ 2/93- 9/ 9/93	7.2	3.2	0.18 ^a	< 71.0	< 9.2	< 39.8
9/ 9/93- 9/16/93	9.1	3.0	0.06 ^b	< 45.9	< 8.2	< 48.9
9/16/93- 9/23/93	8.9	2.1 ^b	0.01 ^c	< 29.6	< 3.7	< 18.4
9/23/93- 9/30/93	8.8	1.9	0.03 ^c	< 31.3	< 7.4	< 33.3
9/30/93-10/ 7/93	9.0	4.2	0.21 ^c	< 59.2	< 3.6	< 26.4
10/ 7/93-10/14/93	8.8	2.5 ^b	0.07 ^b	< **.*	< 7.2	< 46.2
10/14/93-10/21/93	8.9	3.3 ^a	0.06 ^b	< **.*	< 7.2	< 53.8
10/21/93-10/28/93	9.0	3.5 ^a	0.01 ^c	< **.*	< 7.7	< 50.4
10/28/93-11/ 4/93	9.0	2.4	0.04 ^a	< 26.7	< 3.3	< 15.1
11/ 4/93-11/11/93	8.8	4.0	0.05 ^b	< 77.2	< 7.5	< 39.7

TABLE 41 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/11/93-11/18/93	8.9	3.4	0.04 ^b	< 45.9	< 7.3	< 43.6
11/18/93-11/25/93	8.8	4.2	0.04 ^a	< 20.5	< 3.2	< 20.3
11/25/93-12/ 2/93	8.9	2.8	0.09 ^b	< 51.7	< 8.6	< 36.0
12/ 2/93-12/ 9/93	8.9	3.9	0.02 ^b	< 20.4	< 3.3	< 14.8
12/ 9/93-12/16/93	8.5	4.4	0.05 ^b	< 51.5	< 6.5	< 41.8
12/16/93-12/23/93	7.8	2.6	0.07 ^b	< 44.3	< 9.7	< 39.4
12/23/93-12/30/93	8.4	2.5	0.05 ^b	< 34.7	< 8.8	< 50.1

Note:

-- = No data

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%

b = Uncertainty is between 50% and 100%

c = Uncertainty is greater than 100%

TABLE 42
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT INVERCARGILL, NEW ZEALAND DURING 1990-1993

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/29/89- 1/ 6/90	10.2	1.7	0.02 ^a	< 41.6	< 5.3	< 24.2
1/ 6/90- 1/11/90	7.3	1.8	0.05 ^a	< 53.6	< 6.2	< 39.3
1/11/90- 1/18/90	9.0	2.5	0.02	< 15.9	< 2.0	< 11.8
1/18/90- 1/26/90	9.1	2.5	0.05	< 28.4	< 3.1	< 14.0
1/26/90- 2/ 2/90	9.0	3.6	0.06	< 33.2	< 3.2	< 14.6
2/ 2/90- 2/ 8/90	8.7	2.8	0.07	< 25.5	< 3.7	< 15.6
2/ 8/90- 2/16/90	9.1	2.0	0.06	< 32.5	< 3.7	< 16.5
2/16/90- 2/23/90	8.7	3.0	0.11	< 21.8	< 2.8	< 17.1
2/23/90- 3/ 2/90	8.8	3.0	0.02 ^a	< 47.5	< 5.6	< 34.3
3/ 2/90- 3/ 9/90	8.9	1.8	0.04 ^a	< 50.8	< 4.8	< 24.6
3/ 9/90- 3/16/90	8.9	2.4	0.04 ^a	< 65.5	< 3.8	< 19.6
3/16/90- 3/23/90	8.1	2.1	0.03 ^b	< 66.3	< 4.5	< 21.8
3/23/90- 3/30/90	8.9	3.3	0.15	< 82.4	< 3.7	< 27.5
3/30/90- 4/ 7/90	10.9	< 2.4	0.05 ^a	< **.*	< 3.1	< 21.7
4/ 7/90- 4/13/90	6.7	2.9 ^a	0.05 ^b	< **.*	< 4.2	< 38.9
4/13/90- 4/20/90	8.4	0.9 ^a	0.03 ^a	< 94.4	< 2.6	< 15.5
4/20/90- 4/27/90	8.6	1.7 ^a	0.05 ^a	< **.*	< 3.6	< 20.8
4/27/90- 5/ 4/90	8.9	< 0.9	0.05 ^a	< 91.1	< 2.9	< 23.0
5/ 4/90- 5/11/90	9.0	< 4.1	0.06 ^a	< **.*	< 3.7	< 28.5
5/11/90- 5/18/90	8.8	< 2.5	0.02 ^b	< **.*	< 3.8	< 28.2
5/18/90- 5/25/90	8.9	< 1.4	0.01 ^c	< **.*	< 2.2	< 20.4
5/25/90- 6/ 1/90	8.9	< 2.1	0.06 ^a	< **.*	< 3.8	< 32.8
6/ 1/90- 6/22/90	24.3	1.1	0.08	< 21.1	< 1.9	< 12.5
6/22/90- 6/29/90	9.0	0.9 ^a	0.08 ^a	< 39.2	< 6.2	< 31.5
6/29/90- 7/ 6/90	8.7	0.9 ^a	0.13 ^a	< 31.5	< 6.6	< 33.9
7/ 6/90- 7/13/90	8.7	1.5	0.05 ^b	< 34.3	< 5.9	< 24.6
7/13/90- 7/20/90	8.5	1.5	0.06 ^a	< 26.5	< 5.4	< 20.2
7/20/90- 7/27/90	8.5	< 6.4	0.15	< 36.4	< 6.8	< 38.6
7/27/90- 8/ 3/90	8.7	1.5	0.03 ^b	< 18.9	< 4.6	< 23.4
8/ 3/90- 8/10/90	8.8	1.7	0.08 ^b	< 23.1	< 7.1	< 36.4
8/10/90- 8/17/90	8.7	1.0	0.15 ^a	< 23.8	< 8.3	< 28.6
8/17/90- 8/24/90	8.8	1.6	0.06 ^b	< 14.7	< 5.2	< 25.0
8/24/90- 8/31/90	8.9	1.6	0.05 ^b	< 20.5	< 7.6	< 26.6
8/31/90- 9/ 7/90	8.5	1.6 ^a	0.11 ^a	< 50.0	< 5.0	< 27.1
9/ 7/90- 9/14/90	8.6	1.8	0.10 ^a	< 24.7	< 3.4	< 20.7
9/14/90- 9/20/90	9.2	1.9	0.07 ^a	< 19.7	< 2.9	< 16.4
9/20/90- 9/28/90	9.0	2.1	0.08 ^a	< 36.4	< 8.4	< 27.0
9/28/90-10/ 5/90	8.8	1.4	0.06 ^b	< 33.4	< 6.2	< 24.3
10/ 5/90-10/13/90	10.0	1.2 ^a	0.03 ^b	< 46.8	< 3.5	< 17.6
10/13/90-10/19/90	7.1	2.0	0.04 ^a	< 20.1	< 2.3	< 14.1
10/19/90-10/26/90	8.9	1.7 ^a	0.09 ^a	< 69.5	< 7.6	< 32.2
10/26/90-11/ 3/90	9.5	1.6	0.04 ^b	< 27.1	< 3.5	< 14.3
11/ 3/90-11/ 9/90	8.6	2.6	0.07 ^a	< 38.8	< 5.2	< 22.5
11/ 9/90-11/16/90	8.7	3.7	0.08 ^a	< 27.4	< 5.1	< 28.8
11/16/90-11/24/90	9.3	3.5	0.05 ^b	< 27.3	< 6.2	< 22.5
11/24/90-11/30/90	8.0	2.2	0.06 ^a	< 22.0	< 3.5	< 14.5
11/30/90-12/ 4/90	3.6	0.7 ^a	< 0.08	< 33.4	< 8.4	< 42.1
12/ 4/90-12/ 5/90	--	--	--	--	--	--

TABLE 42 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/ 5/90-12/14/90	11.7	1.6	0.05 ^b	< 23.8	< 4.6	< 20.7
12/14/90-12/29/90	18.8	2.5	0.02 ^b	< 10.3	< 3.3	< 16.3
12/29/90- 1/ 4/91	7.7	2.2	0.02 ^c	< 12.5	< 3.9	< 13.9
1/ 4/91- 1/11/91	9.0	1.3	0.04 ^b	< 16.4	< 5.2	< 27.3
1/11/91- 1/18/91	8.9	3.1	0.04 ^b	< 10.7	< 3.4	< 17.0
1/18/91- 1/21/91	9.1	2.4 ^a	0.06 ^b	< 65.9	< 7.2	< 42.6
1/21/91- 2/ 1/91	9.1	1.7	0.03 ^b	< 41.7	< 5.4	< 32.4
2/ 1/91- 2/ 8/91	8.8	2.7	0.04 ^b	< 44.7	< 7.3	< 31.9
2/ 8/91- 2/15/91	8.9	3.6	0.10 ^a	< 39.6	< 6.4	< 39.9
2/15/91- 2/22/91	8.9	3.8	0.05 ^a	< 23.8	< 3.3	< 14.4
2/22/91- 3/ 1/91	8.9	2.3	0.02 ^c	< 27.2	< 3.9	< 16.9
3/ 1/91- 3/ 8/91	8.9	2.5	0.03 ^b	< 13.5	< 2.7	< 16.0
3/ 8/91- 3/15/91	8.8	3.1	0.13 ^a	< 35.2	< 5.9	< 29.1
3/15/91- 3/22/91	9.1	1.5	0.10 ^a	< 32.4	< 7.2	< 26.3
3/22/91- 3/29/91	9.0	1.6	0.07 ^a	< 33.5	< 5.8	< 23.0
3/29/91- 4/ 5/91	9.0	1.3 ^a	0.07 ^a	< 79.5	< 6.1	< 28.7
4/ 5/91- 4/13/91	10.4	1.7	0.01 ^c	< 36.1	< 2.7	< 12.5
4/13/91- 4/19/91	7.8	2.1 ^a	0.17 ^a	< 98.2	< 9.0	< 41.3
4/19/91- 4/26/91	9.0	1.4 ^a	0.04 ^b	< 49.3	< 5.3	< 32.4
4/26/91- 5/ 4/91	8.9	1.4 ^a	0.06 ^b	< 49.2	< 5.9	< 26.2
5/ 4/91- 5/10/91	8.8	2.2	0.10 ^a	< 52.6	< 7.5	< 41.9
5/10/91- 5/17/91	9.3	1.6	0.01 ^c	< 24.4	< 2.1	< 13.7
5/17/91- 5/26/91	12.1	1.1	0.10 ^a	< 27.1	< 5.2	< 18.7
5/26/91- 5/31/91	5.6	1.3 ^a	0.17 ^a	< 80.2	< 12.2	< 49.3
5/31/91- 6/ 7/91	8.7	1.3	0.08 ^a	< 38.2	< 6.3	< 25.2
6/ 7/91- 6/14/91	8.9	1.2	0.05 ^b	< 27.9	< 5.6	< 31.8
6/14/91- 6/21/91	8.9	0.9	< 0.02	< 17.5	< 2.2	< 9.4
6/21/91- 6/28/91	8.0	1.4	0.07 ^b	< 27.8	< 7.6	< 40.5
6/28/91- 7/ 5/91	8.5	2.5	0.07 ^a	< 68.8	< 7.1	< 47.9
7/ 5/91- 7/12/91	8.7	2.1	0.14	< 24.6	< 3.0	< 14.3
7/12/91- 7/19/91	8.2	3.3	0.35	< 19.3	< 2.5	< 11.2
7/19/91- 7/26/91	8.3	1.1	0.03 ^a	< 23.5	< 3.3	< 13.5
7/26/91- 8/ 2/91	8.8	1.1	0.03 ^a	< 35.1	< 3.4	< 17.1
8/ 2/91- 8/ 9/91	8.9	< 0.7	0.06 ^a	< 91.4	< 3.4	< 19.2
8/ 9/91- 8/16/91	9.1	1.6	0.03 ^b	< 63.8	< 5.1	< 31.6
8/16/91- 8/24/91	10.2	0.8	0.02 ^b	< 31.8	< 3.0	< 13.2
8/24/91- 8/30/91	7.3	1.3 ^a	0.08 ^a	< 51.7	< 6.5	< 37.4
8/30/91- 9/ 6/91	8.8	1.2	0.07 ^a	< 43.2	< 5.3	< 31.8
9/ 6/91- 9/13/91	8.9	1.6 ^a	0.07 ^a	< 52.1	< 6.0	< 27.9
9/13/91- 9/21/91	10.2	1.0	0.06 ^a	< 37.8	< 4.6	< 19.9
9/21/91- 9/27/91	7.8	1.0	0.03 ^a	< 31.8	< 4.0	< 23.1
9/27/91-10/ 4/91	9.0	1.2	< 0.02	< 45.8	< 2.8	< 20.6
10/ 4/91-10/11/91	8.8	< 1.6	0.04 ^b	< **.*	< 5.5	< 34.5
10/11/91-10/18/91	8.9	2.0 ^a	0.06 ^a	< **.*	< 6.0	< 31.6
10/18/91-10/25/91	9.0	2.5	0.03 ^b	< 84.6	< 3.3	< 18.5
10/25/91-11/ 1/91	8.8	2.1	0.09 ^a	< 80.3	< 5.8	< 29.7
11/ 1/91-11/ 8/91	8.8	2.7	0.06	< 39.8	< 1.9	< 10.1
11/ 8/91-11/15/91	9.1	1.6	0.03 ^a	< 41.4	< 3.4	< 15.6
11/15/91-11/23/91	10.6	1.5	0.02 ^a	< 31.9	< 2.5	< 17.0
11/23/91-11/29/91	7.0	2.1	0.05 ^b	< 88.6	< 8.2	< 37.3
11/29/91-12/ 7/91	10.5	1.8	0.06 ^b	< 35.5	< 5.5	< 22.2

TABLE 42 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/ 7/91-12/13/91	7.6	2.2	0.03 ^b	< 60.2	< 7.7	< 34.6
12/13/91-12/20/91	8.9	2.3	0.05	< 18.5	< 2.4 ^a	< 7.6
12/20/91-12/27/91	9.0	2.5	0.09	< 38.2	< 3.7	< 15.8
12/27/91- 1/ 4/92	9.9	2.3	0.04 ^a	< 13.7	< 2.8	< 15.2
1/ 4/92- 1/10/92	7.9	3.4	0.10 ^a	< 87.6	< 3.6	< 20.0
1/10/92- 1/17/92	8.8	2.6	0.04 ^a	< 68.2	< 3.7	< 19.1
1/17/92- 1/26/92	12.2	1.7	0.05 ^a	< 41.9	< 2.4	< 11.7
1/26/92- 1/31/92	5.6	2.7	0.02 ^b	< 73.7	< 4.6	< 32.8
1/31/92- 2/ 7/92	9.2	3.0	0.04 ^b	< 78.0	< 4.9	< 25.9
2/ 7/92- 2/16/92	8.2	4.4	0.09 ^a	< 48.9	< 3.9	< 18.8
2/16/92- 2/21/92	6.0	3.2	0.06 ^b	< 97.0	< 9.5	< 63.7
2/21/92- 2/28/92	9.0	2.1	0.01 ^c	< 30.5	< 3.3	< 20.3
2/28/92- 3/ 6/92	9.1	2.7	0.05 ^b	< 58.9	< 6.7	< 32.4
3/ 6/92- 3/13/92	9.0	2.6	0.06 ^b	< 54.4	< 5.8	< 28.4
3/13/92- 3/19/92	8.1	1.9	0.02 ^b	< 12.3	< 2.0	< 8.4
3/19/92- 3/27/92	7.0	3.2	0.04 ^b	< 42.3	< 7.3	< 38.8
3/27/92- 4/ 3/92	9.3	1.8	0.02 ^b	< 20.3	< 3.0	< 12.5
4/ 3/92- 4/10/92	9.2	2.4	0.07 ^b	< 31.9	< 5.8	< 26.4
4/10/92- 4/17/92	8.9	2.5	0.07 ^a	< 24.8	< 6.1	< 24.8
4/17/92- 4/27/92	12.9	2.5	0.07 ^a	< 22.6	< 5.4	< 21.6
4/27/92- 5/ 1/92	5.3	1.8	0.10 ^b	< 47.7	< 13.5	< 42.0
5/ 1/92- 5/ 8/92	9.4	2.5	0.07 ^a	< 39.1	< 4.0	< 24.8
5/ 8/92- 5/15/92	10.6	< 1.1	0.01 ^c	< 89.8	< 4.8	< 41.1
5/15/92- 5/22/92	8.6	< 2.0 ^a	0.03 ^a	< **.*	< 4.5	< 30.2
5/22/92- 5/29/92	9.3	< 1.7	0.12	< **.*	< 3.9	< 25.7
5/29/92- 6/ 6/92	10.8	< 1.9 ^a	0.10	< **.*	< 3.2	< 20.8
6/ 6/92- 6/12/92	8.9	3.2	0.26	< 35.1	< 3.2	< 21.0
6/12/92- 6/19/92	8.4	1.3	0.03 ^a	< 49.7	< 4.6	< 21.3
6/19/92- 6/26/92	9.3	< 2.0	0.16 ^a	< **.*	< 8.2	< 49.5
6/26/92- 7/ 3/92	9.5	< 2.4 ^a	0.07 ^a	< **.*	< 3.7	< 32.1
7/ 3/92- 7/10/92	9.4	1.1	0.05 ^a	< 35.2	< 2.0	< 11.0
7/10/92- 7/17/92	9.0	2.1 ^a	0.22 ^a	< **.*	< 6.8	< 38.2
7/17/92- 7/24/92	9.3	2.0 ^a	0.09 ^a	< 89.2	< 7.7	< 38.2
7/24/92- 8/ 7/92	18.5	1.2	0.05 ^a	< 30.5	< 3.2	< 15.7
8/ 7/92- 8/14/92	9.5	1.9	0.14	< 71.8	< 7.2	< 32.1
8/14/92- 8/21/92	9.1	< 1.1	0.03 ^a	< **.*	< 3.7	< 32.2
8/21/92- 8/28/92	9.3	2.4	0.04 ^b	< 83.5	< 7.4	< 35.5
8/28/92- 9/ 4/92	9.3	3.1	0.10 ^a	< 41.7	< 6.0	< 38.2
9/ 4/92- 9/11/92	9.5	1.2	0.03 ^b	< 47.2	< 8.1	< 44.8
9/11/92- 9/18/92	9.4	2.5	0.12	< 42.6	< 7.7	< 29.9
9/18/92- 9/25/92	9.4	2.6	0.06 ^b	< 45.2	< 7.5	< 30.8
9/25/92-10/ 2/92	9.3	4.1	0.05 ^a	< 25.5	< 4.5	< 25.7
10/ 2/92-10/ 9/92	9.3	2.0 ^a	0.05 ^b	< 89.0	< 6.1	< 40.8
10/ 9/92-10/16/92	9.3	2.0	0.04 ^b	< 46.2	< 3.8	< 20.1
10/16/92-10/23/92	9.3	1.8 ^a	0.07 ^b	< 82.4	< 9.4	< 39.5
10/23/92-10/30/92	9.7	1.5	0.03 ^a	< 24.3	< 2.8	< 13.2
10/30/92-11/ 6/92	10.7	3.5	0.06	< 11.2	< 2.2	< 12.6
11/ 6/92-11/13/92	8.1	3.6	0.21	< 49.5	< 9.4	< 45.4
11/13/92-11/20/92	9.2	2.4	0.08 ^b	< 38.6	< 8.5	< 37.8
11/20/92-11/27/92	9.4	3.0	0.11 ^a	< 39.0	< 8.0	< 33.9
11/27/92-12/ 4/92	9.5	< 8.0	0.06 ^a	< **.*	< 4.1	< 49.0

TABLE 42 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/ 4/92-12/11/92	9.1	3.9 ^a	0.05 ^a	< **.*	< 1.8	< 14.6
12/11/92-12/18/92	9.4	< 4.1	0.04 ^b	< **.*	< 4.2	< 35.3
12/18/92-12/25/92	9.1	< 1.3	0.08 ^a	< **.*	< 4.3	< 27.5
12/25/92- 1/ 1/93	9.1	< 5.0	0.03 ^c	< **.*	< 4.0	< 34.3
1/ 1/93- 1/ 8/93	9.4	3.3	0.04 ^b	< 29.8	< 4.2	< 26.2
1/ 8/93- 1/15/93	9.0	2.2	0.02 ^b	< 24.7	< 3.8	< 24.7
1/15/93- 1/22/93	9.2	4.3	0.11 ^a	< 48.8	< 8.4	< 49.7
1/22/93- 1/29/93	9.2	3.2	< 0.05	< 42.8	< 5.9	< 28.5
1/29/93- 2/ 5/93	9.2	2.0 ^a	0.01 ^c	< **.*	< 3.3	< 31.6
2/ 5/93- 2/12/93	9.2	--	0.04 ^a	< **.*	< 2.3	< 17.2
2/12/93- 2/19/93	10.3	< 6.3	0.09 ^a	< **.*	< 5.2	< 58.2
2/19/93- 2/27/93	8.0	--	0.14 ^a	< **.*	< 5.2	< 57.1
2/27/93- 3/ 6/93	10.7	< 13.1	0.12 ^a	< **.*	< 3.8	< 38.4
3/ 6/93- 3/12/93	7.8	4.6 ^a	0.06 ^a	< **.*	< 3.7	< 37.5
3/12/93- 3/26/93	18.5	--	0.02 ^b	< **.*	< 1.6	< 24.3
3/26/93- 4/ 2/93	9.2	--	0.06 ^a	< **.*	< 1.6	< 14.7
4/ 2/93- 4/ 9/93	9.3	2.8	0.15 ^a	< 35.7	< 7.3	< 36.5
4/ 9/93- 4/16/93	9.2	2.5	0.06	< 7.4	< 1.9	< 10.5
4/16/93- 4/23/93	9.2	1.9	0.02 ^a	< 8.2	< 2.1	< 8.5
4/23/93- 4/30/93	9.3	2.3	0.09 ^a	< 29.0	< 8.2	< 42.2
4/30/93- 5/ 7/93	9.2	2.4	0.16 ^a	< 60.7	< 7.0	< 37.0
5/ 7/93- 5/14/93	9.3	2.6	0.07 ^a	< 48.5	< 8.0	< 48.8
5/14/93- 5/21/93	9.4	2.6	0.05 ^b	< 40.4	< 5.9	< 28.3
5/21/93- 5/28/93	9.0	2.4	0.18	< 43.8	< 8.4	< 45.4
5/28/93- 6/ 4/93	9.3	< 3.6	0.18	< **.*	< 4.1	< 42.1
6/ 4/93- 6/11/93	9.4	5.2 ^a	0.07 ^a	< **.*	< 5.1	< 40.0
6/11/93- 6/18/93	9.3	< 1.4	0.03 ^a	< **.*	< 3.5	< 31.9
6/18/93- 6/25/93	9.2	< 2.2	0.04 ^a	< **.*	< 5.0	< 52.2
6/25/93- 7/ 2/93	9.7	< 1.8	0.03 ^c	< **.*	< 4.6	< 31.7
7/ 2/93- 7/ 9/93	9.5	--	--	--	--	--
7/ 9/93- 7/16/93	9.3	--	--	--	--	--
7/16/93- 7/23/93	9.3	--	--	--	--	--
7/23/93- 7/30/93	9.1	--	--	--	--	--
7/30/93- 8/ 6/93	9.4	3.2 ^a	0.20 ^a	< 87.6	< 5.4	< 33.9
8/ 6/93- 8/13/93	9.3	2.3	0.09 ^a	< 69.3	< 6.4	< 43.1
8/13/93- 8/20/93	8.8	3.5	0.07 ^a	< 73.7	< 4.1	< 22.9
8/20/93- 8/28/93	9.0	3.3	0.04 ^c	< 94.0	< 6.5	< 34.5
8/28/93- 9/ 3/93	6.4	2.7 ^a	0.05 ^c	< 97.2	< 12.4	< 54.0
9/ 3/93- 9/10/93	7.1	3.0	0.10 ^b	< 56.3	< 9.4	< 37.6
9/10/93- 9/17/93	7.5	2.9	0.05 ^a	< 15.5	< 2.4	< 10.6
9/17/93- 9/24/93	8.3	2.3	0.05 ^b	< 37.2	< 6.6	< 41.7
9/24/93-10/ 1/93	7.2	3.4	0.06 ^b	< 36.9	< 7.7	< 48.0
10/ 1/93-10/ 8/93	7.7	4.1	0.12 ^a	< 91.8	< 6.7	< 51.6
10/ 8/93-10/15/93	8.9	2.5	0.07 ^b	< 73.6	< 8.1	< 54.3
10/15/93-10/22/93	8.6	2.3	0.08 ^a	< 54.6	< 4.7	< 23.1
10/22/93-10/30/93	9.6	3.7	0.09	< 57.4	< 5.4	< 38.7
10/30/93-11/ 5/93	7.8	4.5 ^a	0.07 ^b	< **.*	< 5.0	< 40.4
11/ 5/93-11/13/93	9.9	--	0.07 ^b	< **.*	< 6.4	< 42.8
11/13/93-11/19/93	7.6	--	0.03 ^b	< **.*	< 4.2	< 40.2
11/19/93-11/26/93	8.8	3.3	0.03 ^a	< 22.0	< 2.0	< 14.1
11/26/93-12/ 3/93	9.1	--	--	--	--	--

TABLE 42 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/ 3/93-12/10/93	8.9	2.9 ^a	--	< **.*	< 1.7	< 7.8
12/10/93-12/17/93	9.1	3.3 ^a	0.07	< 83.9	< 2.0	< 18.2
12/17/93-12/24/93	8.9	2.5 ^a	--	< **.*	< 1.6	< 7.5
12/24/93-12/31/93	8.9	4.8 ^a	0.09 ^a	< **.*	< 3.8	< 25.2

Note:

-- = No data

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%

b = Uncertainty is between 50% and 100%

c = Uncertainty is greater than 100%

TABLE 43
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT MARION ISLAND DURING 1990-1993

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
3/25/92- 3/27/92	2.6	< **.*	0.06 ^b	< **.*	< 10.8	< **.*
3/27/92- 4/ 1/92	--	--	--	--	--	--
4/ 1/92- 4/ 8/92	8.5	< 86.9	0.03 ^b	< **.*	< 4.6	< 83.3
4/ 8/92- 4/15/92	7.6	< 74.1	0.05 ^a	< **.*	< 3.9	< 75.8
4/15/92- 4/22/92	--	--	--	--	--	--
4/22/92- 4/29/92	5.8	< 77.5	0.04 ^c	< **.*	< 5.2	< 75.8
4/29/92- 5/ 6/92	8.0	< **.*	0.08 ^a	< **.*	< 2.8	< 52.3
5/ 6/92- 5/13/92	8.6	--	0.01 ^c	< **.*	< 4.7	< 81.3
5/13/92- 5/21/92	10.3	< **.*	0.02 ^c	< **.*	< 3.1	< 81.7
5/21/92- 5/26/92	6.5	< 54.5	0.03 ^c	< **.*	< 5.9	< 73.6
5/26/92- 6/ 1/92	7.7	< **.*	0.03 ^b	< **.*	< 2.5	< 53.2
6/ 1/92- 6/ 3/92	--	--	--	--	--	--
6/ 3/92- 6/10/92	9.4	< **.*	< 0.03 ^b	< **.*	< 3.3	< 73.9
6/10/92- 6/17/92	8.5	< **.*	0.04 ^b	< **.*	< 4.4	< 68.4
6/17/92- 6/24/92	5.5	< **.*	0.17 ^a	< **.*	< 7.7	< **.*
6/24/92- 7/ 1/92	9.4	< **.*	0.02 ^b	< **.*	< 3.7	< 84.4
7/ 1/92- 7/ 8/92	8.7	< 19.3	0.03 ^b	< **.*	< 3.5	< 40.2
7/ 8/92- 7/15/92	8.7	< 59.6	0.02 ^b	< **.*	< 1.9	< 37.9
7/15/92- 7/22/92	8.5	< 18.5	0.04 ^a	< **.*	< 3.5	< 51.6
7/22/92- 7/29/92	8.6	< 78.0	0.02 ^b	< **.*	< 4.7	< 81.9
7/29/92- 8/ 5/92	8.4	< 10.5	0.02 ^c	< **.*	< 3.6	< 47.4
8/ 5/92- 8/12/92	7.8	< 10.4	0.02 ^c	< **.*	< 4.3	< 56.6
8/12/92- 8/21/92	11.3	< 4.9	0.02 ^a	--	--	--
8/21/92- 8/26/92	6.1	< 9.8	0.02 ^b	< **.*	< 5.2	< 50.9
8/26/92- 9/ 2/92	8.9	< 7.1	0.09 ^a	< **.*	< 3.9	< 35.3
9/ 2/92- 9/ 9/92	8.4	< 9.7	0.02 ^c	< **.*	< 3.9	< 50.4
9/ 9/92- 9/16/92	8.5	< 7.9	0.02 ^b	< **.*	< 5.2	< 45.0
9/16/92- 9/23/92	5.7	< 48.2	0.02 ^c	< **.*	< 5.7	< 94.5
9/23/92- 9/30/92	8.5	< 6.9	< 0.04 ^b	< **.*	< 4.4	< 39.0
9/30/92-10/ 7/92	8.5	< 5.1	0.02 ^b	< **.*	< 4.5	< 37.1
10/ 7/92-10/14/92	8.7	< 4.3	0.03 ^a	< **.*	< 4.0	< 33.2
10/14/92-10/21/92	5.9	< 5.1	0.04 ^b	< **.*	< 5.1	< 42.4
10/21/92-10/28/92	8.5	< 3.4	0.02 ^b	< **.*	< 4.1	< 31.8
10/28/92-11/ 4/92	6.1	< 4.0	0.05 ^a	< **.*	< 4.3	< 34.4
11/ 4/92-11/11/92	6.0	< 5.2	0.04 ^a	< **.*	< 5.1	< 55.8
11/11/92-11/18/92	6.0	< 3.6 ^a	0.07 ^a	< **.*	< 3.3	< 27.1
11/18/92-11/25/92	6.0	< 4.7	0.05 ^a	< **.*	< 6.2	< 46.7
11/25/92-12/ 2/92	5.9	--	0.02 ^c	< **.*	< 6.6	< 66.8
12/ 2/92-12/ 9/92	6.1	< 4.3	0.02 ^c	< **.*	< 4.6	< 36.2
12/ 9/92-12/16/92	8.5	2.2 ^a	0.01 ^c	< **.*	< 3.6	< 35.9
12/16/92-12/23/92	8.6	--	0.01 ^c	< **.*	< 4.0	< 27.7
12/23/92-12/30/92	8.7	1.9 ^a	0.02 ^b	< 82.5	< 1.9	< 18.5
12/30/92- 1/ 6/93	8.4	< 1.6	0.03 ^b	< **.*	< 3.4	< 33.2
1/ 6/93- 1/13/93	6.1	< 3.4	0.03 ^b	< **.*	< 5.0	< 38.1
1/13/93- 1/20/93	8.6	--	0.01 ^c	< **.*	< 4.3	< 59.2
1/20/93- 1/27/93	8.5	< 2.7	0.01 ^c	< **.*	< 6.5	< 61.6
1/27/93- 2/ 3/93	8.4	< 1.5	< 0.04	< **.*	< 4.4	< 29.5

TABLE 43 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
2/ 3/93- 2/10/93	6.1	4.5	0.04 ^b	< **.*	< 4.4	< 27.6
2/10/93- 2/17/93	8.5	1.3 ^a	0.02 ^c	< 78.4	< 3.6	< 29.1
2/17/93- 2/24/93	6.0	5.1	0.02 ^c	< 90.7	< 4.5	< 35.2
2/24/93- 3/ 3/93	5.9	4.2	< 0.05	< **.*	< 5.3	< 30.3
3/ 3/93- 3/10/93	8.5	< 13.5	< 0.05	< **.*	< 5.1	< 49.4
3/10/93- 3/17/93	6.0	< 16.4	0.06 ^b	< **.*	< 6.4	< 61.6
3/17/93- 3/24/93	6.6	< 13.0	0.01 ^c	< **.*	< 5.6	< 73.7
3/24/93- 3/31/93	9.0	< 9.3	0.03 ^c	< **.*	< 4.0	< 52.8
3/31/93- 4/ 7/93	8.1	--	0.02 ^c	< **.*	< 4.5	< 53.8
4/ 7/93- 4/14/93	8.3	--	0.04 ^b	< **.*	< 4.7	< 54.9
4/14/93- 4/21/93	9.2	--	--	--	--	--
4/21/93- 4/28/93	5.5	--	--	--	--	--
4/28/93- 5/ 5/93	8.5	--	--	--	--	--
5/ 5/93- 5/12/93	9.4	--	--	--	--	--
5/12/93- 5/19/93	7.9	--	--	--	--	--
5/19/93- 5/26/93	8.5	--	--	--	--	--
5/26/93- 6/ 2/93	8.4	--	--	--	--	--
6/ 2/93- 6/ 9/93	8.3	--	--	--	--	--
6/ 9/93- 6/16/93	8.6	--	--	--	--	--
6/16/93- 6/23/93	8.7	--	--	--	--	--
6/23/93- 6/30/93	8.8	--	--	--	--	--
6/30/93- 7/ 7/93	8.8	--	--	--	--	--
7/ 7/93- 7/14/93	9.2	--	--	--	--	--
7/14/93- 7/21/93	8.5	--	--	--	--	--
7/21/93- 7/28/93	9.2	--	--	--	--	--
7/28/93- 8/ 4/93	8.5	--	--	--	--	--
8/ 4/93- 8/11/93	8.9	--	--	--	--	--
8/11/93- 8/18/93	8.8	--	--	--	--	--
8/18/93- 8/25/93	8.6	--	--	--	--	--
8/25/93- 9/ 1/93	7.9	--	--	--	--	--
9/ 1/93- 9/ 8/93	8.3	--	--	--	--	--
9/ 8/93- 9/15/93	8.7	--	--	--	--	--
9/15/93- 9/22/93	8.6	--	--	--	--	--
9/22/93-10/ 1/93	11.3	--	--	--	--	--
10/ 1/93-10/ 6/93	6.2	--	--	--	--	--
10/ 6/93-10/13/93	9.7	--	--	--	--	--
10/13/93-10/20/93	8.1	--	--	--	--	--
10/20/93-10/27/93	9.0	--	--	--	--	--
10/27/93-11/ 3/93	9.1	--	--	--	--	--
11/ 3/93-11/12/93	11.2	--	--	--	--	--
11/12/93-11/17/93	6.3	--	--	--	--	--
11/17/93-11/24/93	9.0	--	--	--	--	--
11/24/93-12/ 1/93	8.8	--	--	--	--	--

TABLE 43 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/ 1/93-12/ 8/93	8.4	--	--	--	--	--
12/ 8/93-12/15/93	9.6	--	--	--	--	--
12/15/93-12/22/93	7.9	--	--	--	--	--
12/22/93-12/29/93	8.6	--	--	--	--	--

Note:

-- = No data

Uncertainty is < 20% except:

- a = Uncertainty is between 20% and 50%
- b = Uncertainty is between 50% and 100%
- c = Uncertainty is greater than 100%

TABLE 44
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT FALKLAND ISLAND DURING 1990-1993

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
1/ 1/90- 1/ 8/90	8.2	1.2	0.03 ^a	< 37.6	< 4.1	< 18.1
1/ 8/90- 1/15/90	--	--	--	--	--	--
1/15/90- 1/22/90	8.7	1.3 ^a	0.02 ^a	< 47.3	< 5.7	< 25.4
1/22/90- 1/29/90	9.7	1.2	0.04	< 16.3	< 2.0	< 8.7
1/29/90- 2/ 5/90	9.1	2.1	0.04 ^a	< 43.3	< 5.1	< 25.2
2/ 5/90- 2/12/90	7.7	1.9	0.02 ^a	< 22.3	< 3.8	< 21.9
2/12/90- 2/19/90	9.6	3.0	0.03	< 21.0	< 3.2	< 18.4
2/19/90- 2/26/90	--	--	--	--	--	--
2/26/90- 3/ 5/90	9.0	1.9	0.04 ^a	< 54.3	< 6.0	< 26.7
3/ 5/90- 3/12/90	--	--	--	--	--	--
3/12/90- 3/19/90	8.9	3.4	0.04 ^b	< 52.2	< 3.8	< 24.5
3/19/90- 3/26/90	8.9	1.6	0.02 ^c	< 51.7	< 3.3	< 23.4
3/26/90- 4/ 2/90	8.9	1.6 ^a	0.03 ^b	< 68.7	< 4.1	< 20.8
4/ 2/90- 4/ 9/90	9.0	< 2.0	0.01 ^c	< **.*	< 3.4	< 32.7
4/ 9/90- 4/16/90	8.6	1.2 ^a	0.01 ^b	< 79.8	< 2.1	< 12.8
4/16/90- 4/23/90	8.9	< 0.9	0.01 ^c	< **.*	< 2.4	< 15.4
4/23/90- 4/30/90	8.9	< 1.5	0.01 ^c	< **.*	< 3.7	< 22.9
4/30/90- 5/ 7/90	8.9	1.4 ^a	0.08 ^a	< **.*	< 3.4	< 20.7
5/ 7/90- 5/14/90	9.1	3.7 ^a	0.04 ^a	< **.*	< 2.4	< 16.7
5/14/90- 5/21/90	9.0	2.0 ^a	0.04 ^a	< **.*	< 2.3	< 16.2
5/21/90- 5/28/90	8.7	< 1.7	0.07 ^a	< **.*	< 3.9	< 24.9
5/28/90- 6/ 4/90	9.0	< 1.7	0.05 ^b	< **.*	< 5.0	< 32.5
6/ 4/90- 6/11/90	9.2	< 0.7	< 0.03	< 75.2	< 3.0	< 22.0
6/11/90- 6/18/90	9.0	1.0 ^a	0.06 ^a	< 63.4	< 2.7	< 20.8
6/18/90- 6/25/90	8.9	1.4 ^a	0.07 ^a	< 99.0	< 3.5	< 20.4
6/25/90- 7/ 2/90	9.0	1.6	0.30	< 34.1	< 3.3	< 20.6
7/ 2/90- 7/ 9/90	8.9	1.6	0.29 ^a	< 22.5	< 8.4	< 38.9
7/ 9/90- 7/16/90	9.2	1.5	0.04 ^b	< 26.6	< 6.9	< 26.1
7/16/90- 7/23/90	9.2	1.1	0.02 ^c	< 20.2	< 3.6	< 20.3
7/23/90- 7/30/90	9.1	1.0 ^a	0.08 ^a	< 30.6	< 6.1	< 25.7
7/30/90- 8/ 6/90	8.9	< 0.8	0.10 ^a	< 76.0	< 7.4	< 34.6
8/ 6/90- 8/13/90	--	--	--	--	--	--
8/13/90- 8/20/90	9.1	1.3	0.03 ^c	< 22.6	< 6.4	< 24.4
8/20/90- 8/27/90	8.6	1.7	0.11 ^a	< 26.2	< 7.2	< 30.4
8/27/90- 9/ 3/90	8.8	1.7	0.03 ^b	< 45.6	< 6.5	< 27.4
9/ 3/90- 9/10/90	8.8	2.6	0.07	< 10.3	< 1.8	< 10.0
9/10/90- 9/17/90	8.9	< 0.7	0.03 ^b	< 82.0	< 3.7	< 20.7
9/17/90- 9/24/90	8.7	2.8	0.02 ^b	< 30.1	< 1.7	< 12.5
9/24/90-10/ 1/90	9.2	1.6	0.08 ^a	< 26.1	< 5.0	< 22.1
10/ 1/90-10/ 8/90	--	--	--	--	--	--
10/ 8/90-10/15/90	9.0	1.3	0.03 ^a	< 31.0	< 1.4	< 7.9
10/15/90-10/22/90	8.9	2.4	0.03 ^b	< 59.3	< 2.7	< 21.2
10/22/90-10/29/90	8.7	1.7 ^a	0.08	< 74.9	< 2.5	< 14.7
10/29/90-11/ 5/90	8.5	< 0.9	0.07 ^b	< **.*	< 9.3	< 38.4
11/ 5/90-11/12/90	8.3	1.4	0.05	< 25.3	< 1.6	< 7.7
11/12/90-11/19/90	9.0	1.7	0.02 ^c	< 52.7	< 3.3	< 23.3
11/19/90-11/26/90	8.9	2.1	0.03 ^b	< 35.2	< 3.4	< 16.6
11/26/90-12/ 3/90	8.8	2.1	0.04 ^b	< 26.2	< 3.3	< 20.3

TABLE 44 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/ 3/90-12/10/90	8.9	2.0	0.06 ^a	< 37.8	< 3.9	< 16.8
12/10/90-12/17/90	9.1	1.3 ^a	0.04 ^c	< 54.3	< 7.8	< 32.9
12/17/90-12/24/90	--	--	--	--	--	--
12/24/90- 1/ 1/91	10.1	2.3	0.06 ^a	< 37.8	< 3.0	< 15.0
1/ 1/91- 1/ 7/91	7.4	1.5 ^a	0.05 ^b	< 55.4	< 6.7	< 38.2
1/ 7/91- 1/14/91	9.0	3.5	0.15 ^a	< 41.3	< 7.4	< 29.6
1/14/91- 1/21/91	8.8	1.9	0.03 ^c	< 36.3	< 7.4	< 29.3
1/21/91- 1/28/91	8.9	1.6	0.01 ^c	< 39.0	< 5.7	< 29.0
1/28/91- 2/ 4/91	8.6	3.6	0.06 ^b	< 24.2	< 7.0	< 41.1
2/ 4/91- 2/11/91	9.0	1.8	0.02 ^b	< 25.1	< 3.8	< 15.2
2/11/91- 2/18/91	8.7	2.7	0.04 ^a	< 8.9	< 1.9	< 7.2
2/18/91- 2/25/91	9.0	2.4	0.02 ^c	< 13.8	< 3.5	< 18.2
2/25/91- 3/ 4/91	8.4	2.0	0.03 ^b	< 11.8	< 3.6	< 13.8
3/ 4/91- 3/11/91	9.2	2.6	0.03 ^b	< 7.9	< 3.1	< 15.7
3/11/91- 3/18/91	8.8	1.1	0.03 ^a	< 12.0	< 2.4	< 9.6
3/18/91- 3/26/91	7.6	1.5	0.02 ^b	< 18.4	< 2.0	< 12.5
3/26/91- 4/ 1/91	7.3	< 0.6	0.05 ^c	< 57.7	< 7.7	< 32.4
4/ 1/91- 4/ 8/91	8.8	3.3	0.07 ^b	< 53.9	< 5.8	< 23.5
4/ 8/91- 4/15/91	--	--	--	--	--	--
4/15/91- 4/22/91	8.7	1.7	0.04 ^b	< 52.4	< 4.7	< 23.1
4/22/91- 4/29/91	8.7	1.7	0.04 ^c	< 48.0	< 7.3	< 42.9
4/29/91- 5/ 6/91	8.9	1.6 ^a	0.15 ^a	< 52.2	< 7.8	< 31.3
5/ 6/91- 5/13/91	8.3	1.0 ^a	0.06 ^a	< 54.8	< 4.4	< 19.9
5/13/91- 5/20/91	8.9	1.3	0.22 ^a	< 33.7	< 6.6	< 27.6
5/20/91- 5/27/91	9.2	1.0 ^a	< 0.03	< 39.2	< 3.5	< 16.7
5/27/91- 6/ 3/91	8.7	1.3	0.02 ^c	< 44.4	< 7.7	< 30.6
6/ 3/91- 6/10/91	8.8	1.4 ^a	0.05 ^a	< 86.0	< 3.7	< 18.5
6/10/91- 6/17/91	9.1	2.2	0.02 ^b	< 21.8	< 2.2	< 9.6
6/17/91- 6/23/91	9.4	1.9	0.02 ^b	< 62.3	< 3.9	< 18.8
6/23/91- 7/ 1/91	9.7	0.8	0.02 ^c	< 23.2	< 2.7	< 11.7
7/ 1/91- 7/ 7/91	7.8	0.8	0.08	< 47.3	< 3.3	< 21.9
7/ 7/91- 7/15/91	9.9	1.7	0.03 ^b	< 45.9	< 3.4	< 22.6
7/15/91- 7/21/91	8.7	1.8	0.22	< 28.8	< 2.3	< 14.5
7/21/91- 7/29/91	10.2	< 0.3	0.02 ^a	< 35.5	< 2.8	< 12.9
7/29/91- 8/ 4/91	8.7	0.7 ^a	0.01 ^c	< 45.4	< 3.7	< 16.2
8/ 4/91- 8/11/91	9.0	1.0	0.02 ^b	< 32.7	< 3.2	< 20.0
8/11/91- 8/19/91	9.2	1.2	0.15	< 39.8	< 3.5	< 14.9
8/19/91- 8/25/91	9.5	1.3	0.03 ^a	< 25.5	< 3.1	< 18.0
8/25/91- 9/ 1/91	9.5	1.6	0.03 ^a	< 26.8	< 3.2	< 18.5
9/ 1/91- 9/ 9/91	8.9	1.0	0.07	< 67.0	< 3.4	< 24.8
9/ 9/91- 9/16/91	9.2	2.0 ^a	0.08 ^a	< **.*	< 3.3	< 27.1
9/16/91- 9/22/91	9.9	1.6	0.03 ^c	< 81.2	< 3.3	< 23.4
9/22/91- 9/30/91	9.1	1.3	0.03 ^c	< 52.8	< 3.5	< 17.5
9/30/91-10/ 7/91	9.4	1.1	0.03 ^a	< 58.3	< 3.1	< 16.5
10/ 7/91-10/13/91	9.5	1.2	0.02 ^b	< 42.8	< 2.7	< 19.0
10/13/91-10/22/91	11.9	1.7	0.03	< 17.8	< 1.1	< 7.7
10/22/91-10/28/91	7.9	1.2 ^a	0.02 ^a	< **.*	< 4.3	< 23.3
10/28/91-11/ 3/91	7.8	2.2	0.13	< 29.6	< 1.9	< 9.2
11/ 3/91-11/10/91	9.4	0.4	0.01 ^c	< 17.4	< 1.8	< 10.8
11/10/91-11/18/91	10.7	2.0	0.03 ^b	< 43.0	< 5.2	< 33.9
11/18/91-11/25/91	9.2	1.5	0.02 ^b	< 33.2	< 3.0	< 18.7

TABLE 44 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/25/91-12/ 1/91	7.8	1.5	0.05 ^a	< 28.3	< 3.1	< 19.9
12/ 1/91-12/ 9/91	9.9	1.9	0.06 ^a	< 54.4	< 3.2	< 16.5
12/ 9/91-12/16/91	9.2	1.7	0.03 ^a	< 35.7	< 3.3	< 14.7
12/16/91-12/23/91	8.8	1.2	0.03 ^b	< 36.2	< 5.5	< 21.5
12/23/91-12/30/91	8.8	1.8	0.03 ^b	< 23.0	< 5.7	< 30.5
12/30/91- 1/ 5/92	7.8	2.2	0.04 ^c	< 18.0	< 1.7	< 7.8
1/ 5/92- 1/13/92	8.7	1.8	0.04 ^a	< 36.8	< 3.5	< 16.4
1/13/92- 1/20/92	9.2	2.1	0.01 ^b	< 27.9	< 3.0	< 14.1
1/20/92- 1/27/92	8.9	3.3	0.12	< 20.1	< 3.2	< 18.4
1/27/92- 2/ 3/92	8.8	2.6	0.04 ^a	< 25.0	< 3.4	< 14.6
2/ 3/92- 2/10/92	9.0	2.4	0.04 ^a	< 62.6	< 2.9	< 15.6
2/10/92- 2/17/92	8.8	1.6	0.01 ^b	< 21.5	< 1.7	< 11.3
2/17/92- 2/24/92	8.9	1.9	0.03 ^b	< 81.1	< 5.4	< 28.3
2/24/92- 3/ 2/92	9.0	2.2	0.08	< 60.5	< 5.4	< 36.5
3/ 2/92- 3/ 9/92	8.7	< 2.0	0.10 ^a	< **.*	< 6.2	< 37.5
3/ 9/92- 3/15/92	7.6	1.5	0.04 ^b	< 37.9	< 1.8	< 9.6
3/15/92- 3/22/92	9.4	1.7	0.02 ^b	< 46.0	< 3.5	< 16.7
3/22/92- 3/28/92	7.8	1.5	0.01 ^b	< 48.0	< 3.2	< 22.4
3/28/92- 4/ 4/92	9.2	0.8 ^a	0.08 ^a	< 90.9	< 6.0	< 27.4
4/ 4/92- 4/11/92	8.8	1.7	0.09	< 37.2	< 3.4	< 22.1
4/11/92- 4/19/92	10.8	1.4	0.04	< 15.8	< 1.4	< 9.3
4/19/92- 4/26/92	8.8	1.7	0.03 ^a	< 57.5	< 3.8	< 17.7
4/26/92- 5/ 2/92	8.2	1.7	0.05 ^a	< 37.3	< 2.4	< 12.3
5/ 2/92- 5/ 9/92	9.0	1.4 ^a	0.02 ^a	< 86.0	< 2.0	< 13.4
5/ 9/92- 5/16/92	9.1	< 2.3	0.02 ^c	< **.*	< 7.3	< 45.3
5/16/92- 5/24/92	10.4	< 1.3	0.03 ^b	< **.*	< 3.8	< 26.3
5/24/92- 6/ 1/92	10.4	1.3 ^a	0.05 ^a	< **.*	< 3.7	< 23.2
6/ 1/92- 6/ 6/92	7.1	1.9 ^a	0.01 ^c	< **.*	< 4.8	< 28.3
6/ 6/92- 6/14/92	10.5	1.1 ^a	0.04 ^c	< 74.8	< 3.4	< 21.4
6/14/92- 6/20/92	8.4	0.8	0.04 ^a	< 39.0	< 4.0	< 18.7
6/20/92- 6/27/92	9.5	1.2	0.03 ^b	< 27.8	< 3.2	< 19.3
6/27/92- 7/ 5/92	10.5	< 0.8	0.03 ^b	< 94.1	< 4.1	< 26.1
7/ 5/92- 7/12/92	9.1	2.4 ^a	0.14 ^a	< 91.8	< 8.0	< 55.7
7/12/92- 7/19/92	9.5	1.7	0.05 ^a	< 30.0	< 3.4	< 20.7
7/19/92- 7/26/92	9.2	2.0	0.14 ^a	< 37.7	< 6.8	< 35.2
7/26/92- 8/ 2/92	9.2	1.3	0.08 ^a	< 45.1	< 7.6	< 28.4
8/ 2/92- 8/10/92	10.6	2.3	0.17	< 61.7	< 2.2	< 18.3
8/10/92- 8/16/92	8.1	1.9	0.10 ^b	< 74.9	< 2.1	< 13.3
8/16/92- 8/23/92	9.4	< 2.1	0.27	< **.*	< 6.2	< 44.4
8/23/92- 8/30/92	9.3	< 1.1	0.04 ^a	< **.*	< 4.4	< 25.7
8/30/92- 9/ 6/92	9.4	< 1.1	0.03 ^b	< **.*	< 4.0	< 25.4
9/ 6/92- 9/14/92	10.7	2.4 ^a	0.10 ^a	< **.*	< 8.0	< 52.4
9/14/92- 9/20/92	8.2	2.0	0.02 ^a	< 14.6	< 2.3	< 14.0
9/20/92- 9/28/92	10.3	< 1.2	0.06 ^a	< 96.0	< 6.5	< 51.8
9/28/92-10/ 4/92	8.0	1.5	0.05 ^b	< 54.5	< 8.0	< 38.5
10/ 4/92-10/13/92	12.0	2.2	0.04 ^b	< 33.8	< 5.2	< 22.1
10/13/92-10/18/92	6.4	1.2	0.03 ^b	< 33.1	< 6.0	< 23.9
10/18/92-10/25/92	9.5	1.5	0.01 ^c	< 36.7	< 6.4	< 28.4
10/25/92-11/ 1/92	9.3	2.1	0.03 ^a	< 10.4	< 1.9	< 11.7
11/ 1/92-11/ 9/92	10.3	1.6	0.03 ^b	< 23.4	< 1.7	< 8.7
11/ 9/92-11/16/92	9.6	1.5	0.03 ^b	< 36.8	< 3.8	< 27.6

TABLE 44 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be		^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)			(μBq m ⁻³)		
11/16/92-11/22/92	7.8	<	5.9	0.03 ^b	< **.*	< 4.4	< 36.1
11/22/92-11/28/92	7.9		2.7	0.06 ^a	< 21.6	< 2.6	< 12.6
11/28/92-12/ 6/92	10.5		3.4 ^a	0.05 ^a	< **.*	< 2.8	< 19.8
12/ 6/92-12/14/92	10.7	<	4.9	0.07 ^a	< **.*	< 3.9	< 33.5
12/14/92-12/21/92	9.4	<	9.9	0.05 ^a	< **.*	< 3.8	< 51.9
12/21/92-12/28/92	9.1	<	7.7	0.08 ^a	< **.*	< 4.2	< 50.6
12/28/92- 1/ 4/93	9.1		2.5	0.05 ^b	< 51.8	< 7.6	< 34.1
1/ 4/93- 1/11/93	9.0		1.0	0.01 ^c	< 17.2	< 2.1	< 10.0
1/11/93- 1/17/93	8.0		3.7	0.04 ^a	< 18.3	< 3.6	< 22.2
1/17/93- 1/25/93	10.7		1.4	0.03 ^a	< 13.9	< 2.9	< 12.1
1/25/93- 2/ 1/93	9.1		2.5	0.04 ^a	< 18.2	< 3.5	< 15.4
2/ 1/93- 2/ 8/93	8.9		--	0.03 ^b	< **.*	< 2.1	< 36.0
2/ 8/93- 2/15/93	9.3		--	0.03 ^c	< **.*	< 4.1	< 66.3
2/15/93- 2/22/93	--		--	--	--	--	--
2/22/93- 3/ 1/93	9.2		--	0.06 ^b	< **.*	< 6.3	< 86.5
3/ 1/93- 3/ 8/93	9.1		3.3	0.08 ^a	< 30.8	< 4.2	< 19.3
3/ 8/93- 3/15/93	9.1		--	0.03 ^c	< **.*	< 4.1	< 72.6
3/15/93- 3/22/93	9.2		--	0.07 ^a	< **.*	< 2.1	< 15.7
3/22/93- 3/29/93	8.5		--	0.03 ^c	< **.*	< 4.1	< 45.8
3/29/93- 4/ 5/93	9.7		2.7	0.05 ^a	< 39.2	< 3.6	< 24.7
4/ 5/93- 4/12/93	9.0		2.5	0.05 ^b	< 57.0	< 5.5	< 37.7
4/12/93- 4/19/93	9.0		2.2	0.04 ^b	< 37.6	< 3.8	< 18.6
4/19/93- 4/26/93	8.8		1.7	0.11 ^a	< 66.6	< 7.7	< 54.0
4/26/93- 5/ 3/93	9.7		1.5	0.03 ^b	< 26.6	< 3.4	< 22.3
5/ 3/93- 5/10/93	9.0		1.7	0.01 ^c	< 36.3	< 5.7	< 36.6
5/10/93- 5/25/93	19.8		2.0	0.13	< 8.4	< 1.5	< 9.2
5/25/93- 6/ 1/93	9.3		2.7	0.11 ^b	< 37.3	< 6.5	< 27.2
6/ 1/93- 6/ 7/93	8.2		--	--	--	--	--
6/ 7/93- 6/15/93	9.8		--	--	--	--	--
6/15/93- 6/21/93	8.7		--	--	--	--	--
6/21/93- 6/29/93	9.6		--	--	--	--	--
6/29/93- 7/ 6/93	9.9		--	--	--	--	--
7/ 6/93- 7/13/93	8.9		--	--	--	--	--
7/13/93- 7/21/93	10.7		--	--	--	--	--
7/21/93- 7/26/93	6.9		--	--	--	--	--
7/26/93- 8/ 2/93	9.3		--	--	--	--	--
8/ 2/93- 8/10/93	10.2		2.0 ^a	0.14 ^a	< **.*	< 6.0	< 52.7
8/10/93- 8/17/93	9.8		1.8	0.05 ^a	< 61.8	< 3.2	< 19.2
8/17/93- 8/25/93	9.8		2.0 ^a	0.05 ^b	< **.*	< 7.6	< 38.6
8/25/93- 8/31/93	8.1		1.4	0.02 ^b	< 48.7	< 4.0	< 29.1
8/31/93- 9/ 6/93	7.8		2.9	0.05 ^a	< 40.1	< 3.8	< 27.3
9/ 6/93- 9/14/93	10.3		2.1	0.05 ^a	< 32.7	< 3.2	< 15.7
9/14/93- 9/20/93	8.1		2.4	0.05 ^c	< 97.2	< 9.3	< 42.4
9/20/93- 9/27/93	1.6		2.9 ^a	0.07 ^c	< **.*	< 19.6	< 97.3
9/27/93-10/ 4/93	9.3		--	0.02 ^c	< **.*	< 4.1	< 44.8
10/ 4/93-10/11/93	9.3		2.2	0.05 ^a	< 63.0	< 3.5	< 19.8
10/11/93-10/18/93	9.1		2.0 ^a	0.07 ^b	< **.*	< 5.5	< 35.6
10/18/93-10/25/93	9.5		1.8 ^a	0.02 ^c	< 85.1	< 3.3	< 19.8
10/25/93-11/ 1/93	9.5		2.8 ^a	0.08 ^a	< 70.1	< 4.3	< 32.1
11/ 1/93-11/ 8/93	9.0		--	0.03 ^c	< **.*	< 5.7	< 52.0
11/ 8/93-11/15/93	9.6		--	0.02 ^c	< **.*	< 5.1	< 35.2

TABLE 44 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/15/93-11/22/93	9.7	2.6 ^a	0.07 ^a	< 93.6	< 3.8	< 23.3
11/22/93-11/29/93	8.8	1.9 ^a	0.07 ^a	< 91.9	< 2.2	< 8.2
11/29/93-12/ 6/93	9.6	--	0.01 ^c	< **.*	< 4.1	< 30.8
12/ 6/93-12/13/93	8.8	1.3 ^a	0.02 ^b	< 67.8	< 2.0	< 17.3
12/13/93-12/20/93	9.4	1.9 ^a	0.01 ^c	< **.*	< 3.7	< 31.0
12/20/93-12/27/93	9.6	2.5 ^a	0.06 ^a	< 99.3	< 1.7	< 6.4
12/27/93- 1/ 3/94	8.9	2.1 ^a	< 0.04	< 98.2	< 3.6	< 20.8

Note:

-- = No data

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%

b = Uncertainty is between 50% and 100%

c = Uncertainty is greater than 100%

TABLE 45
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT MARSH STATION, ANTARCTICA DURING 1990-1993

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
3/27/90- 3/28/90	0.8	< 6.2	< 0.32	< **.*	< 35.5	< **.*
3/28/90- 3/30/90	2.3	< 2.8	< 0.12	< **.*	< 15.4	< 81.3
3/30/90- 4/ 4/90	6.2	< 4.4	< 0.04	< **.*	< 5.2	< 50.3
4/ 4/90- 4/11/90	9.0	< 2.4	< 0.03	< **.*	< 2.9	< 29.2
4/11/90- 4/18/90	8.9	< 2.4	0.05 ^a	< **.*	< 3.4	< 23.7
4/18/90- 4/25/90	8.7	< 30.2	0.02 ^b	< **.*	< 3.6	< 56.1
4/25/90- 5/ 2/90	8.9	< 2.2	0.02 ^c	< **.*	< 3.9	< 35.4
5/ 2/90- 5/ 9/90	9.3	< 2.6	0.03 ^b	< **.*	< 3.4	< 25.7
5/ 9/90- 5/16/90	9.2	2.8 ^a	0.02 ^c	< **.*	< 2.9	< 25.7
5/16/90- 5/23/90	9.0	< 1.9	0.02 ^c	< **.*	< 3.7	< 24.5
5/23/90- 5/30/90	7.3	1.1 ^a	0.01 ^c	< **.*	< 3.6	< 22.1
5/30/90- 6/ 6/90	9.0	1.4 ^a	0.01 ^c	< 71.0	< 3.3	< 25.1
6/ 6/90- 6/13/90	9.1	< 0.6	0.01 ^c	< 75.5	< 3.1	< 18.1
6/13/90- 6/20/90	9.0	< 0.5	0.01 ^c	< 66.6	< 3.0	< 16.4
6/20/90- 6/27/90	8.8	0.9 ^a	< 0.03	< 62.3	< 3.2	< 17.1
6/27/90- 7/ 4/90	7.3	0.5 ^a	0.01 ^c	< 59.3	< 3.9	< 19.2
7/ 4/90- 7/11/90	9.3	1.0 ^a	0.01 ^c	< 42.5	< 2.9	< 14.3
7/11/90- 7/18/90	9.1	1.6	0.03 ^b	< 48.3	< 3.5	< 17.0
7/18/90- 7/25/90	8.8	1.2 ^a	0.02 ^c	< 46.9	< 3.4	< 16.4
7/25/90- 8/ 1/90	8.9	< 0.9	< 0.03	< **.*	< 3.6	< 20.4
8/ 1/90- 8/ 8/90	8.7	1.4 ^a	0.02 ^b	< 68.0	< 2.6	< 21.0
8/ 8/90- 8/15/90	7.9	< 1.1	< 0.04	< **.*	< 4.2	< 32.6
8/15/90- 8/22/90	9.0	1.2 ^a	< 0.03	< **.*	< 3.7	< 21.6
8/22/90- 8/29/90	9.0	< 1.0	0.03 ^c	< **.*	< 5.8	< 29.4
8/29/90- 9/ 5/90	9.1	2.2 ^a	0.02 ^b	< 93.2	< 4.1	< 21.6
9/ 5/90- 9/12/90	9.0	1.0	0.02 ^a	< 40.5	< 1.8	< 10.0
9/12/90- 9/19/90	8.9	2.2	0.02 ^c	< 61.2	< 3.3	< 26.5
9/19/90- 9/26/90	8.9	< 0.6	0.02 ^c	< 80.5	< 4.0	< 20.4
9/26/90-10/ 3/90	7.4	0.8 ^a	0.03 ^b	< 69.2	< 5.3	< 25.2
10/ 3/90-10/10/90	9.1	< 1.0	0.01 ^c	< **.*	< 3.6	< 20.7
10/10/90-10/17/90	8.6	< 0.4	0.04 ^b	< 53.6	< 4.0	< 18.5
10/17/90-10/24/90	9.0	1.1	0.01 ^b	< 22.8	< 1.3	< 6.6
10/24/90-10/31/90	8.8	0.9 ^a	0.03 ^c	< 63.1	< 6.1	< 25.8
10/31/90-11/ 7/90	8.7	5.4	0.14 ^a	< 35.5	< 3.7	< 22.7
11/ 7/90-11/14/90	8.2	< 0.4	< 0.06	< 39.4	< 5.9	< 35.1
11/14/90-11/21/90	7.7	1.0 ^a	0.02 ^c	< 33.6	< 4.1	< 25.7
11/21/90-11/28/90	9.0	1.3	0.03 ^b	< 24.3	< 2.5	< 11.0
11/28/90-12/ 5/90	9.2	1.2 ^a	0.02 ^b	< 61.3	< 3.6	< 17.5
12/ 5/90-12/12/90	9.4	1.4 ^a	0.02 ^b	< 77.3	< 3.6	< 18.2
12/12/90-12/19/90	8.9	1.5	0.02 ^b	< 38.1	< 2.3	< 11.9
12/19/90-12/26/90	9.2	0.8	< 0.02	< 28.6	< 2.0	< 14.3
12/26/90- 1/ 2/91	9.3	< 0.6	< 0.02	< 68.8	< 2.1	< 12.1
1/ 2/91- 1/ 9/91	8.7	< 0.4	< 0.04	< 44.1	< 3.4	< 23.1
1/ 9/91- 1/16/91	8.8	< 0.5	0.01 ^c	< 53.0	< 3.4	< 17.5
1/16/91- 1/23/91	9.4	0.7 ^a	0.01 ^c	< 40.6	2.2 ^a	< 8.7
1/23/91- 1/30/91	7.7	< 0.7	0.01 ^c	< 86.9	< 2.5	< 15.2
1/30/91- 2/ 6/91	8.3	< 0.7	0.01 ^c	< 64.2	< 3.7	< 26.4
2/ 6/91- 2/13/91	8.6	< 0.8	0.01 ^c	< **.*	< 4.7	< 23.2

TABLE 45 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
2/13/91- 2/21/91	--	--	--	--	--	--
2/21/91- 2/27/91	7.4	1.5	< 0.02	< 48.9	< 2.4	< 12.6
2/27/91- 3/ 6/91	4.0	< 1.7	< 0.07	< **.*	< 9.8	< 49.3
3/ 6/91- 3/13/91	8.8	1.0	< 0.02	< 25.1	1.7 ^b	< 8.2
3/13/91- 3/20/91	8.8	1.3 ^a	< 0.04	< 62.0	< 3.6	< 18.9
3/20/91- 3/27/91	9.3	1.0	< 0.02	< 16.9	< 1.6	< 9.9
3/27/91- 4/ 3/91	8.6	0.5 ^a	< 0.02	< 34.2	< 3.8	< 16.4
4/ 3/91- 4/10/91	9.5	1.0	0.02 ^b	< 19.3	< 1.8	< 8.0
4/10/91- 4/17/91	9.8	0.7 ^a	0.01 ^c	< 48.8	< 2.8	< 14.7
4/17/91- 4/24/91	9.0	0.9 ^a	< 0.04	< 46.1	< 5.4	< 31.4
4/24/91- 5/ 1/91	9.2	0.9 ^a	0.01 ^c	< 44.9	< 3.0	< 14.2
5/ 1/91- 5/ 8/91	9.2	1.5 ^a	0.02 ^b	< **.*	< 2.1	< 13.8
5/ 8/91- 5/15/91	9.7	< 1.6	0.01 ^c	< **.*	< 3.9	< 23.1
5/15/91- 5/22/91	9.9	1.5	0.02 ^a	< 67.6	< 2.1	< 11.9
5/22/91- 5/29/91	--	--	--	--	--	--
5/29/91- 6/ 5/91	9.5	1.1	< 0.07	< 28.3	< 1.6	< 11.6
6/ 5/91- 6/12/91	10.0	0.9	0.01 ^b	< 27.8	< 1.8	< 13.3
6/12/91- 6/19/91	10.1	3.2	0.02 ^b	< 54.1	< 3.2	< 22.3
6/19/91- 6/26/91	8.9	0.7 ^a	0.02 ^c	< 62.1	< 4.0	< 18.8
6/26/91- 7/ 3/91	9.3	1.0	0.03 ^b	< 46.7	< 3.2	< 15.8
7/ 3/91- 7/10/91	9.4	< 1.0	0.01 ^c	< 95.1	< 3.5	< 26.1
7/10/91- 7/17/91	9.0	1.4	0.02 ^b	< 40.6	< 3.9	< 19.5
7/17/91- 7/24/91	9.4	1.3	0.05 ^a	< 42.4	< 2.9	< 19.2
7/24/91- 7/31/91	9.8	0.9	0.02 ^b	< 45.9	< 3.3	< 22.1
7/31/91- 8/ 7/91	9.4	1.3 ^a	0.01 ^c	< 56.4	< 2.8	< 19.9
8/ 7/91- 8/14/91	8.8	1.9	0.07 ^a	< **.*	< 3.7	< 22.0
8/14/91- 8/21/91	9.6	< 0.6	0.02 ^a	< 75.0	< 3.5	< 18.3
8/21/91- 8/28/91	9.4	1.1	0.04 ^a	< 34.8	< 3.0	< 13.2
8/28/91- 9/ 4/91	10.0	0.8	0.02 ^b	< 35.6	< 3.4	< 16.0
9/ 4/91- 9/11/91	9.5	0.5	0.02 ^c	< 23.9	< 3.6	< 20.1
9/11/91- 9/18/91	9.7	0.6	0.01 ^b	< 18.1	< 3.0	< 13.7
9/18/91- 9/25/91	9.4	1.1	0.02 ^c	< 28.5	4.1 ^a	< 15.0
9/25/91-10/ 2/91	9.3	1.2	0.02 ^b	< 17.2	< 3.5	< 12.6
10/ 2/91-10/10/91	11.0	0.9	0.01 ^c	< 46.7	< 2.6	< 13.3
10/10/91-10/16/91	8.0	1.6 ^a	0.04 ^b	< 90.9	< 3.6	< 20.9
10/16/91-10/23/91	9.2	< 1.1	0.01 ^c	< **.*	< 5.7	< 31.9
10/23/91-10/30/91	9.4	1.2 ^a	0.01 ^b	< 50.1	< 2.8	< 14.7
10/30/91-11/ 6/91	9.2	0.9 ^a	0.02 ^b	< 42.0	< 3.4	< 21.8
11/ 6/91-11/13/91	8.8	1.1 ^a	< 0.57	< 69.2	< 3.6	< 26.2
11/13/91-11/20/91	9.4	1.0	0.04 ^b	< 54.4	< 5.0	< 23.5
11/20/91-11/27/91	9.3	1.4	0.02 ^b	< 40.0	< 3.5	< 16.6
11/27/91-12/ 4/91	8.9	< 0.6	0.01 ^c	< 65.3	< 3.4	< 24.8
1/ 1/92- 1/ 8/92	9.2	1.2 ^a	0.01 ^c	< 81.5	< 3.0	< 17.6
1/ 8/92- 1/15/92	9.5	< 0.5	0.01 ^c	< 62.9	< 2.8	< 15.2
1/15/92- 1/22/92	7.9	1.4	0.02 ^a	< 32.5	< 1.5	< 8.0
1/22/92- 1/29/92	8.4	1.4	< 0.72	< 66.2	< 3.7	< 25.7
1/29/92- 4/ 1/92	--	--	--	--	--	--
4/ 1/92- 4/ 8/92	10.1	< 9.9	< 0.02	< **.*	< 1.8	< 27.3
4/ 8/92- 4/15/92	11.7	< 5.2	< 0.03	< **.*	< 2.5	< 32.6
4/15/92- 4/22/92	8.0	1.2 ^a	0.02 ^c	< 78.7	< 3.4	< 17.5
4/22/92- 4/29/92	9.7	< 0.7	< 0.03	< 69.8	< 3.2	< 24.3

TABLE 45 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
4/29/92- 5/ 6/92	9.7	< 2.3	0.02 ^c	< ***	< 4.4	< 31.5
5/ 6/92- 5/13/92	9.0	< 2.5	0.01 ^c	< ***	< 4.2	< 32.1
5/13/92- 5/20/92	9.6	0.9	0.01 ^b	< 74.9	< 2.0	< 13.2
5/20/92- 5/27/92	8.9	3.2	0.02 ^c	< ***	< 3.5	< 29.6
5/27/92- 6/ 3/92	9.7	2.3 ^a	0.02 ^b	< ***	< 3.6	< 32.3
6/ 3/92- 6/10/92	9.7	< 2.3	0.04 ^a	< ***	< 3.2	< 33.1
6/10/92- 6/17/92	9.9	< 2.0	< 0.50	< ***	< 4.1	< 29.3
6/17/92- 6/24/92	9.8	2.3 ^a	0.02 ^b	< 86.6	< 3.5	< 27.9
6/24/92- 7/ 1/92	9.9	1.8 ^a	< 0.02	< ***	< 3.9	< 24.9
7/ 1/92- 7/ 8/92	10.2	2.6	0.02 ^b	< ***	< 3.2	< 27.9
7/ 8/92- 7/15/92	9.8	2.8	0.03 ^b	< 96.7	< 3.4	< 31.3
7/15/92- 7/22/92	8.7	< 0.8	< 0.03	< 87.7	< 3.7	< 32.0
7/22/92- 7/29/92	9.8	< 0.8	< 0.04	< 82.3	< 4.5	< 25.5
7/29/92- 8/ 5/92	10.1	1.2 ^a	0.01 ^c	< 52.4	< 5.0	< 37.8
8/ 5/92- 8/12/92	9.8	1.4	0.06 ^a	< 48.4	< 3.3	< 17.7
8/12/92- 8/19/92	10.1	1.2 ^a	0.01 ^c	< 60.0	< 4.8	< 27.4
8/19/92- 8/26/92	9.6	< 0.7	0.02 ^b	< 81.7	< 4.3	< 25.4
8/26/92- 9/ 2/92	9.2	0.6	0.01 ^a	< 18.5	< 1.9	< 9.4
9/ 2/92- 9/ 9/92	9.8	1.2 ^a	0.01 ^c	< ***	< 3.5	< 23.2
9/ 9/92- 9/16/92	9.8	< 0.8	0.01 ^b	< 77.9	< 3.4	< 27.4
9/16/92- 9/23/92	9.5	< 1.2	0.04 ^b	< ***	< 4.9	< 41.0
9/23/92- 9/30/92	10.0	2.4	0.05 ^b	< 86.5	< 5.6	< 43.0
9/30/92-10/ 7/92	9.8	< 29.7	0.01 ^c	< ***	< 4.5	< 54.7
10/ 7/92-10/14/92	10.6	< 16.7	< 0.01	< ***	< 1.8	< 29.4
10/14/92-10/21/92	5.6	< 54.8	0.04 ^b	< ***	< 6.6	< ***
10/21/92-10/28/92	10.5	< 19.2	< 0.02	< ***	< 3.4	< 53.9
10/28/92-11/ 4/92	9.3	< 3.5	0.02 ^b	< ***	< 1.9	< 24.1
11/ 4/92-11/11/92	10.5	< 2.7	< 0.02	< ***	< 2.0	< 23.4
11/11/92-11/18/92	9.8	< 6.0	0.01 ^c	< ***	< 3.8	< 46.9
11/18/92-11/25/92	10.4	< 5.1	0.01 ^c	< ***	< 3.6	< 41.8
11/25/92-12/ 2/92	9.6	< 5.2	0.01 ^c	< ***	< 4.0	< 34.3
12/ 2/92-12/ 9/92	10.3	< 1.4	< 0.02	< ***	< 3.0	< 28.8
12/ 9/92-12/16/92	9.6	< 5.0	0.03 ^b	< ***	< 3.8	< 33.6
12/16/92-12/23/92	10.2	< 5.5	< 0.04	< ***	< 3.6	< 32.0
12/23/92-12/30/92	9.3	1.3	0.01 ^c	< 24.6	< 2.1	< 10.4
12/30/92- 1/ 6/93	10.2	< 7.3	0.01 ^c	< ***	< 3.9	< 48.9
1/ 6/93- 1/13/93	9.8	--	--	< ***	< 4.1	< 52.4
1/13/93- 1/20/93	9.6	1.1 ^a	< 0.02	< 73.3	< 2.0	< 13.1
1/20/93- 1/27/93	9.7	< 5.2	0.01 ^c	< ***	< 2.9	< 36.9
1/27/93- 2/ 3/93	10.1	--	0.01 ^c	< ***	< 3.6	< 61.8
2/ 3/93- 2/10/93	9.7	1.4	0.01 ^c	< 22.1	< 2.4	< 16.2
2/10/93- 2/17/93	9.6	0.8 ^a	0.01 ^c	< 49.6	< 5.4	< 25.9
2/17/93- 2/24/93	9.5	1.5	0.02 ^b	< 14.0	< 1.9	< 11.8
2/24/93- 3/ 3/93	9.7	--	--	--	--	--
3/ 3/93- 3/10/93	8.6	< 6.4	< 0.03	< ***	< 2.2	< 28.8
3/10/93- 3/17/93	9.7	< 11.6	0.01 ^c	< ***	< 4.2	< 53.4
3/17/93- 3/25/93	10.3	< 9.2	0.02 ^c	< ***	< 3.2	< 43.9
3/25/93- 3/31/93	9.1	< 10.6	< 0.05	< ***	< 4.2	< ***
3/31/93- 4/ 7/93	8.3	--	--	--	--	--
4/ 7/93- 4/14/93	9.3	--	--	--	--	--
4/14/93- 4/21/93	9.5	--	--	--	--	--

TABLE 45 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
4/21/93- 4/28/93	10.1	--	--	--	--	--
4/28/93- 5/ 5/93	10.6	--	0.02 ^c	< **.*	< 5.3	< 66.7
5/ 5/93- 5/12/93	10.7	--	0.02 ^c	< **.*	< 5.3	< 48.5
5/12/93- 5/19/93	10.0	--	0.01 ^c	< **.*	< 4.0	< 35.4
5/19/93- 5/27/93	8.7	--	--	--	--	--
5/27/93- 6/ 4/93	12.6	--	< 0.02	< **.*	< 1.9	< 15.8
6/ 4/93- 6/11/93	9.0	--	--	--	--	--
6/11/93- 6/16/93	7.7	--	--	--	--	--
6/16/93- 6/23/93	9.7	--	--	--	--	--
6/23/93- 6/30/93	10.0	--	--	--	--	--
6/30/93- 7/ 7/93	10.2	--	0.02 ^c	< **.*	< 3.3	< 30.2
7/ 7/93- 7/14/93	10.5	--	0.01 ^c	< **.*	< 3.6	< 29.4
7/14/93- 7/21/93	9.8	--	0.03 ^c	< **.*	< 6.6	< 57.0
7/21/93- 7/28/93	10.0	--	0.03 ^c	< **.*	< 3.9	< 37.6
7/28/93- 8/ 4/93	9.7	--	--	--	--	--
8/ 4/93- 8/11/93	10.6	--	--	--	--	--
8/11/93- 8/18/93	10.3	--	--	--	--	--
8/18/93- 8/25/93	10.4	--	--	--	--	--

Note:

-- = No data

Uncertainty is < 20% except:

- a = Uncertainty is between 20% and 50%
- b = Uncertainty is between 50% and 100%
- c = Uncertainty is greater than 100%

TABLE 46
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT PALMER STATION, ANTARCTICA DURING 1990-1993

Sampling Interval	Volume (kscm)	^7Be		^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)			(μBq m ⁻³)		
4/ 3/90- 4/ 6/90	4.6	<	1.9	< 0.03	< **.*	< 3.3	< 30.4
4/ 6/90- 4/13/90	10.7		2.4	0.03 ^a	< 86.2	< 1.6	< 10.4
4/13/90- 4/20/90	10.8		1.8 ^a	0.01 ^c	< 88.8	< 1.5	< 13.8
4/20/90- 4/27/90	11.5	<	1.7	0.02 ^c	< **.*	< 3.0	< 20.5
4/27/90- 5/ 4/90	10.6	<	1.0	0.01 ^c	< **.*	< 2.8	< 16.8
5/ 4/90- 5/11/90	11.5	<	1.5	0.02 ^b	< **.*	< 2.6	< 17.7
5/11/90- 5/18/90	10.5	<	1.8	0.02 ^c	< **.*	< 3.1	< 21.4
5/18/90- 5/25/90	11.5	<	1.5	< 0.03	< **.*	< 3.0	< 19.8
5/25/90- 6/ 2/90	11.5	<	1.3	0.01 ^c	< **.*	< 2.9	< 19.0
6/ 2/90- 6/ 9/90	10.9	<	1.0	0.03 ^b	< **.*	< 4.1	< 25.5
6/ 9/90- 6/15/90	10.7		0.8 ^a	0.01 ^c	< 60.2	< 3.6	< 17.5
6/15/90- 6/22/90	10.4		1.2	< 0.01	< 11.9	< 1.1	< 6.7
6/22/90- 6/29/90	11.1		1.9	0.01 ^b	< 16.5	< 1.3	< 8.3
6/29/90- 7/ 6/90	10.7		1.3 ^a	< 0.03	< 47.6	< 3.6	< 24.4
7/ 6/90- 7/13/90	11.0		0.5 ^a	0.03 ^b	< 39.1	< 2.3	< 12.9
7/13/90- 7/20/90	11.1		1.6	0.02 ^b	< 31.3	< 2.3	< 12.0
7/20/90- 7/28/90	11.5		0.7 ^a	0.02 ^b	< 30.9	< 2.5	< 11.4
7/28/90- 8/ 3/90	10.7		1.3	0.02 ^b	< 31.1	< 2.6	< 11.8
8/ 3/90- 8/10/90	11.0		1.0	0.01 ^c	< 26.2	< 2.6	< 16.9
8/10/90- 8/18/90	11.3		1.1	0.02 ^b	< 28.3	< 2.6	< 12.9
8/18/90- 8/24/90	10.6		1.0	0.01 ^c	< 27.5	< 2.8	< 12.4
8/24/90- 8/31/90	11.1		1.6	0.03 ^a	< 23.9	< 2.9	< 12.8
8/31/90- 9/ 8/90	12.2		1.3	0.02 ^c	< 19.9	< 3.8	< 20.9
9/ 8/90- 9/14/90	9.8		2.1 ^a	0.05 ^b	< 62.7	< 5.2	< 33.8
9/14/90- 9/21/90	10.9		1.6	0.02 ^a	< 17.6	< 1.3	< 8.6
9/21/90- 9/28/90	11.1		1.7 ^a	0.03 ^c	< 76.1	< 6.7	< 30.1
9/28/90-10/ 6/90	11.1		1.3	0.01 ^b	< 18.9	< 1.6	< 7.5
10/ 6/90-10/12/90	10.4		0.9 ^a	0.01 ^c	< 35.9	< 3.2	< 20.8
10/12/90-10/19/90	10.9		1.5	0.01 ^c	< 44.8	< 4.1	< 20.4
10/19/90-10/27/90	11.2		0.9 ^a	0.01 ^c	< 42.3	< 2.8	< 13.4
10/27/90-11/ 2/90	10.7		1.2 ^a	0.01 ^c	< 48.9	< 3.2	< 16.3
11/ 2/90-11/ 9/90	10.9		1.1 ^a	0.01 ^c	< 37.7	< 5.2	< 24.3
11/ 9/90-11/16/90	10.7		1.1	0.02 ^c	< 22.3	< 3.9	< 20.2
11/16/90-11/24/90	11.1		1.4	< 0.04	< 21.6	< 4.2	< 17.1
11/24/90-12/ 1/90	10.6		1.1	0.02 ^b	< 14.3	< 2.9	< 11.2
12/ 1/90-12/ 7/90	10.2		1.7	0.01 ^c	< 11.1	< 2.5	< 13.3
12/ 7/90-12/14/90	11.0		1.2	0.02 ^a	< 8.8	< 1.3	< 5.5
12/14/90-12/21/90	10.4		1.2	0.02 ^b	< 14.7	< 3.0	< 11.7
12/21/90-12/28/90	11.0		0.8	< 0.02	< 9.0	< 2.5	< 9.6
12/28/90- 1/ 2/91	7.8		0.7	< 0.02	< 21.8	< 2.2	< 9.7
1/ 2/91- 1/ 4/91	3.0		1.0 ^a	0.02 ^c	< 75.3	< 10.5	< 44.6
1/ 4/91- 1/11/91	11.0		1.0	0.01 ^c	< 26.3	< 4.1	< 18.0
1/11/91- 1/19/91	10.9		0.8	0.01 ^c	< 14.0	< 3.0	< 10.8
1/19/91- 1/25/91	10.7		1.3	0.02 ^b	< 15.7	< 3.1	< 17.2
1/25/91- 2/ 1/91	11.0		0.5	0.03 ^b	< 11.8	< 2.7	< 10.6
2/ 1/91- 2/ 9/91	11.1		1.0	0.01 ^c	< 13.4	< 2.5	< 9.8
2/ 9/91- 2/15/91	11.0		0.7	0.01 ^c	< 15.7	< 2.8	< 15.2
2/15/91- 2/23/91	11.8		0.6	0.01 ^c	< 5.3	< 1.4	< 5.0

TABLE 46 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
2/23/91- 3/ 2/91	10.1	1.6	0.02 ^c	< 10.0	< 2.9	< 14.6
3/ 2/91- 3/ 9/91	11.2	1.3 ^a	0.02 ^b	< 70.1	< 2.9	< 15.2
3/ 9/91- 3/16/91	11.4	1.3	0.01 ^c	< 20.3	< 1.2	< 5.6
3/16/91- 3/24/91	12.7	1.5 ^a	< 0.03	< 53.9	< 2.7	< 13.8
3/24/91- 3/30/91	9.6	< 0.5	< 0.02	< 61.5	< 3.2	< 15.8
3/30/91- 4/ 6/91	11.3	1.1	0.01 ^b	< 64.1	< 2.5	< 14.2
4/ 6/91- 4/13/91	11.0	0.7 ^a	0.01 ^c	< 46.5	< 2.7	< 13.3
4/13/91- 4/20/91	10.7	0.4	< 0.02	< 15.6	< 1.5	< 6.6
4/20/91- 4/27/91	10.9	1.3	0.02 ^c	< 31.1	< 4.8	< 18.7
4/27/91- 5/ 4/91	11.1	0.8	0.01 ^c	< 7.9	< 1.3	< 5.1
5/ 4/91- 5/11/91	11.1	2.0	0.01 ^c	< 21.5	< 4.3	< 24.5
5/11/91- 5/18/91	11.0	1.0	0.02 ^b	< 14.3	< 2.8	< 11.4
5/18/91- 5/25/91	10.8	1.7	0.03 ^b	< 20.2	< 3.0	< 12.7
5/25/91- 6/ 1/91	11.3	2.3	0.03 ^b	< 18.5	< 3.0	< 11.6
6/ 1/91- 6/ 8/91	10.7	1.4	0.01 ^c	< 27.6	< 1.9	< 9.1
6/ 8/91- 6/15/91	11.4	2.3	0.03 ^a	< 74.5	< 3.1	< 17.0
6/15/91- 6/22/91	9.5	2.8	0.02 ^a	< 28.5	< 1.7	< 11.9
6/22/91- 6/29/91	9.4	1.3	0.02 ^a	< 30.1	4.2 ^a	< 10.2
6/29/91- 7/ 5/91	10.9	1.0	0.01 ^c	< 38.8	< 2.7	< 14.1
7/ 5/91- 7/13/91	11.1	0.7	0.01 ^c	< 39.1	< 2.6	< 15.1
7/13/91- 7/20/91	10.9	1.9	0.03 ^a	< 39.8	< 2.5	< 18.1
7/20/91- 7/27/91	11.1	0.8	0.03 ^c	< 21.3	4.5	< 6.4
7/27/91- 8/ 3/91	11.0	0.8	0.01 ^a	< 16.6	< 1.3	< 8.3
8/ 3/91- 8/10/91	10.7	0.8 ^a	0.01 ^b	< 61.4	< 2.6	< 14.1
8/10/91- 8/17/91	11.2	1.1	0.02 ^b	< 62.9	< 2.6	< 14.0
8/17/91- 8/24/91	10.7	1.2	0.02 ^a	< 50.6	< 2.9	< 21.3
8/24/91- 8/31/91	10.6	1.6	0.02 ^a	< 64.4	< 3.0	< 16.3
8/31/91- 9/ 7/91	10.9	< 0.8	< 0.03	< 82.4	< 2.4	< 20.1
9/ 7/91- 9/14/91	10.8	0.8 ^a	0.01 ^b	< 88.2	< 2.7	< 15.6
9/14/91- 9/21/91	10.8	1.0	0.01 ^c	< 54.8	< 2.9	< 20.8
9/21/91- 9/28/91	11.1	0.6	0.01 ^c	< 34.3	< 2.4	< 15.9
9/28/91-10/ 5/91	11.3	1.5	0.03 ^b	< 65.2	< 4.5	< 20.8
10/ 5/91-10/12/91	11.3	1.3	0.02 ^c	< 41.9	< 2.9	< 13.7
10/12/91-10/19/91	11.2	1.5	0.02 ^a	< 42.3	< 2.6	< 13.5
10/19/91-10/25/91	11.0	0.8	< 0.02	< 34.5	< 2.6	< 12.6
10/25/91-11/ 1/91	11.3	1.2	0.01 ^c	< 41.1	< 3.9	< 18.2
11/ 1/91-11/ 9/91	11.1	1.0	< 0.02	< 26.7	< 2.6	< 11.9
11/ 9/91-11/15/91	10.5	1.1	< 0.02	< 12.4	< 1.4	< 8.7
11/15/91-11/23/91	11.2	1.4	0.02 ^a	< 12.9	< 1.4	< 6.0
11/23/91-11/29/91	11.0	1.5	0.04 ^b	< 42.9	< 4.4	< 22.4
11/29/91-12/ 7/91	8.1	1.7	0.04 ^b	< 68.0	< 4.1	< 20.4
12/ 7/91-12/14/91	11.0	1.0	0.02 ^b	< 44.8	< 3.1	< 16.6
12/14/91-12/20/91	11.3	0.7	0.01 ^b	< 42.1	< 2.9	< 14.5
12/20/91-12/27/91	11.2	1.9	0.04 ^a	< 43.5	< 2.7	< 14.1
12/27/91- 1/ 3/92	11.2	2.0	0.04 ^b	< 37.2	< 2.9	< 14.0
1/ 3/92- 1/10/92	10.8	< 3.6	< 0.03	< **.*	< 2.8	< 26.1
1/10/92- 1/17/92	11.2	< 0.1	0.01 ^c	< **.*	< 2.8	< 23.0
1/17/92- 1/24/92	11.1	< 0.8	0.01 ^c	< 92.4	< 2.7	< 16.2
1/24/92- 1/31/92	11.1	< 0.8	< 0.02	< 94.3	< 2.9	< 17.2

TABLE 46 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
1/31/92- 2/ 7/92	11.1	0.5	< 0.24	< 22.8	< 1.4	< 9.8
2/ 7/92- 2/14/92	10.8	1.2	0.02 ^a	< 22.0	< 1.5	< 7.2
2/14/92- 2/22/92	11.4	1.5	0.01 ^a	< 22.9	< 1.5	< 7.3
2/22/92- 2/28/92	11.2	1.6	0.02 ^b	< 41.0	< 2.9	< 14.1
2/28/92- 3/ 6/92	11.1	0.9	< 0.01	< 22.7	< 1.2	< 8.6
3/ 6/92- 3/14/92	11.1	< 1.5	< 0.02	< **.*	< 2.4	< 25.3
3/14/92- 3/20/92	11.2	0.9	0.02 ^a	< 39.4	< 1.5	< 8.1
3/20/92- 3/28/92	11.5	1.7	0.01 ^a	< 29.4	< 1.4	< 10.1
3/28/92- 4/ 4/92	11.8	1.0 ^a	0.01 ^b	< 85.5	< 2.7	< 16.0
4/ 4/92- 4/11/92	10.4	1.3	< 0.02	< 69.5	< 3.7	< 18.6
4/11/92- 4/18/92	11.4	1.2 ^a	0.01 ^c	< 70.2	< 2.1	< 13.9
4/18/92- 4/25/92	11.4	1.2	0.02 ^b	< 41.6	< 2.6	< 12.6
4/25/92- 5/ 1/92	10.7	1.0	0.01 ^b	< 32.9	< 2.6	< 18.0
5/ 1/92- 5/ 9/92	11.9	< 1.0	0.02 ^b	< 91.4	< 2.5	< 22.8
5/ 9/92- 5/15/92	11.2	< 0.5	0.01 ^c	< 44.6	< 1.2	< 11.4
5/15/92- 5/23/92	11.4	< 1.3	< 0.02	< **.*	< 2.9	< 26.7
5/23/92- 5/30/92	11.4	2.8 ^a	0.03 ^a	< **.*	< 2.6	< 24.4
5/30/92- 6/ 6/92	11.4	2.3	0.01 ^b	< **.*	< 1.9	< 13.3
6/ 6/92- 6/13/92	11.5	< 2.3	0.01 ^c	< **.*	< 2.7	< 21.1
6/13/92- 6/23/92	16.3	2.4	0.03 ^a	< 73.5	< 1.3	< 9.2
6/23/92- 6/27/92	6.4	< 1.5	0.03 ^a	< **.*	< 3.6	< 35.4
6/27/92- 7/ 4/92	11.3	2.2	0.02 ^a	< 50.5	< 2.1	< 17.6
7/ 4/92- 7/10/92	11.4	3.3	0.02 ^a	< 75.4	< 2.5	< 21.5
7/10/92- 7/18/92	11.3	1.0 ^a	< 0.03	< **.*	< 2.5	< 24.2
7/18/92- 7/25/92	11.0	< 1.2	0.01 ^c	< **.*	< 3.1	< 21.3
7/25/92- 8/ 1/92	11.1	1.1	< 0.02	< 68.1	< 2.5	< 15.0
8/ 1/92- 8/ 7/92	11.2	0.9	0.01 ^c	< 29.7	< 1.4	< 8.2
8/ 7/92- 8/14/92	11.1	1.6	0.04 ^a	< 55.3	< 4.3	< 31.2
8/14/92- 8/22/92	11.3	1.0	< 0.02	< 53.6	< 3.8	< 19.7
8/22/92- 8/28/92	11.0	< 0.4	0.02 ^c	< 45.3	< 3.7	< 18.5
8/28/92- 9/ 5/92	11.5	1.0	0.02 ^a	< 18.6	< 1.5	< 10.8
9/ 5/92- 9/12/92	11.2	1.3	0.01 ^b	< 42.8	< 3.5	< 16.8
9/12/92- 9/19/92	11.1	2.1	0.03 ^a	< 19.2	< 1.6	< 11.3
9/19/92- 9/26/92	11.2	2.4	0.01 ^c	< 27.4	< 3.1	< 20.3
9/26/92-10/ 2/92	10.8	3.1	0.04 ^b	< 70.0	< 6.6	< 39.5
10/ 2/92-10/10/92	11.9	2.4	0.03 ^b	< 31.9	< 2.8	< 19.9
10/10/92-10/16/92	10.5	1.4	0.03 ^b	< 32.4	< 3.6	< 24.4
10/16/92-10/24/92	11.5	0.8	0.01 ^c	< 37.7	< 2.7	< 21.1
10/24/92-11/ 1/92	11.2	1.4	0.01 ^c	< 77.8	< 4.2	< 22.8
11/ 1/92-11/ 7/92	10.7	< 13.4	0.04 ^b	< **.*	< 4.9	< 68.1
11/ 7/92-11/14/92	11.2	2.1	0.03 ^b	< 49.5	< 3.0	< 23.7
11/14/92-11/20/92	9.5	< 15.4	0.02 ^c	< **.*	< 4.2	< 45.9
11/20/92-11/27/92	11.8	0.9 ^a	< 0.02	< 53.8	< 3.3	< 18.6
11/27/92-12/ 4/92	10.8	0.6	< 0.03	< 25.5	< 3.6	< 15.9
12/ 4/92-12/11/92	10.8	0.8	0.01 ^c	< 42.1	< 3.5	< 18.7
12/11/92-12/19/92	11.6	0.9	0.02 ^b	< 55.0	< 6.5	< 35.3
12/19/92-12/25/92	10.9	0.5 ^a	0.01 ^c	< 28.9	< 3.1	< 21.5
12/25/92- 1/ 1/93	10.8	1.1 ^b	0.01 ^c	< 28.1	< 3.2	< 21.2

TABLE 46 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
1/ 1/93- 1/ 8/93	11.5	< 0.3	0.01 ^b	< 30.0	< 1.7	< 12.7
1/ 8/93- 1/16/93	11.5	1.2	0.01 ^c	< 35.7	< 3.4	< 23.5
1/16/93- 1/22/93	10.3	1.9	0.01 ^b	< 27.8	< 2.5	< 12.5
1/22/93- 1/29/93	11.1	0.4	< 0.03	< 35.8	< 3.5	< 16.6
1/29/93- 2/ 5/93	11.6	--	0.01 ^c	< **.*	< 3.5	< 50.0
2/ 5/93- 2/12/93	10.7	--	0.01 ^c	< **.*	< 1.8	< 29.6
2/12/93- 2/19/93	11.5	--	--	< **.*	< 0.8	< 6.0
2/19/93- 2/27/93	11.6	--	0.02 ^c	< **.*	< 6.2	< 71.0
2/27/93- 3/ 5/93	10.2	--	--	--	--	--
3/ 5/93- 3/12/93	11.4	--	< 0.03	< **.*	< 2.9	< 46.0
3/12/93- 3/20/93	11.7	--	< 0.04	< **.*	< 4.1	< 51.7
3/20/93- 3/26/93	10.7	< 7.0	0.03 ^c	< **.*	< 4.8	< 40.2
3/26/93- 4/ 2/93	11.3	--	0.01 ^c	< **.*	< 3.6	< 39.8
4/ 2/93- 4/ 9/93	11.3	--	--	--	--	--
4/ 9/93- 4/16/93	11.1	--	--	--	--	--
4/16/93- 4/23/93	11.2	--	--	--	--	--
4/23/93- 5/ 1/93	11.5	--	--	--	--	--
5/ 1/93- 5/ 7/93	11.1	--	0.03 ^c	< **.*	< 3.6	< 45.2
5/ 7/93- 5/14/93	10.9	--	0.01 ^c	< **.*	< 3.5	< 33.2
5/14/93- 5/21/93	11.3	--	--	--	--	--
5/21/93- 5/28/93	11.2	--	< 0.04	< **.*	< 3.9	< 32.0
5/28/93- 6/ 4/93	11.3	--	--	--	--	--
6/ 4/93- 6/11/93	11.4	--	--	--	--	--
6/11/93- 6/18/93	11.4	--	--	--	--	--
6/18/93- 6/26/93	11.3	--	< 0.03	< **.*	< 2.9	< 44.7
6/26/93- 7/ 2/93	11.3	--	--	--	--	--
7/ 2/93- 7/10/93	11.5	< 1.5	0.02 ^b	< **.*	< 4.1	< 37.1
7/10/93- 7/16/93	11.0	< 1.7	0.02 ^c	< **.*	< 4.9	< 29.8
7/16/93- 7/24/93	12.6	--	0.01 ^c	< 83.1	< 1.4	< 14.1
7/24/93- 7/31/93	10.4	< 2.4	0.01 ^c	< **.*	< 3.8	< 30.0
7/31/93- 8/ 7/93	11.0	1.0	< 0.02	< 30.8	< 3.0	< 21.0
8/ 7/93- 8/13/93	10.8	1.5	0.01 ^c	< 39.1	< 3.0	< 15.6
8/13/93- 8/21/93	11.6	0.7	0.01 ^c	< 26.8	< 2.9	< 19.4
8/21/93- 8/27/93	11.0	2.6	0.03 ^a	< 45.1	< 3.4	< 24.1
8/27/93- 9/ 3/93	11.3	2.7	0.03 ^b	< 54.7	< 5.0	< 25.0
9/ 3/93- 9/10/93	11.5	--	0.01 ^c	< **.*	< 2.8	< 33.7
9/10/93- 9/17/93	11.2	--	0.02 ^b	< **.*	< 1.3	< 7.4
9/17/93- 9/24/93	11.3	--	--	< **.*	< 1.3	< 6.9
9/24/93-10/ 1/93	11.7	--	0.08 ^a	< **.*	< 4.3	< 49.0
10/ 1/93-10/ 8/93	11.2	--	0.01 ^c	< **.*	< 3.8	< 30.7
10/ 8/93-10/15/93	11.2	--	< 0.02	< **.*	< 1.5	< 12.8
10/15/93-10/22/93	10.0	--	0.01 ^c	< **.*	< 1.9	< 15.6
10/22/93-10/29/93	11.2	1.7 ^a	0.01 ^c	< **.*	< 1.5	< 16.5
10/29/93-11/ 5/93	11.2	2.1 ^a	--	< **.*	< 1.3	< 5.7
11/ 5/93-11/12/93	11.0	--	0.01 ^c	< **.*	< 3.2	< 23.4
11/12/93-11/19/93	11.2	--	--	< **.*	< 3.0	< 24.1
11/19/93-11/26/93	11.2	--	--	< **.*	< 1.2	< 6.0
11/26/93-12/ 3/93	11.3	--	0.01 ^c	< **.*	< 2.5	< 26.1
12/ 3/93-12/10/93	11.4	--	0.01 ^c	< **.*	< 5.5	< 36.0

TABLE 46 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/10/93-12/17/93	10.7	2.1	0.02 ^b	< 53.0	< 1.7	< 14.8
12/17/93-12/24/93	11.1	1.2 ^b	0.01 ^c	< **.*	< 2.9	< 19.8
12/24/93-12/31/93	11.2	--	0.01 ^c	< **.*	< 3.3	< 20.3

Note:

-- = No data

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%

b = Uncertainty is between 50% and 100%

c = Uncertainty is greater than 100%

TABLE 47
SURFACE AIR RADIONUCLIDE CONCENTRATIONS
AT MAWSON, ANTARCTICA DURING 1990-1993

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
1/ 1/90- 1/ 8/90	8.1	5.3	0.03 ^b	< 38.3	< 4.0	< 24.1
1/ 8/90- 1/15/90	8.5	4.0	0.05 ^b	< 47.3	< 5.5	< 35.3
1/15/90- 1/22/90	8.5	3.5	0.03 ^c	< 49.4	< 6.4	< 27.2
1/22/90- 1/29/90	8.4	5.4	0.04 ^b	< 42.0	< 5.7	< 33.2
1/29/90- 2/ 5/90	8.4	6.0	0.04 ^b	< 44.6	< 5.2	< 26.2
2/ 5/90- 2/12/90	8.4	3.5	0.03 ^a	< 15.4	< 2.0	< 8.3
2/12/90- 2/19/90	8.6	< 27.4	0.01 ^c	< **.*	< 2.9	< 33.0
2/19/90- 2/26/90	8.5	< 30.8	0.01 ^c	< **.*	< 3.8	< 55.8
2/26/90- 3/ 5/90	8.5	< 16.5	0.02 ^c	< **.*	< 3.4	< 35.9
3/ 5/90- 3/12/90	8.3	< 13.5	0.01 ^c	< **.*	< 2.4	< 33.6
3/12/90- 3/19/90	8.5	< 8.5	0.03 ^a	< **.*	< 2.1	< 20.1
3/19/90- 3/26/90	8.1	< 21.9	0.01 ^c	< **.*	< 3.1	< 37.5
3/26/90- 4/ 2/90	8.5	< 27.2	0.01 ^c	< **.*	< 4.1	< 42.9
4/ 2/90- 4/ 9/90	8.3	< 13.0	0.01 ^c	< **.*	< 3.8	< 47.0
4/ 9/90- 4/16/90	8.5	< 25.7	0.05 ^a	< **.*	< 4.8	< 45.9
4/16/90- 4/23/90	8.4	< 19.8	0.03 ^b	< **.*	< 3.8	< 40.9
4/23/90- 4/30/90	8.4	< 19.1	0.02 ^c	< **.*	< 3.6	< 37.8
4/30/90- 5/ 7/90	8.6	< 8.7	0.03 ^b	< **.*	< 3.9	< 35.3
5/ 7/90- 5/14/90	8.5	< 7.5	0.03 ^b	< **.*	< 2.7	< 23.7
5/14/90- 5/21/90	8.4	< 8.5	< 0.03 ^b	< **.*	< 3.8	< 42.5
5/21/90- 5/28/90	8.5	< 9.9	0.04 ^b	< **.*	< 4.0	< 33.6
5/28/90- 6/ 4/90	8.5	< 11.4	0.02 ^c	< **.*	< 4.0	< 38.9
6/ 4/90- 6/11/90	8.6	< 11.9	0.03 ^b	< **.*	< 3.8	< 36.2
6/11/90- 6/18/90	8.4	< 7.4	0.03 ^b	< **.*	< 3.6	< 30.5
6/18/90- 6/25/90	8.6	< 9.9	0.03 ^b	< **.*	< 4.2	< 36.0
6/25/90- 7/ 2/90	8.6	< 6.4	0.05 ^a	< **.*	< 3.9	< 31.3
7/ 2/90- 7/ 9/90	8.4	4.9 ^a	0.04 ^a	< **.*	< 1.6	< 18.5
7/ 9/90- 7/16/90	8.3	5.8	0.04 ^a	< **.*	< 1.9	< 19.3
7/16/90- 7/23/90	8.5	< 3.4	0.03 ^b	< **.*	< 4.0	< 27.5
7/23/90- 7/30/90	8.7	< 3.4	0.03 ^b	< **.*	< 3.5	< 35.6
7/30/90- 8/ 6/90	8.5	< 5.2	0.05 ^a	< **.*	< 3.7	< 29.1
8/ 6/90- 8/13/90	8.6	< 2.6	0.02 ^c	< **.*	< 3.3	< 31.9
8/13/90- 8/20/90	8.2	< 4.0	0.02 ^c	< **.*	< 4.8	< 34.8
8/20/90- 8/27/90	8.3	< 2.7	0.01 ^c	< **.*	< 3.7	< 34.6
8/27/90- 9/ 3/90	8.5	3.6 ^a	0.03 ^a	< **.*	< 1.9	< 13.5
9/ 3/90- 9/10/90	8.6	< 1.8	0.04 ^a	< **.*	< 2.0	< 14.6
9/10/90- 9/17/90	8.4	2.6 ^a	< 0.02 ^b	< **.*	< 2.6	< 17.2
9/17/90- 9/24/90	8.4	< 3.3	0.03 ^b	< **.*	< 4.3	< 29.8
9/24/90-10/ 1/90	8.4	< 3.1	0.03 ^b	< **.*	< 3.9	< 28.2
10/ 1/90-10/ 8/90	8.6	3.7 ^a	0.05 ^a	< **.*	< 3.3	< 24.0
10/ 8/90-10/15/90	7.6	5.7	0.05 ^a	< **.*	< 2.1	< 14.6
10/15/90-10/22/90	8.5	6.6 ^a	0.04 ^b	< **.*	< 3.7	< 25.8
10/22/90-10/29/90	8.4	3.9	0.03 ^b	< 85.0	< 2.4	< 20.3
10/29/90-11/ 5/90	8.4	3.0 ^a	0.03 ^b	< **.*	< 3.6	< 25.4
11/ 5/90-11/12/90	8.4	5.8 ^a	0.05 ^a	< **.*	< 4.2	< 27.8
11/12/90-11/19/90	8.3	6.5 ^a	0.04 ^b	< **.*	< 4.8	< 31.3
11/19/90-11/26/90	8.4	2.6 ^a	0.01 ^c	< **.*	< 3.9	< 25.2
11/26/90-12/ 3/90	8.0	4.3	0.03 ^a	< 84.9	< 2.0	< 17.1

TABLE 47 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
12/ 3/90-12/10/90	9.2	3.4	0.04 ^a	< 73.0	< 3.3	< 17.2
12/10/90-12/17/90	7.8	2.4 ^a	0.01 ^c	< ***	< 4.2	< 25.3
12/17/90-12/24/90	8.2	3.1 ^a	0.04 ^b	< ***	< 6.6	< 33.8
12/24/90-12/31/90	8.2	7.0	0.03 ^c	< ***	< 6.2	< 42.7
12/31/90- 1/ 7/91	8.2	4.7	0.04 ^b	< 90.0	< 5.7	< 39.6
1/ 7/91- 1/14/91	8.3	7.0	0.07 ^b	< 72.8	< 6.3	< 43.1
1/14/91- 1/21/91	8.1	5.9	0.04 ^b	< ***	< 4.1	< 23.6
1/21/91- 1/28/91	8.2	4.4	0.02 ^c	< 55.9	< 4.1	< 29.1
1/28/91- 2/ 4/91	8.2	4.0	0.02 ^a	< 22.2	2.8 ^a	< 7.8
2/ 4/91- 2/11/91	8.2	6.4	0.06 ^b	< 90.6	< 9.3	< 38.3
2/11/91- 2/18/91	8.3	6.8	0.06 ^b	< 54.1	< 8.0	< 45.4
2/18/91- 2/25/91	8.3	4.9	0.02 ^c	< 29.2	< 3.2	< 20.6
2/25/91- 3/ 4/91	8.2	< 4.6	0.07 ^a	< ***	< 5.2	< 36.0
3/ 4/91- 3/11/91	8.3	6.2 ^a	0.04 ^a	< ***	< 4.2	< 28.3
3/11/91- 3/18/91	8.4	8.9 ^a	0.04 ^a	< ***	< 4.3	< 28.5
3/18/91- 3/25/91	8.6	< 3.4	0.03 ^b	< ***	< 4.3	< 39.9
3/25/91- 4/ 1/91	8.1	7.6	0.02 ^b	< ***	< 2.5	< 24.6
4/ 1/91- 4/ 8/91	8.1	< 4.4	0.03 ^b	< ***	< 4.8	< 33.4
4/ 8/91- 4/15/91	8.3	3.2 ^a	0.01 ^c	< ***	< 1.9	< 18.9
4/15/91- 4/22/91	8.6	< 3.5	0.02 ^b	< ***	< 3.6	< 27.9
4/22/91- 4/29/91	8.4	4.8	0.02 ^b	< ***	< 4.1	< 28.7
4/29/91- 5/ 6/91	8.6	2.9 ^a	0.03 ^b	< ***	< 4.0	< 29.1
5/ 6/91- 5/13/91	8.5	4.9 ^a	0.02 ^b	< ***	< 3.7	< 32.1
5/13/91- 5/20/91	8.5	4.2	0.02 ^b	< ***	4.1 ^a	< 24.5
5/20/91- 5/27/91	8.5	2.7	0.02 ^a	< ***	< 2.9	< 17.6
5/27/91- 6/ 3/91	8.5	4.9	0.02 ^b	< 94.9	< 3.3	< 26.0
6/ 3/91- 6/10/91	8.5	4.7	0.03 ^b	< ***	< 3.6	< 22.6
6/10/91- 6/17/91	8.3	2.9 ^a	0.02 ^b	< ***	< 3.8	< 31.8
6/17/91- 6/24/91	8.5	2.5	0.02 ^b	< ***	< 3.9	< 23.6
6/24/91- 7/ 1/91	8.5	2.5 ^a	0.01 ^c	< ***	< 4.3	< 25.1
7/ 1/91- 7/ 8/91	8.4	< 1.1	0.03 ^a	< ***	< 3.2	< 19.2
7/ 8/91- 7/15/91	8.6	3.5	0.03 ^a	< 64.3	< 1.6	< 13.6
7/15/91- 7/22/91	8.5	2.8	0.01 ^c	< ***	< 4.0	< 33.1
7/22/91- 7/29/91	8.7	2.7	0.02 ^b	< ***	< 4.7	< 24.9
7/29/91- 8/ 5/91	8.5	1.8 ^a	0.05 ^a	< 97.7	< 4.0	< 22.1
8/ 5/91- 8/12/91	8.7	2.9	0.04 ^a	< 32.3	2.4 ^a	< 12.9
8/12/91- 8/19/91	8.4	2.2	0.03 ^a	< 58.5	< 3.8	< 25.0
8/19/91- 8/26/91	8.6	2.3	0.02 ^a	< 34.4	< 1.9	< 13.6
8/26/91- 9/ 2/91	8.6	2.1	0.03 ^a	< 37.1	< 2.0	< 10.2
9/ 2/91- 9/ 9/91	8.5	3.8	0.04 ^a	< 86.6	< 3.9	< 20.7
9/ 9/91- 9/16/91	8.5	3.1	0.03 ^b	< 39.5	< 3.7	< 23.7
9/16/91- 9/23/91	8.5	2.9	0.02 ^b	< 34.3	< 2.9	< 19.6
9/23/91- 9/30/91	8.4	4.4	0.02 ^b	< 79.6	< 6.0	< 33.0
9/30/91-10/ 7/91	8.4	4.1	0.02 ^b	< 26.7	< 3.2	< 19.5
10/ 7/91-10/16/91	10.8	2.3	0.02 ^c	< 63.7	< 4.7	< 21.6
10/16/91-10/21/91	5.9	4.2	0.07 ^c	< 50.8	< 6.2	< 24.9
10/21/91-10/28/91	8.5	4.3 ^a	0.02 ^b	< 46.1	< 3.2	< 21.9
10/28/91-11/ 4/91	8.5	5.3	0.03 ^a	< 17.6	< 2.9	< 16.6
11/ 4/91-11/11/91	8.4	4.9	0.05 ^a	< 31.7	< 3.5	< 16.7
11/11/91-11/18/91	8.3	3.7	0.02 ^b	< 34.5	< 4.0	< 17.3
11/18/91-11/25/91	8.2	6.4	0.06	< 16.6	< 2.0	< 8.7

TABLE 47 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/25/91-12/ 2/91	8.5	6.2	0.05 ^a	< 11.9	< 2.1	< 8.1
12/ 2/91-12/ 9/91	8.0	7.6	0.05 ^b	< **.*	< 6.7	< 35.0
12/ 9/91-12/16/91	8.4	6.3	0.04 ^b	< 92.0	< 6.5	< 44.9
12/16/91-12/23/91	8.5	5.8	0.04 ^b	< 20.3	< 1.6	< 10.8
12/23/91-12/30/91	8.2	6.8	0.05 ^b	< 86.5	< 7.2	< 32.6
12/30/91- 1/ 6/92	8.2	5.3	0.04 ^a	< 73.4	< 4.3	< 21.2
1/ 6/92- 1/13/92	8.2	5.2	0.03 ^b	< 64.1	< 6.2	< 37.6
1/13/92- 1/20/92	8.2	7.1	0.05 ^a	< 69.6	< 3.6	< 18.4
1/20/92- 1/27/92	8.5	8.5	0.03 ^b	< 68.8	< 5.3	< 37.4
1/27/92- 2/ 3/92	8.0	6.9	0.03 ^a	< 16.3	< 1.9	< 11.6
2/ 3/92- 2/10/92	7.9	6.7	0.02 ^b	< 59.7	< 3.9	< 18.5
2/10/92- 2/17/92	9.0	5.0	0.05 ^b	< 81.2	< 5.8	< 26.7
2/17/92- 2/24/92	7.8	< **.*	0.02 ^a	< **.*	< 1.9	< 58.8
2/24/92- 3/ 2/92	8.7	< **.*	0.01 ^c	< **.*	< 3.3	< **.*
3/ 2/92- 3/ 9/92	7.8	< 12.2	0.03 ^b	< **.*	< 3.3	< 46.5
3/ 9/92- 3/16/92	8.9	< 13.8	0.02 ^b	< **.*	< 5.0	< 46.0
3/16/92- 3/23/92	7.9	< 39.1	0.03 ^c	< **.*	< 5.3	< 60.2
3/23/92- 3/30/92	9.3	< 15.5	0.03 ^a	< **.*	< 3.2	< 47.1
3/30/92- 4/ 6/92	8.5	< 4.3	0.03 ^a	< **.*	< 2.7	< 32.2
4/ 6/92- 4/13/92	5.9	10.2	0.04 ^a	< **.*	< 2.9	< 24.4
4/13/92- 4/20/92	8.6	< 5.1	0.01 ^c	< **.*	< 4.8	< 50.4
4/20/92- 4/27/92	8.5	4.2 ^a	0.01 ^c	< **.*	< 2.5	< 19.3
4/27/92- 5/ 4/92	8.6	< 14.2	0.03 ^b	< **.*	< 4.3	< 51.1
5/ 4/92- 5/11/92	8.6	< 10.9	0.04 ^a	< **.*	< 3.4	< 46.3
5/11/92- 5/18/92	8.6	< 12.7	0.05 ^a	< **.*	< 4.7	< 60.4
5/18/92- 5/25/92	8.7	< 9.2	0.05 ^a	< **.*	< 3.9	< 38.6
5/25/92- 6/ 1/92	8.8	14.1 ^a	0.02 ^b	< **.*	< 3.7	< 36.4
6/ 1/92- 6/ 8/92	8.8	< 7.3	0.03 ^b	< **.*	< 4.1	< 50.4
6/ 8/92- 6/15/92	8.8	< 7.4	0.04 ^b	< **.*	< 3.4	< 42.4
6/15/92- 6/22/92	9.0	< 10.3	0.04 ^b	< **.*	< 4.9	< 43.7
6/22/92- 6/29/92	8.3	< 6.6	0.03 ^b	< **.*	< 4.9	< 41.2
6/29/92- 7/ 6/92	8.6	9.6 ^a	0.04 ^a	< **.*	< 4.6	< 54.9
7/ 6/92- 7/13/92	8.7	< 5.7	0.01 ^c	< **.*	< 5.1	< 42.1
7/13/92- 7/20/92	8.8	< 6.8	0.03 ^b	< **.*	< 3.9	< 50.4
7/20/92- 7/27/92	8.7	< 8.8	0.08 ^a	< **.*	< 4.4	< 40.0
7/27/92- 8/ 3/92	8.6	< 8.2	0.02 ^c	< **.*	< 4.5	< 39.4
8/ 3/92- 8/10/92	8.6	< 6.6	0.04 ^b	< **.*	< 4.7	< 40.3
8/10/92- 8/17/92	8.6	5.8 ^a	0.01 ^c	< **.*	< 2.2	< 19.2
8/17/92- 8/24/92	8.6	< 3.3	0.04 ^a	< **.*	< 3.5	< 36.9
8/24/92- 8/31/92	8.6	< 4.9	0.03 ^b	< **.*	< 4.8	< 50.0
8/31/92- 9/ 7/92	8.7	3.0	0.02 ^b	< **.*	< 2.4	< 17.0
9/ 7/92- 9/14/92	8.7	5.3 ^a	0.03 ^b	< **.*	< 3.5	< 27.8
9/14/92- 9/21/92	8.7	< 2.2	0.02 ^b	< **.*	< 3.4	< 33.7
9/21/92- 9/28/92	8.7	< 5.0	0.02 ^c	< **.*	< 4.3	< 49.7
9/28/92-10/ 5/92	8.5	< 4.7	0.03 ^a	< **.*	< 2.1	< 27.5
10/ 5/92-10/12/92	8.5	< 52.6	0.03 ^c	< **.*	< 4.9	< 59.2
10/12/92-10/19/92	8.5	6.9	0.04 ^b	< **.*	< 4.1	< 44.5
10/19/92-10/26/92	8.5	< 6.9	0.04 ^c	< **.*	< 4.4	< 50.5
10/26/92-11/ 2/92	8.6	< 61.5	0.02 ^c	< **.*	< 4.6	< 80.7
11/ 2/92-11/ 9/92	7.9	6.4 ^a	0.04 ^a	< **.*	< 2.4	< 20.8
11/ 9/92-11/16/92	8.3	< 6.1	0.04 ^b	< **.*	< 5.1	< 40.1

TABLE 47 (Cont'd)

Sampling Interval	Volume (kscm)	⁷ Be	²¹⁰ Pb	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/16/92-11/23/92	8.3	< 6.1	0.02 ^c	< **.*	< 4.7	< 50.4
11/23/92-11/30/92	8.2	< 5.6	0.02 ^c	< **.*	< 5.1	< 53.3
11/30/92-12/ 7/92	8.3	< 22.8	0.04 ^c	< **.*	< 3.9	< 42.8
12/ 7/92-12/14/92	8.3	< 16.4	0.08 ^a	< **.*	< 2.3	< 26.7
12/14/92-12/21/92	8.4	8.3	--	< **.*	< 6.0	< 36.1
12/28/92- 1/ 4/93	8.4	--	--	--	--	--
1/ 4/93- 1/11/93	8.2	8.3 ^a	--	< **.*	< 3.8	< 32.9
1/11/93- 1/18/93	8.3	< 14.9	0.08 ^a	< **.*	< 5.8	< 57.5
1/18/93- 1/25/93	8.3	< 19.6	0.05 ^b	< **.*	< 6.9	< 64.1
1/25/93- 2/ 2/93	9.4	--	0.07 ^a	< **.*	< 1.8	< 15.1
2/ 2/93- 2/ 8/93	7.1	--	0.05 ^b	< **.*	< 2.6	< 33.4
2/ 8/93- 2/15/93	8.4	--	0.04 ^b	< **.*	< 4.1	< 51.6
2/15/93- 2/22/93	8.2	--	0.03 ^c	< **.*	< 4.9	< 92.7
2/22/93- 3/ 1/93	8.7	--	0.02 ^b	< **.*	< 1.9	< 33.2
3/ 1/93- 3/ 8/93	8.6	--	0.03 ^c	< **.*	< 3.9	< 48.8
3/ 8/93- 3/15/93	8.2	--	0.02 ^b	< **.*	< 2.3	< 28.7
3/15/93- 3/22/93	8.3	--	--	--	--	--
3/22/93- 3/29/93	8.8	--	--	--	--	--
3/29/93- 4/ 5/93	8.8	--	--	--	--	--
4/ 5/93- 4/12/93	8.4	--	--	--	--	--
4/12/93- 4/19/93	8.4	--	--	--	--	--
4/19/93- 4/26/93	8.2	--	--	--	--	--
4/26/93- 5/ 3/93	8.8	--	--	< **.*	< 2.8	< 23.7
5/ 3/93- 5/10/93	8.7	--	--	--	--	--
5/10/93- 5/17/93	8.5	--	--	--	--	--
5/17/93- 5/24/93	8.4	--	--	--	--	--
5/24/93- 5/31/93	8.8	--	--	--	--	--
5/31/93- 6/ 7/93	8.3	--	--	--	--	--
6/ 7/93- 6/14/93	9.2	--	--	--	--	--
6/14/93- 6/21/93	8.1	--	--	--	--	--
6/21/93- 6/28/93	8.8	--	--	--	--	--
6/28/93- 7/ 5/93	8.6	--	< 0.04 ^b	< **.*	< 3.6	< 37.4
7/ 5/93- 7/12/93	8.5	--	0.06 ^b	< **.*	< 6.4	< 67.7
7/12/93- 7/19/93	9.0	--	0.04 ^b	< **.*	< 4.2	< 58.1
7/19/93- 7/26/93	9.0	--	--	--	--	--
7/26/93- 8/ 2/93	8.9	--	--	--	--	--
8/ 2/93- 8/ 9/93	8.7	6.6 ^a	0.04 ^a	< **.*	< 1.9	< 16.6
8/ 9/93- 8/16/93	8.9	--	0.05 ^b	< **.*	< 2.6	< 16.4
8/16/93- 8/23/93	9.0	--	0.04 ^c	< **.*	< 5.7	< 66.6
8/23/93- 8/30/93	8.5	--	0.04 ^c	< **.*	< 6.4	< 75.4
8/30/93- 9/ 6/93	8.9	5.2 ^a	0.03 ^b	< **.*	< 1.5	< 8.7
9/ 6/93- 9/13/93	8.5	3.7 ^a	0.03 ^a	< **.*	< 0.8	< 4.6
9/13/93- 9/20/93	8.6	--	0.04 ^b	< **.*	< 3.5	< 40.0
9/20/93- 9/27/93	8.7	7.0 ^b	0.04 ^c	< **.*	< 6.1	< 66.1
9/27/93-10/ 4/93	9.0	6.7 ^a	0.04 ^b	< **.*	< 3.7	< 28.4
10/ 4/93-10/11/93	8.5	--	0.09 ^b	< **.*	< 6.0	< 52.1
10/11/93-10/18/93	9.0	--	--	--	--	--
10/18/93-10/25/93	8.6	--	0.05 ^b	< **.*	< 4.5	< 50.8
10/25/93-11/ 1/93	8.5	--	0.04 ^c	< **.*	< 5.1	< 50.7
11/ 1/93-11/ 8/93	8.3	8.2 ^a	0.05 ^c	< **.*	< 7.9	< 51.7
11/ 8/93-11/15/93	9.1	8.4 ^a	0.07 ^b	< **.*	< 7.5	< 70.6

TABLE 47 (Cont'd)

Sampling Interval	Volume (kscm)	^7Be	^{210}Pb	^{95}Zr	^{137}Cs	^{144}Ce
		(mBq m ⁻³)		(μBq m ⁻³)		
11/15/93-11/22/93	8.2	9.2 ^a	0.06 ^b	< **.*	< 7.3	< 64.0
11/22/93-11/29/93	8.7	6.3 ^a	0.04 ^c	< **.*	< 8.5	< 52.3
11/29/93-12/ 6/93	8.5	--	--	--	--	--
12/ 6/93-12/13/93	8.7	--	--	--	--	--
12/13/93-12/20/93	7.0	--	--	--	--	--

Note:

-- = No data

Uncertainty is < 20% except:

a = Uncertainty is between 20% and 50%

b = Uncertainty is between 50% and 100%

c = Uncertainty is greater than 100%

TABLE 48
ANALYSES OF COMPOSITE REFERENCE SAMPLES

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
1	Be-7	1/29/90	1/29/90	Be-7-023-V	0.80	7.9	8.3 $\pm$ 0.9	+ 5(0.5)				
	Zr-95			Zr-95-016-V	1.20	3.9	3.7 $\pm$ 0.2		- 5(1.3)			
	Cs-137			Cs-137-001-CX	0.62	10.6	11.3 $\pm$ 0.4			+ 6(1.8)		
	Ce-144			Ce-144-005-IV	0.40	5.1	1.6 $\pm$ 0.3				-69(*.*)	
	Pb-210			Pb-210-004-LI	0.43	13.3	13.7 $\pm$ 1.0					+ 3(0.4)
	Be-7	5/14/90	1/29/90	Be-7-023-V	0.80	7.9	7.9 $\pm$ 1.2	+ 1(0.1)				
	Zr-95			Zr-95-016-V	1.20	3.9	3.7 $\pm$ 0.1		- 7(1.9)			
	Cs-137			Cs-137-001-CX	0.62	10.6	11.1 $\pm$ 0.2			+ 4(2.4)		
	Ce-144			Ce-144-005-IV	0.40	5.1	1.8 $\pm$ 0.2				-65(*.*)	
	Pb-210			Pb-210-004-LI	0.43	13.3	13.1 $\pm$ 0.5					- 1(0.3)
	Be-7	5/26/90	1/29/90	Be-7-023-V	0.80	7.9	21.9 $\pm$ 3.6	*** (3.9)				
	Zr-95			Zr-95-016-V	1.20	3.9	9.3 $\pm$ 0.9		*** (5.6)			
	Cs-137			Cs-137-001-CX	0.62	10.6	14.3 $\pm$ 0.4			+35(9.3)		
	Ce-144			Ce-144-005-IV	0.40	5.1	3.2 $\pm$ 0.4				-37(4.8)	
	Pb-210			Pb-210-004-LI	0.43	13.3	20.1 $\pm$ 1.2					+52(5.7)
2	Be-7	1/29/90	1/29/90	Be-7-023-V	0.97	9.6	10.3 $\pm$ 0.6	+ 7(1.0)				
	Zr-95			Zr-95-016-V	0.87	2.9	2.9 $\pm$ 0.1		+ 3(0.6)			
	Cs-137			Cs-137-001-CX	0.87	15.0	15.2 $\pm$ 0.3			+ 1(0.6)		
	Ce-144			Ce-144-005-IV	0.80	10.3	4.0 $\pm$ 0.2				-61(*.*)	
	Pb-210			Pb-210-004-LI	0.25	7.6	6.6 $\pm$ 0.5					-13(2.0)
	Be-7	3/31/90	1/29/90	Be-7-023-V	0.97	9.6	10.0 $\pm$ 0.7	+ 5(0.7)				
	Zr-95			Zr-95-016-V	0.87	2.9	3.1 $\pm$ 0.2		+ 9(1.5)			
	Cs-137			Cs-137-001-CX	0.87	15.0	15.3 $\pm$ 0.2			+ 2(1.8)		
	Ce-144			Ce-144-005-IV	0.80	10.3	3.9 $\pm$ 0.1				-62(*.*)	
	Pb-210			Pb-210-004-LI	0.25	7.6	6.7 $\pm$ 0.3					-13(3.3)
3	Be-7	1/30/90	1/30/90	Be-7-023-V	0.93	9.0	8.8 $\pm$ 0.9	- 3(0.3)				
	Zr-95			Zr-95-016-V	0.78	2.5	2.5 $\pm$ 0.2		- 0(0.1)			
	Cs-137			Cs-137-001-CX	0.63	10.9	11.6 $\pm$ 0.4			+ 7(2.1)		
	Ce-144			Ce-144-005-IV	0.55	7.1	8.4 $\pm$ 0.5				+19(2.9)	
	Pb-210			Pb-210-004-LI	0.30	9.2	8.8 $\pm$ 0.9					- 4(0.4)
	Be-7	3/30/90	1/30/90	Be-7-023-V	0.93	9.0	9.8 $\pm$ 0.9	+ 9(0.9)				
	Zr-95			Zr-95-016-V	0.78	2.5	2.5 $\pm$ 0.2		- 3(0.3)			
	Cs-137			Cs-137-001-CX	0.63	10.9	11.9 $\pm$ 0.2			+ 9(4.9)		
	Ce-144			Ce-144-005-IV	0.55	7.1	8.1 $\pm$ 0.3				+15(3.8)	
	Pb-210			Pb-210-004-LI	0.30	9.2	9.7 $\pm$ 0.5					+ 6(1.0)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
4	Be-7	1/30/90	1/30/90	Be-7-023-V	1.68	16.4	17.1 $\pm$ 0.7	+ 4(1.0)				
	Cs-137			Cs-137-001-CX	0.70	12.0	13.0 $\pm$ 0.2			+ 8(4.0)		
	Ce-144			Ce-144-005-IV	0.80	10.4	12.2 $\pm$ 0.3				+18(5.4)	
	Pb-210			Pb-210-004-LI	0.37	11.4	13.5 $\pm$ 0.6					+19(3.3)
	Be-7	5/15/90	1/30/90	Be-7-023-V	1.68	16.4	17.5 $\pm$ 1.5	+ 7(0.7)				
	Cs-137			Cs-137-001-CX	0.70	12.0	12.9 $\pm$ 0.2			+ 7(4.0)		
	Ce-144			Ce-144-005-IV	0.80	10.4	11.8 $\pm$ 0.3				+14(4.3)	
	Pb-210			Pb-210-004-LI	0.37	11.4	13.3 $\pm$ 0.6					+18(3.6)
5	Be-7	2/23/90	2/23/90	Be-7-023-VI	0.71	2.7	2.4 $\pm$ 0.2	-11(1.5)				
	Cs-137			Cs-137-001-CX	0.67	11.5	11.1 $\pm$ 0.1			- 3(3.4)		
	Ce-144			Ce-144-005-6	0.24	14.2	12.0 $\pm$ 0.2				-16(*.*)	
	Pb-210			Pb-210-004-LI	0.30	9.1	8.4 $\pm$ 0.3					- 7(2.5)
	Be-7	5/14/90	2/23/90	Be-7-023-VI	0.71	2.7	2.7 $\pm$ 0.8	+ 1(0.0)				
	Cs-137			Cs-137-001-CX	0.67	11.5	11.2 $\pm$ 0.7			- 3(0.5)		
	Ce-144			Ce-144-005-6	0.24	14.2	12.4 $\pm$ 1.0				-13(1.9)	
	Pb-210			Pb-210-004-LI	0.30	9.1	8.8 $\pm$ 0.4					- 3(0.7)
6	Be-7	2/26/90	2/26/90	Be-7-023-VI	0.69	2.5	2.2 $\pm$ 0.6	-11(0.5)				
	Cs-137			Cs-137-001-CX	0.66	11.3	12.4 $\pm$ 0.4			+10(3.1)		
	Ce-144			Ce-144-005-6	0.21	12.7	14.6 $\pm$ 0.6				+15(3.5)	
	Pb-210			Pb-210-004-LI	0.30	9.1	9.9 $\pm$ 0.8					+ 8(0.9)
	Cs-137	5/16/90	2/26/90	Cs-137-001-CX	0.66	11.3	12.7 $\pm$ 0.9			+13(1.6)		
	Ce-144			Ce-144-005-6	0.21	12.7	14.9 $\pm$ 1.3				+18(1.8)	
	Pb-210			Pb-210-004-LI	0.30	9.1	9.6 $\pm$ 0.8					+ 5(0.6)
	Be-7	6/13/90	2/26/90	Be-7-023-VI	0.69	2.5	2.5 $\pm$ 0.4	+ 1(0.1)				
7	Be-7	4/ 2/90	4/ 2/90	Be-7-023-VI	1.00	2.3	2.4 $\pm$ 0.4	+ 5(0.3)				
	Cs-137			Cs-137-001-CX	0.68	11.7	13.9 $\pm$ 0.3			+19(8.9)		
	Ce-144			Ce-144-005-6	0.24	12.9	15.1 $\pm$ 0.4				+17(6.0)	
	Pb-210			Pb-210-004-LI	0.36	10.9	13.3 $\pm$ 0.6					+23(3.9)
	Be-7	4/18/90	4/ 2/90	Be-7-023-VI	1.00	2.3	2.7 $\pm$ 0.4	+15(1.0)				
	Cs-137			Cs-137-001-CX	0.68	11.7	13.7 $\pm$ 0.2			+18(*.*)		
	Ce-144			Ce-144-005-6	0.24	12.9	14.6 $\pm$ 0.3				+13(6.3)	
	Pb-210			Pb-210-004-LI	0.36	10.9	13.6 $\pm$ 0.5					+25(5.7)
8	Be-7	4/ 3/90	4/ 3/90	Be-7-023-VI	0.96	2.2	2.2 $\pm$ 0.4	+ 1(0.1)				
	Cs-137			Cs-137-001-CX	0.57	9.8	10.8 $\pm$ 0.7			+10(1.4)		
	Ce-144			Ce-144-005-6	0.28	15.3	16.8 $\pm$ 1.3				+ 9(1.1)	
	Pb-210			Pb-210-004-LI	0.30	9.1	9.0 $\pm$ 0.5					- 1(0.2)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
9	Cs-137	4/ 9/90	4/ 9/90	Cs-137-001-CVIII	0.71	22.1	28.0 $\pm$ 0.4			+26(*.*)		
	Ce-144			Ce-144-005-6	0.29	15.7	16.3 $\pm$ 0.4				+ 3(1.4)	
	Pb-210			Pb-210-004-LI	0.45	13.8	15.4 $\pm$ 0.7					+12(2.5)
	Cs-137	4/18/90	4/ 9/90	Cs-137-001-CVIII	0.71	22.1	27.7 $\pm$ 1.8			+25(3.1)		
	Ce-144			Ce-144-005-6	0.29	15.7	16.9 $\pm$ 1.3				+ 7(0.9)	
	Pb-210			Pb-210-004-LI	0.45	13.8	15.1 $\pm$ 0.5					+10(2.8)
10	Cs-137	4/11/90	4/11/90	Cs-137-001-CVIII	0.44	13.6	18.4 $\pm$ 1.3			+36(3.8)		
	Ce-144			Ce-144-005-6	0.25	13.5	16.9 $\pm$ 1.4				+25(2.4)	
	Pb-210			Pb-210-004-LI	0.42	12.8	15.7 $\pm$ 1.0					+22(2.8)
	Cs-137	4/23/90	4/11/90	Cs-137-001-CVIII	0.44	13.6	18.6 $\pm$ 0.3			+37(*.*)		
	Ce-144			Ce-144-005-6	0.25	13.5	16.8 $\pm$ 0.4				+25(8.9)	
	Pb-210			Pb-210-004-LI	0.42	12.8	17.2 $\pm$ 0.7					+34(6.4)
11	Be-7	6/ 4/90	6/ 4/90	Be-7-023-07	0.35	20.6	18.6 $\pm$ 2.5	- 9(0.8)				
	Pb-210			Pb-210-004-53	0.44	12.1	12.2 $\pm$ 0.6					+ 1(0.2)
12	Be-7	6/ 4/90	6/ 4/90	Be-7-023-07	0.31	17.8	17.1 $\pm$ 2.3	- 4(0.3)				
	Pb-210			Pb-210-004-53	0.35	9.7	10.2 $\pm$ 0.6					+ 6(1.0)
13	Be-7	7/25/90	7/25/90	Be-7-023-07	0.33	10.0	7.9 $\pm$ 0.4	-21(6.0)				
	Cs-137			Cs-137-001-CXI	1.38	11.8	11.6 $\pm$ 0.1			- 1(1.0)		
	Ce-144			Ce-144-005-07	0.52	9.1	8.2 $\pm$ 0.2				-10(5.0)	
	Pb-210			Pb-210-004-53	0.59	16.2	12.4 $\pm$ 0.4					-23(9.5)
	Be-7	8/21/90	7/25/90	Be-7-023-07	0.33	10.0	7.5 $\pm$ 0.6	-25(4.6)				
	Cs-137			Cs-137-001-CXI	1.38	11.8	11.2 $\pm$ 0.2			- 5(3.1)		
	Ce-144			Ce-144-005-07	0.52	9.1	8.0 $\pm$ 0.2				-13(4.8)	
	Pb-210			Pb-210-004-53	0.59	16.2	11.5 $\pm$ 0.5					-29(9.6)
14	Be-7	7/31/90	7/31/90	Be-7-023-07	0.46	12.9	12.6 $\pm$ 0.6	- 2(0.5)				
	Cs-137			Cs-137-001-CXI	1.15	9.8	11.1 $\pm$ 0.2			+13(6.6)		
	Ce-144			Ce-144-005-07	0.44	7.7	9.0 $\pm$ 0.3				+16(5.0)	
	Pb-210			Pb-210-004-53	0.81	22.1	29.4 $\pm$ 0.8					+33(9.3)
15	Be-7	8/ 7/90	8/ 7/90	Be-7-023-07	0.27	6.9	7.1 $\pm$ 0.3	+ 3(0.6)				
	Cs-137			Cs-137-001-113	0.59	11.9	12.9 $\pm$ 0.1			+ 8(6.3)		
	Ce-144			Ce-144-005-07	0.55	9.4	9.9 $\pm$ 0.2				+ 6(2.8)	
	Pb-210			Pb-210-004-53	0.30	8.3	10.7 $\pm$ 0.4					+29(6.8)
	Be-7	9/ 5/90	8/ 7/90	Be-7-023-07	0.27	6.9	6.7 $\pm$ 1.3	- 2(0.1)				
	Cs-137			Cs-137-001-113	0.59	11.9	12.8 $\pm$ 0.9			+ 7(1.0)		
	Ce-144			Ce-144-005-07	0.55	9.4	9.7 $\pm$ 0.9				+ 4(0.4)	
	Pb-210			Pb-210-004-53	0.30	8.3	11.0 $\pm$ 0.8					+33(3.4)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
16	Be-7	8/ 8/90	8/ 8/90	Be-7-023-07	0.27	6.7	6.3 $\pm$ 0.8	- 6(0.5)				
	Cs-137			Cs-137-001-113	0.57	11.6	12.5 $\pm$ 0.4			+ 7(2.3)		
	Ce-144			Ce-144-005-07	0.52	8.9	11.3 $\pm$ 0.5				+27(4.7)	
	Pb-210			Pb-210-004-53	0.36	9.8	10.5 $\pm$ 0.9					+ 8(0.8)
	Be-7	9/ 5/90	8/ 8/90	Be-7-023-07	0.27	6.7	6.0 $\pm$ 1.0	-11(0.7)				
	Cs-137			Cs-137-001-113	0.57	11.6	12.9 $\pm$ 0.9			+10(1.4)		
	Ce-144			Ce-144-005-07	0.52	8.9	11.6 $\pm$ 0.9				+30(2.8)	
	Pb-210			Pb-210-004-53	0.36	9.8	11.3 $\pm$ 0.6					+16(2.5)
17	Be-7	9/18/90	9/18/90	Be-7-023-07	1.49	21.8	16.5 $\pm$ 2.4	-25(2.2)				
	Cs-137			Cs-137-001-113	0.42	8.6	7.5 $\pm$ 0.6			-13(1.9)		
	Ce-144			Ce-144-005-07	0.50	7.7	7.2 $\pm$ 0.7				- 6(0.7)	
	Pb-210			Pb-210-004-53	0.50	13.5	9.8 $\pm$ 0.9					-28(4.3)
	Be-7	10/11/90	9/18/90	Be-7-023-07	1.49	21.8	16.3 $\pm$ 2.3	-25(2.4)				
	Cs-137			Cs-137-001-113	0.42	8.6	7.2 $\pm$ 0.5			-16(2.8)		
	Ce-144			Ce-144-005-07	0.50	7.7	6.8 $\pm$ 0.6				-11(1.6)	
	Pb-210			Pb-210-004-53	0.50	13.5	9.8 $\pm$ 0.6					-27(6.4)
18	Be-7	9/20/90	9/20/90	Be-7-023-07	2.08	29.7	26.1 $\pm$ 1.5	-12(2.4)				
	Cs-137			Cs-137-001-113	0.60	12.1	11.3 $\pm$ 0.4			- 7(2.2)		
	Ce-144			Ce-144-005-07	0.58	9.0	8.7 $\pm$ 0.5				- 3(0.5)	
	Pb-210			Pb-210-004-53	0.32	8.7	7.9 $\pm$ 1.0					- 9(0.8)
	Be-7	10/11/90	9/20/90	Be-7-023-07	2.08	29.7	24.0 $\pm$ 3.5	-19(1.6)				
	Cs-137			Cs-137-001-113	0.60	12.1	11.5 $\pm$ 0.8			- 5(0.7)		
	Ce-144			Ce-144-005-07	0.58	9.0	8.9 $\pm$ 0.8				+ 0(0.0)	
	Pb-210			Pb-210-004-53	0.32	8.7	9.6 $\pm$ 0.9					+11(1.0)
19	Be-7	10/ 3/90	10/ 3/90	Be-7-023-07	1.16	14.0	10.3 $\pm$ 1.5	-26(2.5)				
	Pb-210			Pb-210-004-53	0.66	18.0	15.0 $\pm$ 0.7					-16(4.5)
	Be-7	10/10/90	10/ 3/90	Be-7-023-07	1.16	14.0	10.6 $\pm$ 1.5	-25(2.4)				
	Pb-210			Pb-210-004-53	0.66	18.0	15.1 $\pm$ 0.5					-16(5.4)
20	Be-7	10/ 3/90	10/ 3/90	Be-7-023-07	1.22	14.8	11.3 $\pm$ 1.7	-24(2.1)				
	Pb-210			Pb-210-004-53	0.65	17.7	16.6 $\pm$ 1.0					- 6(1.0)
	Be-7	10/11/90	10/ 3/90	Be-7-023-07	1.22	14.8	11.9 $\pm$ 1.0	-20(2.9)				
	Pb-210			Pb-210-004-53	0.65	17.7	16.4 $\pm$ 1.1					- 8(1.2)

TABLE 48 (Cont'd)

No.	Nuclide	Counting	Reference	Standard	Quantity	Activity	Activity	% Deviation (Deviation Factor)*				
		Date	Date	Solution	Added (g)	Added (Bq)	Found (Bq $\pm$ 2s)	⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
21	Be-7	10/ 3/90	10/ 3/90	Be-7-023-07	0.92	11.1	9.0 $\pm$ 0.9	-19(2.4)				
	Cs-137			Cs-137-001-113	0.73	14.8	14.8 $\pm$ 0.4			+ .0(0.0)		
	Ce-144			Ce-144-005-07	0.60	8.8	6.7 $\pm$ 0.4				-24(5.1)	
	Pb-210			Pb-210-004-53	0.57	15.6	13.3 $\pm$ 1.0					-15(2.3)
	Cs-137	8/ 8/91	10/ 3/90	Cs-137-001-113	0.73	14.8	15.2 $\pm$ 0.3			+ 3(1.5)		
	Ce-144			Ce-144-005-07	0.60	8.8	6.7 $\pm$ 0.4				-25(4.9)	
	Pb-210			Pb-210-004-53	0.57	15.6	13.4 $\pm$ 0.7					-14(3.2)
22	Be-7	10/29/90	10/29/90	Be-7-024-III	0.46	32.0	25.2 $\pm$ 0.7	-21(9.9)				
	Pb-210			Pb-210-004-53	0.74	20.0	17.5 $\pm$ 0.6					-12(4.5)
23	Be-7	11/ 2/90	11/ 2/90	Be-7-024-III	1.07	70.6	50.1 $\pm$ 6.7	-29(3.1)				
	Pb-210			Pb-210-004-53	0.55	14.8	11.4 $\pm$ 0.7					-23(4.6)
	Be-7	7/25/91	11/ 2/90	Be-7-024-III	1.07	70.6	51.7 $\pm$ 8.3	-27(2.3)				
	Pb-210			Pb-210-004-53	0.55	14.8	12.6 $\pm$ 0.6					-15(3.7)
24	Be-7	11/ 2/90	11/ 2/90	Be-7-024-III	0.49	32.1	23.4 $\pm$ 0.4	-27(*.*)				
	Cs-137			Cs-137-001-113	0.47	9.4	19.3 $\pm$ 0.1			+++(*.*)		
	Ce-144			Ce-144-005-07	1.08	15.0	12.8 $\pm$ 0.2				-15(*.*)	
	Pb-210			Pb-210-004-53	1.05	28.5	9.6 $\pm$ 0.3					-66(*.*)
	Cs-137	7/17/91	11/ 2/90	Cs-137-001-113	0.47	9.4	17.7 $\pm$ 0.2			+88(*.*)		
	Ce-144			Ce-144-005-07	1.08	15.0	10.8 $\pm$ 0.4				-28(*.*)	
	Pb-210			Pb-210-004-53	1.05	28.5	7.6 $\pm$ 0.4					-73(*.*)
25	Be-7	12/10/90	12/10/90	Be-7-024-III	0.90	36.3	35.8 $\pm$ 0.9	- 1(0.6)				
	Pb-210			Pb-210-004-54	0.86	18.0	21.9 $\pm$ 0.7					+22(5.7)
	Be-7	7/22/91	12/10/90	Be-7-024-III	0.90	36.3	30.5 $\pm$ 4.7	-16(1.2)				
	Pb-210			Pb-210-004-54	0.86	18.0	19.8 $\pm$ 0.7					+10(2.6)
26	Be-7	12/12/90	12/12/90	Be-7-024-III	0.82	32.0	20.7 $\pm$ 0.7	-35(*.*)				
	Cs-137			Cs-137-001-113	0.92	18.6	14.7 $\pm$ 0.2			-21(*.*)		
	Ce-144			Ce-144-005-07	0.81	10.2	7.5 $\pm$ 0.2				-26(*.*)	
	Pb-210			Pb-210-004-54	0.53	11.1	7.5 $\pm$ 0.4					-32(8.2)
	Cs-137	7/23/91	12/12/90	Cs-137-001-113	0.92	18.6	15.4 $\pm$ 0.3			-17(*.*)		
	Ce-144			Ce-144-005-07	0.81	10.2	7.5 $\pm$ 0.4				-27(7.2)	
	Pb-210			Pb-210-004-54	0.53	11.1	7.7 $\pm$ 0.5					-30(6.4)
27	Be-7	12/14/90	12/14/90	Be-7-024-III	0.56	21.3	19.6 $\pm$ 0.6	- 8(2.9)				
	Pb-210			Pb-210-004-54	0.60	12.4	14.7 $\pm$ 0.5					+18(4.4)
	Be-7	8/ 9/91	12/14/90	Be-7-024-III	0.56	21.3	20.2 $\pm$ 4.3	- 5(0.3)				
	Pb-210			Pb-210-004-54	0.60	12.4	15.4 $\pm$ 0.6					+24(5.2)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
28	Be-7	12/18/90	12/18/90	Be-7-024-III	1.01	36.7	30.0 $\pm$ 0.8	-18(8.1)				
	Pb-210			Pb-210-004-54	0.78	16.3	18.7 $\pm$ 0.6					+14(3.7)
	Be-7	8/ 6/91	12/18/90	Be-7-024-III	1.01	36.7	28.7 $\pm$ 4.6	-22(1.7)				
	Pb-210			Pb-210-004-54	0.78	16.3	18.2 $\pm$ 0.6					+11(2.9)
29	Be-7	12/19/90	12/19/90	Be-7-024-III	1.23	44.0	32.0 $\pm$ 4.2	-27(2.8)				
	Cs-137			Cs-137-001-113	0.51	10.3	9.5 $\pm$ 0.6			- 8(1.3)		
	Ce-144			Ce-144-005-6	0.81	23.3	22.0 $\pm$ 1.7				- 6(0.8)	
	Pb-210			Pb-210-004-54	0.49	10.1	8.1 $\pm$ 0.4					-20(4.6)
	Be-7	8/23/91	12/19/90	Be-7-024-III	1.23	44.0	36.3 $\pm$ 7.9	-18(1.0)				
	Cs-137			Cs-137-001-113	0.51	10.3	10.3 $\pm$ 0.2			+ 0(0.1)		
	Ce-144			Ce-144-005-6	0.81	23.3	23.3 $\pm$ 0.6				+ 0(0.0)	
	Pb-210			Pb-210-004-54	0.49	10.1	9.1 $\pm$ 0.5					-10(2.0)
30	Be-7	1/ 3/91	1/ 3/91	Be-7-024-III	1.15	33.8	27.5 $\pm$ 1.3	-19(4.7)				
	Pb-210			Pb-210-004-54	0.80	16.7	14.8 $\pm$ 0.9					-11(2.0)
	Be-7	8/30/91	1/ 3/91	Be-7-024-III	1.15	33.8	29.7 $\pm$ 2.4	-12(1.7)				
	Pb-210			Pb-210-004-54	0.80	16.7	17.3 $\pm$ 0.3					+ 4(2.0)
31	Be-7	2/22/91	2/22/91	Be-7-024-III	1.61	24.7	20.4 $\pm$ 0.6	-18(6.9)				
	Cs-137			Cs-137-001-113	0.75	15.0	13.4 $\pm$ 0.2			-10(8.0)		
	Ce-144			Ce-144-005-6	0.62	15.3	14.7 $\pm$ 0.3				- 4(2.3)	
	Pb-210			Pb-210-004-54	0.39	8.2	8.7 $\pm$ 0.4					+ 6(1.2)
	Be-7	8/26/91	2/22/91	Be-7-024-III	1.61	24.7	21.4 $\pm$ 3.9	-14(0.9)				
	Cs-137			Cs-137-001-113	0.75	15.0	13.7 $\pm$ 0.2			- 8(5.2)		
	Ce-144			Ce-144-005-6	0.62	15.3	14.9 $\pm$ 0.4				- 3(1.0)	
	Pb-210			Pb-210-004-54	0.39	8.2	9.3 $\pm$ 0.5					+13(2.1)
32	Be-7	2/28/91	2/28/91	Be-7-024-III	1.44	20.5	15.9 $\pm$ 2.2	-22(2.1)				
	Pb-210			Pb-210-004-54	0.68	14.1	14.8 $\pm$ 0.6					+ 5(1.2)
	Be-7	8/29/91	2/28/91	Be-7-024-III	1.44	20.5	17.4 $\pm$ 2.8	-15(1.1)				
	Pb-210			Pb-210-004-54	0.68	14.1	15.9 $\pm$ 0.6					+13(2.8)
33	Be-7	3/ 1/91	3/ 1/91	Be-7-024-III	1.73	24.3	20.5 $\pm$ 2.7	-16(1.4)				
	Pb-210			Pb-210-004-54	0.58	12.0	13.0 $\pm$ 0.4					+ 8(2.2)
	Be-7	7/26/91	3/ 1/91	Be-7-024-III	1.73	24.3	19.1 $\pm$ 2.1	-21(2.4)				
	Pb-210			Pb-210-004-54	0.58	12.0	12.1 $\pm$ 0.5					+ 1(0.1)
34	Be-7	3/22/91	3/22/91	Be-7-024-III	1.58	16.9	15.5 $\pm$ 1.1	- 8(1.2)				
	Pb-210			Pb-210-004-54	0.56	11.6	12.5 $\pm$ 1.0					+ 8(0.9)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
35	Cs-137	3/25/91	3/25/91	Cs-137-001-113	0.78	15.6	14.0 $\pm$ 0.3			-10 (6.0)		
	Ce-144			Ce-144-005-6	0.69	15.9	13.5 $\pm$ 0.4				-15 (6.4)	
	Pb-210			Pb-210-004-54	0.90	18.6	18.5 $\pm$ 0.8					- 1 (0.2)
36	Be-7	4/11/91	4/11/91	Be-7-024-5	0.42	25.4	20.5 $\pm$ 2.9	-20 (1.7)				
	Pb-210			Pb-210-004-54	0.43	8.9	9.2 $\pm$ 0.7					+ 4 (0.5)
	Be-7	5/10/91	4/11/91	Be-7-024-5	0.42	25.4	19.0 $\pm$ 1.4	-25 (4.6)				
	Pb-210			Pb-210-004-54	0.43	8.9	8.5 $\pm$ 0.7					- 4 (0.5)
37	Pb-210	4/15/91	4/15/91	Pb-210-004-54	0.58	11.9	13.6 $\pm$ 0.5					+14 (3.0)
	Pb-210	5/10/91	4/15/91	Pb-210-004-54	0.58	11.9	14.1 $\pm$ 0.5					+18 (4.1)
38	Be-7	4/18/91	4/18/91	Be-7-024-5	0.38	21.1	17.8 $\pm$ 2.4	-16 (1.4)				
	Pb-210			Pb-210-004-54	0.32	6.7	7.4 $\pm$ 0.3					+12 (2.3)
	Be-7	6/17/91	4/18/91	Be-7-024-5	0.38	21.1	19.4 $\pm$ 0.7	- 8 (2.4)				
	Pb-210			Pb-210-004-54	0.32	6.7	7.4 $\pm$ 0.3					+12 (2.8)
39	Be-7	4/18/91	4/18/91	Be-7-024-5	0.37	20.3	20.5 $\pm$ 2.9	+ 1 (0.1)				
	Cs-137			Cs-137-001-113	0.44	8.8	14.0 $\pm$ 0.3		+59 (*,*)			
	Ce-144			Ce-144-005-6	0.40	8.6	13.5 $\pm$ 0.4				+56 (*,*)	
	Pb-210			Pb-210-004-54	0.41	8.5	9.2 $\pm$ 0.7					+ 8 (1.0)
	Be-7	6/20/91	4/18/91	Be-7-024-5	0.37	20.3	16.2 $\pm$ 1.1	-20 (3.8)				
	Cs-137			Cs-137-001-113	0.44	8.8	8.5 $\pm$ 0.2		- 3 (1.3)			
	Ce-144			Ce-144-005-6	0.40	8.6	8.3 $\pm$ 0.3				- 4 (1.3)	
	Pb-210			Pb-210-004-54	0.41	8.5	8.1 $\pm$ 0.5					- 5 (0.9)
40	Be-7	5/10/91	5/10/91	Be-7-024-5	0.55	22.7	14.4 $\pm$ 2.1	-37 (3.9)				
	Pb-210			Pb-210-004-56	0.42	7.9	6.7 $\pm$ 0.6					-16 (2.1)
	Be-7	6/13/91	5/10/91	Be-7-024-5	0.55	22.7	18.4 $\pm$ 0.9	-19 (4.7)				
	Pb-210			Pb-210-004-56	0.42	7.9	7.8 $\pm$ 0.4					- 2 (0.4)
41	Be-7	5/14/91	5/14/91	Be-7-024-5	0.58	22.8	18.5 $\pm$ 2.7	-19 (1.6)				
	Pb-210			Pb-210-004-56	0.52	9.9	10.6 $\pm$ 0.8					+ 7 (0.9)
	Be-7	6/22/91	5/14/91	Be-7-024-5	0.58	22.8	20.6 $\pm$ 0.6	-10 (3.7)				
	Pb-210			Pb-210-004-56	0.52	9.9	11.6 $\pm$ 0.3					+18 (5.4)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
42	Be-7	5/15/91	5/15/91	Be-7-024-5	0.40	15.5	13.9 $\pm$ 1.1	-11 (1.5)				
	Zr-95			Zr-95-017-IV	0.44	8.3	6.2 $\pm$ 0.3		-26 (8.3)			
	Cs-137			Cs-137-001-115	0.40	15.9	13.6 $\pm$ 0.4			-15 (6.2)		
	Ce-144			Ce-144-005-9	0.61	11.3	10.1 $\pm$ 0.5				-11 (2.7)	
	Pb-210			Pb-210-004-56	0.41	7.8	7.7 $\pm$ 0.8					- 1 (0.1)
	Be-7	9/ 6/91	5/15/91	Be-7-024-5	0.40	15.5	13.0 $\pm$ 0.9	-16 (2.6)				
	Zr-95			Zr-95-017-IV	0.44	8.3	6.1 $\pm$ 0.2		-26 (*.*)			
	Cs-137			Cs-137-001-115	0.40	15.9	13.7 $\pm$ 0.1			-14 (*.*)		
	Ce-144			Ce-144-005-9	0.61	11.3	10.7 $\pm$ 0.2				- 5 (3.1)	
	Pb-210			Pb-210-004-56	0.41	7.8	9.0 $\pm$ 0.3					+16 (4.7)
43	Be-7	6/17/91	6/17/91	Be-7-024-5	0.75	18.9	15.9 $\pm$ 2.3	-16 (1.3)				
	Pb-210			Pb-210-004-56	0.85	16.0	17.0 $\pm$ 1.0					+ 6 (1.0)
	Be-7	9/ 9/91	6/17/91	Be-7-024-5	0.75	18.9	17.4 $\pm$ 1.2	- 8 (1.2)				
	Pb-210			Pb-210-004-56	0.85	16.0	17.9 $\pm$ 0.7					+12 (2.9)
44	Be-7	7/ 8/91	7/ 8/91	Be-7-024-5	0.85	16.3	14.2 $\pm$ 1.2	-13 (1.8)				
	Zr-95			Zr-95-017-IV	0.56	5.9	5.1 $\pm$ 0.2		-15 (3.6)			
	Cs-137			Cs-137-001-115	0.51	20.0	15.8 $\pm$ 0.4			-21 (9.8)		
	Ce-144			Ce-144-005-9	0.91	14.7	12.3 $\pm$ 0.5				-17 (4.6)	
	Pb-210			Pb-210-004-56	0.51	9.6	9.5 $\pm$ 0.9					- 1 (0.1)
	Be-7	9/10/91	7/ 8/91	Be-7-024-5	0.85	16.3	14.0 $\pm$ 1.2	-14 (1.9)				
	Zr-95			Zr-95-017-IV	0.56	5.9	5.3 $\pm$ 0.2		-11 (2.8)			
	Cs-137			Cs-137-001-115	0.51	20.0	16.3 $\pm$ 0.3			-18 (*.*)		
	Ce-144			Ce-144-005-9	0.91	14.7	12.5 $\pm$ 0.4				-15 (6.1)	
	Pb-210			Pb-210-004-56	0.51	9.6	9.8 $\pm$ 0.6					+ 2 (0.3)
45	Be-7	7/10/91	7/10/91	Be-7-024-5	0.75	14.1	11.4 $\pm$ 1.0	-19 (2.8)				
	Pb-210			Pb-210-004-56	0.53	9.9	11.8 $\pm$ 0.9					+19 (2.0)
	Be-7	9/12/91	7/10/91	Be-7-024-5	0.75	14.1	12.2 $\pm$ 0.4	-13 (4.6)				
	Pb-210			Pb-210-004-56	0.53	9.9	11.9 $\pm$ 0.2					+20 (8.3)
46	Be-7	7/24/91	7/24/91	Be-7-024-5	1.44	22.5	20.2 $\pm$ 0.6	-10 (4.1)				
	Pb-210			Pb-210-004-56	0.75	14.0	14.1 $\pm$ 0.4					+ 1 (0.3)
47	Be-7	7/31/91	7/31/91	Be-7-024-5	1.11	15.9	12.7 $\pm$ 0.5	-20 (6.1)				
	Pb-210			Pb-210-004-56	0.60	11.3	11.0 $\pm$ 0.5					- 3 (0.7)
	Be-7	9/ 4/91	7/31/91	Be-7-024-5	1.11	15.9	13.7 $\pm$ 0.8	-14 (2.8)				
	Pb-210			Pb-210-004-56	0.60	11.3	12.9 $\pm$ 0.6					+14 (2.9)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
48	Be-7	8/ 9/91	8/ 9/91	Be-7-024-5	1.21	15.3	14.0 $\pm$ 1.2	- 8(1.1)				
	Zr-95			Zr-95-017-IV	0.56	4.2	4.4 $\pm$ 0.2		+ 5(1.0)			
	Cs-137			Cs-137-001-115	0.63	24.8	23.1 $\pm$ 0.5			- 7(3.3)		
	Ce-144			Ce-144-005-9	0.78	11.7	11.6 $\pm$ 0.5				- 2(0.4)	
	Pb-210			Pb-210-004-56	0.61	11.5	11.3 $\pm$ 1.0					- 2(0.2)
49	Be-7	9/ 3/91	9/ 3/91	Be-7-024-5	0.77	7.1	8.0 $\pm$ 0.8	+13(1.1)				
	Pb-210			Pb-210-004-56	0.93	17.3	18.9 $\pm$ 1.1					+ 9(1.4)
50	Be-7	9/ 4/91	9/ 4/91	Be-7-024-5	1.05	9.5	9.6 $\pm$ 0.8	+ 0(0.1)				
	Pb-210			Pb-210-004-56	0.62	11.6	13.4 $\pm$ 0.9					+16(2.0)
51	Zr-95	9/ 5/91	9/ 5/91	Zr-95-017-IV	0.88	4.9	4.5 $\pm$ 0.2		- 9(1.9)			
	Cs-137			Cs-137-001-115	0.49	19.1	16.7 $\pm$ 0.4			-12(5.4)		
	Ce-144			Ce-144-005-9	0.80	11.2	10.3 $\pm$ 0.5				- 8(1.9)	
	Pb-210			Pb-210-004-56	0.35	6.6	6.1 $\pm$ 0.7					- 7(0.6)
52	Be-7	9/12/91	9/12/91	Be-7-024-VII (7)	1.02	65.4	32.9 $\pm$ 4.3	-50(7.6)				
	Zr-95			Zr-95-017-IV	1.05	5.4	4.3 $\pm$ 0.4		-21(3.0)			
	Cs-137			Cs-137-001-115	0.51	19.8	15.8 $\pm$ 1.0			-20(4.0)		
	Ce-144			Ce-144-005-9	0.80	11.0	9.2 $\pm$ 0.7				-17(2.6)	
	Pb-210			Pb-210-004-56	0.49	9.1	8.5 $\pm$ 0.2					- 6(2.7)
53	Be-7	9/16/91	9/16/91	Be-7-024-VII (7)	0.36	21.8	14.4 $\pm$ 1.0	-34(7.5)				
	Pb-210			Pb-210-004-56	0.72	13.4	13.1 $\pm$ 0.9					- 2(0.3)
	Be-7	11/19/91	9/16/91	Be-7-024-VII (7)	0.36	21.8	14.3 $\pm$ 2.4	-34(3.1)				
	Pb-210			Pb-210-004-56	0.72	13.4	12.4 $\pm$ 0.8					- 8(1.3)
	Be-7	12/26/91	9/16/91	Be-7-024-VII (7)	0.36	21.8	14.8 $\pm$ 1.8	-32(3.9)				
	Pb-210			Pb-210-004-56	0.72	13.4	13.2 $\pm$ 0.9					- 2(0.3)
54	Be-7	9/18/91	9/18/91	Be-7-024-VII (7)	0.73	43.2	33.3 $\pm$ 1.0	-23(*.*)				
	Pb-210			Pb-210-004-56	0.53	9.9	11.5 $\pm$ 0.6					+16(2.8)
	Be-7	11/19/91	9/18/91	Be-7-024-VII (7)	0.73	43.2	32.8 $\pm$ 2.3	-24(4.5)				
	Pb-210			Pb-210-004-56	0.53	9.9	11.3 $\pm$ 0.9					+15(1.6)
55	Be-7	10/ 4/91	10/ 4/91	Be-7-024-VII (7)	0.59	28.4	24.3 $\pm$ 3.2	-14(1.3)				
	Pb-210			Pb-210-004-56	0.50	9.2	11.6 $\pm$ 0.5					+25(4.9)
	Be-7	1/14/92	10/ 4/91	Be-7-024-VII (7)	0.59	28.4	24.3 $\pm$ 1.7	-14(2.4)				
	Pb-210			Pb-210-004-56	0.50	9.2	10.9 $\pm$ 0.4					+18(3.7)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
56	Be-7	10/ 5/91	10/ 5/91	Be-7-024-VII (7)	0.74	34.9	29.1 $\pm$ 3.8	-17(1.5)				
	Pb-210			Pb-210-004-56	0.55	10.1	11.0 $\pm$ 0.2					+ 8(3.3)
	Be-7	11/19/91	10/ 5/91	Be-7-024-VII (7)	0.74	34.9	29.5 $\pm$ 4.0	-16(1.4)				
	Pb-210			Pb-210-004-56	0.55	10.1	11.4 $\pm$ 0.5					+12(2.3)
57	Be-7	10/11/91	10/11/91	Be-7-024-VII (7)	0.52	22.8	19.8 $\pm$ 1.2	-13(2.3)				
	Zr-95			Zr-95-017-IV	0.99	3.7	3.7 $\pm$ 0.2		- 0(0.1)			
	Cs-137			Cs-137-001-115	0.42	16.3	15.5 $\pm$ 0.4			- 5(2.2)		
	Ce-144			Ce-144-005-9	0.81	10.4	9.9 $\pm$ 0.5				- 5(1.0)	
	Pb-210			Pb-210-004-56	0.40	7.5	8.9 $\pm$ 0.8					+19(1.7)
	Be-7	11/18/91	10/11/91	Be-7-024-VII (7)	0.52	22.8	20.0 $\pm$ 1.1	-12(2.5)				
	Zr-95			Zr-95-017-IV	0.99	3.7	3.6 $\pm$ 0.2		- 5(1.1)			
	Cs-137			Cs-137-001-115	0.42	16.3	15.5 $\pm$ 0.3			- 5(3.1)		
	Ce-144			Ce-144-005-9	0.81	10.4	10.5 $\pm$ 0.3				+ 1(0.3)	
	Pb-210			Pb-210-004-56	0.40	7.5	8.6 $\pm$ 0.5					+15(2.1)
	Be-7	10/31/91	10/31/91	Be-7-024-VII (7)	0.93	31.3	28.1 $\pm$ 0.7	-10(4.5)				
	Pb-210			Pb-210-004-56	0.43	8.0	10.0 $\pm$ 0.4					+25(4.7)
58	Be-7	12/26/91	10/31/91	Be-7-024-VII (7)	0.93	31.3	28.5 $\pm$ 3.9	- 9(0.7)				
	Pb-210			Pb-210-004-56	0.43	8.0	10.3 $\pm$ 0.5					+29(4.8)
	Be-7	11/ 1/91	11/ 1/91	Be-7-024-VII (7)	0.74	24.6	17.4 $\pm$ 2.3	-29(3.1)				
	Pb-210			Pb-210-004-56	0.47	8.7	8.2 $\pm$ 0.3					- 6(1.5)
59	Be-7	12/26/91	11/ 1/91	Be-7-024-VII (7)	0.74	24.6	19.6 $\pm$ 2.9	-20(1.7)				
	Pb-210			Pb-210-004-56	0.47	8.7	9.6 $\pm$ 0.7					+10(1.2)
	Be-7	11/ 1/91	11/ 1/91	Be-7-024-VII (7)	0.56	18.8	16.4 $\pm$ 0.6	-13(3.9)				
	Zr-95			Zr-95-017-IV	0.95	2.8	2.8 $\pm$ 0.1		- 2(0.7)			
60	Cs-137			Cs-137-001-115	0.33	13.0	13.2 $\pm$ 0.2			+ 2(1.0)		
	Ce-144			Ce-144-005-9	0.85	10.4	9.9 $\pm$ 0.2				- 5(2.1)	
	Pb-210			Pb-210-004-56	0.52	9.6	11.6 $\pm$ 0.5					+21(4.1)
	Be-7	12/26/91	11/ 1/91	Be-7-024-VII (7)	0.56	18.8	16.7 $\pm$ 1.0	-11(2.1)				
	Zr-95			Zr-95-017-IV	0.95	2.8	2.9 $\pm$ 0.1		+ 2(0.8)			
	Cs-137			Cs-137-001-115	0.33	13.0	13.3 $\pm$ 0.4			+ 2(0.7)		
	Ce-144			Ce-144-005-9	0.85	10.4	10.1 $\pm$ 0.5				- 3(0.6)	
	Pb-210			Pb-210-004-56	0.52	9.6	11.3 $\pm$ 0.7					+17(2.5)
	Be-7	11/19/91	9/12/91	Be-7-024-VII (7)	1.02	65.4	35.1 $\pm$ 1.8	-46(*.*)				
	Zr-95			Zr-95-017-IV	1.05	5.4	4.3 $\pm$ 0.2		-20(4.9)			
	Cs-137			Cs-137-001-115	0.51	19.8	16.0 $\pm$ 0.3			-19(*.*)		
	Ce-144			Ce-144-005-9	0.80	11.0	9.1 $\pm$ 0.3				-17(5.5)	
	Pb-210			Pb-210-004-56	0.49	9.1	9.2 $\pm$ 0.6					+ 1(0.1)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
62	Be-7 Pb-210	12/ 6/91	12/ 6/91	Be-7-024-VII (7) Pb-210-004-56	1.32 0.70	28.0 13.0	24.0 $\pm$ 1.3 14.4 $\pm$ 0.8	-14(3.1)				+11(1.8)
63	Be-7 Pb-210	12/11/91	12/11/91	Be-7-024-VII (7) Pb-210-004-56	0.84 0.41	16.7 7.6	14.1 $\pm$ 1.1 8.9 $\pm$ 0.8	-15(2.3)				+17(1.7)
64	Be-7 Zr-95 Cs-137 Ce-144 Pb-210	12/23/91	12/23/91	Be-7-024-VII (7) Zr-95-017-IV Cs-137-001-115 Ce-144-005-9 Pb-210-004-56	1.03 0.95 0.47 1.11 0.33	17.5 1.6 18.3 11.9 6.1	14.2 $\pm$ 1.2 1.5 $\pm$ 0.1 14.7 $\pm$ 0.5 11.1 $\pm$ 0.4 6.9 $\pm$ 4.1	-19(2.7)	- 6(1.4)	-20(6.8)	- 7(2.0)	+13(0.2)
65	Be-7 Pb-210	1/22/92	1/22/92	Be-7-024-VII (7) Pb-210-004-58	1.20 0.46	13.8 7.8	13.5 $\pm$ 1.6 8.1 $\pm$ 1.1	- 2(0.2)				+ 4(0.3)
66	Be-7 Zr-95 Cs-137 Ce-144 Pb-210	1/30/92	1/30/92	Be-7-024-VII (7) Zr-95-017-IV Cs-137-001-115 Ce-144-005-9 Pb-210-004-58	1.17 1.60 0.41 0.95 0.38	12.1 1.8 16.0 9.3 6.5	12.2 $\pm$ 1.4 2.0 $\pm$ 0.2 16.8 $\pm$ 1.7 11.4 $\pm$ 1.2 7.3 $\pm$ 1.1	+ 1(0.1)	+12(1.3)	+ 5(0.5)	+23(1.8)	+12(0.7)
67	Be-7 Pb-210	2/ 1/92	2/ 1/92	Be-7-024-VII (7) Pb-210-004-58	1.25 0.61	12.6 10.4	12.6 $\pm$ 1.4 10.9 $\pm$ 2.3	+ 0(0.0)				+ 4(0.2)
68	Be-7 Pb-210	3/ 2/92	3/ 2/92	Be-7-024-09 Pb-210-004-58	0.31 0.51	2.0 8.7	99.9 $\pm$ 0.2 9.5 $\pm$ 1.0	- 1(0.1)				+ 9(0.8)
69	Be-7 Pb-210	3/10/92	3/10/92	Be-7-024-09 Pb-210-004-58	0.33 0.71	92.4 12.2	65.7 $\pm$ 1.4 13.8 $\pm$ 0.4	-14(1.2)				+13(3.8)
70	Be-7 Zr-95 Cs-137 Ce-144 Pb-210	3/16/92	3/16/92	Be-7-024-09 Zr-95-017-IV Cs-137-001-115 Ce-144-005-9 Pb-210-004-58	0.40 1.57 0.73 0.55 0.68	16.4 1.1 28.2 4.8 11.7	69.5 $\pm$ 1.9 1.1 $\pm$ 0.1 25.4 $\pm$ 1.6 5.3 $\pm$ 0.4 13.8 $\pm$ 3.1	-22(2.1)	+ 3(0.3)	-10(1.7)	+10(1.2)	+18(0.7)
71	Be-7 Pb-210	3/24/92	3/24/92	Be-7-024-09 Pb-210-004-58	0.20 0.16	96.2 2.7	74.1 $\pm$ 7.7 2.2 $\pm$ 0.3	-23(2.9)				-20(2.1)
72	Be-7 Pb-210	3/27/92	3/27/92	Be-7-024-09 Pb-210-004-58	0.40 0.50	89.5 8.5	36.1 $\pm$ 4.0 7.9 $\pm$ 1.0	-28(3.8)				- 7(0.6)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
73	Be-7	3/31/92	3/31/92	Be-7-024-09	0.39	74.5	33.3 $\pm$ 3.9	-24(3.0)				
	Cs-137			Cs-137-001-115	0.54	20.9	16.0 $\pm$ 1.6			-23(3.1)		
	Ce-144			Ce-144-005-09	0.49	4.1	3.7 $\pm$ 0.5				-12(1.0)	
	Pb-210			Pb-210-004-58	0.47	8.0	7.2 $\pm$ 0.9					-10(0.9)
74	Be-7	4/ 3/92	4/ 3/92	Be-7-024-09	0.20	86.7	61.2 $\pm$ 6.4	-29(4.0)				
	Cs-137			Cs-137-001-115	0.34	13.0	10.4 $\pm$ 1.0			-19(2.4)		
	Ce-144			Ce-144-005-12	0.45	8.6	7.2 $\pm$ 0.8				-16(1.8)	
	Pb-210			Pb-210-004-60	0.26	5.1	3.1 $\pm$ 0.5					-40(4.4)
75	Be-7	4/13/92	4/13/92	Be-7-024-09	0.17	65.4	54.8 $\pm$ 5.7	-16(1.9)				
	Pb-210			Pb-210-004-60	0.41	8.2	7.3 $\pm$ 0.9					-10(1.0)
76	Be-7	4/16/92	4/16/92	Be-7-024-09	0.17	62.1	54.8 $\pm$ 5.7	-12(1.3)				
	Pb-210			Pb-210-004-60	0.33	6.5	5.6 $\pm$ 0.6					-14(1.4)
77	Be-7	4/29/92	4/29/92	Be-7-024-09	0.21	64.9	49.5 $\pm$ 5.1	-24(3.0)				
	Pb-210			Pb-210-004-60	0.35	6.9	5.0 $\pm$ 0.6					-27(3.1)
78	Be-7	4/29/92	4/29/92	Be-7-024-09	0.26	80.0	66.4 $\pm$ 7.1	-17(1.9)				
	Pb-210			Pb-210-004-60	0.26	5.1	4.3 $\pm$ 0.5					-16(1.6)
79	Be-7	5/ 1/92	5/ 1/92	Be-7-024-09	0.20	60.6	42.9 $\pm$ 4.5	-29(4.0)				
	Cs-137			Cs-137-001-115	0.33	12.7	10.2 $\pm$ 1.0			-20(2.5)		
	Ce-144			Ce-144-005-12	0.55	9.7	7.5 $\pm$ 4.6				-22(0.5)	
	Pb-210			Pb-210-004-60	0.42	8.3	5.8 $\pm$ 0.6					-30(3.9)
80	Be-7	5/20/92	5/20/92	Be-7-024-011	0.54	33.2	21.9 $\pm$ 2.9	-34(3.9)				
	Pb-210			Pb-210-004-60	0.55	10.9	8.4 $\pm$ 0.3					-23(7.4)
81	Be-7	5/20/92	5/20/92	Be-7-024-011	0.86	52.5	45.0 $\pm$ 4.5	-14(1.7)				
	Cs-137			Cs-137-001-115	0.73	28.2	25.3 $\pm$ 2.4			-10(1.2)		
	Ce-144			Ce-144-005-12	0.90	15.2	15.1 $\pm$ 1.4				+ 0(0.0)	
	Pb-210			Pb-210-004-60	0.76	15.0	12.5 $\pm$ 1.4					-17(1.7)
82	Be-7	5/21/92	5/21/92	Be-7-024-011	0.37	22.1	16.7 $\pm$ 2.2	-25(2.5)				
	Pb-210			Pb-210-004-60	0.75	14.8	14.7 $\pm$ 0.5					- 1(0.2)
83	Be-7	7/ 2/92	7/ 2/92	Be-7-024-011	0.80	28.0	23.7 $\pm$ 2.5	-16(1.7)				
	Pb-210			Pb-210-004-60	0.63	12.4	9.4 $\pm$ 1.3					-24(2.2)
84	Be-7	7/ 8/92	7/ 8/92	Be-7-024-011	0.38	12.2	10.1 $\pm$ 1.3	-18(1.7)				
	Pb-210			Pb-210-004-60	0.82	16.0	14.0 $\pm$ 1.7					-12(1.1)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
85	Be-7	7/10/92	7/10/92	Be-7-024-011	0.46	14.4	12.8 $\pm$ 1.3	-11(1.3)				
	Cs-137			Cs-137-001-115	0.58	22.5	23.4 $\pm$ 2.2			+ 4(0.4)		
	Ce-144			Ce-144-005-12	0.92	13.8	14.0 $\pm$ 1.3				+ 2(0.2)	
	Pb-210			Pb-210-004-60	0.54	10.6	10.8 $\pm$ 1.3					+ 3(0.2)
86	Be-7	8/27/92	8/27/92	Be-7-024-011	1.10	18.5	20.9 $\pm$ 2.2	+13(1.1)				
	Pb-210			Pb-210-004-60	0.56	10.9	12.4 $\pm$ 1.4					+14(1.0)
87	Be-7	9/ 9/92	9/ 9/92	Be-7-024-011	0.98	14.0	11.9 $\pm$ 1.6	-15(1.3)				
	Cs-137			Cs-137-001-115	0.63	24.3	24.3 $\pm$ 1.6			+ 0(0.0)		
	Ce-144			Ce-144-005-12	0.71	9.1	9.6 $\pm$ 0.8				+ 5(0.6)	
	Pb-210			Pb-210-004-60	0.91	17.8	20.1 $\pm$ 0.7					+13(3.3)
88	Be-7	9/16/92	9/16/92	Be-7-025-03	1.41	50.6	62.3 $\pm$ 8.1	+23(1.4)				
89	Be-7	9/23/92	9/23/92	Be-7-024-011	1.24	14.7	14.8 $\pm$ 1.5	+ 1(0.1)				
	Pb-210			Pb-210-004-60	0.70	13.6	13.7 $\pm$ 1.5					+ 1(0.1)
90	Be-7	9/24/92	9/24/92	Be-7-025-03	1.41	45.6	38.9 $\pm$ 5.1	-15(1.3)				
91	Be-7	10/28/92	10/28/92	Be-7-024-011	1.53	11.5	11.4 $\pm$ 1.2	- 1(0.1)				
	Cs-137			Cs-137-001-115	0.75	28.7	30.4 $\pm$ 2.9			+ 6(0.6)		
	Ce-144			Ce-144-005-12	0.75	8.6	8.7 $\pm$ 0.8				+ 2(0.2)	
	Pb-210			Pb-210-004-60	1.07	20.8	23.7 $\pm$ 2.6					+14(1.1)
92	Be-7	11/ 2/92	11/ 2/92	Be-7-025-03	0.75	14.5	16.2 $\pm$ 2.2	+12(0.8)				
	Cs-137			Cs-137-001-115	0.57	21.6	24.4 $\pm$ 1.6			+13(1.7)		
	Ce-144			Ce-144-005-12	1.28	14.4	15.5 $\pm$ 1.2				+ 8(0.9)	
	Pb-210			Pb-210-004-58	1.05	17.6	23.2 $\pm$ 0.9					+32(6.5)
93	Be-7	11/ 4/92	11/ 4/92	Be-7-025-03	0.59	11.1	10.9 $\pm$ 1.3	- 2(0.2)				
	Pb-210			Pb-210-004-58	0.43	7.2	7.7 $\pm$ 1.1					+ 6(0.4)
94	Be-7	11/ 4/92	11/ 4/92	Be-7-025-03	0.70	13.2	14.7 $\pm$ 1.6	+11(0.9)				
	Pb-210			Pb-210-004-58	0.57	9.6	11.9 $\pm$ 1.4					+24(1.6)
95	Be-7	11/ 4/92	11/ 4/92	Be-7-025-03	1.72	32.5	34.9 $\pm$ 4.6	+ 7(0.5)				
	Cs-137			Cs-137-001-115	1.12	42.7	46.5 $\pm$ 3.0			+ 9(1.3)		
	Ce-144			Ce-144-005-12	1.11	12.4	13.8 $\pm$ 1.1				+11(1.3)	
	Pb-210			Pb-210-004-58	0.38	6.3	8.7 $\pm$ 0.6					+37(4.3)
96	Be-7	11/ 6/92	11/ 6/92	Be-7-025-03	1.26	23.3	24.4 $\pm$ 2.7	+ 5(0.4)				
	Pb-210			Pb-210-004-58	0.56	9.3	12.2 $\pm$ 1.5					+30(1.9)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
97	Be-7 Pb-210	11/ 6/92	11/ 6/92	Be-7-025-03 Pb-210-004-58	0.75 0.72	13.9 12.1	14.4 $\pm$ 1.9 18.2 $\pm$ 0.6	+ 3(0.3)				+50(9.6)
98	Be-7	11/23/92	11/23/92	Be-7-024-011	1.28	6.9	6.1 $\pm$ 0.9	-12(0.9)				
99	Be-7 Pb-210	12/22/92	12/22/92	Be-7-025-03 Pb-210-004-60	1.08 0.17	11.0 3.3	11.3 $\pm$ 1.4 3.6 $\pm$ 0.5	+ 3(0.2)				+ 9(0.5)
100	Be-7 Pb-210	12/28/92	12/28/92	Be-7-025-03 Pb-210-004-60	0.77 0.46	7.3 8.8	7.8 $\pm$ 0.9 10.3 $\pm$ 1.3	+ 7(0.6)				+18(1.2)
101	Cs-137 Ce-144 Pb-210	12/29/92	12/29/92	Cs-137-001-115 Ce-144-005-12 Pb-210-004-60	0.89 0.46 0.41	33.9 4.5 7.9	45.1 $\pm$ 4.3 7.2 $\pm$ 0.7 9.5 $\pm$ 1.2		+33(2.6)		+57(3.5)	+20(1.4)
102	Be-7 Pb-210	1/27/93	1/27/93	Be-7-025-03 Pb-210-004-60	0.77 0.27	4.9 5.1	4.9 $\pm$ 0.7 7.0 $\pm$ 0.9	+ 1(0.0)				+38(2.1)
103	Be-7 Pb-210	2/ 1/93	2/ 1/93	Be-7-025-03 Pb-210-004-60	1.09 0.69	6.5 13.2	6.3 $\pm$ 0.9 13.5 $\pm$ 1.7	- 3(0.2)				+ 3(0.2)
104	Be-7 Cs-137 Ce-144 Pb-210	2/10/93	2/10/93	Be-7-025-03 Cs-137-001-115 Ce-144-005-12 Pb-210-004-60	0.61 0.47 1.02 0.20	3.2 18.0 9.0 3.9	3.4 $\pm$ 0.6 22.2 $\pm$ 2.2 9.6 $\pm$ 1.1 3.6 $\pm$ 0.6	+ 7(0.4)	+24(1.9)		+ 7(0.6)	- 8(0.5)
105	Cs-137 Ce-144	2/22/93	2/22/93	Cs-137-001-122 Ce-144-005-16	0.62 0.63	12.9 13.6	15.3 $\pm$ 1.6 15.8 $\pm$ 1.8		+18(1.5)		+16(1.2)	
106	Be-7	2/23/93	2/23/93	Be-7-025-03	0.95	4.3	4.8 $\pm$ 0.6	+12(0.9)				
107	Be-7	2/25/93	2/25/93	Be-7-025-03	0.97	4.2	4.7 $\pm$ 0.8	+11(0.6)				
108	Be-7	3/ 9/93	3/ 9/93	Be-7-025-03	1.32	4.9	5.0 $\pm$ 0.8	+ 1(0.0)				
109	Be-7	3/11/93	3/11/93	Be-7-025-03	1.11	4.0	4.3 $\pm$ 0.6	+ 6(0.4)				
110	Cs-137 Ce-144	4/ 2/93	4/ 2/93	Cs-137-001-122 Ce-144-005-16	0.66 0.82	13.8 16.1	16.5 $\pm$ 1.1 19.7 $\pm$ 1.5		+20(2.5)		+23(2.4)	
111	Pb-210	4/19/93	4/19/93	Pb-210-004-64	0.61	9.3	10.7 $\pm$ 1.4					+15(1.0)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
112	Cs-137	4/19/93	4/19/93	Cs-137-001-122	0.72	14.9	13.4 $\pm$ 1.3			-10(1.1)		
	Ce-144			Ce-144-005-16	0.53	9.9	12.6 $\pm$ 1.3				+27(2.1)	
	Pb-210			Pb-210-004-64	1.07	16.2	18.7 $\pm$ 2.2					+15(1.1)
113	Pb-210	4/27/93	4/27/93	Pb-210-004-64	0.49	7.4	9.0 $\pm$ 0.7					+22(2.3)
114	Cs-137	5/11/93	5/11/93	Cs-137-001-122	0.57	11.9	11.1 $\pm$ 0.8			- 6(0.9)		
	Ce-144			Ce-144-005-16	0.96	17.1	19.6 $\pm$ 1.7				+14(1.4)	
	Pb-210			Pb-210-004-64	1.43	21.7	28.5 $\pm$ 1.7					+31(4.1)
115	Pb-210	5/24/93	5/24/93	Pb-210-004-64	0.80	12.1	14.3 $\pm$ 1.6					+18(1.4)
116	Pb-210	6/18/93	6/18/93	Pb-210-004-64	1.18	17.8	18.5 $\pm$ 3.0					+ 4(0.3)
	Pb-210			Pb-210-004-64								-17(1.5)
117	Pb-210	8/ 5/93	8/ 5/93	Pb-210-004-64	0.79	11.9	9.8 $\pm$ 1.4					- 4(0.4)
	Pb-210	12/15/93	8/ 5/93	Pb-210-004-64	0.79	11.9	11.4 $\pm$ 1.2					
118	Cs-137	8/17/93	8/17/93	Cs-137-001-122	0.66	13.5	11.6 $\pm$ 1.1			-14(1.7)		
	Ce-144			Ce-144-005-16	0.87	12.1	11.3 $\pm$ 1.1				- 7(0.8)	
	Pb-210			Pb-210-004-64	0.63	9.6	7.6 $\pm$ 0.9					-21(2.2)
	Cs-137	12/20/93	8/17/93	Cs-137-001-122	0.66	13.5	11.8 $\pm$ 1.2			-13(1.4)		
	Ce-144			Ce-144-005-16	0.87	12.1	12.1 $\pm$ 4.7				+ 1(0.0)	
	Pb-210			Pb-210-004-64	0.63	9.6	8.3 $\pm$ 1.0					-13(1.3)
119	Pb-210	8/24/93	8/24/93	Pb-210-004-64	0.73	11.0	9.0 $\pm$ 1.3					-18(1.5)
	Pb-210	12/22/93	8/24/93	Pb-210-004-64	0.73	11.0	10.3 $\pm$ 1.1					- 6(0.6)
120	Pb-210	8/25/93	8/25/93	Pb-210-004-64	0.58	8.8	8.8 $\pm$ 1.2					+ 0(0.0)
	Pb-210	12/15/93	8/25/93	Pb-210-004-64	0.58	8.8	9.6 $\pm$ 1.1					+ 9(0.7)
121	Pb-210	8/27/93	8/27/93	Pb-210-004-64	0.56	8.3	7.0 $\pm$ 1.1					-16(1.3)
	Pb-210	12/22/93	8/27/93	Pb-210-004-64	0.56	8.3	7.6 $\pm$ 3.6					- 9(0.2)
122	Cs-137	8/30/93	8/30/93	Cs-137-001-122	0.56	11.6	12.9 $\pm$ 0.9			+11(1.5)		
	Ce-144			Ce-144-005-16	0.58	7.8	9.3 $\pm$ 0.8				+18(1.8)	
	Pb-210			Pb-210-004-64	1.27	19.0	24.9 $\pm$ 1.2					+31(5.1)
	Cs-137	12/22/93	8/30/93	Cs-137-001-122	0.56	11.6	12.4 $\pm$ 1.3			+ 7(0.6)		
	Ce-144			Ce-144-005-16	0.58	7.8	9.8 $\pm$ 1.0				+25(2.0)	
	Pb-210			Pb-210-004-64	1.27	19.0	21.8 $\pm$ 4.1					+14(0.7)
123	Pb-210	11/18/93	11/18/93	Pb-210-004-64	0.60	8.9	8.8 $\pm$ 1.1					- 1(0.1)
124	Pb-210	11/18/93	11/18/93	Pb-210-004-64	0.68	10.2	10.7 $\pm$ 1.3					+ 4(0.3)

TABLE 48 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (g)	Activity Added (Bq)	Activity Found (Bq $\pm$ 2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
125	Pb-210	11/18/93	11/18/93	Pb-210-004-64	0.43	6.5	6.3 $\pm$ 0.8					- 3(0.3)
126	Cs-137	11/19/93	11/19/93	Cs-137-001-122	0.61	12.4	12.4 $\pm$ 1.3			+ 0(0.0)		
	Ce-144			Ce-144-005-16	0.71	8.0	8.6 $\pm$ 0.9				+ 8(0.7)	
	Pb-210			Pb-210-004-64	0.43	6.4	6.3 $\pm$ 0.7					- 1(0.1)
127	Pb-210	11/19/93	11/19/93	Pb-210-004-64	0.48	7.2	6.6 $\pm$ 0.8					- 9(0.8)
128	Pb-210	11/22/93	11/22/93	Pb-210-004-64	0.68	10.1	9.2 $\pm$ 1.0					- 9(0.9)
129	Pb-210	11/23/93	11/23/93	Pb-210-004-64	0.52	7.8	7.1 $\pm$ 0.8					- 9(0.8)
130	Cs-137	11/23/93	11/23/93	Cs-137-001-122	0.51	10.5	10.7 $\pm$ 1.2			+ 2(0.2)		
	Ce-144			Ce-144-005-16	0.83	9.1	8.9 $\pm$ 0.9				- 2(0.2)	
	Pb-210			Pb-210-004-64	0.36	5.4	4.4 $\pm$ 0.7					-19(1.5)
131	Cs-137	11/23/93	11/23/93	Cs-137-001-122	0.59	12.1	12.2 $\pm$ 1.3			+ 1(0.1)		
	Ce-144			Ce-144-005-16	0.69	7.7	8.1 $\pm$ 0.8				+ 6(0.6)	
	Pb-210			Pb-210-004-64	0.60	8.9	8.3 $\pm$ 0.9					- 7(0.6)
132	Pb-210	12/16/93	12/16/93	Pb-210-004-65	0.67	1.9	2.0 $\pm$ 0.2					+ 1(0.0)
133	Cs-137	12/16/93	12/16/93	Cs-137-001-123	0.38	0.9	0.8 $\pm$ 0.1			- 9(0.8)		
	Ce-144			Ce-144-005-17	0.63	0.7	0.8 $\pm$ 0.1				+11(0.8)	
	Pb-210			Pb-210-004-65	0.36	1.0	0.9 $\pm$ 0.2					-18(0.9)
134	Pb-210	12/20/93	12/20/93	Pb-210-004-65	0.34	1.0	0.6 $\pm$ 0.2					-38(2.0)

* % deviation is the % deviation between the added and reported activity relative to the added activity. The deviation factor, the difference between the reported and added activity, divided by the counting error of the reported activity, follows in parentheses.

** The % deviation is greater than 99%.

*** The deviation factor is greater than 9.9

TABLE 49
ANALYSES OF COMPOSITE DUPLICATE SAMPLES

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
1	Be-7	6/90	55. ± 7.94	53. ± 3.42	53. ± 3.14	4. (0.2)	0. (0.0)	0. (0.0)	0. (0.0)	5. (0.5)
	Zr-95		0. ± 0.25	0. ± 0.27	0. ± 0.19					
	Cs-137		0. ± 0.05	0. ± 0.07	0. ± 0.04					
	Ce-144		0. ± 0.19	0. ± 0.30	0. ± 0.16					
	Pb-210		8. ± 0.72	7. ± 0.79	7. ± 0.53					
2	Be-7	7/90	78. ± 2.12	64. ± 8.27	78. ± 2.05	18. (1.7)	0. (0.0)	0. (0.0)	0. (0.0)	19. (3.5)
	Zr-95		0. ± 0.13	0. ± 0.04	0. ± 0.04					
	Cs-137		0. ± 0.05	0. ± 0.02	0. ± 0.02					
	Ce-144		0. ± 0.20	0. ± 0.06	0. ± 0.05					
	Pb-210		13. ± 0.59	11. ± 0.22	11. ± 0.21					
3	Be-7	9/90	42. ± 3.49	46. ± 8.33	42. ± 3.22	9. (0.4)	0. (0.0)	0. (0.0)	0. (0.0)	8. (1.1)
	Zr-95		0. ± 0.51	0. ± 1.30	0. ± 0.47					
	Cs-137		0. ± 0.03	0. ± 0.05	0. ± 0.03					
	Ce-144		0. ± 0.17	0. ± 0.29	0. ± 0.15					
	Pb-210		7. ± 0.33	8. ± 0.53	8. ± 0.28					
4	Be-7	10/90	85. ± 11.44	95. ± 6.59	93. ± 5.71	9. (0.7)	0. (0.0)	0. (0.0)	0. (0.0)	10. (2.5)
	Zr-95		0. ± 0.27	0. ± 0.69	0. ± 0.25					
	Cs-137		0. ± 0.02	0. ± 0.04	0. ± 0.02					
	Ce-144		0. ± 0.09	0. ± 0.23	0. ± 0.08					
	Pb-210		15. ± 0.34	17. ± 0.60	15. ± 0.30					
5	Be-7	11/90	62. ± 2.01	59. ± 8.73	62. ± 1.96	4. (0.3)	0. (0.0)	0. (0.0)	0. (0.0)	2. (0.4)
	Zr-95		0. ± 0.21	0. ± 0.39	0. ± 0.19					
	Cs-137		0. ± 0.02	0. ± 0.04	0. ± 0.02					
	Ce-144		0. ± 0.11	0. ± 0.15	0. ± 0.09					
	Pb-210		15. ± 0.32	15. ± 0.63	15. ± 0.28					
6	Be-7	12/90	78. ± 6.07	79. ± 11.00	78. ± 5.31	1. (0.1)	0. (0.0)	0. (0.0)	0. (0.0)	14. (2.5)
	Zr-95		0. ± 0.48	0. ± 0.27	0. ± 0.24					
	Cs-137		0. ± 0.08	0. ± 0.04	0. ± 0.03					
	Ce-144		0. ± 0.36	0. ± 0.15	0. ± 0.14					
	Pb-210		20. ± 1.27	24. ± 0.79	23. ± 0.67					
7	Be-7	1/91	74. ± 9.72	10. ± 1.31	11. ± 1.30	**, (6.4)	0. (0.0)	0. (0.0)	0. (0.0)	39. (9.5)
	Zr-95		0. ± 0.12	0. ± 0.24	0. ± 0.11					
	Cs-137		0. ± 0.02	0. ± 0.05	0. ± 0.02					
	Ce-144		0. ± 0.09	0. ± 0.20	0. ± 0.08					
	Pb-210		16. ± 0.42	8. ± 0.54	13. ± 0.33					

TABLE 49 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
8	Be-7	2/91	81. ± 11.10	75. ± 10.50	78. ± 7.64	4. (0.3)	0. (0.0)	0. (0.0)	0. (0.0)	2. (0.3)
	Zr-95		0. ± 0.22	0. ± 0.22	0. ± 0.16					
	Cs-137		0. ± 0.06	0. ± 0.05	0. ± 0.04					
	Ce-144		0. ± 0.18	0. ± 0.20	0. ± 0.14					
	Pb-210		15. ± 0.89	16. ± 0.96	15. ± 0.65					
9	Be-7	3/91	82. ± 11.10	90. ± 2.04	90. ± 2.00	9. (0.7)	0. (0.0)	0. (0.0)	0. (0.0)	4. (0.5)
	Zr-95		0. ± 0.17	0. ± 0.11	0. ± 0.09					
	Cs-137		0. ± 0.05	0. ± 0.04	0. ± 0.03					
	Ce-144		0. ± 0.21	0. ± 0.17	0. ± 0.13					
	Pb-210		12. ± 0.88	13. ± 0.55	13. ± 0.47					
10	Be-7	4/91	123. ± 4.66	112. ± 4.19	117. ± 3.12	5. (1.3)	0. (0.0)	0. (0.0)	0. (0.0)	1. (0.2)
	Zr-95		0. ± 0.22	0. ± 0.22	0. ± 0.16					
	Cs-137		0. ± 0.08	0. ± 0.08	0. ± 0.06					
	Ce-144		0. ± 0.33	0. ± 0.33	0. ± 0.23					
	Pb-210		14. ± 1.06	13. ± 1.04	14. ± 0.74					
11	Be-7	5/91	109. ± 3.54	110. ± 1.87	110. ± 1.65	0. (0.1)	0. (0.0)	0. (0.0)	0. (0.0)	5. (1.2)
	Zr-95		0. ± 0.23	0. ± 0.11	0. ± 0.10					
	Cs-137		0. ± 0.05	0. ± 0.03	0. ± 0.02					
	Ce-144		0. ± 0.20	0. ± 0.12	0. ± 0.10					
	Pb-210		15. ± 0.67	16. ± 0.42	15. ± 0.35					
12	Be-7	6/91	63. ± 8.55	87. ± 2.80	85. ± 2.66	25. (2.5)	0. (0.0)	0. (0.0)	0. (0.0)	13. (2.6)
	Zr-95		0. ± 0.17	0. ± 0.20	0. ± 0.13					
	Cs-137		0. ± 0.03	0. ± 0.04	0. ± 0.03					
	Ce-144		0. ± 0.12	0. ± 0.18	0. ± 0.10					
	Pb-210		9. ± 0.46	12. ± 0.54	10. ± 0.35					
13	Be-7	7/91	125. ± 16.40	128. ± 2.81	128. ± 2.77	2. (0.1)	0. (0.0)	0. (0.0)	0. (0.0)	1. (0.2)
	Zr-95		0. ± 0.11	0. ± 0.14	0. ± 0.08					
	Cs-137		0. ± 0.03	0. ± 0.04	0. ± 0.03					
	Ce-144		0. ± 0.13	0. ± 0.19	0. ± 0.11					
	Pb-210		21. ± 0.64	22. ± 0.73	21. ± 0.48					
14	Be-7	8/91	71. ± 10.60	88. ± 3.84	86. ± 3.61	18. (1.4)	0. (0.0)	0. (0.0)	0. (0.0)	9. (1.2)
	Zr-95		0. ± 0.14	0. ± 0.20	0. ± 0.12					
	Cs-137		0. ± 0.03	0. ± 0.03	0. ± 0.02					
	Ce-144		0. ± 0.12	0. ± 0.14	0. ± 0.09					
	Pb-210		16. ± 1.27	18. ± 0.94	18. ± 0.76					

TABLE 49 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
15	Be-7	9/91	68. ± 2.60	69. ± 10.10	68. ± 2.54	1. (0.1)	0. (0.0)	0. (0.0)	0. (0.0)	5. (0.5)
	Zr-95		0. ± 0.12	0. ± 0.29	0. ± 0.11					
	Cs-137		0. ± 0.02	0. ± 0.06	0. ± 0.02					
	Ce-144		0. ± 0.11	0. ± 0.20	0. ± 0.10					
	Pb-210		16. ± 0.61	16. ± 1.54	16. ± 0.57					
16	Be-7	10/91	100. ± 5.02	86. ± 4.50	92. ± 3.35	8. (1.5)	0. (0.0)	**. (0.7)	0. (0.0)	8. (1.5)
	Zr-95		0. ± 0.07	0. ± 0.13	0. ± 0.06					
	Cs-137		0. ± 0.01	0. ± 0.05	0. ± 0.01					
	Ce-144		0. ± 0.10	0. ± 0.19	0. ± 0.09					
	Pb-210		21. ± 1.05	18. ± 0.99	19. ± 0.72					
17	Be-7	11/91	58. ± 7.79	66. ± 2.77	65. ± 2.61	10. (0.9)	0. (0.0)	0. (0.0)	0. (0.0)	4. (0.6)
	Zr-95		0. ± 0.16	0. ± 0.10	0. ± 0.09					
	Cs-137		0. ± 0.05	0. ± 0.04	0. ± 0.03					
	Ce-144		0. ± 0.18	0. ± 0.16	0. ± 0.12					
	Pb-210		20. ± 0.94	21. ± 1.23	20. ± 0.75					
18	Be-7	12/91	86. ± 11.90	93. ± 11.60	90. ± 8.29	4. (0.3)	0. (0.0)	0. (0.0)	0. (0.0)	12. (1.0)
	Zr-95		0. ± 0.24	0. ± 0.35	0. ± 0.20					
	Cs-137		0. ± 0.06	0. ± 0.07	0. ± 0.05					
	Ce-144		0. ± 0.22	0. ± 0.33	0. ± 0.19					
	Pb-210		26. ± 1.22	22. ± 2.88	25. ± 1.12					
19	Be-7	1/92	0. ± 36.20	76. ± 21.90	56. ± 18.70	**. (1.5)	0. (0.0)	0. (0.0)	0. (0.0)	10. (0.8)
	Zr-95		0. ± 3.02	0. ± 3.97	0. ± 2.40					
	Cs-137		0. ± 0.04	0. ± 0.04	0. ± 0.03					
	Ce-144		0. ± 0.24	0. ± 0.33	0. ± 0.19					
	Pb-210		13. ± 0.64	11. ± 1.64	13. ± 0.59					
20	Be-7	2/92	90. ± 10.30	0. ± 50.00	86. ± 10.10	**. (1.7)	0. (0.0)	0. (0.0)	0. (0.0)	3. (0.2)
	Zr-95		0. ± 0.14	0. ± 3.66	0. ± 0.14					
	Cs-137		0. ± 0.04	0. ± 0.07	0. ± 0.04					
	Ce-144		0. ± 0.19	0. ± 0.52	0. ± 0.18					
	Pb-210		16. ± 1.91	17. ± 2.23	16. ± 1.45					

TABLE 49 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
21	Be-7	3/92	148. ± 18.60	160. ± 17.10	154. ± 12.60	4. (0.4)				
	Zr-95		0. ± 1.07	0. ± 0.28	0. ± 0.27		0. (0.0)			
	Cs-137		0. ± 0.07	0. ± 0.01	0. ± 0.01			** (0.6)		
	Ce-144		0. ± 0.41	0. ± 0.13	0. ± 0.12				0. (0.0)	
	Pb-210		18. ± 2.17	18. ± 2.13	18. ± 1.52					1. (0.1)
22	Be-7	4/92	108. ± 12.60	113. ± 14.50	110. ± 9.52	3. (0.2)				
	Zr-95		0. ± 0.42	0. ± 0.66	0. ± 0.35		0. (0.0)			
	Cs-137		0. ± 0.07	0. ± 0.08	0. ± 0.05			0. (0.0)		
	Ce-144		0. ± 0.36	0. ± 0.45	0. ± 0.28				0. (0.0)	
	Pb-210		11. ± 1.40	11. ± 1.40	11. ± 0.99					1. (0.1)
23	Be-7	5/92	130. ± 17.70	152. ± 16.20	142. ± 12.00	9. (0.7)				
	Zr-95		0. ± 0.36	0. ± 0.29	0. ± 0.23		0. (0.0)			
	Cs-137		0. ± 0.05	0. ± 0.04	0. ± 0.03			0. (0.0)		
	Ce-144		0. ± 0.22	0. ± 0.21	0. ± 0.15				0. (0.0)	
	Pb-210		13. ± 0.70	12. ± 1.51	13. ± 0.63					6. (0.5)
24	Be-7	6/92	94. ± 11.00	127. ± 18.20	103. ± 9.42	23. (1.3)				
	Zr-95		0. ± 0.28	0. ± 0.68	0. ± 0.26		0. (0.0)			
	Cs-137		0. ± 0.03	0. ± 0.08	0. ± 0.03			0. (0.0)		
	Ce-144		0. ± 0.15	0. ± 0.40	0. ± 0.14				0. (0.0)	
	Pb-210		8. ± 1.09	11. ± 1.55	9. ± 0.89					23. (1.4)
25	Be-7	7/92	84. ± 10.70	80. ± 10.10	82. ± 7.33	3. (0.2)				
	Zr-95		0. ± 0.31	0. ± 0.46	0. ± 0.26		0. (0.0)			
	Cs-137		0. ± 0.04	0. ± 0.06	0. ± 0.04			0. (0.0)		
	Ce-144		0. ± 0.22	0. ± 0.35	0. ± 0.18				0. (0.0)	
	Pb-210		11. ± 1.43	10. ± 1.46	10. ± 1.02					4. (0.3)
26	Be-7	8/92	133. ± 16.20	169. ± 19.10	148. ± 12.40	14. (1.1)				
	Zr-95		0. ± 0.33	0. ± 0.22	0. ± 0.18		0. (0.0)			
	Cs-137		0. ± 0.07	0. ± 0.04	0. ± 0.04			0. (0.0)		
	Ce-144		0. ± 0.35	0. ± 0.21	0. ± 0.18				0. (0.0)	
	Pb-210		14. ± 1.81	17. ± 2.19	15. ± 1.40					14. (0.9)

TABLE 49 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
27	Be-7	9/92	92. ± 12.70	101. ± 12.30	97. ± 8.84	5. (0.4)	0. (0.0)	0. (0.0)	0. (0.0)	9. (0.2)
	Zr-95		0. ± 0.35	0. ± 0.27	0. ± 0.22					
	Cs-137		0. ± 0.05	0. ± 0.04	0. ± 0.03					
	Ce-144		0. ± 0.22	0. ± 0.22	0. ± 0.16					
	Pb-210		12. ± 5.90	11. ± 1.57	11. ± 1.52					
28	Be-7	10/92	85. ± 10.10	111. ± 14.10	94. ± 8.18	19. (1.2)	0. (0.0)	0. (0.0)	0. (0.0)	15. (0.9)
	Zr-95		0. ± 0.26	0. ± 0.48	0. ± 0.23					
	Cs-137		0. ± 0.05	0. ± 0.07	0. ± 0.04					
	Ce-144		0. ± 0.22	0. ± 0.36	0. ± 0.19					
	Pb-210		15. ± 2.07	18. ± 2.65	16. ± 1.63					
29	Be-7	11/92	74. ± 8.95	86. ± 12.00	78. ± 7.17	9. (0.6)	0. (0.0)	0. (0.0)	0. (0.0)	24. (2.3)
	Zr-95		0. ± 0.31	0. ± 0.26	0. ± 0.20					
	Cs-137		0. ± 0.07	0. ± 0.05	0. ± 0.04					
	Ce-144		0. ± 0.35	0. ± 0.22	0. ± 0.19					
	Pb-210		12. ± 1.70	18. ± 1.16	16. ± 0.96					
30	Be-7	12/92	85. ± 9.50	77. ± 11.20	82. ± 7.23	6. (0.5)	0. (0.0)	0. (0.0)	0. (0.0)	8. (0.4)
	Zr-95		0. ± 0.21	0. ± 0.24	0. ± 0.16					
	Cs-137		0. ± 0.04	0. ± 0.04	0. ± 0.03					
	Ce-144		0. ± 0.18	0. ± 0.19	0. ± 0.13					
	Pb-210		14. ± 2.44	12. ± 2.02	13. ± 1.55					
31	Be-7	1/93	97. ± 13.50	111. ± 14.20	104. ± 9.77	7. (0.5)	0. (0.0)	0. (0.0)	0. (0.0)	9. (0.6)
	Zr-95		0. ± 0.14	0. ± 0.18	0. ± 0.11					
	Cs-137		0. ± 0.03	0. ± 0.04	0. ± 0.02					
	Ce-144		0. ± 0.14	0. ± 0.21	0. ± 0.11					
	Pb-210		16. ± 2.86	19. ± 2.79	18. ± 2.00					
32	Be-7	2/93	108. ± 14.50	103. ± 15.30	106. ± 10.50	2. (0.2)	0. (0.0)	0. (0.0)	0. (0.0)	4. (0.3)
	Zr-95		0. ± 0.13	0. ± 0.12	0. ± 0.09					
	Cs-137		0. ± 0.04	0. ± 0.04	0. ± 0.03					
	Ce-144		0. ± 0.20	0. ± 0.17	0. ± 0.13					
	Pb-210		14. ± 2.27	13. ± 1.89	14. ± 1.45					

TABLE 49 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	± Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
33	Be-7	3/93	80. ± 9.36	81. ± 10.80	81. ± 7.08	0. (0.0)				
	Zr-95		0. ± 0.15	0. ± 0.55	0. ± 0.15		0. (0.0)			
	Cs-137		0. ± 0.01	0. ± 0.08	0. ± 0.01			** (0.5)		
	Ce-144		0. ± 0.09	0. ± 0.37	0. ± 0.09				0. (0.0)	
	Pb-210		13. ± 1.75	14. ± 1.97	13. ± 1.31					4. (0.3)
34	Be-7	4/93	118. ± 15.90	111. ± 13.60	114. ± 10.30	4. (0.3)				
	Zr-95		0. ± 0.25	0. ± 0.59	0. ± 0.23		0. (0.0)			
	Cs-137		0. ± 0.03	0. ± 0.06	0. ± 0.03			0. (0.0)		
	Ce-144		0. ± 0.15	0. ± 0.26	0. ± 0.13				0. (0.0)	
	Pb-210		10. ± 0.37	9. ± 4.52	10. ± 0.37					13. (0.3)
35	Be-7	5/93	123. ± 16.30	148. ± 15.20	136. ± 11.10	10. (0.8)				
	Zr-95		0. ± 0.13	0. ± 0.24	0. ± 0.11		0. (0.0)			
	Cs-137		0. ± 0.03	0. ± 0.02	0. ± 0.02			0. (0.0)		
	Ce-144		0. ± 0.12	0. ± 0.12	0. ± 0.08				0. (0.0)	
	Pb-210		11. ± 0.34	11. ± 3.03	11. ± 0.34					2. (0.1)
36	Be-7	6/93	107. ± 14.20	126. ± 13.80	116. ± 9.91	8. (0.7)				
	Zr-95		0. ± 0.16	0. ± 0.25	0. ± 0.13		0. (0.0)			
	Cs-137		0. ± 0.05	0. ± 0.04	0. ± 0.03			0. (0.0)		
	Ce-144		0. ± 0.23	0. ± 0.19	0. ± 0.15				0. (0.0)	
	Pb-210		12. ± 0.71	11. ± 1.32	12. ± 0.63					6. (0.6)
37	Be-7	8/93	154. ± 16.20	143. ± 15.00	148. ± 11.00	4. (0.3)				
	Zr-95		0. ± 0.12	0. ± 0.17	0. ± 0.10		0. (0.0)			
	Cs-137		0. ± 0.02	0. ± 0.03	0. ± 0.02			0. (0.0)		
	Ce-144		0. ± 0.11	0. ± 0.13	0. ± 0.08				0. (0.0)	
	Pb-210		18. ± 2.00	16. ± 1.79	17. ± 1.34					6. (0.6)
38	Be-7	9/93	111. ± 11.90	115. ± 12.50	113. ± 8.59	2. (0.2)				
	Zr-95		0. ± 0.10	0. ± 0.25	0. ± 0.09		0. (0.0)			
	Cs-137		0. ± 0.03	0. ± 0.07	0. ± 0.03			0. (0.0)		
	Ce-144		0. ± 0.12	0. ± 0.31	0. ± 0.11				0. (0.0)	
	Pb-210		12. ± 1.93	13. ± 2.35	13. ± 1.49					1. (0.1)

TABLE 49 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
39	Be-7	10/93	93. ± 10.30	91. ± 9.84	92. ± 7.10	1. (0.1)	0. (0.0)	0. (0.0)	0. (0.0)	9. (0.3)
	Zr-95		0. ± 0.31	0. ± 0.33	0. ± 0.23					
	Cs-137		0. ± 0.05	0. ± 0.04	0. ± 0.03					
	Ce-144		0. ± 0.22	0. ± 0.20	0. ± 0.15					
	Pb-210		12. ± 3.34	11. ± 1.17	11. ± 1.10					
40	Be-7	11/93	114. ± 12.10	112. ± 11.80	113. ± 8.46	1. (0.1)	0. (0.0)	0. (0.0)	0. (0.0)	2. (0.2)
	Zr-95		0. ± 0.20	0. ± 0.11	0. ± 0.09					
	Cs-137		0. ± 0.06	0. ± 0.03	0. ± 0.03					
	Ce-144		0. ± 0.28	0. ± 0.16	0. ± 0.14					
	Pb-210		20. ± 2.18	21. ± 2.18	21. ± 1.54					
41	Be-7	12/93	95. ± 9.91	101. ± 10.60	98. ± 7.23	3. (0.3)	0. (0.0)	0. (0.0)	0. (0.0)	1. (0.1)
	Zr-95		0. ± 0.09	0. ± 0.09	0. ± 0.06					
	Cs-137		0. ± 0.03	0. ± 0.04	0. ± 0.02					
	Ce-144		0. ± 0.14	0. ± 0.15	0. ± 0.10					
	Pb-210		19. ± 2.11	20. ± 2.08	19. ± 1.48					

* % deviation is the greater of the % deviations obtained by taking the % deviation of each measurement from the weighted mean of the two measurements. The deviation factor, the greater of the ratios obtained by taking the deviation of each measurement from the weighted mean of the two measurements, and dividing it by the counting error of that measurement, follows in parentheses.

** % deviation greater than 99%

TABLE 50
REPLICATE ANALYSES OF A SINGLE COMPOSITE SAMPLE

No.	Nuclide	Counting Date	Reference Date	Activity Found (Bq $\pm$ 2s)	% Deviation*	
					¹³⁷ Cs	²¹⁰ Pb
1	Cs-137	1/13/90	1/ 1/86	149.0 $\pm$ 0.42	1.8	
	Pb-210	1/13/90	1/ 1/86	56.8 $\pm$ 0.66		12.3
2	Cs-137	2/27/90	1/ 1/86	140.0 $\pm$ 1.34	-4.4	
	Pb-210	2/27/90	1/ 1/86	47.7 $\pm$ 2.07		-5.8
3	Cs-137	3/27/90	1/ 1/86	146.5 $\pm$ 0.76	0.0	
	Pb-210	3/27/90	1/ 1/86	55.3 $\pm$ 1.21		9.3
4	Cs-137	4/11/90	1/ 1/86	146.6 $\pm$ 1.32	0.1	
	Pb-210	4/11/90	1/ 1/86	54.9 $\pm$ 2.13		8.5
5	Cs-137	6/ 5/90	1/ 1/86	147.7 $\pm$ 1.36	0.9	
	Pb-210	6/ 5/90	1/ 1/86	52.9 $\pm$ 2.13		4.6
6	Cs-137	7/30/90	1/ 1/86	148.3 $\pm$ 0.83	1.3	
	Pb-210	7/30/90	1/ 1/86	55.1 $\pm$ 1.33		8.9
7	Cs-137	8/11/90	1/ 1/86	144.9 $\pm$ 9.16	-1.1	
	Pb-210	8/11/90	1/ 1/86	51.7 $\pm$ 0.72		2.2
8	Cs-137	9/20/90	1/ 1/86	147.4 $\pm$ 9.46	0.6	
	Pb-210	9/20/90	1/ 1/86	54.5 $\pm$ 2.00		7.6
9	Cs-137	10/ 9/90	1/ 1/86	141.9 $\pm$ 9.03	-3.1	
	Pb-210	10/ 9/90	1/ 1/86	50.7 $\pm$ 1.27		0.3
10	Cs-137	11/12/90	1/ 1/86	143.1 $\pm$ 9.10	-2.2	
	Pb-210	11/12/90	1/ 1/86	52.2 $\pm$ 1.06		3.1
11	Cs-137	3/11/91	1/ 1/86	144.4 $\pm$ 9.18	-1.4	
	Pb-210	3/11/91	1/ 1/86	52.7 $\pm$ 1.27		4.0
12	Cs-137	4/ 9/91	1/ 1/86	145.5 $\pm$ 0.81	-0.6	
	Pb-210	4/ 9/91	1/ 1/86	54.1 $\pm$ 1.30		7.0
13	Cs-137	5/ 2/91	1/ 1/86	142.0 $\pm$ 9.12	-3.0	
	Pb-210	5/ 2/91	1/ 1/86	48.8 $\pm$ 2.00		-3.6
14	Cs-137	6/ 5/91	1/ 1/86	146.4 $\pm$ 9.31	-0.1	
	Pb-210	6/ 5/91	1/ 1/86	54.0 $\pm$ 1.30		6.8
15	Cs-137	7/ 1/91	1/ 1/86	145.3 $\pm$ 9.24	-0.8	
	Pb-210	7/ 1/91	1/ 1/86	53.1 $\pm$ 1.28		5.0
16	Cs-137	8/ 5/91	1/ 1/86	143.3 $\pm$ 0.80	-2.2	
	Pb-210	8/ 5/91	1/ 1/86	51.3 $\pm$ 1.27		1.3
17	Cs-137	9/ 3/91	1/ 1/86	146.6 $\pm$ 0.85	0.1	
	Pb-210	9/ 3/91	1/ 1/86	55.5 $\pm$ 1.36		9.6
18	Cs-137	10/30/91	1/ 1/86	147.4 $\pm$ 9.37	0.6	
	Pb-210	10/30/91	1/ 1/86	54.6 $\pm$ 1.34		7.9

TABLE 50 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Activity Found (Bq $\pm$ 2s)	% Deviation*	
					¹³⁷ Cs	²¹⁰ Pb
19	Cs-137	12/24/91	1/ 1/86	144.2 $\pm$ 9.35	-1.5	
	Pb-210	12/24/91	1/ 1/86	52.4 $\pm$ 1.14		3.5
20	Cs-137	1/15/92	1/ 1/86	148.8 $\pm$ 14.02	1.6	
	Pb-210	1/15/92	1/ 1/86	49.9 $\pm$ 5.36		-1.4
21	Cs-137	4/ 2/92	1/ 1/86	143.8 $\pm$ 9.43	-1.8	
	Pb-210	4/ 2/92	1/ 1/86	51.3 $\pm$ 1.69		1.4
22	Cs-137	4/21/92	1/ 1/86	140.7 $\pm$ 13.31	-3.9	
	Pb-210	4/21/92	1/ 1/86	45.5 $\pm$ 4.79		-10.2
23	Cs-137	5/18/92	1/ 1/86	141.2 $\pm$ 13.41	-3.6	
	Pb-210	5/18/92	1/ 1/86	45.6 $\pm$ 4.83		-10.0
24	Cs-137	7/ 1/92	1/ 1/86	149.6 $\pm$ 14.45	2.1	
	Pb-210	7/ 1/92	1/ 1/86	45.8 $\pm$ 5.50		-9.6
25	Cs-137	7/ 7/92	1/ 1/86	150.7 $\pm$ 14.25	2.9	
	Pb-210	7/ 7/92	1/ 1/86	50.7 $\pm$ 7.76		0.1
26	Cs-137	9/10/92	1/ 1/86	146.0 $\pm$ 9.61	-0.3	
	Pb-210	9/10/92	1/ 1/86	54.1 $\pm$ 1.28		6.8
27	Cs-137	10/15/92	1/ 1/86	150.0 $\pm$ 14.22	2.4	
	Pb-210	10/15/92	1/ 1/86	51.2 $\pm$ 5.74		1.2
28	Cs-137	11/ 9/92	1/ 1/86	146.0 $\pm$ 9.75	-0.3	
	Pb-210	11/ 9/92	1/ 1/86	53.2 $\pm$ 2.90		5.0
29	Cs-137	11/13/92	1/ 1/86	145.9 $\pm$ 9.60	-0.3	
	Pb-210	11/13/92	1/ 1/86	53.3 $\pm$ 1.01		5.3
30	Cs-137	12/ 9/92	1/ 1/86	144.1 $\pm$ 14.09	-1.6	
	Pb-210	12/ 9/92	1/ 1/86	45.0 $\pm$ 5.49		-11.1
31	Cs-137	1/14/93	1/ 1/86	145.9 $\pm$ 9.48	-0.4	
	Pb-210	1/14/93	1/ 1/86	53.0 $\pm$ 31.82		4.8
32	Cs-137	2/12/93	1/ 1/86	146.3 $\pm$ 9.48	-0.1	
	Pb-210	2/12/93	1/ 1/86	54.0 $\pm$ 1.07		6.6
33	Cs-137	4/ 5/93	1/ 1/86	145.1 $\pm$ 9.46	-0.9	
	Pb-210	4/ 5/93	1/ 1/86	53.1 $\pm$ 3.90		5.0
34	Cs-137	4/ 8/93	1/ 1/86	197.2 $\pm$ 12.93	34.6	
	Pb-210	4/ 8/93	1/ 1/86	71.4 $\pm$ 1.53		41.0
35	Cs-137	4/26/93	1/ 1/86	145.7 $\pm$ 9.56	-0.5	
	Pb-210	4/26/93	1/ 1/86	52.5 $\pm$ 4.72		3.7
36	Cs-137	6/30/93	1/ 1/86	145.3 $\pm$ 9.53	-0.8	
	Pb-210	6/30/93	1/ 1/86	53.5 $\pm$ 1.42		5.6

TABLE 50 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Activity Found (Bq $\pm$ 2s)	% Deviation*	
					¹³⁷ Cs	²¹⁰ Pb
37	Cs-137	8/10/93	1/ 1/86	146.3 $\pm$ 9.80	-0.1	
	Pb-210	8/10/93	1/ 1/86	53.9 $\pm$ 1.73		6.4
38	Cs-137	9/ 7/93	1/ 1/86	145.8 $\pm$ 9.51	-0.4	
	Pb-210	9/ 7/93	1/ 1/86	54.0 $\pm$ 1.16		6.8
39	Cs-137	11/22/93	1/ 1/86	142.7 $\pm$ 14.93	-2.6	
	Pb-210	11/22/93	1/ 1/86	40.3 $\pm$ 4.35		-20.4

* % deviation from long-term mean value

TABLE 51
COMPOSITE BLANK SAMPLE ANALYSIS

No.	Counting Date	Reference Date	Count Time (hrs)	Detector	Activity Found (mBq $\pm$ 2s)				
					⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
1.	1/16/90	1/16/90	19.0	A2	0. $\pm$ 302.	0. $\pm$ 65.	0. $\pm$ 44.	0. $\pm$ 139.	0. $\pm$ 482.
2.	1/30/90	1/30/90	17.1	B2	0. $\pm$ 247.	0. $\pm$ 61.	0. $\pm$ 31.	0. $\pm$ 93.	121. $\pm$ 238.
3.	2/26/90	2/26/90	17.3	A2	0. $\pm$ 310.	0. $\pm$ 70.	0. $\pm$ 43.	0. $\pm$ 150.	0. $\pm$ 504.
4.	3/26/90	3/26/90	18.1	A2	0. $\pm$ 299.	0. $\pm$ 66.	0. $\pm$ 43.	0. $\pm$ 149.	0. $\pm$ 492.
5.	4/10/90	4/10/90	23.1	A2	0. $\pm$ 271.	0. $\pm$ 60.	0. $\pm$ 41.	0. $\pm$ 132.	0. $\pm$ 426.
6.	6/ 6/90	6/ 6/90	23.7	B2	0. $\pm$ 206.	0. $\pm$ 45.	0. $\pm$ 30.	0. $\pm$ 76.	0. $\pm$ 212.
7.	8/ 1/90	8/ 1/90	6.7	A2	0. $\pm$ 494.	0. $\pm$ 112.	0. $\pm$ 79.	0. $\pm$ 241.	0. $\pm$ 814.
8.	8/ 6/90	8/ 6/90	16.7	A2	0. $\pm$ 311.	0. $\pm$ 69.	0. $\pm$ 48.	0. $\pm$ 151.	0. $\pm$ 511.
9.	9/18/90	9/18/90	46.3	A2	0. $\pm$ 189.	0. $\pm$ 44.	0. $\pm$ 29.	0. $\pm$ 90.	0. $\pm$ 310.
10.	10/ 4/90	10/ 4/90	24.4	A2	0. $\pm$ 195.	0. $\pm$ 50.	0. $\pm$ 32.	0. $\pm$ 75.	0. $\pm$ 210.
11.	11/ 1/90	11/ 1/90	23.9	B2	0. $\pm$ 203.	0. $\pm$ 47.	0. $\pm$ 31.	0. $\pm$ 78.	0. $\pm$ 231.
12.	12/17/90	12/17/90	24.5	A2	0. $\pm$ 257.	0. $\pm$ 60.	0. $\pm$ 41.	0. $\pm$ 127.	0. $\pm$ 424.
13.	12/27/90	12/27/90	22.4	A2	0. $\pm$ 273.	0. $\pm$ 62.	0. $\pm$ 40.	0. $\pm$ 132.	0. $\pm$ 436.
14.	3/ 6/91	3/ 6/91	23.9	B2	0. $\pm$ 221.	0. $\pm$ 50.	0. $\pm$ 31.	0. $\pm$ 79.	0. $\pm$ 233.
15.	3/22/91	3/22/91	71.0	B2	0. $\pm$ 113.	0. $\pm$ 29.	0. $\pm$ 17.	0. $\pm$ 45.	0. $\pm$ 120.
16.	4/10/91	4/10/91	25.1	B2	0. $\pm$ 207.	0. $\pm$ 49.	0. $\pm$ 29.	0. $\pm$ 76.	0. $\pm$ 203.
17.	6/14/91	6/14/91	64.8	A2	0. $\pm$ 159.	0. $\pm$ 35.	0. $\pm$ 24.	0. $\pm$ 76.	0. $\pm$ 252.
18.	7/12/91	7/12/91	26.8	A2	0. $\pm$ 246.	0. $\pm$ 55.	0. $\pm$ 36.	0. $\pm$ 119.	0. $\pm$ 402.
19.	8/27/91	8/27/91	45.0	A2	0. $\pm$ 190.	0. $\pm$ 42.	0. $\pm$ 29.	0. $\pm$ 91.	0. $\pm$ 305.
20.	8/30/91	8/30/91	6.8	A2	0. $\pm$ 522.	0. $\pm$ 103.	0. $\pm$ 73.	0. $\pm$ 243.	0. $\pm$ 787.
21.	9/16/91	9/16/91	23.7	B2	0. $\pm$ 210.	0. $\pm$ 52.	0. $\pm$ 30.	0. $\pm$ 80.	0. $\pm$ 27.
22.	10/ 2/91	10/ 2/91	7.0	B2	0. $\pm$ 352.	0. $\pm$ 84.	0. $\pm$ 50.	0. $\pm$ 151.	0. $\pm$ 48.
23.	11/ 2/91	11/ 2/91	45.5	A2	0. $\pm$ 186.	0. $\pm$ 43.	0. $\pm$ 29.	0. $\pm$ 93.	0. $\pm$ 307.
24.	12/12/91	12/12/91	8.0	A2	0. $\pm$ 378.	0. $\pm$ 99.	0. $\pm$ 57.	0. $\pm$ 227.	0. $\pm$ 627.
25.	1/29/92	1/29/92	7.5	A2	0. $\pm$ 418.	0. $\pm$ 95.	0. $\pm$ 62.	0. $\pm$ 227.	0. $\pm$ 673.
26.	3/26/92	3/26/92	24.5	A2	0. $\pm$ 236.	0. $\pm$ 56.	0. $\pm$ 37.	0. $\pm$ 124.	0. $\pm$ 373.
27.	3/28/92	3/28/92	45.8	A2	0. $\pm$ 177.	0. $\pm$ 40.	0. $\pm$ 27.	0. $\pm$ 92.	0. $\pm$ 265.
28.	4/30/92	4/30/92	17.2	A2	0. $\pm$ 285.	0. $\pm$ 63.	0. $\pm$ 44.	0. $\pm$ 145.	0. $\pm$ 424.
29.	5/ 6/92	5/ 6/92	25.7	A2	0. $\pm$ 226.	0. $\pm$ 49.	0. $\pm$ 37.	0. $\pm$ 118.	0. $\pm$ 358.
30.	5/22/92	5/22/92	95.1	B2	0. $\pm$ 101.	0. $\pm$ 24.	0. $\pm$ 15.	0. $\pm$ 39.	0. $\pm$ 13.
31.	8/14/92	8/14/92	70.1	A2	0. $\pm$ 138.	0. $\pm$ 32.	0. $\pm$ 21.	0. $\pm$ 73.	0. $\pm$ 217.
32.	9/17/92	9/17/92	23.2	A2	0. $\pm$ 239.	0. $\pm$ 55.	0. $\pm$ 36.	0. $\pm$ 125.	0. $\pm$ 373.
33.	10/21/92	10/21/92	17.5	A2	0. $\pm$ 279.	0. $\pm$ 63.	0. $\pm$ 42.	0. $\pm$ 144.	0. $\pm$ 420.
34.	12/21/92	12/21/92	24.6	A2	0. $\pm$ 233.	0. $\pm$ 52.	0. $\pm$ 35.	0. $\pm$ 126.	0. $\pm$ 364.
35.	2/ 2/93	2/ 2/93	9.2	B2	0. $\pm$ 300.	0. $\pm$ 77.	0. $\pm$ 45.	0. $\pm$ 125.	0. $\pm$ 38.
36.	3/ 8/93	3/ 8/93	16.1	B2	0. $\pm$ 233.	0. $\pm$ 65.	0. $\pm$ 35.	0. $\pm$ 94.	0. $\pm$ 29.
37.	3/ 9/93	3/ 9/93	16.4	A2	0. $\pm$ 306.	0. $\pm$ 66.	0. $\pm$ 45.	0. $\pm$ 156.	0. $\pm$ 438.
38.	4/ 8/93	4/ 8/93	17.0	A2	0. $\pm$ 293.	0. $\pm$ 68.	0. $\pm$ 45.	0. $\pm$ 149.	0. $\pm$ 444.

TABLE 51 (Cont'd)

No.	Counting Date	Reference Date	Count Time (hrs)	Detector	Activity Found (mBq $\pm$ 2s)									
					^7Be		^{95}Zr		^{137}Cs		^{144}Ce		^{210}Pb	
49.	8/26/93	8/26/93	16.0	B2	0. $\pm$	223.	0. $\pm$	52.	0. $\pm$	35.	0. $\pm$	96.	0. $\pm$	28.
40.	9/ 8/93	9/ 8/93	20.7	B2	0. $\pm$	199.	0. $\pm$	47.	0. $\pm$	29.	0. $\pm$	86.	0. $\pm$	25.
41.	11/19/93	11/19/93	7.0	B2	0. $\pm$	113.	0. $\pm$	25.	0. $\pm$	16.	0. $\pm$	45.	0. $\pm$	14.
42.	11/22/93	11/22/93	22.9	A2	0. $\pm$	244.	0. $\pm$	52.	0. $\pm$	37.	0. $\pm$	128.	0. $\pm$	372.
43.	12/13/93	12/13/93	16.2	B2	0. $\pm$	219.	0. $\pm$	50.	0. $\pm$	34.	0. $\pm$	92.	0. $\pm$	29.
44.	12/15/93	12/15/93	16.7	B2	0. $\pm$	246.	0. $\pm$	52.	0. $\pm$	32.	0. $\pm$	94.	0. $\pm$	28.
45.	12/16/93	12/16/93	17.1	A2	0. $\pm$	281.	0. $\pm$	66.	0. $\pm$	43.	0. $\pm$	144.	0. $\pm$	437.
46.	12/20/93	12/20/93	17.6	A2	0. $\pm$	288.	0. $\pm$	65.	0. $\pm$	42.	0. $\pm$	152.	0. $\pm$	434.

TABLE 52
INDIVIDUAL REFERENCE SAMPLE ANALYSIS

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
1	Be-7	1/ 3/90	1/ 3/90	Be-7-023-VI	0.17	1.28	1.33 ± 0.09	+ 4(0.5)				
	Zr-95			Zr-95-016-V	0.21	0.91	0.95 ± 0.03		+ 4(1.5)			
	Cs-137			Cs-137-001-CXI	0.08	0.68	0.81 ± 0.02			+20(5.7)		
	Ce-144			Ce-144-005-III	0.11	0.43	0.56 ± 0.03				+31(4.7)	
	Pb-210			Pb-210-004-LI	0.19	5.74	4.81 ± 0.13					-16(7.4)
	Be-7	4/16/90	1/ 3/90	Be-7-023-VI	0.17	1.28	1.50 ± 0.21	+17(1.0)				
	Zr-95			Zr-95-016-V	0.21	0.91	0.96 ± 0.05		+ 6(1.0)			
	Cs-137			Cs-137-001-CXI	0.08	0.68	0.83 ± 0.03			+22(6.0)		
	Ce-144			Ce-144-005-III	0.11	0.43	0.60 ± 0.03				+39(5.4)	
	Pb-210			Pb-210-004-LI	0.19	5.74	4.94 ± 0.11					-14(7.0)
2	Be-7	1/ 3/90	1/ 3/90	Be-7-023-VI	0.25	1.82	2.00 ± 0.09	+10(2.0)				
	Zr-95			Zr-95-016-V	0.15	0.64	0.64 ± 0.02		- 1(0.3)			
	Cs-137			Cs-137-001-CXI	0.15	1.30	1.29 ± 0.03			- 1(0.3)		
	Ce-144			Ce-144-005-III	0.16	0.64	0.87 ± 0.03				+36(7.3)	
	Pb-210			Pb-210-004-LI	0.15	4.63	4.04 ± 0.10					-13(5.8)
	Be-7	4/16/90	1/ 3/90	Be-7-023-VI	0.25	1.82	2.03 ± 0.24	+12(0.9)				
	Zr-95			Zr-95-016-V	0.15	0.64	0.74 ± 0.05		+14(2.0)			
	Cs-137			Cs-137-001-CXI	0.15	1.30	1.23 ± 0.03			- 5(2.5)		
	Ce-144			Ce-144-005-III	0.16	0.64	0.86 ± 0.04				+34(5.8)	
	Pb-210			Pb-210-004-LI	0.15	4.63	4.16 ± 0.11					-10(4.2)
3	Be-7	1/26/90	1/26/90	Be-7-023-VI	0.14	0.78	0.82 ± 0.03	+ 6(1.4)				
	Zr-95			Zr-95-016-V	0.16	0.55	0.54 ± 0.01		- 2(1.1)			
	Cs-137			Cs-137-001-CXI	0.14	1.24	1.37 ± 0.02			+10(5.7)		
	Ce-144			Ce-144-005-III	0.23	0.87	0.95 ± 0.02				+ 9(5.3)	
	Pb-210			Pb-210-004-LI	0.18	5.49	4.81 ± 0.05					-12(***)
4	Be-7	1/29/90	1/29/90	Be-7-023-VI	0.17	0.90	0.93 ± 0.13	+ 2(0.2)				
	Zr-95			Zr-95-016-V	0.23	0.75	0.88 ± 0.06		+19(2.3)			
	Cs-137			Cs-137-001-CXI	0.09	0.80	0.83 ± 0.04			+ 4(0.8)		
	Ce-144			Ce-144-005-III	0.23	0.83	0.88 ± 0.05				+ 6(1.0)	
	Pb-210			Pb-210-004-LI	0.33	9.96	8.36 ± 0.24					-16(6.6)
	Be-7	4/18/90	1/29/90	Be-7-023-VI	0.17	0.90	1.06 ± 0.11	+17(1.4)				
	Zr-95			Zr-95-016-V	0.23	0.75	0.76 ± 0.02		+ 2(0.6)			
	Cs-137			Cs-137-001-CXI	0.09	0.80	0.92 ± 0.02			+14(6.7)		
	Ce-144			Ce-144-005-III	0.23	0.83	0.98 ± 0.03				+18(5.5)	
	Pb-210			Pb-210-004-LI	0.33	9.96	8.80 ± 0.11					-12(***)

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2σ)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
	Be-7	5/14/90	1/29/90	Be-7-023-VI	0.17	0.90	1.05 ± 0.21	+16(0.7)				
	Zr-95			Zr-95-016-V	0.23	0.75	0.83 ± 0.05		+11(1.7)			
	Cs-137			Cs-137-001-CXI	0.09	0.80	0.86 ± 0.02			+ 7(2.3)		
	Ce-144			Ce-144-005-III	0.23	0.83	0.89 ± 0.04				+ 7(1.5)	
	Pb-210			Pb-210-004-LI	0.33	9.96	8.46 ± 0.16					-15(9.4)
5	Be-7	3/19/90	3/19/90	Be-7-023-VI	0.80	2.24	2.31 ± 0.11	+ 4(0.7)				
	Cs-137			Cs-137-001-CX	0.11	1.93	2.14 ± 0.04			+11(5.3)		
	Ce-144			Ce-144-005-III	0.31	1.04	1.07 ± 0.03				+ 3(1.0)	
	Pb-210			Pb-210-004-52	0.21	0.60	0.51 ± 0.01					-15(5.9)
6	Be-7	3/19/90	3/19/90	Be-7-023-VI	0.81	2.26	2.51 ± 0.10	+11(2.6)				
	Cs-137			Cs-137-001-CX	0.12	2.05	2.18 ± 0.03			+ 7(3.9)		
	Ce-144			Ce-144-005-III	0.22	0.73	0.79 ± 0.03				+ 8(1.9)	
	Pb-210			Pb-210-004-52	0.22	0.63	0.51 ± 0.04					-19(2.9)
	Be-7	4/16/90	3/19/90	Be-7-023-VI	0.81	2.26	2.41 ± 0.20	+ 7(0.7)				
	Cs-137			Cs-137-001-CX	0.12	2.05	2.05 ± 0.05			+ 0(0.0)		
	Ce-144			Ce-144-005-III	0.22	0.73	0.73 ± 0.05				+ 0(0.0)	
	Pb-210			Pb-210-004-52	0.22	0.63	0.54 ± 0.08					-13(1.1)
7	Be-7	3/20/90	3/20/90	Be-7-023-VI	0.37	1.03	1.13 ± 0.12	+10(0.9)				
	Cs-137			Cs-137-001-CXI	0.10	0.86	0.86 ± 0.04			+ 0(0.0)		
	Ce-144			Ce-144-005-III	0.16	0.53	0.52 ± 0.04				- 1(0.1)	
	Pb-210			Pb-210-004-52	0.23	0.66	0.56 ± 0.05					-16(1.9)
	Be-7	4/17/90	3/20/90	Be-7-023-VI	0.37	1.03	1.03 ± 0.08	+ 0(0.0)				
	Cs-137			Cs-137-001-CXI	0.10	0.86	0.92 ± 0.02			+ 7(2.7)		
	Ce-144			Ce-144-005-III	0.16	0.53	0.55 ± 0.02				+ 4(0.9)	
	Pb-210			Pb-210-004-52	0.23	0.66	0.59 ± 0.04					-12(2.1)
8	Be-7	3/20/90	3/20/90	Be-7-023-VI	0.52	1.42	1.52 ± 0.14	+ 7(0.7)				
	Cs-137			Cs-137-001-CXI	0.11	0.95	1.01 ± 0.04			+ 6(1.3)		
	Ce-144			Ce-144-005-III	0.22	0.75	0.73 ± 0.05				- 2(0.4)	
	Pb-210			Pb-210-004-52	0.30	0.87	0.74 ± 0.08					-14(1.6)
9	Cs-137	4/12/90	4/12/90	Cs-137-001-CXI	0.12	1.07	1.13 ± 0.04			+ 6(1.6)		
	Ce-144			Ce-144-005-III	0.23	0.75	0.75 ± 0.04				+ 1(0.2)	
	Pb-210			Pb-210-004-52	0.25	0.71	0.59 ± 0.11					-18(1.2)
	Cs-137	5/15/90	4/12/90	Cs-137-001-CXI	0.12	1.07	1.16 ± 0.04			+ 8(2.1)		
	Ce-144			Ce-144-005-III	0.23	0.75	0.78 ± 0.05				+ 4(0.7)	
	Pb-210			Pb-210-004-52	0.25	0.71	0.60 ± 0.06					-16(1.9)
10	Cs-137	4/12/90	4/12/90	Cs-137-001-CXI	0.15	1.26	1.44 ± 0.05			+14(3.5)		
	Ce-144			Ce-144-005-III	0.25	0.81	0.81 ± 0.04				+ 0(0.0)	
	Pb-210			Pb-210-004-52	0.26	0.74	0.64 ± 0.07					-13(1.4)
11	Be-7	5/31/90	5/31/90	Be-7-023-02	0.14	1.97	1.94 ± 0.09	- 1(0.2)				
	Pb-210			Pb-210-004-52	0.31	0.90	0.81 ± 0.05					-10(1.6)

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
12	Be-7 Pb-210	5/31/90	5/31/90	Be-7-023-02 Pb-210-004-52	0.15 0.26	2.14 0.74	2.05 ± 0.10 0.67 ± 0.05	- 4(0.9)				- 9(1.2)
13	Be-7 Cs-137 Ce-144 Pb-210	6/28/90	6/28/90	Be-7-023-02 Cs-137-001-114 Ce-144-005-08 Pb-210-004-52	0.19 0.25 0.28 0.38	1.91 0.55 0.53 1.10	1.90 ± 0.14 0.56 ± 0.03 0.57 ± 0.04 0.96 ± 0.08	+ 0(0.0)		+ 1(0.2)	+ 7(0.9)	-13(1.8)
14	Be-7 Cs-137 Ce-144 Pb-210	6/28/90	6/28/90	Be-7-023-02 Cs-137-001-114 Ce-144-005-08 Pb-210-004-52	0.15 0.27 0.34 0.27	1.47 0.59 0.64 0.78	1.48 ± 0.08 0.62 ± 0.02 0.67 ± 0.03 0.67 ± 0.05	+ 1(0.2)		+ 5(1.6)	+ 5(1.1)	-15(2.5)
15	Be-7 Cs-137 Ce-144 Pb-210	8/10/90	8/10/90	Be-7-023-02 Cs-137-001-114 Ce-144-005-08 Pb-210-004-52	0.16 0.28 0.28 0.30	0.90 0.61 0.48 0.86	0.95 ± 0.06 0.61 ± 0.02 0.54 ± 0.03 0.69 ± 0.05	+ 5(0.7)		+ 0(0.1)	+12(2.2)	-19(3.6)
	Be-7 Cs-137 Ce-144 Pb-210	9/ 6/90	8/10/90	Be-7-023-02 Cs-137-001-114 Ce-144-005-08 Pb-210-004-52	0.16 0.28 0.28 0.30	0.90 0.61 0.48 0.86	0.96 ± 0.19 0.63 ± 0.05 0.55 ± 0.06 0.79 ± 0.11	+ 6(0.3)		+ 4(0.5)	+13(1.0)	- 8(0.6)
16	Be-7 Cs-137 Ce-144 Pb-210	8/11/90	8/11/90	Be-7-023-02 Cs-137-001-114 Ce-144-005-08 Pb-210-004-52	0.17 0.29 0.27 0.27	0.95 0.63 0.46 0.76	0.95 ± 0.04 0.64 ± 0.01 0.50 ± 0.01 0.62 ± 0.03	- 0(0.1)		+ 2(1.1)	+ 9(2.7)	-18(5.5)
	Be-7 Cs-137 Ce-144 Pb-210	9/10/90	8/11/90	Be-7-023-02 Cs-137-001-114 Ce-144-005-08 Pb-210-004-52	0.17 0.29 0.27 0.27	0.95 0.63 0.46 0.76	1.01 ± 0.19 0.66 ± 0.04 0.56 ± 0.06 0.72 ± 0.08	+ 6(0.3)		+ 5(0.7)	+22(1.6)	- 6(0.6)
17	Be-7 Cs-137 Ce-144 Pb-210	9/11/90	9/11/90	Be-7-023-02 Cs-137-001-114 Ce-144-005-08 Pb-210-004-52	1.03 0.46 0.47 0.49	3.93 0.98 0.74 1.40	4.19 ± 0.13 1.04 ± 0.03 1.00 ± 0.04 1.14 ± 0.06	+ 7(2.0)		+ 5(2.1)	+36(6.6)	-19(4.2)
	Be-7 Cs-137 Ce-144 Pb-210	6/28/91	9/11/90	Be-7-023-02 Cs-137-001-114 Ce-144-005-08 Pb-210-004-52	1.03 0.46 0.47 0.49	3.93 0.98 0.74 1.40	4.56 ± 1.20 1.00 ± 0.01 1.34 ± 0.17 1.34 ± 0.09	+16(0.5)		+ 2(1.2)	+82(3.5)	- 4(0.7)

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
18	Be-7	9/12/90	9/12/90	Be-7-023-02	0.72	2.72	2.94 ± 0.11	+ 8(2.0)				
	Cs-137			Cs-137-001-114	0.43	0.93	1.00 ± 0.03			+ 8(2.9)		
	Ce-144			Ce-144-005-08	0.32	0.50	0.67 ± 0.06				+34(3.1)	
	Pb-210			Pb-210-004-52	0.54	1.54	1.47 ± 0.11					- 5(0.7)
	Be-7	5/14/91	9/12/90	Be-7-023-02	0.72	2.72	3.23 ± 1.15	+19(0.4)				
	Cs-137			Cs-137-001-114	0.43	0.93	0.93 ± 0.02			- 1(0.3)		
	Ce-144			Ce-144-005-08	0.32	0.50	0.68 ± 0.06				+36(2.9)	
	Pb-210			Pb-210-004-52	0.54	1.54	1.45 ± 0.07					- 6(1.4)
19	Be-7	10/ 4/90	10/ 4/90	Be-7-023-02	0.46	1.29	1.35 ± 0.08	+ 5(0.9)				
	Pb-210			Pb-210-004-53	0.18	4.89	4.29 ± 0.10					-12(6.0)
20	Be-7	10/ 9/90	10/ 9/90	Be-7-023-02	0.58	1.53	1.41 ± 0.09	- 8(1.3)				
	Pb-210			Pb-210-004-53	0.16	4.45	4.09 ± 0.11					- 8(3.2)
21	Be-7	10/ 9/90	10/ 9/90	Be-7-023-02	0.48	1.27	1.45 ± 0.09	+14(2.1)				
	Cs-137			Cs-137-001-114	0.46	0.99	1.04 ± 0.03			+ 5(2.0)		
	Ce-144			Ce-144-005-08	0.53	0.78	0.91 ± 0.04				+17(3.3)	
	Pb-210			Pb-210-004-53	0.21	5.83	5.07 ± 0.12					-13(6.2)
	Cs-137	7/25/91	10/ 9/90	Cs-137-001-114	0.46	0.99	1.03 ± 0.03			+ 5(1.7)		
	Ce-144			Ce-144-005-08	0.53	0.78	1.02 ± 0.10				+31(2.5)	
	Pb-210			Pb-210-004-53	0.21	5.83	5.23 ± 0.12					-10(5.1)
22	Be-7	11/ 5/90	11/ 5/90	Be-7-023-IV	0.23	3.36	3.43 ± 0.20	+ 2(0.4)				
	Pb-210			Pb-210-004-55	0.28	0.85	1.04 ± 0.09					+22(2.0)
	Be-7	5/24/91	11/ 5/90	Be-7-023-IV	0.23	3.36	3.33 ± 0.19	- 1(0.1)				
	Pb-210			Pb-210-004-55	0.28	0.85	1.02 ± 0.03					+20(5.5)
23	Be-7	11/ 5/90	11/ 5/90	Be-7-023-IV	0.17	2.46	2.59 ± 0.18	+ 5(0.7)				
	Pb-210			Pb-210-004-55	0.29	0.87	0.85 ± 0.09					- 3(0.3)
24	Be-7	11/ 5/90	11/ 5/90	Be-7-023-IV	0.23	3.28	3.37 ± 0.22	+ 3(0.4)				
	Cs-137			Cs-137-001-114	0.27	0.59	0.61 ± 0.04			+ 4(0.6)		
	Ce-144			Ce-144-005-08	0.21	0.29	0.33 ± 0.04				+13(1.0)	
	Pb-210			Pb-210-004-55	0.20	0.61	0.71 ± 0.08					+16(1.2)
	Be-7	5/30/91	11/ 5/90	Be-7-023-IV	0.23	3.28	3.53 ± 0.23	+ 7(1.1)				
	Cs-137			Cs-137-001-114	0.27	0.59	0.64 ± 0.01			+ 8(6.1)		
	Ce-144			Ce-144-005-08	0.21	0.29	0.32 ± 0.01				+10(2.6)	
	Pb-210			Pb-210-004-55	0.20	0.61	0.64 ± 0.02					+ 6(2.1)
25	Be-7	11/20/90	11/20/90	Be-7-023-IV	0.22	2.66	2.68 ± 0.19	+ 1(0.1)				
	Pb-210			Pb-210-004-55	0.41	1.25	1.16 ± 0.10					- 7(0.8)

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
26	Be-7	11/20/90	11/20/90	Be-7-023-IV	0.79	9.43	8.68 ± 0.32	- 8(2.3)				
	Cs-137			Cs-137-001-114	0.90	1.93	1.86 ± 0.06			- 4(1.2)		
	Ce-144			Ce-144-005-08	0.82	1.08	0.98 ± 0.06				- 9(1.7)	
	Pb-210			Pb-210-004-55	1.02	3.10	2.42 ± 0.15					-22(4.5)
27	Be-7	12/ 3/90	12/ 3/90	Be-7-023-IV	0.34	3.46	3.51 ± 0.22	+ 1(0.2)				
	Pb-210			Pb-210-004-55	0.51	1.53	1.47 ± 0.12					- 4(0.5)
28	Be-7	12/17/90	12/17/90	Be-7-023-IV	0.35	2.93	2.84 ± 0.17	- 3(0.5)				
	Pb-210			Pb-210-004-55	0.30	0.92	0.95 ± 0.09					+ 4(0.4)
29	Be-7	12/18/90	12/18/90	Be-7-023-IV	0.49	4.05	4.19 ± 0.32	+ 4(0.5)				
	Cs-137			Cs-137-001-114	0.25	0.55	0.62 ± 0.05			+14(1.5)		
	Ce-144			Ce-144-005-08	0.30	0.37	0.42 ± 0.06				+14(0.9)	
	Pb-210			Pb-210-004-55	0.36	1.10	1.11 ± 0.14					+ 1(0.1)
30	Be-7	12/19/90	12/19/90	Be-7-023-IV	0.31	2.56	2.38 ± 0.20	- 7(0.9)				
	Pb-210			Pb-210-004-55	0.38	1.14	1.38 ± 0.12					+21(2.0)
	Be-7	6/25/91	12/19/90	Be-7-023-IV	0.31	2.56	2.65 ± 0.45	+ 4(0.2)				
	Pb-210			Pb-210-004-55	0.38	1.14	1.35 ± 0.06					+18(3.2)
31	Be-7	1/15/91	1/15/91	Be-7-023-IV	0.56	3.25	3.11 ± 0.24	- 4(0.6)				
	Pb-210			Pb-210-004-55	0.32	0.97	0.94 ± 0.12					- 3(0.2)
32	Be-7	1/15/91	1/15/91	Be-7-023-IV	0.52	3.03	2.88 ± 0.27	- 5(0.6)				
	Pb-210			Pb-210-004-55	0.28	0.83	0.91 ± 0.12					+10(0.7)
33	Be-7	2/13/91	2/13/91	Be-7-023-IV	0.71	2.82	2.48 ± 0.20	-12(1.7)				
	Cs-137			Cs-137-001-114	0.45	0.97	0.96 ± 0.05			- 1(0.3)		
	Ce-144			Ce-144-005-08	0.85	0.91	0.86 ± 0.06				- 6(1.0)	
	Pb-210			Pb-210-004-55	0.28	0.83	0.63 ± 0.14					-25(1.5)
	Be-7	7/ 2/91	2/13/91	Be-7-023-IV	0.71	2.82	2.82 ± 0.23	+ 0(0.0)				
	Cs-137			Cs-137-001-114	0.45	0.97	1.04 ± 0.05			+ 7(1.3)		
	Ce-144			Ce-144-005-08	0.85	0.91	1.03 ± 0.07				+12(1.6)	
	Pb-210			Pb-210-004-55	0.28	0.83	1.04 ± 0.04					+25(4.7)
34	Be-7	2/14/91	2/14/91	Be-7-023-IV	0.71	2.77	2.63 ± 0.22	- 5(0.6)				
	Pb-210			Pb-210-004-55	0.37	1.11	1.27 ± 0.13					+14(1.2)
35	Be-7	2/19/91	2/19/91	Be-7-023-IV	0.71	2.61	2.65 ± 0.22	+ 1(0.2)				
	Pb-210			Pb-210-004-55	0.32	0.95	1.09 ± 0.12					+15(1.2)

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
36	Be-7	3/18/91	3/18/91	Be-7-023-IV	0.73	1.89	2.06 ± 0.22	+ 9(0.8)				
	Pb-210			Pb-210-004-55	0.50	1.49	1.79 ± 0.17					+21(1.8)
	Be-7	6/12/91	3/18/91	Be-7-023-IV	0.73	1.89	1.78 ± 0.17	- 6(0.7)				
	Pb-210			Pb-210-004-55	0.50	1.49	1.66 ± 0.06					+12(2.7)
37	Be-7	3/18/91	3/18/91	Be-7-023-IV	1.14	2.94	2.83 ± 0.20	- 4(0.5)				
	Pb-210			Pb-210-004-55	0.34	1.01	1.54 ± 0.13					+51(4.1)
	Be-7	7/ 2/91	3/18/91	Be-7-023-IV	1.14	2.94	3.05 ± 0.22	+ 4(0.5)				
	Pb-210			Pb-210-004-55	0.34	1.01	1.30 ± 0.06					+29(5.1)
38	Be-7	3/18/91	3/18/91	Be-7-023-IV	0.86	2.22	2.43 ± 0.18	+ 9(1.2)				
	Cs-137			Cs-137-001-114	0.49	1.04	1.27 ± 0.05			+22(4.6)		
	Ce-144			Ce-144-005-08	1.08	1.08	1.25 ± 0.06				+16(2.7)	
	Pb-210			Pb-210-004-55	0.54	1.63	1.96 ± 0.13					+20(2.5)
	Be-7	7/ 1/91	3/18/91	Be-7-023-IV	0.86	2.22	2.16 ± 0.24	- 3(0.3)				
	Cs-137			Cs-137-001-114	0.49	1.04	1.28 ± 0.03			+23(7.3)		
	Ce-144			Ce-144-005-08	1.08	1.08	1.27 ± 0.04				+18(4.5)	
	Pb-210			Pb-210-004-55	0.54	1.63	1.86 ± 0.07					+15(3.2)
39	Be-7	4/16/91	4/16/91	Be-7-023-IV	1.12	1.98	2.08 ± 0.18	+ 5(0.5)				
	Pb-210			Pb-210-004-55	0.33	0.99	1.21 ± 0.12					+22(1.9)
	Be-7	7/24/91	4/16/91	Be-7-023-IV	1.12	1.98	2.26 ± 0.21	+14(1.4)				
	Pb-210			Pb-210-004-55	0.33	0.99	1.01 ± 0.06					+ 3(0.5)
40	Be-7	4/16/91	4/16/91	Be-7-023-IV	1.19	2.11	2.38 ± 0.09	+13(3.2)				
	Cs-137			Cs-137-001-114	0.24	0.51	0.66 ± 0.02			+30(8.6)		
	Ce-144			Ce-144-005-08	0.85	0.79	1.03 ± 0.03				+29(8.0)	
	Pb-210			Pb-210-004-55	0.26	0.79	0.86 ± 0.05					+ 9(1.5)
	Be-7	7/27/91	4/16/91	Be-7-023-IV	1.19	2.11	2.07 ± 0.15	- 2(0.3)				
	Cs-137			Cs-137-001-114	0.24	0.51	0.65 ± 0.01			+29(***)		
	Ce-144			Ce-144-005-08	0.85	0.79	1.01 ± 0.02				+27(8.9)	
	Pb-210			Pb-210-004-55	0.26	0.79	0.98 ± 0.04					+24(5.1)
41	Be-7	4/18/91	4/18/91	Be-7-023-IV	1.03	1.78	1.98 ± 0.18	+11(1.1)				
	Pb-210			Pb-210-004-55	0.36	1.08	1.31 ± 0.13					+21(1.8)
	Be-7	7/25/91	4/18/91	Be-7-023-IV	1.03	1.78	1.88 ± 0.19	+ 5(0.5)				
	Pb-210			Pb-210-004-55	0.36	1.08	1.26 ± 0.06					+17(3.2)
42	Be-7	5/ 7/91	5/ 7/91	Be-7-024-VI	0.20	2.11	1.94 ± 0.07	- 8(2.5)				
	Zr-95			Zr-95-017-V	0.19	0.81	0.72 ± 0.02		-11(5.2)			
	Cs-137			Cs-137-001-116	0.20	0.71	0.70 ± 0.02			- 2(0.7)		
	Ce-144			Ce-144-005-10	0.32	0.61	0.62 ± 0.02				+ 1(0.3)	
	Pb-210			Pb-210-004-57	0.42	1.20	1.36 ± 0.04					+13(3.7)

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
43	Be-7	5/ 9/91	5/ 9/91	Be-7-024-VI	0.20	2.10	2.59 ± 0.10	+23(5.0)				
	Pb-210			Pb-210-004-57	0.41	1.18	1.08 ± 0.05					- 9(2.0)
	Be-7	8/23/91	5/ 9/91	Be-7-024-VI	0.20	2.10	2.44 ± 0.23	+16(1.5)				
	Pb-210			Pb-210-004-57	0.41	1.18	1.13 ± 0.06					- 4(0.9)
44	Be-7	5/10/91	5/10/91	Be-7-024-VI	0.25	2.53	1.94 ± 0.09	-23(6.9)				
	Pb-210			Pb-210-004-57	0.37	1.05	1.32 ± 0.05					+25(4.9)
	Be-7	8/22/91	5/10/91	Be-7-024-VI	0.25	2.53	1.86 ± 0.20	-26(3.4)				
	Pb-210			Pb-210-004-57	0.37	1.05	1.41 ± 0.06					+35(5.9)
45	Be-7	7/ 9/91	7/ 9/91	Be-7-024-VI	0.32	1.48	1.39 ± 0.16	- 6(0.6)				
	Pb-210			Pb-210-004-57	0.43	1.22	1.29 ± 0.12					+ 6(0.6)
46	Be-7	7/17/91	7/17/91	Be-7-024-VI	0.44	1.84	1.61 ± 0.09	-12(2.7)				
	Zr-95			Zr-95-017-V	0.20	0.40	0.45 ± 0.02		+12(2.7)			
	Cs-137			Cs-137-001-116	0.33	1.18	1.20 ± 0.03			+ 2(0.7)		
	Ce-144			Ce-144-005-10	0.56	0.92	0.94 ± 0.03				+ 3(1.0)	
	Pb-210			Pb-210-004-57	0.47	1.33	1.43 ± 0.06					+ 7(1.5)
47	Be-7	7/19/91	7/19/91	Be-7-024-VI	0.32	1.30	1.26 ± 0.17	- 3(0.2)				
	Zr-95			Zr-95-017-V	0.36	0.69	0.78 ± 0.05		+12(1.7)			
	Cs-137			Cs-137-001-116	0.31	1.12	1.20 ± 0.06			+ 7(1.3)		
	Ce-144			Ce-144-005-10	0.41	0.66	0.74 ± 0.06				+12(1.4)	
	Pb-210			Pb-210-004-57	0.50	1.42	1.69 ± 0.11					+19(2.3)
48	Be-7	7/23/91	7/23/91	Be-7-024-VI	0.40	1.54	1.54 ± 0.13	+ 0(0.0)				
	Pb-210			Pb-210-004-57	0.42	1.21	1.32 ± 0.10					+ 9(1.1)
49	Be-7	8/13/91	8/13/91	Be-7-024-VI	0.40	1.16	1.17 ± 0.11	+ 0(0.0)				
	Pb-210			Pb-210-004-57	0.38	1.08	1.20 ± 0.08					+11(1.4)
50	Be-7	8/21/91	8/21/91	Be-7-024-VI	0.28	0.75	0.84 ± 0.10	+12(0.9)				
	Pb-210			Pb-210-004-57	0.33	0.94	1.05 ± 0.09					+11(1.2)
51	Pb-210	8/23/91	8/23/91	Pb-210-004-57	0.32	0.90	0.98 ± 0.10					+ 8(0.7)
52	Pb-210	8/23/91	8/23/91	Pb-210-004-57	0.41	1.17	1.31 ± 0.12					+12(1.2)
53	Be-7	10/10/91	10/10/91	Be-7-024-VI	1.16	1.61	1.34 ± 0.16	-17(1.7)				
	Pb-210			Pb-210-004-57	0.49	1.40	1.52 ± 0.13					+ 9(1.0)
	Be-7	11/16/91	10/10/91	Be-7-024-VI	1.16	1.61	1.35 ± 0.07	-16(4.0)				
	Pb-210			Pb-210-004-57	0.49	1.40	1.38 ± 0.04					- 1(0.4)

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
54	Be-7	10/11/91	10/11/91	Be-7-024-VI	1.03	1.40	1.13 ± 0.15	-19(1.8)				
	Pb-210			Pb-210-004-57	0.58	1.65	1.57 ± 0.14					- 5(0.6)
	Be-7	11/16/91	10/11/91	Be-7-024-VI	1.03	1.40	1.36 ± 0.07	- 3(0.6)				
	Pb-210			Pb-210-004-57	0.58	1.65	1.82 ± 0.04					+11(4.1)
55	Be-7	10/23/91	10/23/91	Be-7-024-VI	0.78	0.91	0.93 ± 0.15	+ 2(0.1)				
	Zr-95			Zr-95-017-V	0.33	0.22	0.24 ± 0.03		+ 7(0.5)			
	Cs-137			Cs-137-001-116	0.22	0.77	0.78 ± 0.05			+ 2(0.2)		
	Ce-144			Ce-144-005-10	0.41	0.53	0.54 ± 0.05				+ 2(0.2)	
	Pb-210			Pb-210-004-57	0.40	1.13	1.18 ± 0.12					+ 5(0.5)
56	Be-7	10/29/91	10/29/91	Be-7-024-VI	1.16	1.25	1.17 ± 0.14	- 7(0.6)				
	Pb-210			Pb-210-004-55	0.77	2.26	2.44 ± 0.16					+ 8(1.1)
57	Be-7	10/29/91	10/29/91	Be-7-024-VI	0.96	1.04	1.02 ± 0.14	- 1(0.1)				
	Pb-210			Pb-210-004-55	0.45	1.33	1.64 ± 0.13					+23(2.3)
	Be-7	12/ 2/91	10/29/91	Be-7-024-VI	0.96	1.04	1.04 ± 0.04	+ 1(0.1)				
	Pb-210			Pb-210-004-55	0.45	1.33	1.63 ± 0.06					+22(4.7)
58	Be-7	10/29/91	10/29/91	Be-7-024-VI	0.96	1.03	1.05 ± 0.15	+ 2(0.1)				
	Zr-95			Zr-95-017-V	0.73	0.46	0.50 ± 0.04		+ 8(1.0)			
	Cs-137			Cs-137-001-116	0.42	1.49	1.55 ± 0.06			+ 4(1.1)		
	Ce-144			Ce-144-005-10	0.48	0.60	0.67 ± 0.05				+12(1.3)	
	Pb-210			Pb-210-004-55	0.65	1.92	2.08 ± 0.15					+ 8(1.1)
59	Zr-95	11/22/91	11/22/91	Zr-95-017-V	0.26	0.13	0.12 ± 0.01	- 3(0.5)				
	Cs-137			Cs-137-001-116	0.39	1.39	1.45 ± 0.03			+ 4(1.9)		
	Ce-144			Ce-144-005-10	0.47	0.56	0.60 ± 0.02				+ 8(1.8)	
	Pb-210			Pb-210-004-57	0.33	0.92	1.01 ± 0.05					+10(1.7)
60	Be-7	11/25/91	11/25/91	Be-7-024-VI	0.72	0.55	0.51 ± 0.06	- 7(0.6)				
	Zr-95			Zr-95-017-V	0.83	0.39	0.42 ± 0.02		+ 6(1.2)			
	Cs-137			Cs-137-001-116	0.41	1.45	1.37 ± 0.03			- 6(2.9)		
	Ce-144			Ce-144-005-10	0.59	0.69	0.69 ± 0.03				- 0(0.1)	
	Pb-210			Pb-210-004-57	0.36	1.02	1.13 ± 0.12					+11(1.0)
61	Be-7	11/25/91	11/25/91	Be-7-024-VI	0.80	0.61	0.64 ± 0.09	+ 6(0.4)				
	Pb-210			Pb-210-004-57	0.58	1.64	2.02 ± 0.13					+24(3.0)
62	Be-7	11/25/91	11/25/91	Be-7-024-VI	0.80	0.61	0.68 ± 0.11	+12(0.6)				
	Pb-210			Pb-210-004-57	0.31	0.89	0.99 ± 0.10					+11(1.0)

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
63	Be-7 Pb-210	12/23/91	12/23/91	Be-7-024-8 Pb-210-004-57	0.56 0.46	2.16 1.30	2.11 ± 0.08 1.51 ± 0.07	- 3(0.7)				+16(3.2)
64	Be-7 Pb-210	12/23/91	12/23/91	Be-7-024-8 Pb-210-004-57	0.53 0.35	2.05 0.99	2.25 ± 0.09 1.08 ± 0.06	+10(2.2)				+ 9(1.4)
65	Be-7 Zr-95 Cs-137 Ce-144 Pb-210	12/23/91	12/23/91	Be-7-024-8 Zr-95-017-V Cs-137-001-116 Ce-144-005-10 Pb-210-004-57	0.45 1.04 0.34 0.56 0.35	1.74 0.37 1.21 0.62 0.99	1.83 ± 0.06 0.37 ± 0.01 1.26 ± 0.02 0.72 ± 0.02 1.18 ± 0.06	+ 5(1.6)	+ 1(0.4)	+ 5(2.4)	+17(5.1)	+20(3.1)
66	Be-7 Zr-95 Cs-137 Ce-144 Pb-210	1/23/92	1/23/92	Be-7-024-8 Zr-95-017-V Cs-137-001-116 Ce-144-005-10 Pb-210-004-57	0.70 2.15 0.27 0.62 0.38	1.80 0.54 0.97 0.63 1.06	1.63 ± 0.13 0.63 ± 0.03 1.00 ± 0.02 0.74 ± 0.05 1.33 ± 0.10	- 9(1.3)	+16(3.1)	+ 3(2.0)	+17(2.2)	+26(2.7)
67	Be-7 Pb-210	1/24/92	1/24/92	Be-7-024-8 Pb-210-004-57	0.76 0.29	1.93 0.82	1.96 ± 0.13 1.16 ± 0.10	+ 1(0.2)				+41(3.5)
68	Be-7 Pb-210	1/27/92	1/27/92	Be-7-024-8 Pb-210-004-57	0.82 0.37	2.01 1.05	2.05 ± 0.12 1.28 ± 0.10	+ 2(0.3)				+22(2.4)
69	Be-7 Pb-210	3/ 1/92	3/ 1/92	Be-7-024-10 Pb-210-004-57	0.16 0.35	2.08 0.99	1.97 ± 0.10 1.13 ± 0.06	- 5(1.0)				+13(2.2)
70	Be-7 Zr-95 Cs-137 Ce-144 Pb-210	3/ 3/92	3/ 3/92	Be-7-024-10 Zr-95-017-V Cs-137-001-116 Ce-144-005-10 Pb-210-004-57	0.14 0.36 0.36 0.55 0.15	1.74 0.06 1.27 0.51 0.42	1.86 ± 0.11 0.09 ± 0.01 1.30 ± 0.05 0.61 ± 0.05 0.55 ± 0.06	+ 7(1.1)	+47(2.7)	+ 2(0.5)	+19(2.1)	+32(2.3)
71	Be-7 Pb-210	3/ 3/92	3/ 3/92	Be-7-024-10 Pb-210-004-57	0.15 0.28	1.82 0.78	1.84 ± 0.04 1.00 ± 0.07	+ 1(0.5)				+29(3.4)
72	Be-7 Pb-210	3/ 4/92	3/ 4/92	Be-7-024-10 Pb-210-004-57	0.16 0.31	1.99 0.88	1.93 ± 0.09 1.11 ± 0.07	- 3(0.7)				+26(3.2)
73	Be-7 Pb-210	3/16/92	3/16/92	Be-7-024-10 Pb-210-004-57	0.17 0.31	1.76 0.87	1.85 ± 0.13 1.05 ± 0.07	+ 5(0.7)				+21(2.7)

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
74	Be-7	3/17/92	3/17/92	Be-7-024-10	0.24	2.54	2.59 ± 0.17	+ 2(0.3)				
	Zr-95			Zr-95-017-V	0.96	0.14	0.14 ± 0.01		+ 0(0.0)			
	Cs-137			Cs-137-001-116	0.10	0.34	0.37 ± 0.02			+ 9(1.3)		
	Ce-144			Ce-144-005-10	0.41	0.37	0.49 ± 0.03				+33(4.8)	
	Pb-210			Pb-210-004-57	0.38	1.06	1.24 ± 0.10					+17(1.8)
75	Be-7	5/ 7/92	5/ 7/92	Be-7-024-10	0.51	2.77	2.78 ± 0.16	+ 0(0.1)				
	Cs-137			Cs-137-001-116	0.23	0.82	0.88 ± 0.04			+ 8(1.7)		
	Ce-144			Ce-144-005-10	0.49	0.39	0.50 ± 0.04				+28(3.1)	
	Pb-210			Pb-210-004-61	0.21	0.80	0.82 ± 0.23					+ 2(0.1)
76	Be-7	5/ 7/92	5/ 7/92	Be-7-024-10	0.77	4.16	4.12 ± 0.22	- 1(0.2)				
	Cs-137			Cs-137-001-116	0.51	1.80	1.49 ± 0.07			-17(4.7)		
	Ce-144			Ce-144-005-10	0.69	0.54	0.71 ± 0.04				+32(4.2)	
	Pb-210			Pb-210-004-61	0.42	1.62	2.09 ± 0.19					+29(2.5)
77	Be-7	5/11/92	5/11/92	Be-7-024-10	0.37	1.89	1.97 ± 0.15	+ 4(0.5)				
	Pb-210			Pb-210-004-61	0.47	1.83	1.89 ± 0.17					+ 4(0.4)
78	Be-7	5/11/92	5/11/92	Be-7-024-10	0.56	2.86	2.80 ± 0.19	- 2(0.3)				
	Pb-210			Pb-210-004-61	0.32	1.25	1.40 ± 0.09					+12(1.7)
79	Be-7	5/11/92	5/11/92	Be-7-024-10	0.51	2.60	2.75 ± 0.17	+ 6(0.9)				
	Pb-210			Pb-210-004-61	0.31	1.21	1.37 ± 0.10					+14(1.7)
80	Be-7	5/12/92	5/12/92	Be-7-024-10	0.35	1.78	1.68 ± 0.16	- 6(0.7)				
	Pb-210			Pb-210-004-61	0.39	1.52	1.72 ± 0.15					+13(1.3)
81	Be-7	5/26/92	5/26/92	Be-7-024-10	0.43	1.81	1.72 ± 0.08	- 5(1.1)				
	Pb-210			Pb-210-004-61	0.34	1.30	1.46 ± 0.06					+12(2.7)
82	Be-7	5/26/92	5/26/92	Be-7-024-10	0.46	1.91	1.97 ± 0.10	+ 3(0.5)				
	Pb-210			Pb-210-004-61	0.44	1.72	1.82 ± 0.09					+ 6(1.1)
83	Be-7	6/ 2/92	6/ 2/92	Be-7-024-10	0.50	1.91	2.14 ± 0.14	+12(1.6)				
	Cs-137			Cs-137-001-116	0.21	0.72	0.78 ± 0.03			+ 8(1.8)		
	Ce-144			Ce-144-005-10	0.49	0.37	0.45 ± 0.03				+24(3.3)	
	Pb-210			Pb-210-004-61	0.32	1.24	1.28 ± 0.09					+ 3(0.5)
84	Be-7	7/ 7/92	7/ 7/92	Be-7-024-10	0.52	1.26	1.27 ± 0.05	+ 0(0.1)				
	Pb-210			Pb-210-004-61	0.48	1.83	1.82 ± 0.09					- 0(0.1)

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
85	Pb-210	7/ 8/92	7/ 8/92	Pb-210-004-61	0.44	1.68	1.84 ± 0.09					+10(1.8)
86	Be-7	7/ 8/92	7/ 8/92	Be-7-024-10	0.95	2.29	2.23 ± 0.13	- 3(0.4)				
	Cs-137			Cs-137-001-116	0.96	3.36	3.60 ± 0.07			+ 7(3.4)		
	Ce-144			Ce-144-005-10	0.34	0.23	0.32 ± 0.02				+41(4.1)	
	Pb-210			Pb-210-004-61	0.66	2.55	2.73 ± 0.21					+ 7(0.9)
87	Be-7	8/26/92	8/26/92	Be-7-024-10	0.91	1.16	1.30 ± 0.11	+13(1.3)				
	Pb-210			Pb-210-004-61	0.40	1.52	1.66 ± 0.11					+ 9(1.3)
88	Be-7	8/26/92	8/26/92	Be-7-024-10	0.62	0.79	0.82 ± 0.11	+ 3(0.3)				
	Cs-137			Cs-137-001-116	0.53	1.86	1.86 ± 0.06			- 0(0.1)		
	Ce-144			Ce-144-005-10	0.28	0.17	0.22 ± 0.03				+31(2.0)	
	Pb-210			Pb-210-004-61	0.40	1.53	1.75 ± 0.12					+15(1.9)
89	Be-7	8/27/92	8/27/92	Be-7-024-10	0.72	0.91	0.81 ± 0.09	-11(1.1)				
	Pb-210			Pb-210-004-61	0.31	1.21	1.28 ± 0.10					+ 6(0.8)
90	Be-7	9/16/92	9/16/92	Be-7-025-03	0.47	18.74	22.78 ± 0.81	+22(5.0)				
91	Be-7	9/16/92	9/16/92	Be-7-025-03	0.56	22.58	28.54 ± 0.54	+26(***)				
92	Be-7	10/20/92	10/20/92	Be-7-024-10	0.75	0.47	0.41 ± 0.06	-12(1.0)				
	Cs-137			Cs-137-001-116	0.32	1.10	1.16 ± 0.04			+ 5(1.3)		
	Ce-144			Ce-144-005-10	0.42	0.22	0.31 ± 0.03				+38(3.1)	
	Pb-210			Pb-210-004-61	0.43	1.65	1.80 ± 0.24					+ 9(0.6)
93	Be-7	10/21/92	10/21/92	Be-7-024-10	0.69	0.43	0.32 ± 0.04	-26(2.6)				
	Pb-210			Pb-210-004-61	0.22	0.83	0.92 ± 0.04					+11(2.6)
94	Be-7	10/22/92	10/22/92	Be-7-024-10	0.88	0.53	0.53 ± 0.05	+ 1(0.1)				
	Pb-210			Pb-210-004-61	0.27	1.04	1.13 ± 0.74					+ 9(0.1)
95	Be-7	11/ 3/92	11/ 3/92	Be-7-025-04	0.36	1.41	1.50 ± 0.05	+ 6(1.9)				
	Pb-210			Pb-210-004-61	0.24	0.91	0.98 ± 0.03					+ 8(2.0)
96	Be-7	11/ 3/92	11/ 3/92	Be-7-025-04	0.43	1.70	1.84 ± 0.18	+ 8(0.8)				
	Pb-210			Pb-210-004-61	0.25	0.95	1.03 ± 0.06					+ 9(1.4)
97	Be-7	11/ 3/92	11/ 3/92	Be-7-025-04	0.17	0.67	0.67 ± 0.04	+ 0(0.0)				
	Cs-137			Cs-137-001-116	0.22	0.76	0.83 ± 0.02			+10(4.1)		
	Ce-144			Ce-144-005-13	0.22	0.25	0.27 ± 0.01				+ 6(1.3)	
	Pb-210			Pb-210-004-61	0.21	0.79	0.83 ± 0.06					+ 5(0.7)

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2s)	% Deviation (Deviation Factor)*				
								⁷ Ba	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
98	Be-7 Ce-144 Pb-210	11/ 3/92	11/ 3/92	Be-7-025-04 Ce-144-005-13 Pb-210-004-61	0.42 0.33 0.28	1.64 0.38 1.09	1.81 ± 0.09 0.39 ± 0.02 1.30 ± 0.06	+10(1.8)			+ 4(0.7)	+20(3.8)
99	Be-7 Cs-137 Pb-210	11/ 3/92	11/ 3/92	Be-7-025-04 Cs-137-001-116 Pb-210-004-61	0.20 0.58 0.21	0.79 2.02 0.79	0.86 ± 0.09 2.20 ± 0.05 0.92 ± 0.06	+ 9(0.8)		+ 9(3.8)		+17(2.1)
100	Be-7 Pb-210	11/ 3/92	11/ 3/92	Be-7-025-04 Pb-210-004-61	0.59 0.56	2.34 2.14	2.52 ± 0.07 2.30 ± 0.09	+ 7(2.6)				+ 8(1.8)
101	Be-7 Pb-210	12/17/92	12/17/92	Be-7-025-04 Pb-210-004-61	0.44 0.27	0.97 1.04	1.07 ± 0.06 1.24 ± 0.06	+10(1.6)				+19(3.4)
102	Be-7 Cs-137 Ce-144 Pb-210	12/17/92	12/17/92	Be-7-025-04 Cs-137-001-116 Ce-144-005-13 Pb-210-004-61	0.42 0.37 0.34 0.46	0.94 1.29 0.35 1.73	1.01 ± 0.02 1.40 ± 0.03 0.37 ± 0.02 1.83 ± 0.02	+ 8(3.3)		+ 9(3.7)	+ 4(0.7)	+ 5(3.8)
103	Be-7 Pb-210	12/21/92	12/21/92	Be-7-025-04 Pb-210-004-61	0.49 0.32	1.03 1.22	1.06 ± 0.03 1.40 ± 0.04	+ 3(1.0)				+15(4.2)
104	Be-7 Pb-210	1/28/93	1/28/93	Be-7-025-04 Pb-210-004-61	0.42 0.33	0.54 1.25	0.52 ± 0.08 1.35 ± 0.09	- 4(0.3)				+ 8(1.1)
105	Be-7 Pb-210	1/28/93	1/28/93	Be-7-025-04 Pb-210-004-61	0.24 0.94	0.31 3.56	0.34 ± 0.05 3.93 ± 0.17	+ 9(0.6)				+10(2.2)
106	Be-7 Cs-137 Ce-144 Pb-210	1/28/93	1/28/93	Be-7-025-04 Cs-137-001-116 Ce-144-005-13 Pb-210-004-61	0.35 0.45 0.36 0.27	0.45 1.57 0.34 1.01	0.60 ± 0.10 1.65 ± 0.06 0.33 ± 0.04 1.20 ± 0.10	+32(1.4)		+ 5(1.3)	- 1(0.1)	+19(1.8)
107	Be-7	3/12/93	3/12/93	Be-7-025-04	0.63	0.47	0.49 ± 0.02	+ 5(1.1)				
108	Be-7	3/23/93	3/23/93	Be-7-025-04	1.09	0.70	0.72 ± 0.06	+ 3(0.4)				
109	Cs-137 Ce-144	3/24/93	3/24/93	Cs-137-001-123 Ce-144-005-17	0.33 0.23	0.81 0.49	0.81 ± 0.02 0.49 ± 0.02			- 1(0.2)	- 1(0.3)	
110	Cs-137 Ce-144	4/ 9/93	4/ 9/93	Cs-137-001-123 Ce-144-005-17	0.48 0.37	1.20 0.79	1.23 ± 0.01 0.79 ± 0.01			+ 2(2.3)	- 0(0.1)	

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2σ)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
111	Be-7	4/15/93	4/15/93	Be-7-025-04	0.57	0.27	0.28 ± 0.02	+ 6(0.9)				
112	Pb-210	4/19/93	4/19/93	Pb-210-004-65	0.84	2.51	2.90 ± 0.16					+16(2.5)
113	Pb-210	4/23/93	4/23/93	Pb-210-004-65	0.35	1.03	1.03 ± 0.08					- 1(0.1)
114	Cs-137	6/ 1/93	6/ 1/93	Cs-137-001-123	0.31	0.77	0.77 ± 0.02			- 1(0.3)		
	Ce-144			Ce-144-005-17	0.50	0.88	0.92 ± 0.03				+ 4(1.3)	
	Pb-210			Pb-210-004-65	0.41	1.20	1.16 ± 0.08					- 3(0.5)
115	Pb-210	6/ 7/93	6/ 7/93	Pb-210-004-65	0.67	1.99	2.34 ± 0.11					+18(3.1)
116	Pb-210	6/ 7/93	6/ 7/93	Pb-210-004-65	0.93	2.74	2.82 ± 0.08					+ 3(0.9)
117	Cs-137	7/22/93	7/22/93	Cs-137-001-123	0.31	0.76	0.76 ± 0.02			+ 0(0.0)		
	Ce-144			Ce-144-005-17	0.30	0.47	0.54 ± 0.02				+17(3.9)	
	Pb-210			Pb-210-004-65	0.30	0.89	0.97 ± 0.07					+ 9(1.1)
118	Pb-210	7/22/93	7/22/93	Pb-210-004-65	0.41	1.22	1.34 ± 0.57					+10(0.2)
119	Cs-137	7/23/93	7/23/93	Cs-137-001-123	0.65	1.61	1.66 ± 0.05			+ 4(1.3)		
	Ce-144			Ce-144-005-17	0.67	1.05	1.19 ± 0.07				+14(2.2)	
	Pb-210			Pb-210-004-65	0.30	0.89	0.86 ± 0.15					- 4(0.2)
120	Pb-210	7/28/93	7/28/93	Pb-210-004-65	0.32	0.95	1.00 ± 0.07					+ 6(0.8)
121	Pb-210	7/30/93	7/30/93	Pb-210-004-65	0.29	0.86	0.87 ± 0.05					+ 2(0.3)
122	Cs-137	7/30/93	7/30/93	Cs-137-001-123	0.56	1.38	1.36 ± 0.06			- 2(0.4)		
	Ce-144			Ce-144-005-17	0.49	0.75	0.68 ± 0.05				- 9(1.6)	
	Pb-210			Pb-210-004-65	0.41	1.21	1.11 ± 0.09					- 8(1.0)
123	Pb-210	8/ 2/93	8/ 2/93	Pb-210-004-65	0.47	1.39	1.51 ± 0.07					+ 9(1.6)
124	Cs-137	11/ 3/93	11/ 3/93	Cs-137-001-123	0.26	0.64	0.65 ± 0.02			+ 1(0.5)		
	Ce-144			Ce-144-005-17	0.30	0.37	0.37 ± 0.01				+ 0(0.1)	
	Pb-210			Pb-210-004-65	0.37	1.08	1.10 ± 0.07					+ 2(0.3)
125	Pb-210	11/ 8/93	11/ 8/93	Pb-210-004-65	0.37	1.09	1.08 ± 0.05					- 1(0.3)
126	Pb-210	11/ 8/93	11/ 8/93	Pb-210-004-65	0.33	0.97	1.04 ± 0.04					+ 7(1.7)
127	Pb-210	11/ 8/93	11/ 8/93	Pb-210-004-65	0.29	0.86	1.03 ± 0.07					+19(2.3)

TABLE 52 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Standard Solution	Quantity Added (grams)	Activity Added (Bq)	Activity Found (Bq±2s)	% Deviation (Deviation Factor)*				
								⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
128	Cs-137	11/10/93	11/10/93	Cs-137-001-123	0.55	1.34	1.38 ± 0.08			+ 3(0.5)		
	Ce-144			Ce-144-005-17	0.57	0.68	0.80 ± 0.06				+17(2.0)	
	Pb-210			Pb-210-004-65	0.56	1.63	2.06 ± 0.13					+26(3.2)
129	Pb-210	11/16/93	11/16/93	Pb-210-004-65	0.30	0.88	1.17 ± 0.12					+34(2.5)
130	Pb-210	11/16/93	11/16/93	Pb-210-004-65	0.40	1.17	1.56 ± 0.09					+33(4.2)
131	Pb-210	11/16/93	11/16/93	Pb-210-004-65	0.29	0.85	0.93 ± 0.09					+10(0.9)
132	Cs-137	11/17/93	11/17/93	Cs-137-001-123	0.23	0.56	0.59 ± 0.03			+ 5(1.2)		
	Ce-144			Ce-144-005-17	0.76	0.90	1.12 ± 0.08				+24(2.9)	
	Pb-210			Pb-210-004-65	0.43	1.27	1.58 ± 0.14					+24(2.2)
133	Pb-210	11/17/93	11/17/93	Pb-210-004-65	0.32	0.94	1.04 ± 0.14					+11(0.7)
134	Cs-137	11/17/93	11/17/93	Cs-137-001-123	0.33	0.80	0.88 ± 0.04			+11(2.4)		
	Ce-144			Ce-144-005-17	0.37	0.43	0.53 ± 0.04				+23(2.2)	
	Pb-210			Pb-210-004-65	0.34	1.00	1.24 ± 0.11					+23(2.2)
135	Pb-210	12/ 3/93	12/ 3/93	Pb-210-004-65	0.29	0.85	1.00 ± 0.07					+17(2.1)

% deviation is the % deviation between the added and reported activity relative to the added activity. The deviation factor, the difference between the reported and added activity, divided by the counting error of the reported activity, follows in parentheses.

* The % deviation is greater than 99%.

.* The deviation factor is greater than 9.9

TABLE 53
ANALYSES OF INDIVIDUAL DUPLICATE SAMPLES

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
1	Be-7	5/90	12.30 ± 0.50	11.50 ± 0.15	11.60 ± 0.15	6(1.5)				
	Zr-95		0.00 ± 0.03	0.00 ± 0.01	0.00 ± 0.01		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.00	0.00 ± 0.00			0(0.0)		
	Ce-144		0.00 ± 0.05	0.00 ± 0.01	0.00 ± 0.01				0(0.0)	
	Pb-210		1.12 ± 0.10	1.09 ± 0.03	1.09 ± 0.03					3(0.3)
2	Be-7	5/90	0.00 ± 4.30	0.00 ± 4.22	0.00 ± 3.01	0(0.0)				
	Zr-95		0.00 ± 0.48	0.00 ± 0.50	0.00 ± 0.34		0(0.0)			
	Cs-137		0.00 ± 0.01	0.01 ± 0.00	0.01 ± 0.00			** (0.7)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.05	0.00 ± 0.04				0(0.0)	
	Pb-210		0.46 ± 0.05	0.48 ± 0.05	0.47 ± 0.03					2(0.2)
3	Be-7	5/90	0.00 ± 4.51	0.00 ± 2.12	0.00 ± 1.92	0(0.0)				
	Zr-95		0.00 ± 0.42	0.00 ± 0.25	0.00 ± 0.22		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.05	0.00 ± 0.04				0(0.0)	
	Pb-210		6.78 ± 2.80	0.29 ± 0.05	0.30 ± 0.05					** (2.3)
4	Be-7	5/90	6.61 ± 2.73	10.10 ± 2.75	8.35 ± 1.93	21(0.6)				
	Zr-95		0.00 ± 0.46	0.00 ± 0.39	0.00 ± 0.30		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.05	0.00 ± 0.07	0.00 ± 0.04				0(0.0)	
	Pb-210		0.74 ± 0.07	0.73 ± 0.06	0.74 ± 0.05					1(0.1)
5	Be-7	6/90	9.42 ± 1.29	8.86 ± 3.08	9.34 ± 1.19	5(0.2)				
	Zr-95		0.00 ± 0.19	0.00 ± 0.51	0.00 ± 0.18		0(0.0)			
	Cs-137		0.00 ± 0.00	0.00 ± 0.01	0.00 ± 0.00			0(0.0)		
	Ce-144		0.00 ± 0.03	0.00 ± 0.08	0.00 ± 0.03				0(0.0)	
	Pb-210		0.78 ± 0.03	0.98 ± 0.12	0.79 ± 0.03					24(1.6)
6	Be-7	6/90	9.80 ± 2.57	9.35 ± 2.25	9.55 ± 1.69	3(0.1)				
	Zr-95		0.00 ± 0.41	0.00 ± 0.40	0.00 ± 0.29		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.05	0.00 ± 0.07	0.00 ± 0.04				0(0.0)	
	Pb-210		0.94 ± 0.07	0.84 ± 0.10	0.90 ± 0.06					8(0.7)
7	Be-7	6/90	8.55 ± 0.39	9.33 ± 0.90	8.67 ± 0.36	8(0.7)				
	Zr-95		0.00 ± 0.04	0.00 ± 0.06	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.03	0.00 ± 0.08	0.00 ± 0.03				0(0.0)	
	Pb-210		1.17 ± 0.07	1.22 ± 0.15	1.17 ± 0.06					4(0.3)

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
8	Be-7	6/90	4.07 ± 1.29	4.02 ± 2.18	4.06 ± 1.11	1(0.0)				
	Zr-95		0.00 ± 0.21	0.00 ± 0.42	0.00 ± 0.19		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.09	0.00 ± 0.05				0(0.0)	
	Pb-210		0.66 ± 0.05	0.76 ± 0.14	0.67 ± 0.05					14(0.7)
9	Be-7	7/90	9.70 ± 0.78	11.60 ± 0.77	10.70 ± 0.55	9(1.2)				
	Zr-95		0.00 ± 0.06	0.00 ± 0.05	0.00 ± 0.04		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.08	0.00 ± 0.05				0(0.0)	
	Pb-210		1.48 ± 0.16	1.61 ± 0.16	1.54 ± 0.11					4(0.4)
10	Be-7	7/90	8.21 ± 0.69	8.15 ± 0.60	8.18 ± 0.45	0(0.0)				
	Zr-95		0.00 ± 0.05	0.00 ± 0.04	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.08	0.00 ± 0.05				0(0.0)	
	Pb-210		0.82 ± 0.13	0.84 ± 0.13	0.83 ± 0.09					1(0.1)
11	Be-7	7/90	8.87 ± 0.60	7.83 ± 0.33	8.07 ± 0.29	10(1.3)				
	Zr-95		0.00 ± 0.04	0.00 ± 0.03	0.00 ± 0.02		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.04	0.00 ± 0.03				0(0.0)	
	Pb-210		1.69 ± 0.17	1.49 ± 0.07	1.52 ± 0.07					11(1.0)
12	Be-7	7/90	3.32 ± 0.46	3.61 ± 0.35	3.50 ± 0.28	5(0.4)				
	Zr-95		0.00 ± 0.06	0.00 ± 0.04	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.07	0.00 ± 0.04				0(0.0)	
	Pb-210		0.78 ± 0.13	0.76 ± 0.11	0.77 ± 0.08					1(0.1)
13	Be-7	8/90	11.20 ± 0.91	12.40 ± 0.86	11.90 ± 0.63	5(0.7)				
	Zr-95		0.00 ± 0.07	0.00 ± 0.06	0.00 ± 0.05		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.08	0.00 ± 0.05				0(0.0)	
	Pb-210		1.40 ± 0.15	1.23 ± 0.15	1.31 ± 0.11					7(0.6)
14	Be-7	8/90	18.90 ± 1.00	19.60 ± 1.10	19.20 ± 0.74	2(0.3)				
	Zr-95		0.00 ± 0.06	0.00 ± 0.06	0.00 ± 0.04		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.07	0.00 ± 0.04				0(0.0)	
	Pb-210		2.94 ± 0.18	3.04 ± 0.20	2.99 ± 0.14					2(0.3)

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
15	Be-7	9/90	4.25 ± 0.36	4.21 ± 0.39	4.23 ± 0.27	1(0.1)				
	Zr-95		0.00 ± 0.04	0.00 ± 0.05	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.05	0.00 ± 0.06	0.00 ± 0.04				0(0.0)	
	Pb-210		0.50 ± 0.09	0.51 ± 0.10	0.51 ± 0.07					1(0.0)
16	Be-7	9/90	5.85 ± 0.39	5.51 ± 0.28	5.62 ± 0.23	4(0.6)				
	Zr-95		0.00 ± 0.03	0.00 ± 0.03	0.00 ± 0.02		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.05	0.00 ± 0.04				0(0.0)	
	Pb-210		0.89 ± 0.12	0.90 ± 0.08	0.90 ± 0.07					0(0.0)
17	Be-7	9/90	6.82 ± 0.70	5.70 ± 0.75	6.30 ± 0.51	10(0.8)				
	Zr-95		0.00 ± 0.06	0.00 ± 0.10	0.00 ± 0.05		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.06	0.00 ± 0.05				0(0.0)	
	Pb-210		1.31 ± 0.14	1.32 ± 0.13	1.31 ± 0.10					0(0.0)
18	Be-7	10/90	11.30 ± 0.77	10.90 ± 0.43	11.00 ± 0.37	3(0.4)				
	Zr-95		0.00 ± 0.06	0.00 ± 0.03	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.04	0.00 ± 0.04				0(0.0)	
	Pb-210		1.76 ± 0.15	1.63 ± 0.08	1.66 ± 0.07					6(0.7)
19	Be-7	10/90	5.82 ± 0.79	8.04 ± 0.77	6.96 ± 0.55	16(1.4)				
	Zr-95		0.00 ± 0.08	0.00 ± 0.07	0.00 ± 0.05		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.10	0.00 ± 0.06				0(0.0)	
	Pb-210		1.16 ± 0.18	1.16 ± 0.16	1.16 ± 0.12					0(0.0)
20	Be-7	10/90	11.00 ± 0.30	11.50 ± 0.97	11.00 ± 0.29	5(0.6)				
	Zr-95		0.00 ± 0.03	0.00 ± 0.08	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.00	0.00 ± 0.02	0.00 ± 0.00			0(0.0)		
	Ce-144		0.00 ± 0.02	0.00 ± 0.09	0.00 ± 0.02				0(0.0)	
	Pb-210		1.35 ± 0.05	1.14 ± 0.14	1.33 ± 0.05					14(1.3)
21	Be-7	10/90	6.43 ± 0.79	6.55 ± 0.23	6.54 ± 0.22	2(0.1)				
	Zr-95		0.00 ± 0.09	0.00 ± 0.02	0.00 ± 0.02		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.00	0.00 ± 0.00			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.02	0.00 ± 0.02				0(0.0)	
	Pb-210		1.47 ± 0.15	1.43 ± 0.04	1.44 ± 0.04					3(0.2)

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
22	Be-7	11/90	18.10 ± 1.51	17.40 ± 1.58	17.80 ± 1.09	2(0.3)				
	Zr-95		0.00 ± 0.10	0.00 ± 0.14	0.00 ± 0.08		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.10	0.00 ± 0.08	0.00 ± 0.06				0(0.0)	
	Pb-210		4.97 ± 0.28	5.03 ± 0.28	5.00 ± 0.20					1(0.1)
23	Be-7	11/90	9.12 ± 1.09	10.10 ± 1.11	9.58 ± 0.78	5(0.4)				
	Zr-95		0.00 ± 0.11	0.00 ± 0.10	0.00 ± 0.08		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.11	0.00 ± 0.07	0.00 ± 0.06				0(0.0)	
	Pb-210		1.66 ± 0.19	1.84 ± 0.19	1.75 ± 0.14					5(0.5)
24	Be-7	12/90	5.84 ± 0.83	7.17 ± 0.91	6.44 ± 0.62	11(0.8)				
	Zr-95		0.00 ± 0.11	0.00 ± 0.09	0.00 ± 0.07		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		1.53 ± 0.18	1.49 ± 0.16	1.51 ± 0.12					2(0.2)
25	Be-7	12/90	12.40 ± 1.17	10.60 ± 1.12	11.50 ± 0.81	8(0.8)				
	Zr-95		0.00 ± 0.10	0.00 ± 0.12	0.00 ± 0.08		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		2.95 ± 0.22	2.92 ± 0.20	2.93 ± 0.15					1(0.1)
26	Be-7	12/90	8.69 ± 0.97	9.09 ± 0.88	8.91 ± 0.65	2(0.2)				
	Zr-95		0.00 ± 0.09	0.00 ± 0.09	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		2.40 ± 0.25	2.34 ± 0.21	2.36 ± 0.16					1(0.1)
27	Be-7	12/90	5.18 ± 0.59	4.76 ± 0.56	4.96 ± 0.41	4(0.4)				
	Zr-95		0.00 ± 0.07	0.00 ± 0.07	0.00 ± 0.05		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.09	0.00 ± 0.08	0.00 ± 0.06				0(0.0)	
	Pb-210		1.57 ± 0.17	1.67 ± 0.17	1.62 ± 0.12					3(0.3)
28	Be-7	1/91	6.20 ± 0.66	6.70 ± 0.69	6.44 ± 0.48	4(0.4)				
	Zr-95		0.00 ± 0.07	0.00 ± 0.07	0.00 ± 0.05		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.08	0.00 ± 0.06				0(0.0)	
	Pb-210		1.56 ± 0.16	1.50 ± 0.16	1.53 ± 0.11					2(0.2)

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
29	Be-7	1/91	6.42 ± 1.37	5.32 ± 1.26	5.82 ± 0.93	10(0.4)				
	Zr-95		0.00 ± 0.17	0.00 ± 0.23	0.00 ± 0.14		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.10	0.00 ± 0.07	0.00 ± 0.06				0(0.0)	
	Pb-210		1.08 ± 0.15	1.10 ± 0.12	1.09 ± 0.09					1(0.1)
30	Be-7	1/91	9.77 ± 0.74	9.79 ± 0.73	9.78 ± 0.52	0(0.0)				
	Zr-95		0.00 ± 0.05	0.00 ± 0.07	0.00 ± 0.04		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.08	0.00 ± 0.06				0(0.0)	
	Pb-210		1.95 ± 0.17	1.96 ± 0.17	1.96 ± 0.12					0(0.0)
31	Be-7	1/91	6.93 ± 0.32	7.00 ± 0.53	6.95 ± 0.27	1(0.1)				
	Zr-95		0.00 ± 0.03	0.00 ± 0.06	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.03	0.00 ± 0.05	0.00 ± 0.03				0(0.0)	
	Pb-210		1.49 ± 0.07	1.65 ± 0.14	1.52 ± 0.06					9(0.9)
32	Be-7	2/91	10.30 ± 0.63	10.00 ± 0.75	10.20 ± 0.48	1(0.2)				
	Zr-95		0.00 ± 0.05	0.00 ± 0.07	0.00 ± 0.04		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.05	0.00 ± 0.06	0.00 ± 0.04				0(0.0)	
	Pb-210		2.29 ± 0.15	2.25 ± 0.20	2.27 ± 0.12					1(0.1)
33	Be-7	2/91	9.20 ± 0.70	8.56 ± 0.68	8.87 ± 0.49	4(0.5)				
	Zr-95		0.00 ± 0.05	0.00 ± 0.06	0.00 ± 0.04		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.06	0.00 ± 0.04				0(0.0)	
	Pb-210		1.66 ± 0.16	1.71 ± 0.16	1.69 ± 0.12					2(0.2)
34	Be-7	2/91	7.97 ± 0.58	7.68 ± 0.64	7.84 ± 0.43	2(0.3)				
	Zr-95		0.00 ± 0.04	0.00 ± 0.06	0.00 ± 0.04		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		1.27 ± 0.15	1.19 ± 0.17	1.23 ± 0.11					4(0.3)
35	Be-7	3/91	7.85 ± 0.59	7.55 ± 0.55	7.69 ± 0.40	2(0.3)				
	Zr-95		0.00 ± 0.05	0.00 ± 0.04	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.06	0.00 ± 0.04				0(0.0)	
	Pb-210		1.22 ± 0.17	1.10 ± 0.14	1.14 ± 0.11					6(0.4)

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
36	Be-7	3/91	13.00 ± 1.06	11.70 ± 1.21	12.50 ± 0.80	6(0.6)				
	Zr-95		0.00 ± 0.07	0.00 ± 0.10	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		1.87 ± 0.17	1.88 ± 0.17	1.87 ± 0.12					0(0.0)
37	Be-7	3/91	6.35 ± 0.97	5.03 ± 1.12	5.79 ± 0.73	13(0.7)				
	Zr-95		0.00 ± 0.15	0.00 ± 0.22	0.00 ± 0.12		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.04	0.00 ± 0.04				0(0.0)	
	Pb-210		0.68 ± 0.06	0.58 ± 0.06	0.63 ± 0.04					8(0.8)
38	Be-7	3/91	8.91 ± 1.26	8.08 ± 1.18	8.47 ± 0.86	5(0.3)				
	Zr-95		0.00 ± 0.19	0.00 ± 0.19	0.00 ± 0.13		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.05	0.00 ± 0.05	0.00 ± 0.03				0(0.0)	
	Pb-210		1.12 ± 0.08	1.09 ± 0.07	1.11 ± 0.05					2(0.3)
39	Be-7	4/91	7.15 ± 0.90	5.02 ± 1.45	6.55 ± 0.77	23(1.1)				
	Zr-95		0.00 ± 0.20	0.00 ± 0.25	0.00 ± 0.16		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.04	0.00 ± 0.08	0.00 ± 0.04				0(0.0)	
	Pb-210		1.14 ± 0.06	1.06 ± 0.14	1.12 ± 0.06					6(0.5)
40	Be-7	4/91	13.30 ± 2.28	12.10 ± 1.83	12.60 ± 1.43	6(0.3)				
	Zr-95		0.00 ± 0.26	0.00 ± 0.19	0.00 ± 0.15		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.11	0.00 ± 0.10	0.00 ± 0.07				0(0.0)	
	Pb-210		1.50 ± 0.15	1.52 ± 0.16	1.51 ± 0.11					1(0.1)
41	Be-7	4/91	7.28 ± 0.81	7.59 ± 1.51	7.35 ± 0.72	3(0.2)				
	Zr-95		0.00 ± 0.11	0.00 ± 0.24	0.00 ± 0.10		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.05	0.00 ± 0.07	0.00 ± 0.04				0(0.0)	
	Pb-210		0.85 ± 0.06	0.86 ± 0.10	0.86 ± 0.05					1(0.1)
42	Be-7	5/91	5.39 ± 1.50	5.47 ± 1.17	5.44 ± 0.92	1(0.0)				
	Zr-95		0.00 ± 0.34	0.00 ± 0.15	0.00 ± 0.14		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.09	0.00 ± 0.07	0.00 ± 0.06				0(0.0)	
	Pb-210		0.69 ± 0.09	0.76 ± 0.13	0.71 ± 0.07					6(0.3)

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
43	Be-7	5/91	6.85 ± 0.61	7.65 ± 1.28	7.00 ± 0.55	9(0.5)				
	Zr-95		0.00 ± 0.13	0.00 ± 0.19	0.00 ± 0.11		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.04	0.00 ± 0.07	0.00 ± 0.04				0(0.0)	
	Pb-210		1.25 ± 0.04	1.25 ± 0.13	1.25 ± 0.04					0(0.0)
44	Be-7	5/91	10.70 ± 1.69	11.80 ± 1.33	11.40 ± 1.05	6(0.4)				
	Zr-95		0.00 ± 0.22	0.00 ± 0.15	0.00 ± 0.13		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.06	0.00 ± 0.05				0(0.0)	
	Pb-210		1.02 ± 0.13	1.18 ± 0.11	1.11 ± 0.09					8(0.7)
45	Be-7	5/91	11.50 ± 0.64	11.20 ± 0.72	11.40 ± 0.48	2(0.3)				
	Zr-95		0.00 ± 0.07	0.00 ± 0.13	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.00			0(0.0)		
	Ce-144		0.00 ± 0.04	0.00 ± 0.04	0.00 ± 0.03				0(0.0)	
	Pb-210		1.36 ± 0.06	1.40 ± 0.05	1.39 ± 0.04					2(0.4)
46	Be-7	6/91	7.85 ± 0.98	8.33 ± 0.96	8.09 ± 0.69	3(0.2)				
	Zr-95		0.00 ± 0.25	0.00 ± 0.20	0.00 ± 0.16		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		0.98 ± 0.11	0.97 ± 0.11	0.98 ± 0.08					1(0.1)
47	Be-7	6/91	7.60 ± 1.01	7.82 ± 0.90	7.72 ± 0.67	2(0.1)				
	Zr-95		0.00 ± 0.10	0.00 ± 0.11	0.00 ± 0.07		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.09	0.00 ± 0.06	0.00 ± 0.05				0(0.0)	
	Pb-210		0.96 ± 0.13	0.85 ± 0.11	0.89 ± 0.08					8(0.5)
48	Be-7	6/91	5.93 ± 0.79	6.60 ± 0.52	6.39 ± 0.44	7(0.6)				
	Zr-95		0.00 ± 0.15	0.00 ± 0.10	0.00 ± 0.08		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.04	0.00 ± 0.03				0(0.0)	
	Pb-210		0.87 ± 0.15	0.86 ± 0.06	0.86 ± 0.05					1(0.1)
49	Be-7	6/91	12.70 ± 1.11	11.80 ± 1.11	12.30 ± 0.78	3(0.4)				
	Zr-95		0.00 ± 0.08	0.00 ± 0.11	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.09	0.00 ± 0.09	0.00 ± 0.06				0(0.0)	
	Pb-210		1.39 ± 0.15	1.25 ± 0.13	1.31 ± 0.10					6(0.5)

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
50	Be-7	7/91	9.40 ± 0.88	8.04 ± 0.88	8.72 ± 0.62	8(0.8)				
	Zr-95		0.00 ± 0.08	0.00 ± 0.09	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.09	0.00 ± 0.06	0.00 ± 0.05				0(0.0)	
	Pb-210		0.99 ± 0.13	0.84 ± 0.14	0.92 ± 0.09					9(0.6)
51	Be-7	7/91	15.00 ± 1.02	14.90 ± 0.90	14.90 ± 0.67	1(0.1)				
	Zr-95		0.00 ± 0.07	0.00 ± 0.11	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.09	0.00 ± 0.06				0(0.0)	
	Pb-210		2.76 ± 0.19	2.74 ± 0.27	2.75 ± 0.15					0(0.0)
52	Be-7	7/91	6.85 ± 0.73	5.82 ± 0.74	6.34 ± 0.52	8(0.7)				
	Zr-95		0.00 ± 0.07	0.00 ± 0.10	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.09	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		0.98 ± 0.13	0.98 ± 0.13	0.98 ± 0.09					0(0.0)
53	Be-7	8/91	5.59 ± 0.57	6.17 ± 0.57	5.88 ± 0.41	5(0.5)				
	Zr-95		0.00 ± 0.09	0.00 ± 0.06	0.00 ± 0.05		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		1.25 ± 0.10	1.16 ± 0.08	1.20 ± 0.06					4(0.5)
54	Be-7	8/91	4.73 ± 0.41	5.18 ± 0.61	4.87 ± 0.34	6(0.5)				
	Zr-95		0.00 ± 0.06	0.00 ± 0.13	0.00 ± 0.05		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.07	0.00 ± 0.04				0(0.0)	
	Pb-210		0.65 ± 0.09	0.77 ± 0.08	0.72 ± 0.06					10(0.7)
55	Be-7	8/91	10.30 ± 0.68	10.10 ± 0.42	10.20 ± 0.36	1(0.2)				
	Zr-95		0.00 ± 0.08	0.00 ± 0.04	0.00 ± 0.04		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.04	0.00 ± 0.03				0(0.0)	
	Pb-210		1.86 ± 0.13	1.84 ± 0.09	1.85 ± 0.08					1(0.1)
56	Be-7	8/91	7.27 ± 0.28	7.04 ± 0.61	7.23 ± 0.26	3(0.3)				
	Zr-95		0.00 ± 0.04	0.00 ± 0.07	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.04	0.00 ± 0.08	0.00 ± 0.04				0(0.0)	
	Pb-210		1.38 ± 0.04	1.38 ± 0.11	1.38 ± 0.04					0(0.0)

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
57	Be-7	9/91	7.98 ± 0.62	7.17 ± 0.67	7.60 ± 0.45	6(0.7)				
	Zr-95		0.00 ± 0.07	0.00 ± 0.10	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		1.60 ± 0.11	1.64 ± 0.15	1.61 ± 0.09					2(0.2)
58	Be-7	10/91	9.81 ± 0.17	9.03 ± 0.69	9.76 ± 0.17	7(1.1)				
	Zr-95		0.00 ± 0.03	0.00 ± 0.11	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.04	0.00 ± 0.07	0.00 ± 0.04				0(0.0)	
	Pb-210		1.34 ± 0.06	1.50 ± 0.15	1.36 ± 0.05					10(0.9)
59	Be-7	10/91	5.39 ± 0.27	5.75 ± 0.26	5.58 ± 0.19	3(0.7)				
	Zr-95		0.00 ± 0.03	0.00 ± 0.05	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.03	0.00 ± 0.04	0.00 ± 0.03				0(0.0)	
	Pb-210		0.96 ± 0.08	0.96 ± 0.04	0.96 ± 0.04					0(0.0)
60	Be-7	10/91	9.17 ± 0.35	10.20 ± 0.65	9.40 ± 0.31	8(1.2)				
	Zr-95		0.00 ± 0.03	0.00 ± 0.07	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.03	0.00 ± 0.06	0.00 ± 0.03				0(0.0)	
	Pb-210		1.63 ± 0.03	1.67 ± 0.13	1.63 ± 0.03					2(0.3)
61	Be-7	10/91	9.85 ± 0.46	10.80 ± 0.25	10.60 ± 0.22	7(1.5)				
	Zr-95		0.00 ± 0.06	0.00 ± 0.03	0.00 ± 0.02		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.04	0.00 ± 0.03				0(0.0)	
	Pb-210		2.70 ± 0.18	2.25 ± 0.06	2.30 ± 0.06					17(2.3)
62	Be-7	10/91	5.95 ± 0.17	6.84 ± 0.59	6.02 ± 0.17	14(1.4)				
	Zr-95		0.00 ± 0.02	0.00 ± 0.07	0.00 ± 0.02		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.03	0.00 ± 0.06	0.00 ± 0.02				0(0.0)	
	Pb-210		1.21 ± 0.07	1.31 ± 0.13	1.23 ± 0.06					6(0.6)
63	Be-7	11/91	6.75 ± 0.11	6.95 ± 0.32	6.78 ± 0.11	3(0.5)				
	Zr-95		0.00 ± 0.01	0.00 ± 0.04	0.00 ± 0.01		0(0.0)			
	Cs-137		0.00 ± 0.00	0.00 ± 0.01	0.00 ± 0.00			0(0.0)		
	Ce-144		0.00 ± 0.01	0.00 ± 0.08	0.00 ± 0.01				0(0.0)	
	Pb-210		1.99 ± 0.07	1.93 ± 0.09	1.97 ± 0.05					2(0.4)

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)%				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
64	Be-7	11/91	5.85 ± 0.19	6.32 ± 0.40	5.93 ± 0.17	6(1.0)				
	Zr-95		0.00 ± 0.02	0.00 ± 0.05	0.00 ± 0.02		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.04	0.00 ± 0.05	0.00 ± 0.03				0(0.0)	
	Pb-210		1.44 ± 0.05	1.60 ± 0.11	1.47 ± 0.05					9(1.2)
65	Be-7	11/91	6.13 ± 0.34	6.64 ± 0.18	6.53 ± 0.16	6(1.2)				
	Zr-95		0.00 ± 0.03	0.00 ± 0.02	0.00 ± 0.02		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.04	0.00 ± 0.03				0(0.0)	
	Pb-210		1.88 ± 0.12	2.16 ± 0.11	2.04 ± 0.08					8(1.3)
66	Be-7	11/91	4.01 ± 0.24	4.12 ± 0.33	4.05 ± 0.20	2(0.2)				
	Zr-95		0.00 ± 0.03	0.00 ± 0.04	0.00 ± 0.02		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.05	0.00 ± 0.06	0.00 ± 0.04				0(0.0)	
	Pb-210		0.73 ± 0.09	0.89 ± 0.10	0.80 ± 0.07					12(0.9)
67	Be-7	12/91	6.90 ± 0.10	6.41 ± 0.34	6.87 ± 0.09	7(1.3)				
	Zr-95		0.00 ± 0.01	0.00 ± 0.04	0.00 ± 0.01		0(0.0)			
	Cs-137		0.00 ± 0.00	0.00 ± 0.02	0.00 ± 0.00			0(0.0)		
	Ce-144		0.00 ± 0.02	0.00 ± 0.06	0.00 ± 0.02				0(0.0)	
	Pb-210		1.54 ± 0.04	1.48 ± 0.11	1.54 ± 0.04					4(0.5)
68	Be-7	12/91	5.56 ± 0.12	4.94 ± 0.29	5.47 ± 0.11	10(1.9)				
	Zr-95		0.00 ± 0.02	0.00 ± 0.04	0.00 ± 0.01		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.03	0.00 ± 0.06	0.00 ± 0.02				0(0.0)	
	Pb-210		2.53 ± 0.51	2.33 ± 0.18	2.35 ± 0.17					8(0.4)
69	Be-7	12/91	7.02 ± 0.36	6.68 ± 0.28	6.80 ± 0.22	3(0.6)				
	Zr-95		0.00 ± 0.03	0.00 ± 0.03	0.00 ± 0.02		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		1.69 ± 0.14	1.74 ± 0.13	1.71 ± 0.10					2(0.2)
70	Be-7	12/91	8.53 ± 0.31	8.54 ± 0.43	8.53 ± 0.25	0(0.0)				
	Zr-95		0.00 ± 0.04	0.00 ± 0.04	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.06	0.00 ± 0.04				0(0.0)	
	Pb-210		1.83 ± 0.12	1.77 ± 0.15	1.80 ± 0.09					2(0.2)

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
71	Be-7	12/91	9.27 ± 0.36	9.34 ± 0.68	9.29 ± 0.32	1(0.1)				
	Zr-95		0.00 ± 0.02	0.00 ± 0.04	0.00 ± 0.02		0(0.0)			
	Cs-137		0.01 ± 0.00	0.00 ± 0.02	0.01 ± 0.00			** (0.8)		
	Ce-144		0.00 ± 0.03	0.00 ± 0.06	0.00 ± 0.02				0(0.0)	
	Pb-210		1.70 ± 0.08	1.75 ± 0.07	1.72 ± 0.05					2(0.3)
72	Be-7	2/92	16.90 ± 1.14	17.70 ± 0.25	17.70 ± 0.25	4(0.1)				
	Zr-95		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01		0(0.0)			
	Cs-137		0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00			0(0.0)		
	Ce-144		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01				0(0.0)	
	Pb-210		1.75 ± 0.13	1.53 ± 0.16	1.66 ± 0.10					8(0.8)
73	Be-7	2/92	11.50 ± 1.19	10.20 ± 0.35	10.30 ± 0.34	11(1.0)				
	Zr-95		0.00 ± 0.12	0.00 ± 0.05	0.00 ± 0.05		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.03	0.00 ± 0.03				0(0.0)	
	Pb-210		1.34 ± 0.10	1.31 ± 0.12	1.32 ± 0.08					1(0.2)
74	Be-7	2/92	6.26 ± 0.51	6.47 ± 0.13	6.46 ± 0.13	3(0.4)				
	Zr-95		0.00 ± 0.08	0.00 ± 0.02	0.00 ± 0.02		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.00	0.00 ± 0.00			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.02	0.00 ± 0.02				0(0.0)	
	Pb-210		1.45 ± 0.09	1.50 ± 0.03	1.49 ± 0.03					3(0.5)
75	Be-7	2/92	6.29 ± 0.56	6.18 ± 0.24	6.19 ± 0.22	1(0.2)				
	Zr-95		0.00 ± 0.10	0.00 ± 0.03	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.00	0.00 ± 0.00			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.02	0.00 ± 0.02				0(0.0)	
	Pb-210		1.46 ± 0.13	1.58 ± 0.94	1.46 ± 0.13					8(0.1)
76	Be-7	3/92	9.81 ± 0.92	5.09 ± 0.35	5.68 ± 0.32	73(4.5)				
	Zr-95		0.00 ± 0.17	0.00 ± 0.07	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.05	0.00 ± 0.04				0(0.0)	
	Pb-210		1.64 ± 0.09	1.78 ± 0.04	1.76 ± 0.03					7(1.3)
77	Be-7	3/92	9.56 ± 0.26	8.70 ± 0.33	9.22 ± 0.21	6(1.6)				
	Zr-95		0.00 ± 0.04	0.00 ± 0.06	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00			0(0.0)		
	Ce-144		0.00 ± 0.03	0.00 ± 0.02	0.00 ± 0.02				0(0.0)	
	Pb-210		1.62 ± 0.04	1.51 ± 0.06	1.59 ± 0.03					5(1.2)

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
78	Be-7	3/92	19.60 ± 0.88	20.20 ± 0.92	19.90 ± 0.63	2(0.3)				
	Zr-95		0.00 ± 0.14	0.00 ± 0.11	0.00 ± 0.09		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.09	0.00 ± 0.09	0.00 ± 0.07				0(0.0)	
	Pb-210		2.02 ± 0.15	1.96 ± 0.13	1.98 ± 0.10					2(0.2)
79	Be-7	3/92	12.20 ± 1.27	13.00 ± 1.11	12.60 ± 0.84	3(0.3)				
	Zr-95		0.00 ± 0.13	0.00 ± 0.15	0.00 ± 0.10		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.08	0.00 ± 0.05				0(0.0)	
	Pb-210		1.63 ± 0.13	1.63 ± 0.13	1.63 ± 0.09					0(0.0)
80	Be-7	4/92	16.00 ± 0.68	13.90 ± 0.81	15.10 ± 0.52	8(1.5)				
	Zr-95		0.00 ± 0.08	0.00 ± 0.12	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.00	0.00 ± 0.01	0.00 ± 0.00			0(0.0)		
	Ce-144		0.00 ± 0.02	0.00 ± 0.04	0.00 ± 0.02				0(0.0)	
	Pb-210		1.41 ± 0.06	1.41 ± 0.11	1.41 ± 0.05					0(0.0)
81	Be-7	4/92	16.00 ± 1.27	16.60 ± 1.43	16.20 ± 0.95	2(0.2)				
	Zr-95		0.00 ± 0.24	0.00 ± 0.19	0.00 ± 0.15		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.10	0.00 ± 0.06				0(0.0)	
	Pb-210		1.90 ± 0.12	1.81 ± 0.26	1.89 ± 0.11					4(0.3)
82	Be-7	4/92	11.10 ± 1.60	10.20 ± 1.30	10.60 ± 1.01	5(0.3)				
	Zr-95		0.00 ± 0.30	0.00 ± 0.43	0.00 ± 0.25		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.03	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.13	0.00 ± 0.06				0(0.0)	
	Pb-210		1.05 ± 0.73	1.05 ± 0.10	1.05 ± 0.10					1(0.0)
83	Be-7	4/92	4.47 ± 1.01	4.38 ± 0.42	4.40 ± 0.39	2(0.1)				
	Zr-95		0.00 ± 0.30	0.00 ± 0.10	0.00 ± 0.10		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.03	0.00 ± 0.03				0(0.0)	
	Pb-210		0.59 ± 0.19	0.64 ± 0.04	0.64 ± 0.04					8(0.3)
84	Be-7	5/92	9.05 ± 1.71	6.84 ± 0.96	7.38 ± 0.84	23(1.0)				
	Zr-95		0.00 ± 0.35	0.00 ± 0.17	0.00 ± 0.16		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.12	0.00 ± 0.06	0.00 ± 0.05				0(0.0)	
	Pb-210		0.86 ± 0.09	0.84 ± 0.08	0.85 ± 0.06					1(0.1)

TABLE 53 (Cont'd)

No. Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*							
		Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb			
85 Be-7	5/92	9.25 ± 0.53	8.53 ± 0.73	9.00 ± 0.43	5(0.6)							
Zr-95		0.00 ± 0.07	0.00 ± 0.15	0.00 ± 0.07					0(0.0)			
Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01						0(0.0)		
Ce-144		0.00 ± 0.03	0.00 ± 0.06	0.00 ± 0.03							0(0.0)	
Pb-210		0.92 ± 0.06	0.95 ± 0.09	0.93 ± 0.05								2(0.2)
86 Be-7	5/92	11.60 ± 0.66	10.10 ± 0.72	10.90 ± 0.49	8(1.2)							
Zr-95		0.00 ± 0.15	0.00 ± 0.12	0.00 ± 0.09					0(0.0)			
Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01						0(0.0)		
Ce-144		0.00 ± 0.05	0.00 ± 0.06	0.00 ± 0.04							0(0.0)	
Pb-210		1.00 ± 0.06	0.92 ± 0.15	0.99 ± 0.06								6(0.4)
87 Be-7	5/92	16.50 ± 2.49	15.60 ± 0.31	15.60 ± 0.31	6(0.4)							
Zr-95		0.00 ± 0.37	0.00 ± 0.04	0.00 ± 0.04					0(0.0)			
Cs-137		0.00 ± 0.02	0.00 ± 0.00	0.00 ± 0.00						0(0.0)		
Ce-144		0.00 ± 0.09	0.00 ± 0.02	0.00 ± 0.02							0(0.0)	
Pb-210		1.28 ± 0.13	1.32 ± 0.80	1.28 ± 0.13								3(0.0)
88 Be-7	5/92	8.30 ± 1.68	9.97 ± 0.42	9.87 ± 0.41	16(0.9)							
Zr-95		0.00 ± 0.29	0.00 ± 0.04	0.00 ± 0.04					0(0.0)			
Cs-137		0.00 ± 0.02	0.00 ± 0.00	0.00 ± 0.00						0(0.0)		
Ce-144		0.00 ± 0.09	0.00 ± 0.02	0.00 ± 0.02							0(0.0)	
Pb-210		0.93 ± 0.12	0.98 ± 0.05	0.97 ± 0.04								4(0.3)
89 Be-7	6/92	7.78 ± 0.41	7.80 ± 0.77	7.79 ± 0.36	0(0.0)							
Zr-95		0.00 ± 0.06	0.00 ± 0.16	0.00 ± 0.06					0(0.0)			
Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01						0(0.0)		
Ce-144		0.00 ± 0.03	0.00 ± 0.08	0.00 ± 0.03							0(0.0)	
Pb-210		1.33 ± 0.05	1.36 ± 0.11	1.34 ± 0.05								2(0.2)
90 Be-7	6/92	14.40 ± 1.19	15.70 ± 0.37	15.60 ± 0.35	7(1.0)							
Zr-95		0.00 ± 0.13	0.00 ± 0.04	0.00 ± 0.04					0(0.0)			
Cs-137		0.00 ± 0.01	0.00 ± 0.00	0.00 ± 0.00						0(0.0)		
Ce-144		0.00 ± 0.07	0.00 ± 0.02	0.00 ± 0.02							0(0.0)	
Pb-210		1.24 ± 0.15	1.33 ± 0.08	1.31 ± 0.07								6(0.5)
91 Be-7	6/92	16.40 ± 0.85	14.90 ± 0.97	15.80 ± 0.64	5(0.8)							
Zr-95		0.00 ± 0.10	0.00 ± 0.14	0.00 ± 0.08					0(0.0)			
Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01						0(0.0)		
Ce-144		0.00 ± 0.04	0.00 ± 0.07	0.00 ± 0.03							0(0.0)	
Pb-210		1.10 ± 0.06	0.95 ± 0.07	1.03 ± 0.05								8(1.2)

TABLE 53 (Cont'd)

No. Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*			
		Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce
92 Be-7	6/92	16.90 ± 1.14	17.40 ± 1.48	17.00 ± 0.90	2(0.2)	0(0.0)	0(0.0)	2(0.4)
Zr-95		0.00 ± 0.11	0.00 ± 0.13	0.00 ± 0.08				
Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01				
Ce-144		0.00 ± 0.10	0.00 ± 0.07	0.00 ± 0.06				
Pb-210		2.14 ± 0.11	2.23 ± 0.13	2.18 ± 0.09				
93 Be-7	7/92	7.91 ± 0.58	7.97 ± 0.42	8.00 ± 0.34	1(0.1)	0(0.0)	0(0.0)	5(0.5)
Zr-95		0.00 ± 0.06	0.00 ± 0.08	0.00 ± 0.05				
Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01				
Ce-144		0.00 ± 0.08	0.00 ± 0.07	0.00 ± 0.05				
Pb-210		0.97 ± 0.10	1.05 ± 0.07	1.03 ± 0.06				
94 Be-7	7/92	12.50 ± 0.69	12.10 ± 0.56	12.30 ± 0.43	2(0.3)	0(0.0)	0(0.0)	0(0.0)
Zr-95		0.00 ± 0.08	0.00 ± 0.04	0.00 ± 0.04				
Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01				
Ce-144		0.00 ± 0.06	0.00 ± 0.03	0.00 ± 0.03				
Pb-210		2.45 ± 2.05	2.46 ± 2.19	2.45 ± 1.50				
95 Be-7	7/92	13.90 ± 0.74	13.40 ± 0.73	13.60 ± 0.52	2(0.3)	0(0.0)	0(0.0)	2(0.2)
Zr-95		0.00 ± 0.07	0.00 ± 0.07	0.00 ± 0.05				
Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01				
Ce-144		0.00 ± 0.05	0.00 ± 0.06	0.00 ± 0.04				
Pb-210		1.55 ± 0.12	1.60 ± 0.13	1.58 ± 0.09				
96 Be-7	8/92	12.90 ± 0.62	12.70 ± 0.80	12.80 ± 0.49	1(0.1)	0(0.0)	0(0.0)	3(0.3)
Zr-95		0.00 ± 0.08	0.00 ± 0.09	0.00 ± 0.06				
Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01				
Ce-144		0.00 ± 0.05	0.00 ± 0.07	0.00 ± 0.04				
Pb-210		1.32 ± 0.07	1.27 ± 0.10	1.31 ± 0.06				
97 Be-7	8/92	10.70 ± 0.67	10.30 ± 0.73	10.60 ± 0.50	2(0.3)	0(0.0)	0(0.0)	7(0.6)
Zr-95		0.00 ± 0.09	0.00 ± 0.11	0.00 ± 0.07				
Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01				
Ce-144		0.00 ± 0.06	0.00 ± 0.07	0.00 ± 0.04				
Pb-210		1.10 ± 0.08	1.00 ± 0.13	1.07 ± 0.07				
98 Be-7	8/92	17.50 ± 0.66	18.60 ± 0.89	17.90 ± 0.53	4(0.8)	0(0.0)	0(0.0)	3(0.4)
Zr-95		0.00 ± 0.10	0.00 ± 0.08	0.00 ± 0.06				
Cs-137		0.00 ± 0.02	0.00 ± 0.02	0.00 ± 0.01				
Ce-144		0.00 ± 0.07	0.00 ± 0.09	0.00 ± 0.05				
Pb-210		2.18 ± 0.15	2.28 ± 0.13	2.24 ± 0.10				

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
99	Be-7	8/92	15.70 ± 0.87	14.60 ± 0.68	15.10 ± 0.54	4(0.8)				
	Zr-95		0.00 ± 0.08	0.00 ± 0.10	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.02	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		2.48 ± 0.14	2.35 ± 0.22	2.44 ± 0.12					4(0.4)
100	Be-7	9/92	11.20 ± 1.87	9.76 ± 0.69	9.92 ± 0.64	12(0.7)				
	Zr-95		0.00 ± 0.38	0.00 ± 0.12	0.00 ± 0.11		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.10	0.00 ± 0.07	0.00 ± 0.06				0(0.0)	
	Pb-210		1.40 ± 0.12	1.51 ± 0.06	1.49 ± 0.06					6(0.7)
101	Be-7	9/92	17.60 ± 1.26	17.00 ± 1.44	17.30 ± 0.95	2(0.2)				
	Zr-95		0.00 ± 0.11	0.00 ± 0.13	0.00 ± 0.08		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.10	0.00 ± 0.07	0.00 ± 0.06				0(0.0)	
	Pb-210		1.32 ± 0.10	1.40 ± 0.15	1.34 ± 0.08					4(0.4)
102	Be-7	9/92	16.00 ± 1.77	16.00 ± 1.51	16.00 ± 1.15	0(0.0)				
	Zr-95		0.00 ± 0.24	0.00 ± 0.15	0.00 ± 0.13		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.08	0.00 ± 0.05				0(0.0)	
	Pb-210		2.32 ± 0.13	2.29 ± 0.16	2.31 ± 0.10					1(0.1)
103	Be-7	9/92	11.30 ± 1.92	10.40 ± 1.00	10.60 ± 0.88	7(0.4)				
	Zr-95		0.00 ± 0.28	0.00 ± 0.11	0.00 ± 0.11		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.08	0.00 ± 0.06				0(0.0)	
	Pb-210		1.00 ± 0.08	1.04 ± 0.09	1.01 ± 0.06					2(0.2)
104	Be-7	2/93	19.40 ± 1.26	14.20 ± 0.57	15.10 ± 0.52	28(3.4)				
	Zr-95		0.00 ± 0.10	0.00 ± 0.06	0.00 ± 0.05		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.09	0.00 ± 0.05	0.00 ± 0.04				0(0.0)	
	Pb-210		2.32 ± 0.12	2.31 ± 0.06	2.31 ± 0.06					0(0.1)
105	Be-7	2/93	13.20 ± 0.86	13.60 ± 1.07	13.40 ± 0.67	2(0.2)				
	Zr-95		0.00 ± 0.11	0.00 ± 0.11	0.00 ± 0.08		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		1.70 ± 0.14	1.70 ± 0.10	1.70 ± 0.08					0(0.0)

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
106	Be-7	2/93	15.50 ± 0.78	14.50 ± 1.03	15.20 ± 0.62	4(0.6)				
	Zr-95		0.00 ± 0.10	0.00 ± 0.10	0.00 ± 0.07		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.08	0.00 ± 0.06				0(0.0)	
	Pb-210		2.85 ± 0.09	3.02 ± 0.12	2.91 ± 0.07					4(0.9)
107	Be-7	4/93	10.30 ± 1.00	9.49 ± 1.17	9.93 ± 0.76	4(0.4)				
	Zr-95		0.00 ± 0.18	0.00 ± 0.18	0.00 ± 0.12		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		1.07 ± 0.12	1.08 ± 0.16	1.07 ± 0.10					1(0.1)
108	Be-7	4/93	10.40 ± 0.44	9.56 ± 1.07	10.30 ± 0.41	7(0.7)				
	Zr-95		0.00 ± 0.14	0.00 ± 0.12	0.00 ± 0.09		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.10	0.00 ± 0.09	0.00 ± 0.07				0(0.0)	
	Pb-210		0.82 ± 0.10	0.87 ± 0.10	0.85 ± 0.07					3(0.2)
109	Be-7	4/93	20.10 ± 2.62	19.10 ± 1.31	19.30 ± 1.17	4(0.3)				
	Zr-95		0.00 ± 0.15	0.00 ± 0.14	0.00 ± 0.10		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.10	0.00 ± 0.06				0(0.0)	
	Pb-210		1.65 ± 0.18	1.34 ± 0.09	1.41 ± 0.08					17(1.4)
110	Be-7	4/93	21.20 ± 0.78	20.60 ± 2.11	21.10 ± 0.73	3(0.3)				
	Zr-95		0.00 ± 0.10	0.00 ± 0.16	0.00 ± 0.08		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		1.28 ± 0.07	1.48 ± 0.15	1.32 ± 0.06					12(1.1)
111	Be-7	5/93	15.70 ± 0.71	16.60 ± 1.41	15.90 ± 0.63	5(0.6)				
	Zr-95		0.00 ± 0.05	0.00 ± 0.11	0.00 ± 0.05		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.07	0.00 ± 0.04				0(0.0)	
	Pb-210		1.15 ± 0.05	1.47 ± 0.12	1.20 ± 0.05					22(2.2)
112	Be-7	5/93	10.80 ± 0.56	10.60 ± 0.86	10.70 ± 0.47	1(0.1)				
	Zr-95		0.00 ± 0.06	0.00 ± 0.08	0.00 ± 0.05		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		1.03 ± 0.08	1.16 ± 0.09	1.10 ± 0.06					6(0.8)

TABLE 53 (Cont'd)

No. Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)		% Deviation (Deviation Factor)*			
		Part A	Part B	7Be	95Zr	137Cs	144Ce	210Pb	
113 Be-7 Zr-95 Cs-137 Ce-144 Pb-210	5/93	20.70 ± 0.49 0.00 ± 0.03 0.00 ± 0.01 0.00 ± 0.04 1.51 ± 0.04	20.90 ± 1.14 0.00 ± 0.09 0.00 ± 0.01 0.00 ± 0.09 1.66 ± 0.08	20.70 ± 0.45 0.00 ± 0.03 0.00 ± 0.01 0.00 ± 0.04 1.54 ± 0.04	1(0.2)	0(0.0)	0(0.0)	7(1.4)	
114 Be-7 Zr-95 Cs-137 Ce-144 Pb-210	5/93	13.50 ± 0.86 0.00 ± 0.07 0.00 ± 0.01 0.00 ± 0.08 1.49 ± 0.11	24.80 ± 0.68 0.00 ± 0.10 0.00 ± 0.02 0.00 ± 0.11 2.31 ± 0.14	20.40 ± 0.53 0.00 ± 0.06 0.00 ± 0.01 0.00 ± 0.07 1.81 ± 0.09	34(8.1)	0(0.0)	0(0.0)	27(3.5)	
115 Be-7 Zr-95 Cs-137 Ce-144 Pb-210	5/93	16.70 ± 0.43 0.00 ± 0.03 0.00 ± 0.01 0.00 ± 0.04 0.98 ± 0.05	18.10 ± 1.06 0.00 ± 0.03 0.00 ± 0.01 0.00 ± 0.03 1.16 ± 0.07	16.90 ± 0.40 0.00 ± 0.02 0.00 ± 0.00 0.00 ± 0.02 1.04 ± 0.04	7(1.2)	0(0.0)	0(0.0)	12(1.9)	
116 Be-7 Zr-95 Cs-137 Ce-144 Pb-210	8/93	11.80 ± 1.67 0.00 ± 0.25 0.00 ± 0.02 0.00 ± 0.08 2.19 ± 0.21	13.50 ± 0.80 0.00 ± 0.10 0.00 ± 0.02 0.00 ± 0.07 2.00 ± 0.21	13.20 ± 0.72 0.00 ± 0.09 0.00 ± 0.01 0.00 ± 0.05 2.10 ± 0.15	11(0.8)	0(0.0)	0(0.0)	4(0.4)	
117 Be-7 Zr-95 Cs-137 Ce-144 Pb-210	8/93	17.00 ± 0.99 0.00 ± 0.14 0.00 ± 0.01 0.00 ± 0.09 2.13 ± 0.09	18.40 ± 0.38 0.00 ± 0.07 0.00 ± 0.01 0.00 ± 0.08 2.18 ± 0.12	18.20 ± 0.36 0.00 ± 0.06 0.00 ± 0.01 0.00 ± 0.06 2.15 ± 0.07	7(1.3)	0(0.0)	0(0.0)	2(0.3)	
118 Be-7 Zr-95 Cs-137 Ce-144 Pb-210	8/93	20.90 ± 1.58 0.00 ± 0.15 0.00 ± 0.01 0.00 ± 0.07 2.05 ± 0.17	20.00 ± 0.75 0.00 ± 0.09 0.00 ± 0.01 0.00 ± 0.09 1.82 ± 0.11	20.10 ± 0.68 0.00 ± 0.07 0.00 ± 0.01 0.00 ± 0.05 1.88 ± 0.09	4(0.5)	0(0.0)	0(0.0)	9(1.0)	
119 Be-7 Zr-95 Cs-137 Ce-144 Pb-210	8/93	29.10 ± 2.16 0.00 ± 0.19 0.00 ± 0.01 0.00 ± 0.07 3.67 ± 0.20	20.40 ± 1.08 0.00 ± 0.06 0.00 ± 0.01 0.00 ± 0.05 3.52 ± 0.25	22.10 ± 0.97 0.00 ± 0.06 0.00 ± 0.01 0.00 ± 0.04 3.61 ± 0.16	32(3.3)	0(0.0)	0(0.0)	3(0.4)	

TABLE 53 (Cont'd)

No.	Nuclide	Reference Date	Nuclide Activity (Bq per sample)		Weighted Mean (by error)	% Deviation (Deviation Factor)*				
			Part A	Part B		⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
120	Be-7	9/93	15.70 ± 0.79	16.20 ± 1.32	15.80 ± 0.68	3(0.3)				
	Zr-95		0.00 ± 0.08	0.00 ± 0.10	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.02	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.08	0.00 ± 0.07	0.00 ± 0.05				0(0.0)	
	Pb-210		1.81 ± 0.13	2.33 ± 0.16	2.00 ± 0.10					16(2.0)
121	Be-7	9/93	19.50 ± 1.05	18.50 ± 0.99	19.00 ± 0.72	3(0.5)				
	Zr-95		0.00 ± 0.09	0.00 ± 0.08	0.00 ± 0.06		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.06	0.00 ± 0.09	0.00 ± 0.05				0(0.0)	
	Pb-210		2.13 ± 0.14	1.80 ± 0.13	1.95 ± 0.10					9(1.3)
122	Be-7	9/93	0.84 ± 0.17	1.30 ± 0.28	0.97 ± 0.15	35(1.2)				
	Zr-95		0.00 ± 0.06	0.00 ± 0.06	0.00 ± 0.04		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.07	0.00 ± 0.05	0.00 ± 0.04				0(0.0)	
	Pb-210		0.16 ± 0.06	0.18 ± 0.07	0.17 ± 0.04					9(0.2)
123	Be-7	9/93	15.20 ± 0.58	13.80 ± 1.14	14.90 ± 0.51	7(0.9)				
	Zr-95		0.00 ± 0.03	0.00 ± 0.08	0.00 ± 0.03		0(0.0)			
	Cs-137		0.00 ± 0.01	0.00 ± 0.01	0.00 ± 0.01			0(0.0)		
	Ce-144		0.00 ± 0.03	0.00 ± 0.06	0.00 ± 0.03				0(0.0)	
	Pb-210		2.27 ± 0.15	2.26 ± 0.20	2.27 ± 0.12					0(0.0)

* % deviation is the greater of the % deviations obtained by taking the % deviation of each measurement from the weighted mean of the two measurements. The deviation factor, the greater of the ratios obtained by taking the deviation of each measurement from the weighted mean of the two measurements, and dividing it by the counting error of that measurement, follows in parentheses.

** % deviation greater than 99%

TABLE 54
INDIVIDUAL REPLICATE SAMPLE ANALYSIS

No.	Nuclide	Counting	Reference	Activity Found (Bq $\pm$ 2s)	% Deviation*	
		Date	Date		¹³⁷ Cs	²¹⁰ Pb
1	Cs-137	1/ 9/90	1/ 1/86	4.57 $\pm$ 0.05	-3.9	
	Pb-210	1/ 9/90	1/ 1/86	1.96 $\pm$ 0.09		0.2
2	Cs-137	2/13/90	1/ 1/86	4.94 $\pm$ 0.06	4.0	
	Pb-210	2/13/90	1/ 1/86	1.94 $\pm$ 0.07		-1.1
3	Cs-137	3/19/90	1/ 1/86	4.89 $\pm$ 0.08	2.8	
	Pb-210	3/19/90	1/ 1/86	1.96 $\pm$ 0.12		-0.3
4	Cs-137	4/11/90	1/ 1/86	4.63 $\pm$ 0.09	-2.6	
	Pb-210	4/11/90	1/ 1/86	1.83 $\pm$ 0.13		-6.8
5	Cs-137	5/31/90	1/ 1/86	4.85 $\pm$ 0.08	2.0	
	Pb-210	5/31/90	1/ 1/86	1.80 $\pm$ 0.12		-8.4
6	Cs-137	6/28/90	1/ 1/86	4.86 $\pm$ 0.10	2.2	
	Pb-210	6/28/90	1/ 1/86	1.89 $\pm$ 0.13		-3.5
7	Cs-137	8/ 6/90	1/ 1/86	4.89 $\pm$ 0.05	2.9	
	Pb-210	8/ 6/90	1/ 1/86	1.85 $\pm$ 0.08		-5.5
8	Cs-137	9/ 7/90	1/ 1/86	4.85 $\pm$ 0.10	2.0	
	Pb-210	9/ 7/90	1/ 1/86	1.99 $\pm$ 0.14		1.6
9	Cs-137	9/27/90	1/ 1/86	4.93 $\pm$ 0.11	3.8	
	Pb-210	9/27/90	1/ 1/86	1.81 $\pm$ 0.15		-7.5
10	Cs-137	11/12/90	1/ 1/86	4.90 $\pm$ 0.05	3.1	
	Pb-210	11/12/90	1/ 1/86	1.91 $\pm$ 0.07		-2.3
11	Cs-137	3/11/91	1/ 1/86	4.45 $\pm$ 0.06	-6.4	
	Pb-210	3/11/91	1/ 1/86	2.16 $\pm$ 0.10		10.3
12	Cs-137	4/ 5/91	1/ 1/86	4.51 $\pm$ 0.06	-5.1	
	Pb-210	4/ 5/91	1/ 1/86	2.07 $\pm$ 0.09		5.3
13	Cs-137	4/23/91	1/ 1/86	4.65 $\pm$ 0.11	-2.2	
	Pb-210	4/23/91	1/ 1/86	2.02 $\pm$ 0.17		3.2
14	Cs-137	6/ 4/91	1/ 1/86	4.88 $\pm$ 0.06	2.7	
	Pb-210	6/ 4/91	1/ 1/86	1.92 $\pm$ 0.08		-2.1
15	Cs-137	7/15/91	1/ 1/86	4.89 $\pm$ 0.04	2.8	
	Pb-210	7/15/91	1/ 1/86	1.88 $\pm$ 0.05		-4.0
16	Cs-137	8/ 5/91	1/ 1/86	4.88 $\pm$ 0.06	2.5	
	Pb-210	8/ 5/91	1/ 1/86	1.92 $\pm$ 0.09		-1.9
17	Cs-137	9/ 3/91	1/ 1/86	4.57 $\pm$ 0.06	-3.9	
	Pb-210	9/ 3/91	1/ 1/86	1.89 $\pm$ 0.09		-3.4
18	Cs-137	10/31/91	1/ 1/86	4.22 $\pm$ 0.05	-11.2	
	Pb-210	10/31/91	1/ 1/86	1.54 $\pm$ 0.08		-21.5

TABLE 54 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Activity Found (Bq $\pm$ 2s)	% Deviation*	
					¹³⁷ Cs	²¹⁰ Pb
19	Cs-137	12/24/91	1/ 1/86	4.89 $\pm$ 0.04	2.9	
	Pb-210	12/24/91	1/ 1/86	1.97 $\pm$ 0.15		0.5
20	Cs-137	1/ 8/92	1/ 1/86	4.61 $\pm$ 0.10	-3.1	
	Pb-210	1/ 8/92	1/ 1/86	2.02 $\pm$ 0.11		3.1
21	Cs-137	2/ 3/92	1/ 1/86	4.89 $\pm$ 0.14	2.8	
	Pb-210	2/ 3/92	1/ 1/86	1.90 $\pm$ 0.18		-3.1
22	Cs-137	3/24/92	1/ 1/86	4.93 $\pm$ 0.08	3.7	
	Pb-210	3/24/92	1/ 1/86	2.06 $\pm$ 0.10		5.2
23	Cs-137	4/10/92	1/ 1/86	4.88 $\pm$ 0.13	2.6	
	Pb-210	4/10/92	1/ 1/86	2.08 $\pm$ 0.11		6.1
24	Cs-137	5/18/92	1/ 1/86	4.48 $\pm$ 0.14	-5.7	
	Pb-210	5/18/92	1/ 1/86	1.98 $\pm$ 0.09		0.8
25	Cs-137	6/24/92	1/ 1/86	4.57 $\pm$ 0.27	-4.0	
	Pb-210	6/24/92	1/ 1/86	2.04 $\pm$ 0.14		3.9
26	Cs-137	7/13/92	1/ 1/86	4.61 $\pm$ 0.16	-3.1	
	Pb-210	7/13/92	1/ 1/86	2.17 $\pm$ 0.13		10.7
27	Cs-137	9/ 1/92	1/ 1/86	4.55 $\pm$ 0.12	-4.3	
	Pb-210	9/ 1/92	1/ 1/86	2.04 $\pm$ 0.07		4.1
28	Cs-137	10/15/92	1/ 1/86	4.84 $\pm$ 0.05	1.9	
	Pb-210	10/15/92	1/ 1/86	1.92 $\pm$ 0.10		-2.2
29	Cs-137	11/ 9/92	1/ 1/86	4.53 $\pm$ 0.18	-4.8	
	Pb-210	11/ 9/92	1/ 1/86	2.03 $\pm$ 0.12		3.3
30	Cs-137	12/10/92	1/ 1/86	4.55 $\pm$ 0.13	-4.4	
	Pb-210	12/10/92	1/ 1/86	2.06 $\pm$ 0.08		5.1
31	Cs-137	1/20/93	1/ 1/86	4.62 $\pm$ 0.14	-2.8	
	Pb-210	1/20/93	1/ 1/86	1.93 $\pm$ 0.13		-1.4
32	Cs-137	2/ 4/93	1/ 1/86	4.60 $\pm$ 0.29	-3.2	
	Pb-210	2/ 4/93	1/ 1/86	2.28 $\pm$ 0.09		16.4
33	Cs-137	4/ 2/93	1/ 1/86	4.89 $\pm$ 0.08	2.9	
	Pb-210	4/ 2/93	1/ 1/86	1.79 $\pm$ 0.08		-8.5
34	Cs-137	4/28/93	1/ 1/86	4.84 $\pm$ 0.10	1.9	
	Pb-210	4/28/93	1/ 1/86	1.87 $\pm$ 0.13		-4.7
35	Cs-137	6/21/93	1/ 1/86	4.87 $\pm$ 0.09	2.4	
	Pb-210	6/21/93	1/ 1/86	1.98 $\pm$ 0.14		0.8
36	Cs-137	8/11/93	1/ 1/86	4.82 $\pm$ 0.14	1.3	
	Pb-210	8/11/93	1/ 1/86	1.86 $\pm$ 0.11		-5.0

TABLE 54 (Cont'd)

No.	Nuclide	Counting Date	Reference Date	Activity Found (Bq $\pm$ 2s)	% Deviation*	
					¹³⁷ Cs	²¹⁰ Pb
37	Cs-137	9/20/93	1/ 1/86	4.84 $\pm$ 0.09	1.9	
	Pb-210	9/20/93	1/ 1/86	1.94 $\pm$ 0.06		-1.1
38	Cs-137	12/13/93	1/ 1/86	4.86 $\pm$ 0.10	2.2	
	Pb-210	12/13/93	1/ 1/86	2.29 $\pm$ 0.16		16.9

* % deviation from long-term mean value

TABLE 55
INDIVIDUAL BLANK SAMPLE ANALYSIS

No.	Counting Date	Reference Date	Count Time (hrs)	Detector	Activity Found (mBq $\pm$ 2s)				
					^{7}Be	^{95}Zr	^{137}Cs	^{144}Ce	^{210}Pb
1	1/ 3/90	1/ 3/90	16.9	B3	0.0 $\pm$ 44.1	0.0 $\pm$ 11.5	0.0 $\pm$ 6.3	0.0 $\pm$ 20.2	0.0 $\pm$ 46.1
2	1/18/90	1/18/90	20.8	B4	0.0 $\pm$ 40.6	0.0 $\pm$ 8.3	0.0 $\pm$ 5.3	0.0 $\pm$ 22.1	0.0 $\pm$ 48.5
3	1/31/90	1/31/90	16.5	B1	0.0 $\pm$ 41.2	0.0 $\pm$ 8.7	0.0 $\pm$ 5.1	0.0 $\pm$ 17.0	0.0 $\pm$ 46.1
4	3/19/90	3/19/90	17.0	B1	0.0 $\pm$ 39.9	0.0 $\pm$ 9.0	0.0 $\pm$ 5.3	0.0 $\pm$ 16.8	0.0 $\pm$ 46.5
5	3/31/90	3/31/90	44.6	B4	0.0 $\pm$ 28.0	0.0 $\pm$ 5.5	0.0 $\pm$ 3.5	0.0 $\pm$ 15.2	0.0 $\pm$ 33.0
6	4/12/90	4/12/90	24.7	B4	0.0 $\pm$ 37.2	0.0 $\pm$ 7.0	0.0 $\pm$ 4.9	0.0 $\pm$ 20.2	0.0 $\pm$ 43.6
7	6/ 4/90	6/ 4/90	20.7	B4	0.0 $\pm$ 42.1	0.0 $\pm$ 8.0	0.0 $\pm$ 5.2	0.0 $\pm$ 22.5	0.0 $\pm$ 48.7
8	6/27/90	6/27/90	14.0	B4	0.0 $\pm$ 50.2	0.0 $\pm$ 9.5	0.0 $\pm$ 6.2	0.0 $\pm$ 26.9	0.0 $\pm$ 59.7
9	8/10/90	8/10/90	16.6	B3	0.0 $\pm$ 46.8	0.0 $\pm$ 10.3	0.0 $\pm$ 6.7	0.0 $\pm$ 20.5	0.0 $\pm$ 47.3
10	9/11/90	9/11/90	15.9	B3	0.0 $\pm$ 47.3	0.0 $\pm$ 9.7	0.0 $\pm$ 6.5	0.0 $\pm$ 19.9	0.0 $\pm$ 46.9
11	10/ 3/90	10/ 3/90	15.6	B3	0.0 $\pm$ 44.6	0.0 $\pm$ 12.3	0.0 $\pm$ 6.8	0.0 $\pm$ 20.2	0.0 $\pm$ 47.7
12	11/20/90	11/20/90	28.2	B3	0.0 $\pm$ 34.8	0.0 $\pm$ 8.1	0.0 $\pm$ 4.7	0.0 $\pm$ 15.2	0.0 $\pm$ 36.4
13	12/14/90	12/14/90	25.0	B4	0.0 $\pm$ 38.2	0.0 $\pm$ 7.2	0.0 $\pm$ 4.8	0.0 $\pm$ 20.0	0.0 $\pm$ 44.1
14	1/25/91	1/25/91	61.0	B1	0.0 $\pm$ 24.0	0.0 $\pm$ 5.9	0.0 $\pm$ 3.2	0.0 $\pm$ 10.2	0.0 $\pm$ 29.6
15	2/14/91	2/14/91	20.4	B3	0.0 $\pm$ 42.2	0.0 $\pm$ 10.1	0.0 $\pm$ 5.9	0.0 $\pm$ 18.3	0.0 $\pm$ 42.8
16	3/29/91	3/29/91	62.6	B1	0.0 $\pm$ 24.5	0.0 $\pm$ 5.6	0.0 $\pm$ 3.3	0.0 $\pm$ 10.0	0.0 $\pm$ 29.4
17	5/ 9/91	5/ 9/91	16.0	B1	0.0 $\pm$ 47.7	0.0 $\pm$ 10.3	0.0 $\pm$ 6.0	0.0 $\pm$ 19.5	0.0 $\pm$ 60.7
18	5/13/91	5/13/91	14.3	B3	0.0 $\pm$ 47.4	0.0 $\pm$ 12.4	0.0 $\pm$ 6.6	0.0 $\pm$ 21.7	0.0 $\pm$ 52.7
19	7/15/91	7/15/91	7.8	B4	0.0 $\pm$ 68.9	0.0 $\pm$ 14.3	0.0 $\pm$ 8.6	0.0 $\pm$ 35.7	0.0 $\pm$ 80.9
20	7/24/91	7/24/91	20.4	B3	0.0 $\pm$ 41.2	0.0 $\pm$ 10.3	0.0 $\pm$ 6.1	0.0 $\pm$ 17.9	0.0 $\pm$ 41.7
21	8/24/91	8/24/91	47.1	B3	0.0 $\pm$ 25.5	0.0 $\pm$ 6.4	0.0 $\pm$ 4.0	0.0 $\pm$ 11.9	0.0 $\pm$ 28.4
22	10/10/91	10/10/91	19.8	B3	0.0 $\pm$ 42.8	0.0 $\pm$ 9.9	0.0 $\pm$ 5.8	0.0 $\pm$ 17.2	0.0 $\pm$ 51.3
23	10/29/91	10/29/91	18.7	B4	0.0 $\pm$ 43.0	0.0 $\pm$ 8.6	0.0 $\pm$ 5.4	0.0 $\pm$ 22.8	0.0 $\pm$ 49.9
24	11/25/91	11/25/91	19.4	B3	0.0 $\pm$ 40.5	0.0 $\pm$ 9.6	0.0 $\pm$ 6.1	0.0 $\pm$ 18.1	0.0 $\pm$ 44.4
25	12/20/91	12/20/91	6.7	B4	0.0 $\pm$ 67.5	0.0 $\pm$ 12.6	0.0 $\pm$ 8.9	0.0 $\pm$ 37.8	0.0 $\pm$ 74.9
26	1/27/92	1/27/92	23.6	B3	0.0 $\pm$ 36.3	0.0 $\pm$ 10.0	0.0 $\pm$ 5.4	0.0 $\pm$ 16.8	0.0 $\pm$ 40.2
27	3/ 3/92	3/ 3/92	22.8	B4	0.0 $\pm$ 38.4	0.0 $\pm$ 7.7	0.0 $\pm$ 5.3	0.0 $\pm$ 21.1	0.0 $\pm$ 46.1
28	3/ 4/92	3/ 4/92	10.9	B3	0.0 $\pm$ 52.9	0.0 $\pm$ 11.5	0.0 $\pm$ 8.3	0.0 $\pm$ 25.0	0.0 $\pm$ 58.2
29	5/ 7/92	5/ 7/92	93.6	B3	0.0 $\pm$ 19.2	0.0 $\pm$ 4.6	0.0 $\pm$ 2.7	0.0 $\pm$ 8.5	12.7 $\pm$ 6.9
30	5/12/92	5/12/92	17.9	B4	0.0 $\pm$ 43.7	0.0 $\pm$ 8.6	0.0 $\pm$ 5.7	0.0 $\pm$ 23.0	0.0 $\pm$ 50.7
31	6/29/92	6/29/92	16.9	B4	0.0 $\pm$ 45.0	0.0 $\pm$ 8.7	0.0 $\pm$ 5.9	0.0 $\pm$ 24.6	0.0 $\pm$ 53.4
32	7/ 2/92	7/ 2/92	7.6	B3	0.0 $\pm$ 61.6	0.0 $\pm$ 16.2	0.0 $\pm$ 9.8	0.0 $\pm$ 30.3	0.0 $\pm$ 72.8
33	8/14/92	8/14/92	71.0	B1	0.0 $\pm$ 22.6	0.0 $\pm$ 5.3	0.0 $\pm$ 2.8	0.0 $\pm$ 9.0	0.0 $\pm$ 26.7
34	11/ 2/92	11/ 2/92	18.4	B4	0.0 $\pm$ 44.7	0.0 $\pm$ 9.4	0.0 $\pm$ 5.8	0.0 $\pm$ 23.9	0.0 $\pm$ 51.1
35	12/18/92	12/18/92	64.7	B4	0.0 $\pm$ 23.9	0.0 $\pm$ 4.7	0.0 $\pm$ 3.0	0.0 $\pm$ 12.6	0.0 $\pm$ 28.1
36	2/ 4/93	2/ 4/93	20.4	B4	0.0 $\pm$ 39.4	0.0 $\pm$ 7.9	0.0 $\pm$ 4.7	0.0 $\pm$ 22.2	0.0 $\pm$ 42.1
37	4/ 2/93	4/ 2/93	65.8	B4	0.0 $\pm$ 20.3	0.0 $\pm$ 4.3	0.0 $\pm$ 2.7	0.0 $\pm$ 12.4	0.0 $\pm$ 23.7
38	4/16/93	4/16/93	16.4	B4	0.0 $\pm$ 42.1	0.0 $\pm$ 8.5	0.0 $\pm$ 5.6	0.0 $\pm$ 24.8	0.0 $\pm$ 47.7

TABLE 55 (Cont'd)

No.	Counting Date	Reference Date	Count Time (hrs)	Detector	Activity Found (mBq $\pm$ 2s)				
					⁷ Be	⁹⁵ Zr	¹³⁷ Cs	¹⁴⁴ Ce	²¹⁰ Pb
39	6/ 3/93	6/ 3/93	19.5	B4	0.0 $\pm$ 40.7	0.0 $\pm$ 8.2	0.0 $\pm$ 5.1	0.0 $\pm$ 22.6	0.0 $\pm$ 43.4
40	6/ 8/93	6/ 8/93	7.6	B4	0.0 $\pm$ 63.5	0.0 $\pm$ 11.1	0.0 $\pm$ 7.3	0.0 $\pm$ 38.0	0.0 $\pm$ 69.2
41	8/26/93	8/26/93	16.1	B3	0.0 $\pm$ 41.7	0.0 $\pm$ 10.8	0.0 $\pm$ 6.3	0.0 $\pm$ 20.8	0.0 $\pm$ 41.3
42	11/ 3/93	11/ 3/93	3.3	B4	0.0 $\pm$ 30.6	0.0 $\pm$ 6.4	0.0 $\pm$ 3.9	0.0 $\pm$ 17.8	0.0 $\pm$ 33.6
43	11/10/93	11/10/93	10.0	B4	0.0 $\pm$ 55.5	0.0 $\pm$ 11.4	0.0 $\pm$ 6.7	0.0 $\pm$ 32.4	0.0 $\pm$ 60.6
44	11/15/93	11/15/93	15.9	B4	0.0 $\pm$ 43.8	0.0 $\pm$ 8.9	0.0 $\pm$ 5.7	0.0 $\pm$ 25.9	0.0 $\pm$ 46.6
45	11/22/93	11/22/93	9.4	B1	0.0 $\pm$ 54.0	0.0 $\pm$ 13.0	0.0 $\pm$ 7.0	0.0 $\pm$ 24.8	0.0 $\pm$ 63.5
46	11/23/93	11/23/93	18.4	B4	0.0 $\pm$ 40.2	0.0 $\pm$ 7.8	0.0 $\pm$ 5.2	0.0 $\pm$ 23.6	0.0 $\pm$ 43.4

Figures 1 - 55

▲ Surface Air Stations ★ Remote Atmospheric Measurements Program Stations

Figure 1. EML's Global Sampling Network

Figure 2. Monthly surface air concentrations at Thule, Greenland.

Figure 3. Surface Air Concentrations at Barrow, Alaska.

Figure 4. Surface Air Concentrations at Constable Point, Greenland.

Figure 5. Surface Air Concentrations at Moosonee, Canada.

Figure 6. Surface Air Concentrations at Beaverton, Oregon.

Figure 7. Surface Air Concentrations at Rexburg, Idaho.

Figure 8. Surface Air Concentrations at Chester, New Jersey.

Figure 9. Surface Air Concentrations at New York City, New York.

Figure 10. Surface Air Concentrations at Montgomery, Alabama.

Figure 11. Surface Air Concentrations at Miami, Florida.

Figure 12. Surface Air Concentrations at Mauna Loa, Hawaii.

Figure 13. Surface Air Concentrations at Guayaquil, Ecuador.

Figure 14. Surface Air Concentrations at Lima, Peru.

Figure 15. Surface Air Concentrations at Tutuila, Samoa.

Figure 16. Surface Air Concentrations at Chacaltaya, Bolivia.

Figure 17. Surface Air Concentrations at Reunion Island.

Figure 18. Surface Air Concentrations at Antofagasta, Chile.

Figure 19. Surface Air Concentrations at Pretoria, South Africa.

Figure 20. Surface Air Concentrations at Isla de Pascua (Easter Island).

Figure 21. Surface Air Concentrations at Norfolk Island.

Figure 22. Surface Air Concentrations at Perth, Australia.

Figure 23. Surface Air Concentrations at Durzano, Uruguay.

Figure 24. Surface Air Concentrations at Santiago, Chile.

Figure 25. Surface Air Concentrations at Cape Point, South Africa.

Figure 26. Surface Air Concentrations at Cape Grim, Australia.

Figure 27. Surface Air Concentrations at Lower Hutt, New Zealand.

Figure 28. Surface Air Concentrations at Puerto Montt, Chile.

Figure 29. Surface Air Concentrations at Chatham Island.

Figure 30. Surface Air Concentrations at Invercargill, New Zealand.

Figure 31. Surface Air Concentrations at Marion Island.

Figure 32. Surface Air Concentrations at Falkland Islands.

Figure 33. Surface Air Concentrations at Punta Arenas, Chile.

Figure 34. Surface Air Concentrations at Marsh, Antarctica.

Figure 35. Surface Air Concentrations at Palmer, Antarctica.

Figure 36. Surface Air Concentrations at Mawson, Antarctica Station.

Figure 37. Surface Air Concentrations at South Pole Station.

Figure 38. Composite reference samples for beryllium-7.

Figure 39. Composite reference samples for zirconium-95.

Figure 40. Composite reference samples for cesium-137.

Figure 41. Composite reference samples for cerium-144.

Figure 42. Composite reference samples for lead-210.

Figure 43. Composite duplicate samples for beryllium-7.

Figure 44. Composite duplicate samples for lead-210.

Figure 45. Composite replicate sample for cesium-137.

Figure 46. Composite replicate sample for lead-210.

Figure 47. Individual reference samples for beryllium-7.

Figure 48. Individual reference samples for zirconium-95.

Figure 49. Individual reference samples for cesium-137.

Figure 50. Individual reference samples for cerium-144.

Figure 51. Individual reference samples for lead-210.

Figure 52. Individual duplicate samples for beryllium-7.

Figure 53. Individual duplicate samples for lead-210.

Figure 54. Individual replicate sample for cesium-137.

Figure 55. Individual replicate sample for lead-210.

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