NOAA Technical Memorandum ERL ARL-80

MEASURED WEEKLY AND TWICE-DAILY KRYPTON-85 SURFACE AIR CONCENTRATIONS WITHIN 150 KM OF THE SAVANNAH RIVER PLANT (MARCH 1975 THROUGH SEPTEMBER 1977) - FINAL REPORT

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Silver Spring, Maryland
January 1980

UNITED STATES DEPARTMENT OF COMMERCE
Philip M. Klutznick, Secretary

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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Environmental Research Laboratories
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FINAL REPORT

Abstract. A cryogenic air sampling network of 13 stations surrounding the Savannah River Plant operated continuously taking weekly or twice-daily ^{85}Kr samples from March 1975 to September 1977. These data are reported together with the monthly ^{85}Kr emissions at the plant and associated meteorological data. The ^{85}Kr sampling data have also been averaged into monthly, seasonal, and annual concentrations. These data should prove useful to air pollution modellers for model improvement and verification.

1. INTRODUCTION

In recent years, there has been increasing concern about industrial air pollution and the need to determine atmospheric transport and dispersion of airborne material to distances of a hundred kilometers or more from a pollutant source. Many models have been developed to estimate pollutant concentrations at these distances but there are very few data available for verification of these calculations beyond a few kilometers.

An air sampling experiment was designed by the Air Resources Laboratories (ARL) of the National Oceanic and Atmospheric Administration (NOAA) and the Savannah River Laboratory (SRL) of E.I. DuPont de Nemours and Co. with the following objectives:

1) Provide weekly average air concentrations for model verification at distances from about 25 km to 150 km from a quasi-continuous point source.

2) Provide verification of estimates of long-term air concentrations and dose-to-man from routine Savannah River Plant (SRP) emissions.

3) Conduct several periods of intensive short-term sampling (twice-daily) to provide more detailed data for model development and verification.

4) Test the adequacy of standard stability-wind rose techniques for estimating monthly, seasonal, and annual air concentrations out to 150 km from a continuous source.

The sampling program was designed to take advantage of the Krypton-85 (^{85}Kr) plume produced by routine emissions from the operation of chemical

separations facilities at the SRP and the availability of 13 cryogenic air samplers used by ARL in a 1974 dispersion experiment (Ferber et al., 1977). A program of weekly air sampling at 13 locations surrounding the SRP began in March 1975. Pendergast et al. (1979) reported the weekly data for the first 1½ years (March 1975 through August 1976) of this sampling program. This final report includes those data along with weekly and twice-daily samples collected from September 1976 through mid-September 1977. Continuous sampling over this relatively long period provides air concentration data over a wide range of meteorological conditions as well as seasonal and annual average concentration patterns.

Because ^{85}Kr is an inert gas (radioactive half-life of 10.76 years), its use as a tracer enables one to study the effects of atmospheric transport and dispersion free of the complications introduced by wet and dry deposition, and chemical transformations.

This sampling program provides a unique set of data for verification of atmospheric dispersion calculations used in air pollution models. The ^{85}Kr emissions data and meteorological data provided in this report and associated data tapes may be used as input for model calculations of monthly, seasonal and annual concentrations to be tested against the measured concentrations.

2. DESCRIPTION OF SITE AND SAMPLING NETWORK

The Savannah River Plant is the major production facility of the U.S. Department of Energy (DOE). The SRP includes a nuclear fuel manufacturing facility, three production reactors, two chemical separations plants, a heavy water production plant and various waste management activities. These facilities are located on a 770 -km^2 site south of Aiken, South Carolina.

The terrain within 150 km of the SRP is gently rolling hills ranging in elevation from 150 m above sea level to the northwest to about 25 m toward the southeast. The SRP is covered with mixed hardwood and pine forests; the surrounding area consists of equal amounts of mixed forests and cleared farm land.

Krypton-85 is released during dissolving operations from the two chemical separations plants located near the center of the SRP. The ^{85}Kr is released as a non-buoyant plume through two 62 m stacks.

The ^{85}Kr samplers were located at 13 sites surrounding the SRP as shown in Figure 1. Table 1 gives the approximate azimuth and distance to each site from a point midway between the two ^{85}Kr source areas (F and H).

3. SAMPLE COLLECTION AND PROCESSING

The cryogenic air sampler (Figure 2), concentrates the krypton in the atmosphere from an abundance of about one part per million in the ambient

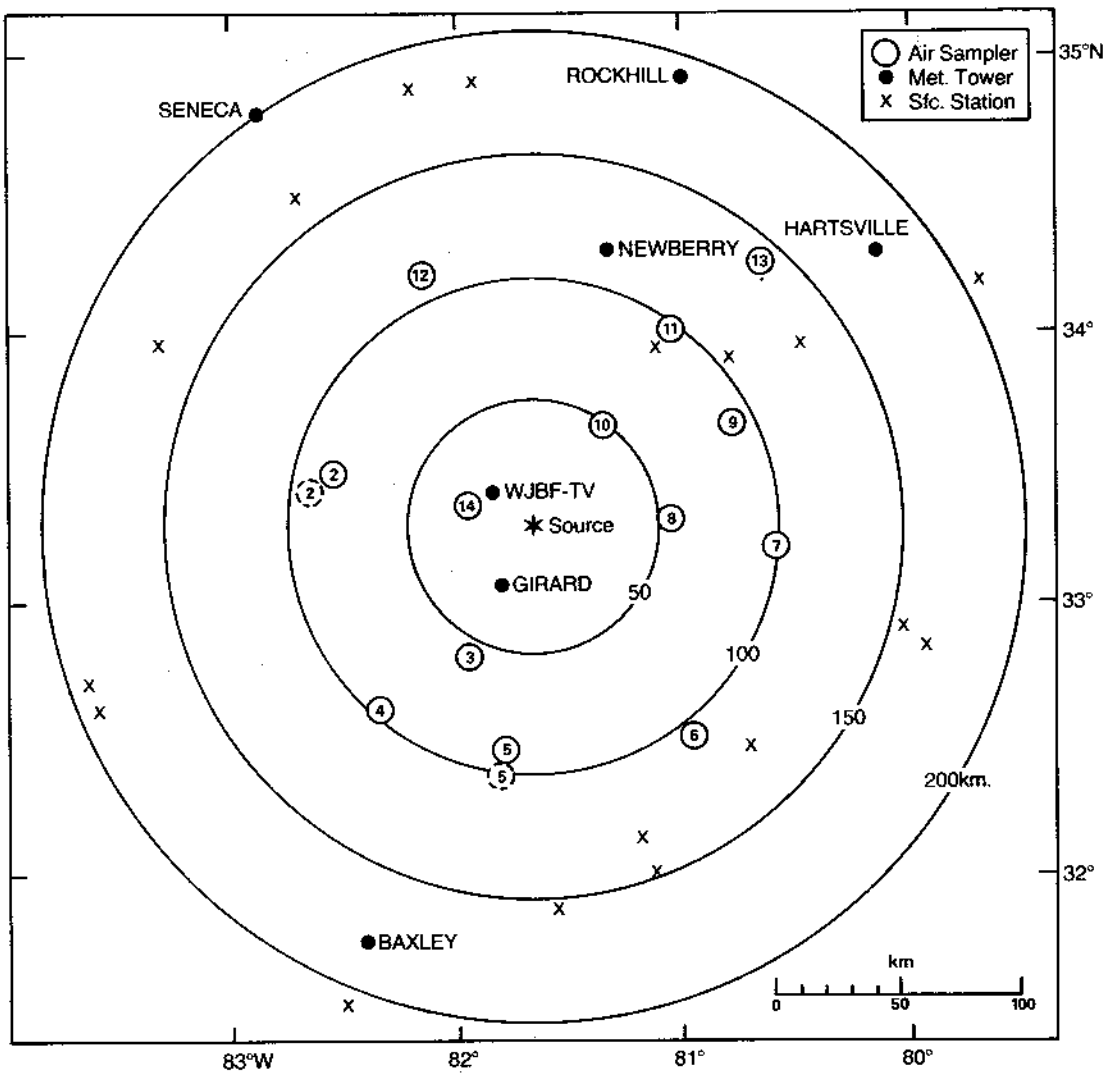

Figure 1. Krypton-85 cryogenic air sampling stations, meteorological towers and surface weather stations within 200 km of the SRP source. Dashed circles indicate earlier sampling location (see Table 1).

Table 1. Locations of the 13 Cryogenic Sampling Sites

Location	Station No.	Latitude °N	Longitude °W	Distance,[a] km	Azimuth,[a] deg
Warrenton, GA	2	33.40	82.65	94	278
(Moved 9-22-76)	2	33.46	82.56	87	283
Millen, GA	3	32.80	81.95	60	207
Swainsboro, GA	4	32.60	82.34	99	220
Statesboro, GA	5	32.35	81.80	104	187
(Moved 3-30-76)	5	32.46	81.78	92	187
Ridgeland, SC	6	32.50	80.95	109	142
St. George, SC	7	33.20	80.60	100	95
Bamberg, SC	8	33.30	81.05	57	88
St. Mathews, SC	9	33.66	80.78	93	63
Wagener, SC	10	33.65	81.36	50	34
Columbia, SC	11	34.00	81.05	98	36
Greenwood, SC	12	34.20	82.15	112	336
Camden, SC	13	34.25	80.65	144	41
Bush Field (Augusta, GA)	14	33.35	81.95	28	286
Source F		33.28	81.68		
Source H		33.28	81.64		

[a]Measured from a point midway between the two ^{85}Kr emissions areas at the Savannah River Plant.

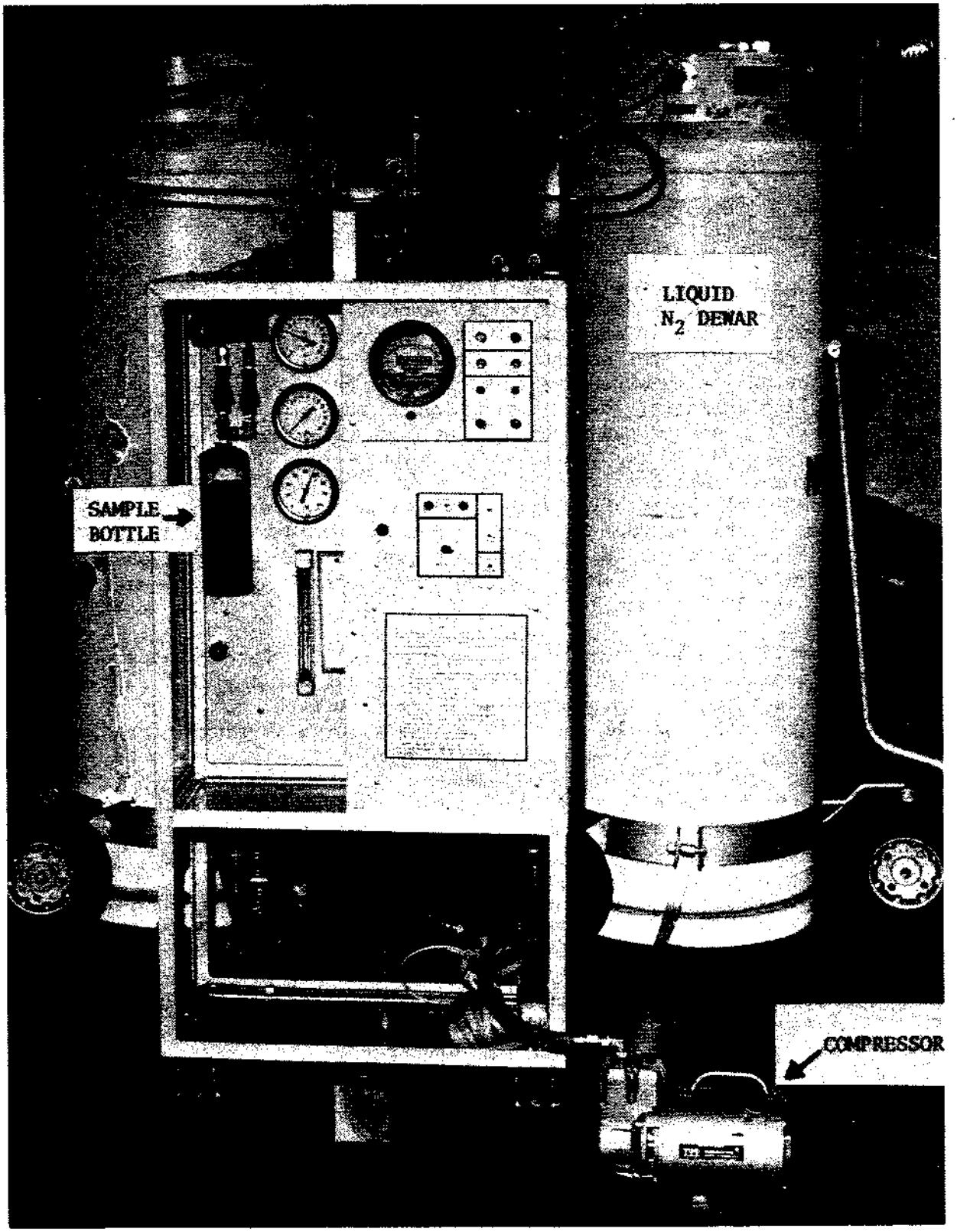

Figure 2. Cryogenic air sampler.

air to about one part per hundred in a 900 cc sample cylinder. The krypton is concentrated by continuous liquefaction of the incoming air, using liquid nitrogen (about 20 liters per day) as the cold source, and allowing the more volatile atmospheric components to boil off.

The sampler consists of a main unit and a small air compressor both operating on 120 V, 60 Hz AC power. The main unit consumes 120 watts and the compressor 380 watts. The sampler is 61 cm wide x 74 cm long x 159 cm high and weighs 114 kg including the compressor.

The cryogenic air sampler can be programmed to process the incoming air for any desired sampling period from six hours to a week or more. Following the sample collection period, the sampler is programmed to enter the Sample Isolation Period (SIP) for one hour. During the SIP, the collected enriched sample is automatically warmed by a refrigerant gas system and transferred to the sampling cylinder. After completion of the SIP, the filled sample cylinder must be removed and a new cylinder installed manually.

The cryogenic air sampler was programmed to collect seven-day samples at a continuous flow rate of 8 ℓ/min. Daily observations of flow and several pressure gages were recorded by field operators in order to maintain adequate operation of the sampling units. The units were serviced each week at which time liquid nitrogen was supplied in 160 liter interchangeable dewars and the sample cylinders returned to the SRL.

The sample cylinders were logged in and checked before shipment to Argonne National Laboratory (ANL) where the krypton was isolated in a highly purified state by a gas chromatographic separation technique. The amount of ^{85}Kr contained in the sample was then determined by measuring its radioactivity.

During the twice-daily sampling periods (day and night, with each sample of about 10-hour duration), the sampler was programmed to collect at a continuous flow rate of 20 ℓ/min.

Constant maintenance was required to maintain the network of 13 stations at a 90% operational level. Moisture buildups within the cryogenic system periodically reduced the efficiency. There is some question as to whether changes in the efficiency of collection of krypton may have been great enough, at times, to significantly affect some of the concentration values. In an effort to resolve this question, two cryogenic air samplers were operated side by side at the SRL, after the sampling program terminated, from October 10, 1977 to January 20, 1978. The results of this intercomparison are given in Section 6.

4. MONTHLY KRYPTON-85 EMISSIONS

The total amount of ^{85}Kr released from the SRP has been tabulated on a quasi-monthly basis to correspond to the weekly sampling periods from March 3, 1975 through September 19, 1977 as given in Table 2.

Table 2. Total Monthly Kr-85 Emissions (Curies) from the Savannah River Plant from March 1975 through September 1977.

Month	Total Emissions (Ci) During Sampling Period					
	1975		1976		1977	
Jan.	----		55,800	(Dec. 29,'75-Feb. 2,'76)	64,700	(Jan. 3-31)
Feb.	----		81,200	(Feb. 2-Mar. 1)	71,000	(Jan. 31-Feb. 28)
Mar.	51,200[a]	(Mar. 3-31)	62,100	(Mar. 1-29)	98,000	(Feb. 28-Apr. 4)
Apr.	51,200[a]	(Mar. 31-Apr. 28)	64,100	(Mar. 29-May 3)	65,800	Apr. 4-May 2)
May	51,200[a]	(Apr. 28-June 2)	35,400	(May 3-31)	53,400	(May 2-30)
June	51,200[a]	(June 2-30)	65,100	(May 31-June 28)	46,000	(May 30-July 4)
July	51,200[a]	(June 30-Aug. 4)	79,600	(June 28-Aug. 2)	32,300	(July 4-Aug. 1)
Aug.	4,200	(Aug. 4-Sept. 1)	46,500	(Aug. 2-30)	11,700	(Aug. 1-29)
Sept.	7,400	(Sept. 1-29)	86,400	(Aug. 30-Oct. 4)	2,300	(Aug. 29-Sept. 19)
Oct.	17,500	(Sept. 29-Nov. 3)	52,200	(Oct. 4-Nov. 1)		----
Nov.	43,800	(Nov. 3-Dec. 1)	31,900	(Nov. 1-29)		----
Dec.	89,300	(Dec. 1-29)	61,200	(Nov. 29-Jan. 3, 1977)		----

(a) Average monthly emissions for the period August 1975 through September 1977 are used for these five months (see text).

Questions concerning the actual monthly emission for the first five months (March 3, 1975 through August 4, 1975) have not been completely resolved. We, therefore, have substituted the arithmetic average monthly emission (for the period August 1975 through September 1977) for the first five months. The average value is believed to be within ±20% of the actual values for March through June 1975 but the July 1975 value has a much larger uncertainty. For the purpose of calculating long-term (seasonal, annual) mean concentrations, the ^{85}Kr release may be assumed to be continuous, and at a uniform rate, during each month. Actually chemical separations operations are done as a batch process in separate runs lasting 10 hours or longer and there are many days with no emissions. Emission rates may vary by more than a factor of three during a run. However, separation is done around the clock (no day-night bias) on most days including weekends and the fluctuations in emission rate should not seriously affect long-term concentrations (Draxler, 1980). The percent of time ^{85}Kr was emitted from the Savannah River Plant from March 1975 through September 1977 is given in Table 3.

If more detailed data are desired, the best estimate of the hourly emission rates between March 3, 1975 and September 19, 1977 is available on magnetic tape (see Section 9). These data are classified as CONFIDENTIAL RESTRICTED DATA and are available to researchers with the appropriate clearance from the DOE Headquarters, Division of Nuclear Fuel Cycle and Production, Washington, DC 20585.

5. METEOROLOGICAL DATA

Meteorological data for the years of the ^{85}Kr Savannah River Experiment (SRE), 1975, 1976 and 1977, have been stored on magnetic tape for the region within and surrounding the Savannah River Plant. There are separate Meteorological Data Bases (MDB) for hourly surface weather observations, twice-daily rawinsonde observations, and hourly-averaged meteorological tower observations. These were combined to make a SRE-MDB tape.

In addition to the raw meteorological data, the on-site 62 m meteorological tower data has been used to compile wind-rose statistics representative of the source area and an acoustic sounder located at the SRP has been used to compile vertical mixing characteristics of the lower atmosphere.

The following sections describe in more detail, the individual data bases, the data included in the combined SRE-MDB tape, and the wind-rose and acoustic sounder data.

5.1 Surface Weather Observations

Surface weather observations at stations between 100°W and 60°W, 50°N and 20°N have been provided on magnetic tape (see Appendix A for the tape format) by the National Climatic Center, NOAA (NCC, 1978a). About 600 surface weather stations report each hour in this area. As many as 35 items and meteorological observations are recorded for each station. All stations appear in sequence by block-station number each hour. Approximately one month of data are stored on a magnetic tape (1600 bpi).

Table 3. Percent of time Kr-85 was being emitted from the Savannah River Plant from March 1975 through September 1977

Month	Percent During Sampling Period*		
	1975	1976	1977
Jan.	--	55	77
Feb.	--	73	62
Mar.	47	73	73
Apr.	43	58	56
May	47	45	57
Jun.	38	68	35
Jul.	14	65	33
Aug.	15	49	7
Sept.	49	55	51
Oct.	50	50	--
Nov.	57	46	--
Dec.	71	50	--

*See Table 2 for dates included in each sampling period.

5.2 Rawinsonde Observations

Upper-air observations are usually made every twelve hours (a few report every six hours) and are available from the National Climatic Center, NOAA (NCC, 1978b) on magnetic tape (see Appendix B for the tape format) for approximately 150 stations in the United States and Canada. Winds and temperatures are tabulated separately for each sounding. One year of data are stored on two magnetic tapes (1600 bpi).

5.3 Meteorological Tower Observations

Meteorological data collected at power plant sites in the area near the Savannah River Plant were provided by local utility companies (Carolina Power and Light Co., Duke Power Co., Georgia Power Co., South Carolina Electric and Gas Co.). These sites have been assigned a standard WMO type-block station number from 72001 through 72007. The block-station numbers, location, and period of data are given in Table 4 for each of the seven power plant towers.

In most cases the measurements include hourly wind speed, direction and directional range at one to three levels and ambient temperature, dew point, vertical temperature gradient, precipitation and solar radiation when available.

Table 4. Meteorological Tower Locations

Site	Block-Station Number	North Latitude (degrees)	West Longitude (degrees)	Available Period
Newberry, SC	72001	34.30	81.32	1/1/75 - 12/31/75
Hartsville, SC	72002	34.40	80.15	1/1/75 - 12/31/77
Southport, NC	72003	33.95	78.00	1/1/75 - 12/31/77
Baxley, GA	72004	31.75	82.40	1/1/75 - 12/31/77
Girard, GA	72005	33.05	81.80	4/1/77 - 12/31/77
Seneca, SC	72006	34.80	82.90	1/1/75 - 12/31/77
Rock Hill, SC	72007	34.95	81.00	12/15/75 - 12/31/77
WJBF-TV, SC	72008	33.40	81.83	1/11/75 - 12/31/77
SRP, SC	72009	33.28	81.66	1/1/75 - 12/31/77

In addition to the seven power plant towers, meteorological data from the WJBF television tower, about 21 km from the SRP source, are included with the other data. The TV tower is instrumented at seven levels between 2 and

335 m above ground with temperature sensors and turbulence-quality wind sensors. Data at three levels (10 m, 91 m and 243 m) were averaged over 15 min. periods and tabulated at one-hour intervals.

Adjacent to the main SRP operating areas, seven on-site towers with a wind sensor at 62 m are located in pine forests within a 10 km radius of the SRP source. The 15 min. average wind speeds and direction were tabulated at one-hour intervals. Because any individual 62-m tower usually does not have a continuous record, an hourly arithmetic average of the wind velocity from all on-site towers was calculated from the available data at one-hour intervals. This arithmetic average is assumed to be representative of the wind conditions at 62 meters (source area stack height) at a location midway between the two source areas, F and H. The averaged hourly values are included on the tape as SRP tower - 72009.

The towers within 200 km of the SRP are shown in Figure 1. The format of the tower data tape is given in Appendix C.

5.4 Savannah River Experiment - Meteorological Data Base Tape

The three types of data from Sections 5.1, 5.2, and 5.3 (surface, upper-air sounding, and tower) are included on the SRE-MDB magnetic tape. The data appear in time sequence in the format given in Appendix D.

5.4.1 Surface weather observations

Surface weather stations located between 86°W and 77°W, 37°N and 30°N are included in the SRE-MDB. About 60 stations report in this subgrid each hour. The surface stations within 200 km of the SRP source are shown in Figure 1. Ten parameters per station have been extracted for the SRE-MDB tape. These are World Meteorological Organization (WMO) block station number, station longitude and latitude, station elevation above mean sea level, wind direction, wind speed, station pressure, dry bulb temperature, dew point depression, and the previous 6-hour precipitation amount.

In addition, the Pasquill stability category (A to G represented by 1 to 7) as defined by Turner (1964), has been added to each surface observation. The stability category is based on the cloud cover, cloud ceiling, solar elevation angle, and wind speed observed each hour.

5.4.2 Rawinsonde observations

The SRE-MDB tape includes only those observations within the surface weather stations subgrid. Four rawinsonde stations regularly take observations every twelve hours in this area: Waycross and Athens, Georgia; Greenville and Charleston, South Carolina. To simplify data handling, wind and temperature were combined in a single tabulation on the SRE-MDB tape. All winds were included. Temperatures were linearly interpolated to a wind level where no corresponding temperature existed. Temperatures at levels where no winds were available were excluded.

5.4.3 Meteorological tower observations

For the SRE-MDB tape the tower sites were treated as rawinsonde stations in terms of format. Hourly wind direction, wind speed and temperature for as many as three levels are included. The tower heights range from 40 to 100 m except for the TV tower which includes a level at 243 m.

5.5 Wind-rose Statistics

Wind-rose statistics based upon the average SRP tower wind are available on magnetic tape for each month during the experiment.

The monthly period is chosen to correspond to the start and end date of the air sampling periods (see Table 2 and Table 9a-c). The wind-rose statistics provide the joint frequency distribution for direction (16 sectors), speed (6 classes) and stability (7 categories). The stability class was determined from observations of the standard deviation of wind azimuth at 62 m height.

The format of the wind-rose magnetic tape data is given in Appendix E. Also described in Appendix E is the original average hourly SRP tower wind data from which the wind-rose statistics were derived and from which the on-site SRP tower data (72009) were extracted (see Appendix C).

5.6 Acoustic Sounder

An acoustic sounder located at the SRP provides continuous measurements of the vertical mixing characteristics of the lower atmosphere. These data are recorded on facsimile paper and subjectively analyzed at 1-hour intervals. During unstable conditions, the acoustic mixed depth may exceed the 1 km range of the instrument.

Table 5 is a summary of the average monthly acoustic mixing depth at the SRP for day and night between March 1975 and September 1977. The climatological average maximum monthly mixing depths interpolated from Holzworth's maps (1972) are substituted for hours when the acoustic mixed depth is above 1 km.

The hourly acoustic mixed depths for the entire period are available on magnetic tape (see Appendix F for tape format). This tape contains acoustic data which have been reduced manually to provide hourly estimates of the mixing depths and a characterization of the acoustic record into one of the 17 categories shown in Table 6. The mixing depth is frequently a straightforward measurement from the acoustic record. The characterization of the acoustic record, however, can be quite subjective. The major value of the acoustic categories is to place confidence limits on the mixing depth estimates because more subjectivity is required to estimate mixing depth in some categories than others.

Table 5. Average Hourly Acoustic Mixed Depth for each Month During the Savannah River Experiment.

		DAYTIME[b]			NIGHTTIME[c]		
Month	Year	Mean Std. Dev. m	Maximum[d] m	N	Mean Std. Dev. m	Maximum m	N
March	1975	459 (311)	1300	181	357 (109)	700	226
April		464 (359)	1600	291	352 (117)	800	307
May		511 (430)	1700	63	349 (75)	550	74
June		496 (461)	1730	269	311 (88)	500	285
July		464 (459)	1760	319	238 (105)	600	333
August		505 (455)	1800	225	306 (95)	600	251
September		477 (451)	1750	193	300 (117)	600	175
October		425 (347)	1600	395	325 (144)	700	425
November		391 (299)	1400	246	364 (158)	900	239
December		397 (276)	1275	225	447 (198)	1000	214
January	1976	450 (55)	500	6	560 (52)	600	10
February		351 (208)	1000	102	436 (272)	1000	90
March		469 (282)	1300	407	398 (124)	900	432
April		602 (352)	1600	322	556 (166)	1000	329
May		660 (431)	1700	110	463 (150)	1000	116
June		565 (471)	1730	105	309 (76)	500	81
July		525 (462)	1760	407	314 (75)	500	385
August		501 (438)	1800	344	319 (89)	600	438
September		541 (414)	1750	242	395 (102)	800	286
October		530 (390)	1600	73	327 (92)	600	92
November[e]							
December[e]							
January	1977	482 (209)	1125	226	462 (155)	1000	283
February		475 (199)	1000	211	474 (138)	950	217
March		500 (293)	1300	314	468 (158)	1000	381
April		452 (242)	1600	337	500 (145)	1000	382
May		461 (361)	1700	363	427 (95)	800	372
June		486 (390)	1730	353	485 (127)	950	362
July		497 (427)	1760	206	394 (57)	650	223
August		467 (467)	1800	29	394 (40)	450	16
September		410 (438)	1750	379	225 (97)	600	330

a. Statistics are based upon monthly estimates of mixing depth obtained with an acoustic sounder located at SRP. N is the hours of data used to compile the statistics. Elevation of the acoustic sounder is 85 m MSL. The mixing depths are in meters.

b. Daytime defined as the period between 1400 GMT and 0100 GMT inclusive.

c. Nighttime defined as the period between 0200 GMT and 1300 GMT inclusive.

d. Maximum vertical extent of acoustic sounder is 1000 m. When mixing depth exceeds 1000 m, it is assumed to be given by the climatological average obtained from Holzworth.

e. Data not available.

Table 6. Categories of Atmospheric Boundary Layers as Identified by Acoustic Sounder

Category 1:	Abrupt change from stable multiple layers to a well-mixed layer
Category 2:	Back-scattered layer
Category 3:	Back-scattered layer with waves
Category 4:	Very complex; many waves in the bottom layer
Category 5:	Two layers in the bottom
Category 6:	Two layers, separate one over the other, large separation from the top to the bottom layer
Category 7:	Multiple weak layers with waves
Category 8:	Strong multiple layers with waves
Category 9:	Ascending layer from the surface
Category 10:	Ascending layer, but not starting at the surface
Category 11:	Descending layer, but not merging with the surface
Category 12:	Descending layer merging with the surface layer
Category 13:	Thermal plumes only
Category 14:	Stable multiple layers
Category 15:	Inversion layer with waves
Category 16:	Wind and rain noise
Category 17:	Inoperative

6. INTERCOMPARISON OF CRYOGENIC AIR SAMPLERS

As noted in the report presenting the first 1½ years of sampling data (Pendergast et al., 1979), the actual collection rate of krypton was often lower than the programmed rate and the volumes collected sometimes varied in an erratic manner from one sampling period to the next. This would have no effect on the ^{85}Kr concentration of the sample if the collection rate were nearly uniform throughout each individual sampling period. However, if the collection rate varied during a sampling period, and the ambient ^{85}Kr concentration also varied, as would be the case when a plume was present, the sample concentration could be significantly different from the average air concentration during the sampling period. This would have little effect on the determination of long-term (seasonal and annual) mean concentrations from the sampling data but some of the individual measurements would not represent the true mean values during the sampling period.

In an effort to resolve this question, two cryogenic air samplers were operated side by side at the SRL from October 10, 1977 (Julian day 283) through January 20, 1978 (Julian day 20). For convenience, the instruments were set up in a laboratory about 10 km from the source. Twice-daily samples (AM and PM) were collected for the first two weeks, followed by eleven weekly samples, and a final 12-day period of twice-daily samples. Routine maintenance was not performed on the samplers in a deliberate attempt to induce erratic behavior.

Figure 3 shows the concentration ratios of Samplers A and B plotted versus Julian date (starting date is indicated for the weekly samples). The individual volumes of krypton collected by each sampler are plotted in the bottom figure. In all cases the ratio of concentrations (dots in the upper figure) obtained from the two samplers is very close to 1. However, most of the concentrations are at the background level (14-15 pCi/SCM) and tell us little about the performance of the samplers. Only those cases where a plume is present during the sampling period and the volume record suggests that at least one of the samplers was performing erratically, can shed light on the problem. All data points where concentrations were distinctly above background (> 16 pCi/SCM) are circled in the upper figure and arrows indicate the cases (8) of interest, where the volume also appears to be erratic.

With a few exceptions the volumes suggest that both samplers were performing well during this period of twice-daily sampling. The worst concentration ratio (0.89) occurred on day 294, but the concentration was too close to background to indicate whether a serious problem may have existed. The volumes collected were good for both samplers although sampler A was a little low compared to the previous and following period. The PM sample on day 295 had the highest concentration seen during the side-by-side intercomparisons; more than ten times background. Both samplers collected a good volume during this period but the sampler B volume during the previous period had been too small to assay, which might lead us to suspect that the collection rate may not have been constant during the 295 PM period. However, the two measurements agree within 3%.

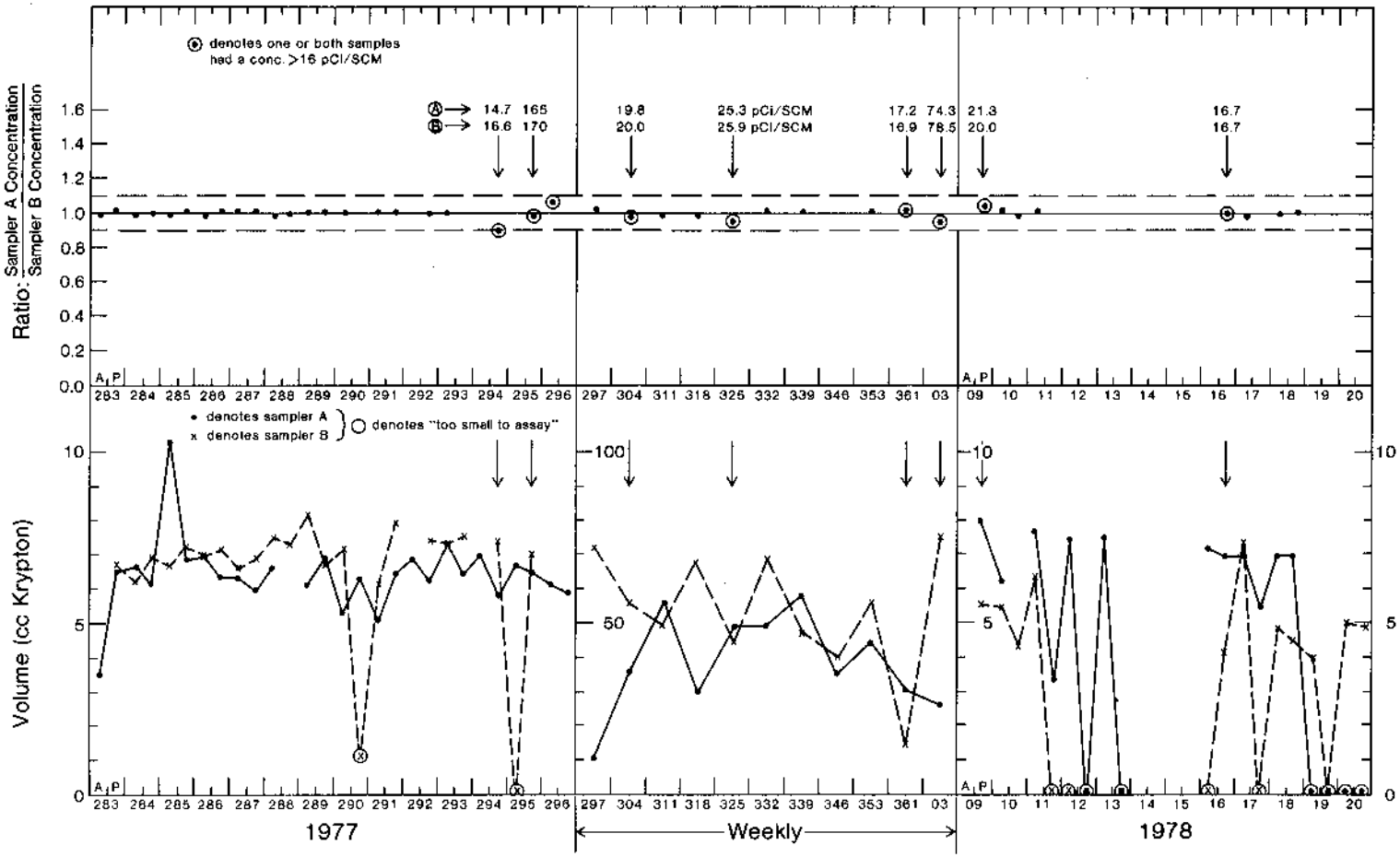

Figure 3. Comparison of two side-by-side cryogenic samplers. A denotes AM and P denotes PM sample.

During the period of weekly sampling beginning on day 297 both samplers showed considerable week-to-week fluctuations in volume of krypton collected. Plumes were seen on four of the weekly samples (those started on day 304, 325, 361, and 03) and concentrations measured by the two samplers agree within a few percent in each case. Results for the last two weekly samples (361, 03) are particularly encouraging. On sample 361, sampler A collected a low volume and sampler B was even lower with a very large drop in the collection rate from the previous week, yet the concentrations (17.2, 16.9) agreed within 2%. For the following week, sampler A again collected in low volume, while the sampler B collection rate increased greatly. The average concentration for this period was about five times background, so an erratic collection rate could have resulted in a very large percentage error, yet the two samplers agree within about 5%.

During the final period of twice-daily sampling, both instruments were functioning so poorly that many samples were too small to assay. Two plumes were seen. On day 09, both samplers appear to be functioning reasonably well and the concentrations agree within 5%. On day 16, sampler A volume was good, sampler B was behaving poorly, yet the measured concentrations are the same.

The results of this intercomparison are very encouraging in that we see erratic collection volumes, but no serious discrepancy in measured concentrations in the eight cases where plumes were present. The following conclusions can be drawn concerning the 2½ years of sampling data.

1) Measured concentrations above background definitely indicate that a plume was present at some time during the sampling period.

2) It is possible that a small number of measured values may greatly overestimate or underestimate the true average concentration during the sampling period, due to fluctuations in the collection rate. However, the measured concentration must have existed in the ambient air at some time during the sampling period.

3) The great majority of measured concentrations are within ±10% of the true average ambient air concentration during the sampling period.

4) Long-term mean concentrations (e.g., seasonal or annual) obtained from these data are believed to provide reliable estimates of the true long-term averages.

7. SAMPLING DATA

7.1 Weekly Average ^{85}Kr Concentration

The weekly average ^{85}Kr concentrations at the 13 cryogenic sampling locations were measured during the following periods:

1. March 1975 through September 1976.

2. December 1976 through January 1977.

3. March 1977

4. May 1977 through June 1977.

5. August 1977 through mid-September 1977.

These data are listed in Appendix G. The first column identifies the sampling site (see Figure 1 and Table 1). The second and third columns give the Julian date (day of the year) and the time (GMT) each sample collection began. Julian data calendars are provided in Tables 7 and 8 (note that 1976 was a Leap Year). Samples were scheduled to start each Monday morning and run for seven days. For convenience, the calendar date is given for each Monday.

The fourth and fifth columns give the Julian date and time the sample was terminated followed by the sample duration (days). Some samples ran more or less than seven days due to malfunctions or human error. Scheduled samples that are omitted from the listing were lost due to sampler malfunction or sample processing problems.

A mentioned in Section 2, the cryogenic air sampler was programmed to enter a Sample Isolation Period of about one hour, therefore, there should be an hour break between the time off and time on of consecutive samples. Examination of the data in Appendix G reveals that, at times, the time off and subsequent time on for consecutive samples are identical. This is due to human error in recording the times but is not considered to be a serious problem.

The last column of the table shows the average ^{85}Kr concentration during the sampling period in units of picocuries per standard cubic meter of air (pCi/SCM computed at 76 cm Hg and $0^{o}C$) decay corrected to day of sampling using a half-life of 10.76 years.

Ferber et al., (1977) found a ^{85}Kr concentration background of about 14 pCi/SCM at their midwest sampling locations during early 1974. A ^{85}Kr background of about 14 pCi/SCM was also determined by Pendergast et al. (1979) based on the first year of data (March 1975 through February 1976) collected around the SRP site. One may therefore subtract a background of 14 pCi/SCM from the concentrations listed in Appendix G to obtain the excess ^{85}Kr, that is, the concentration due to SRP plumes.

The weekly average ^{85}Kr concentration data are available on magnetic tape (see Appendix I for tape format).

Table 7.

JULIAN DATE CALENDAR

(PERPETUAL)

Day	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Day
1	001	032	060	091	121	152	182	213	244	274	305	335	1
2	002	033	061	092	122	153	183	214	245	275	306	336	2
3	003	034	062	093	123	154	184	215	246	276	307	337	3
4	004	035	063	094	124	155	185	216	247	277	308	338	4
5	005	036	064	095	125	156	186	217	248	278	309	339	5
6	006	037	065	096	126	157	187	218	249	279	310	340	6
7	007	038	066	097	127	158	188	219	250	280	311	341	7
8	008	039	067	098	128	159	189	220	251	281	312	342	8
9	009	040	068	099	129	160	190	221	252	282	313	343	9
10	010	041	069	100	130	161	191	222	253	283	314	344	10
11	011	042	070	101	131	162	192	223	254	284	315	345	11
12	012	043	071	102	132	163	193	224	255	285	316	346	12
13	013	044	072	103	133	164	194	225	256	286	317	347	13
14	014	045	073	104	134	165	195	226	257	287	318	348	14
15	015	046	074	105	135	166	196	227	258	288	319	349	15
16	016	047	075	106	136	167	197	228	259	289	320	350	16
17	017	048	076	107	137	168	198	229	260	290	321	351	17
18	018	049	077	108	138	169	199	230	261	291	322	352	18
19	019	050	078	109	139	170	200	231	262	292	323	353	19
20	020	051	079	110	140	171	201	232	263	293	324	354	20
21	021	052	080	111	141	172	202	233	264	294	325	355	21
22	022	053	081	112	142	173	203	234	265	295	326	356	22
23	023	054	082	113	143	174	204	235	266	296	327	357	23
24	024	055	083	114	144	175	205	236	267	297	328	358	24
25	025	056	084	115	145	176	206	237	268	298	329	359	25
26	026	057	085	116	146	177	207	238	269	299	330	360	26
27	027	058	086	117	147	178	208	239	270	300	331	361	27
28	028	059	087	118	148	179	209	240	271	301	332	362	28
29	029		088	119	149	180	210	241	272	302	333	363	29
30	030		089	120	150	181	211	242	273	303	334	364	30
31	031		090		151		212	243		304		365	31

Table 8.

JULIAN DATE CALENDAR

FOR LEAP YEARS ONLY

Day	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Day
1	001	032	061	092	122	153	183	214	245	275	306	336	1
2	002	033	062	093	123	154	184	215	246	276	307	337	2
3	003	034	063	094	124	155	185	216	247	277	308	338	3
4	004	035	064	095	125	156	186	217	248	278	309	339	4
5	005	036	065	096	126	157	187	218	249	279	310	340	5
6	006	037	066	097	127	158	188	219	250	280	311	341	6
7	007	038	067	098	128	159	189	220	251	281	312	342	7
8	008	039	068	099	129	160	190	221	252	282	313	343	8
9	009	040	069	100	130	161	191	222	253	283	314	344	9
10	010	041	070	101	131	162	192	223	254	284	315	345	10
11	011	042	071	102	132	163	193	224	255	285	316	346	11
12	012	043	072	103	133	164	194	225	256	286	317	347	12
13	013	044	073	104	134	165	195	226	257	287	318	348	13
14	014	045	074	105	135	166	196	227	258	288	319	349	14
15	015	046	075	106	136	167	197	228	259	289	320	350	15
16	016	047	076	107	137	168	198	229	260	290	321	351	16
17	017	048	077	108	138	169	199	230	261	291	322	352	17
18	018	049	078	109	139	170	200	231	262	292	323	353	18
19	019	050	079	110	140	171	201	232	263	293	324	354	19
20	020	051	080	111	141	172	202	233	264	294	325	355	20
21	021	052	081	112	142	173	203	234	265	295	326	356	21
22	022	053	082	113	143	174	204	235	266	296	327	357	22
23	023	054	083	114	144	175	205	236	267	297	328	358	23
24	024	055	084	115	145	176	206	237	268	298	329	359	24
25	025	056	085	116	146	177	207	238	269	299	330	360	25
26	026	057	086	117	147	178	208	239	270	300	331	361	26
27	027	058	087	118	148	179	209	240	271	301	332	362	27
28	028	059	088	119	149	180	210	241	272	302	333	363	28
29	029	060	089	120	150	181	211	242	273	303	334	364	29
30	030		090	121	151	182	212	243	274	304	335	365	30
31	031		091		152		213	244		305		366	31

7.2 Twice-Daily Average Krypton-85 Concentrations

Twice-daily sampling (day and night, with each sample of about 10-hour duration) were made during the following periods to represent the four seasons:

1. Fall, October 4 through November 19, 1976
2. Winter, January 31 through February 27, 1977
3. Spring, April 1 through May 1, 1977
4. Summer, July 1 through July 31, 1977.

Due to personnel limitations, twice-daily sampling at most stations was not conducted on weekends.

The twice-daily samples are listed in Appendix H. The calendar date is given along with the corresponding Julian date. The individual days are grouped into AM and PM samples. The first column identifies the sampling site (see Figure 1 and Table 1), the second column gives the time (GMT) each sample collection began. The third column gives the sample duration in hours. The last column shows the average ^{85}Kr concentration (pCi/SCM) during the sampling period. Scheduled samples that are omitted from the listing were lost due to sampler malfunction or sampling processing problems.

As with the weekly data, one may subtract a background of 14 pCi/SCM from the concentration data in Appendix H to obtain the excess ^{85}Kr, that is, the concentration due to the SRP plume.

The twice-daily ^{85}Kr concentration data are available on magnetic tape (see Appendix I for tape format).

8. MONTHLY, SEASONAL AND ANNUAL KRYPTON-85 CONCENTRATIONS

The average monthly, seasonal and annual ^{85}Kr concentrations for each sampling location has been calculated and listed in Table 9.

About 10% of the weekly samples were lost due to sampler malfunction or human error. Those lost data were replaced by a subjective estimate of the weekly concentration based on data from surrounding samplers. The number of days of missing data are given in parenthesis next to the average concentration. Stations 6 (Ridgeland) and 12 (Greenwood) were alone in their respective sectors and, therefore, their monthly means, where data were missing, would have a larger uncertainty. These are indicated in Table 9 by an asterisk. Use of estimated weekly values where data were missing had less than a 10% effect on the seasonal and annual averages (Telegadas et al., 1978).

The twice-daily sampling data were also used to determine monthly average concentrations. As mentioned previously, twice-daily samples

Table 9a.

AVERAGE MONTHLY AND SEASONAL KR-85 CONCENTRATIONS (pCi/SCH)

Station	MARCH Mar 3 - Mar. 31, 1975	APRIL Mar. 31 - Apr. 28, 1975	MAY Apr. 28 - June 2, 1975	SPRING Mar. 3 - June 2, 1975
	Concentration (Days missing)			
2	38.1	38.8	19.7	31.2
3	22.6	30.7	19.8	24.0
4	19.7	23.8	18.1 (9)	20.3 (9)
5	28.1	17.7	17.9	21.0
6	17.5	17.5	15.4 (3)	16.7
7	19.7 (1)	29.1	21.1	23.1 (1)
8	17.9 (7)	33.1	55.9	37.2 (7)
9	17.2	37.7	54.8	38.0
10	76.6	55.4	55.5 (7)	63.5 (7)
11	33.3	32.6	26.8	30.6
12	18.8 (1)	21.6 (1)	23.7	21.5 (2)
13	29.5 (6)	23.3	20.5	24.1 (6)
14	86.7	100.9	73.2	85.9

Station	JUNE June 2 - June 30, 1975	JULY June 30 - Aug. 4, 1975	AUGUST Aug. 4 - Sept. 1, 1975	SUMMER June 2 - Sept. 1, 1975
	Concentration (Days missing)			
2	80.0 (8)	16.6	14.5	35.5 (8)
3	30.4	17.2	16.0	20.9
4	32.7 (8)	18.6	16.2 (10)	22.2 (18)
5	23.5	14.8	15.1	17.6
6	15.4 (14)*	14.5	14.3	14.7 (14)
7	31.3 (2)	15.0 (21)	14.3 (21)	19.8 (44)
8	32.5 (10)	14.8	14.6	20.2 (10)
9	26.4	20.5	16.8	21.2
10	23.6	57.1 (14)	27.4	37.7 (14)
11	18.8 (7)	21.4	18.6	19.7 (7)
12	34.1	15.3	14.5	20.8
13	18.1	17.7 (14)	15.6 (9)	17.2 (23)
14	66.6 (6)	21.1	16.3	33.6 (6)

Station	SEPTEMBER Sept. 1 - Sept. 29, 1975	OCTOBER Sept. 29 - Nov. 3, 1975	NOVEMBER Nov. 3 - Dec. 1, 1975	FALL Sept. 1 - Dec. 1, 1975
	Concentration (Days missing)			
2	16.1 (18)	16.0 (1)	46.7	25.5 (19)
3	16.4	31.9	24.9	24.9
4	26.0 (9)	33.0	24.3 (9)*	28.2 (18)
5	15.9	15.1 (3)	21.1	17.2 (3)
6	15.7 (1)	15.8	37.0	22.3 (1)
7	16.1 (14)	15.3 (7)	36.8	22.2 (21)
8	23.9 (1)	15.3 (8)	84.9	39.4 (9)
9	19.6 (8)	20.5	26.7	22.1 (8)
10	27.0	40.8	16.6	29.1
11	19.2	16.8	15.8 (21)	17.2 (21)
12	15.2	15.4 (16)*	15.5 (21)*	15.4 (37)
13	16.5 (4)	16.2	15.6	16.1 (4)
14	18.9	33.9	58.0	36.7

Station	DECEMBER Dec. 1 - Dec. 29, 1975	JANUARY Dec. 29, 1975 Feb. 2, 1976	FEBRUARY Feb. 2 - Mar. 1, 1976	WINTER Dec. 1, 1975 Mar. 1, 1976
	Concentration (Days missing)			
2	37.4	21.2 (7)	21.0	26.6 (7)
3	39.2	39.1	19.9	33.2
4	39.6	20.4	17.8	25.5
5	27.4	28.9	17.5	24.9
6	27.2	19.4	19.4	21.8
7	41.1	52.3	33.4	43.0
8	40.0	84.1	155.4	92.5
9	76.7	31.7	90.6	63.7
10	134.5	90.3 (1)	131.1	116.5 (1)
11	104.8 (21)	45.0 (35)	66.6 (2)	70.0 (58)
12	43.5 (7)*	21.8 (7)*	16.4	26.8 (14)
13	70.1	25.9	37.7 (7)	43.1
14	96.0 (7)	51.1	34.7	59.9 (7)

*Estimated concentration has a large uncertainty.

Table 9b.

AVERAGE MONTHLY AND SEASONAL KR-85 CONCENTRATIONS (pCi/SCM)

Station	MARCH Mar. 1 - Mar. 29, 1976	APRIL Mar. 29 - May 3, 1976	MAY May 3 - May 31, 1976	SPRING Mar. 1 - May 31, 1976
	Concentration (Days missing)			
2	16.3	19.4	25.8	20.4
3	27.6	29.5 (7)	18.3	25.5 (7)
4	20.4	25.1	16.6 (7)	21.0 (7)
5	21.8	17.9 (14)	15.0 (1)	18.2 (15)
6	67.3	21.0 (14)*	14.9	33.4 (14)
7	53.2	35.5 (14)	23.7	37.3 (14)
8	76.8	51.5 (7)	26.6	51.6 (7)
9	51.3	31.6 (14)	52.2 (15)	44.0 (29)
10	142.3 (7)	64.6 (7)	67.8	89.5 (14)
11	68.8 (7)	36.3	34.7	45.8 (7)
12	19.6 (7)*	21.0	22.7	21.1 (7)
13	38.0 (7)	23.5	22.0 (16)	27.5 (23)
14	61.6	80.2	33.4	60.1

Station	JUNE May 31 - June 28, 1976	JULY June 28 - Aug. 2, 1976	AUGUST Aug. 2 - Aug. 30, 1976	SUMMER May 31 - Aug. 30, 1976
	Concentration (Days missing)			
2	18.8	16.7 (7)	18.6 (3)	17.9 (10)
3	36.6 (2)	17.0 (3)	16.4	22.8 (5)
4	67.2	15.3	36.6	37.8
5	17.2 (2)	16.9	16.8 (7)	17.0 (2)
6	15.9	15.2	20.5	17.0
7	23.3 (21)	43.1 (4)	16.2	28.7 (25)
8	61.7	115.2 (16)	15.8 (9)	68.2 (25)
9	45.8	92.9	33.3	60.1
10	55.9	92.2	190.7	111.3
11	30.0	41.5	35.8	36.2
12	46.8	16.0 (7)*	17.5	25.9 (7)
13	23.7	38.3	20.2	28.2
14	94.0	47.8	45.8 (1)	61.4 (1)

Station	SEPTEMBER Aug. 30 - Oct. 4, 1976	OCTOBER Oct. 4 - Nov. 1, 1976**	NOVEMBER Nov. 1 - Nov. 29, 1976**	FALL Aug. 30 Nov. 29, 1976
	Concentration (Days missing)			
2	22.0 (10)	23.9 (7)	16.3 (8)	20.8 (25)
3	21.9	30.1 (6)	27.0 (7)	26.0 (13)
4	22.1 (8)	36.7 (5)	21.6 (17)	26.4 (30)
5	17.1 (3)	32.1 (8)	35.1 (10)	27.3 (21)
6	17.0 (8)*	29.2 (9)	16.2 (10)	20.5 (27)
7	27.7 (4)	16.4 (15)	20.6 (12)	22.0 (31)
8	42.5 (10)	21.3 (5)	44.8 (13)	36.7 (28)
9	32.7	24.5 (11)	22.1 (19)	26.9 (30)
10	58.8 (3)	29.9 (4)	23.0 (9)	38.9 (16)
11	24.9	18.1 (5)	17.0 (10)	20.4 (15)
12	20.4 (1)	59.9 (8)	15.9 (16)	31.2 (25)
13	30.1 (19)	16.1 (17)	16.7 (18)	21.7 (54)
14	130.3 (1)	62.7 (4)	18.8 (6)	75.2 (11)

Station	DECEMBER Nov. 29, 1976- Jan. 3, 1977	JANUARY Jan. 3 - Jan. 31, 1977	FEBRUARY Jan. 31 - Feb. 28, 1977**	WINTER Nov. 29, 1976- Feb. 28, 1977
	Concentrated (Days missing)			
2	31.3 (12)	97.1 (3)	20.4 (12)	48.2 (27)
3	28.1 (3)	17.1 (3)	18.4 (11)	21.7 (17)
4	58.6	16.7 (3)	26.1 (9)	35.7 (12)
5	18.2 (3)	17.4 (3)	21.4 (11)	18.9 (17)
6	37.3 (8)*	26.4	19.8 (9)	28.6 (17)
7	35.7 (2)	56.6	40.5 (8)	43.6 (10)
8	44.7	64.3	47.9 (11)	51.7 (11)
9	21.5 (7)	38.1	65.7 (9)	40.2 (16)
10	64.5	25.4 (1)	50.9 (8)	48.3 (9)
11	30.8 (7)	21.1 (3)	52.8 (11)	34.6 (21)
12	18.3	21.7	16.7 (14)	18.9 (14)
13	21.3 (15)	39.5 (3)	24.9 (11)	28.0 (29)
14	35.4	402.9	30.5 (4)	147.0 (4)

*Estimated concentration has a large uncertainty.
**These data include a period of twice daily samples, no attempt was made to estimate concentration for missing days.

Table 9c. AVERAGE MONTHLY AND SEASONAL KR-85 CONCENTRATIONS (pCi/SCM)

Sampling Period	MARCH Feb. 28 - Apr. 4, 1977	APRIL Apr. 4 - May 2, 1977**	MAY May 2 - May 30, 1977	SPRING Feb. 28 - May 30, 1977
Station	Concentration (Days missing)			
2	22.9 (3)	18.4 (17)	46.5	28.7 (20)
3	58.1 (1)	17.5 (13)	19.5	32.6 (14)
4	29.9 (1)	16.4 (14)	19.6 (4)	22.2 (19)
5	25.9	17.4 (18)	17.5 (7)	20.5 (25)
6	30.2 (11)*	16.9 (14)	16.3	21.4 (25)
7	33.5	46.7 (14)	17.1 (3)	32.8 (17)
8	34.0 (4)	118.7 (16)	33.6 (7)	62.1 (27)
9	47.1 (1)	42.7 (15)	28.3 (1)	39.8 (17)
10	37.8	92.6 (15)	79.3 (1)	69.0 (16)
11	25.7	27.4 (15)	36.3 (9)	29.6 (24)
12	24.2 (14)*	23.0 (14)	26.0 (7)*	24.4 (35)
13	20.3 (14)	31.7 (12)	19.0	23.7 (26)
14	161.4 (2)	73.6 (3)	126.0	121.1 (5)

Sampling Period	JUNE May 30 - July 4, 1977	JULY July 4 - Aug. 1, 1977**	AUGUST Aug. 1 - Aug. 29, 1977	SUMMER May 30 - Aug. 29, 1977
Station	Concentration (Days missing)			
2	17.0	15.7 (19)	17.8	16.8 (19)
3	19.5	15.6 (17)	16.0	17.1 (17)
4	17.3	16.0 (17)	15.9 (7)	16.4 (24)
5	19.1 (9)	15.5 (16)	16.0 (7)	16.9 (32)
6	18.4	Sampling Terminated July 6		
7	25.9 (2)	16.0 (15)	15.5	19.3 (17)
8	58.3	16.4 (17)	15.5 (7)	30.9 (24)
9	49.6	27.5 (17)	16.0	31.7 (17)
10	110.0 (7)	106.3 (14)	29.3 (14)	83.9 (35)
11	33.9 (7)	65.7 (14)	19.0 (7)	40.1 (28)
12	17.3 (4)	16.3 (16)	20.5 (7)	17.9 (27)
13	22.2 (1)	27.3 (16)	17.1	22.4 (17)
14	70.3 (7)	16.6 (4)	33.8 (6)	40.8 (17)

Sampling Period	ANNUAL March 3, 1975 - March 1, 1976		ANNUAL March 1, 1976 - February 28, 1977	
Station	Concentration	(Days missing)	Concentration	(Days missing)
2	29.7	(34) 9%***	26.8	(62) 17%***
3	25.8	-0-	24.0	(35) 10%
4	24.0	(45) 12%	30.2	(49) 13%
5	20.2	(3) 1%	20.4	(55) 15%
6	18.9	(15) 4%	24.9	(58) 16%
7	27.0	(66) 18%	32.9	(80) 22%
8	47.3	(26) 7%	52.1	(71) 19%
9	36.2	(8) 2%	42.8	(75) 21%
10	61.7	(22) 6%	72.0	(39) 11%
11	34.4	(86) 24%	34.3	(43) 12%
12	21.1	(53) 15%	24.3	(53) 15%
13	25.1	(43) 12%	26.4	(106) 29%
14	54.0	(13) 4%	85.9	(16) 4%

*Estimated concentration has a large uncertainty.

**These data include a period of twice daily samples, no attempt was made to estimate concentration for missing days.

***Percent of total days missing.

generally were collected only on weekdays. The only station which operated on weekends, for all four twice-daily periods, was Station 14 (Bush Field), staffed by National Weather Service, NOAA personnel. No attempt was made to estimate the twice-daily concentrations during non-sampling weekends or for those days where data were missing. An arithmetic average of the observed data was assumed to be representative of the monthly mean. Although the average concentration during a month of twice-daily sampling may have a relatively large uncertainty at some stations, the seasonal and annual averages incorporating these data are believed to be good estimates of the actual concentrations.

The annual average concentrations for the periods March 3, 1975 - March 1, 1976 and March 1, 1976 - February 28, 1977 are shown at the end of Table 9c together with the number and percent of days of missing data. The 1975 annual average is based on weekly data and has an overall 9% average of missing days. The 1976 annual average concentration which contains twice-daily data has an overall average of 16% missing days. This 16% includes the weekends during the twice-daily sampling where no sampling was programmed. If these weekends were not included, the overall average would be reduced from 16% to 11% missing.

The background ^{85}Kr concentration of 14 pCi/SCM was subtracted from the observed seasonal and annual concentrations listed in Table 9 and the resultant excess ^{85}Kr is plotted at each station in Figure 4. The figure shows the seasonal and annual excess concentration patterns resulting from ^{85}Kr emissions from the Savannah River Plant.

Differences in the excess ^{85}Kr concentrations between seasons can be attributed to differences in the emission amounts as well as meteorological factors. Shown in Table 10 are the seasonal emission rates calculated from Table 2 together with the corresponding overall average concentrations for the 13 sampling locations. For the same season in different years the overall average concentration is higher when the emission rate is higher. This is especially noted between the Summer 1976 and 1977 seasons and between Fall 1975 and 1976 seasons.

9. AVAILABILITY OF DATA TAPES

The various magnetic tapes are listed in Table 11 by name and identifying number along with the address to which requests should be sent.

10. APPLICATION OF DATA

Krypton-85 concentration data are being used by SRL and ARL to verify and improve their model simulations of pollutant transport and dispersion. A study at ARL (Telegadas et al., 1978) compares calculations of long-term average concentrations, using a standard stability wind rose technique and a simplified version of the ARL transport and dispersion model (Heffter et al., 1975), to the measured concentrations. ARL is also developing more

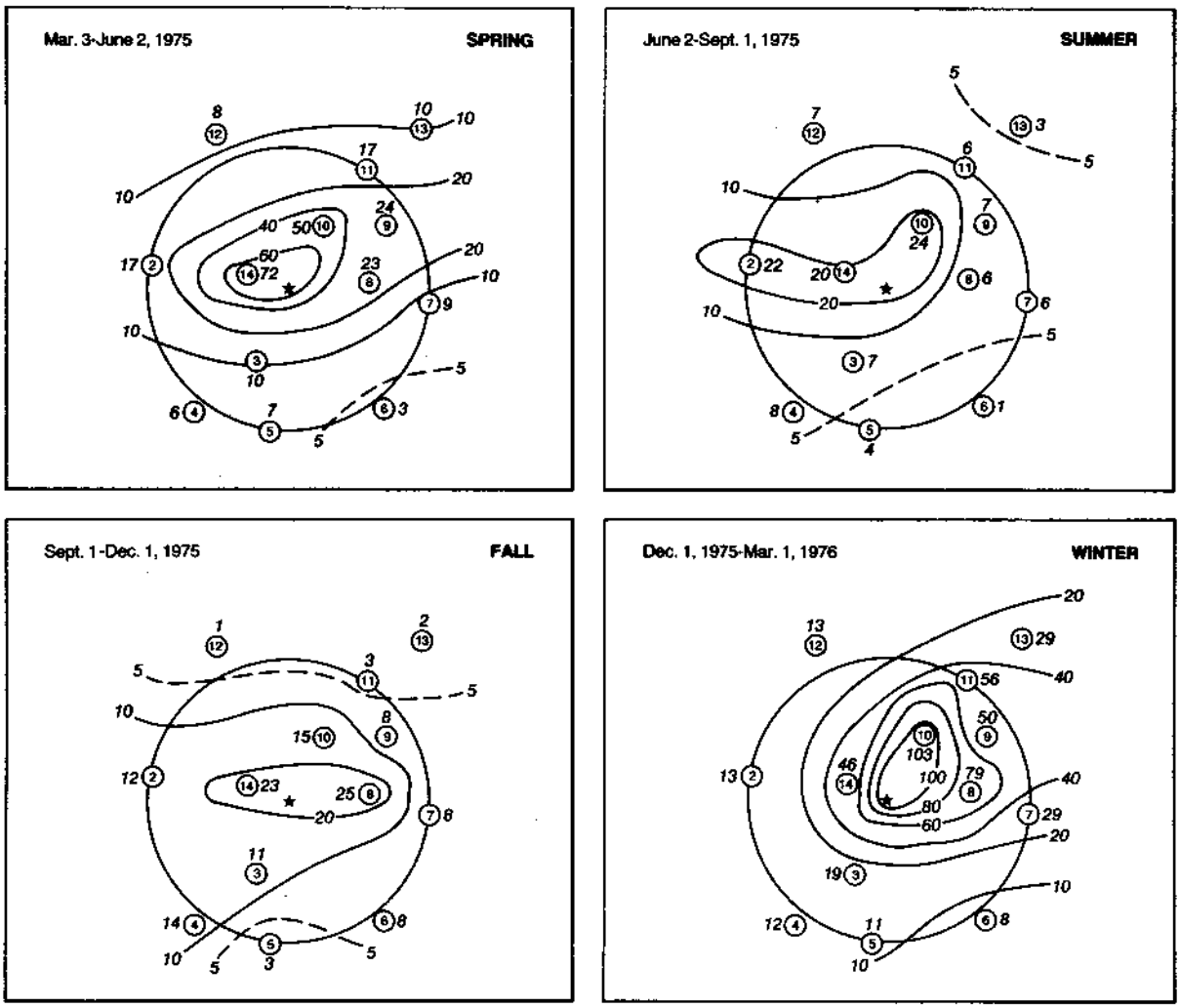

Figure 4a. Seasonal and annual observed excess Kr-85 concentrations (pCi/SCM). Star denotes source location and a 100 km radius circle about the source is shown.

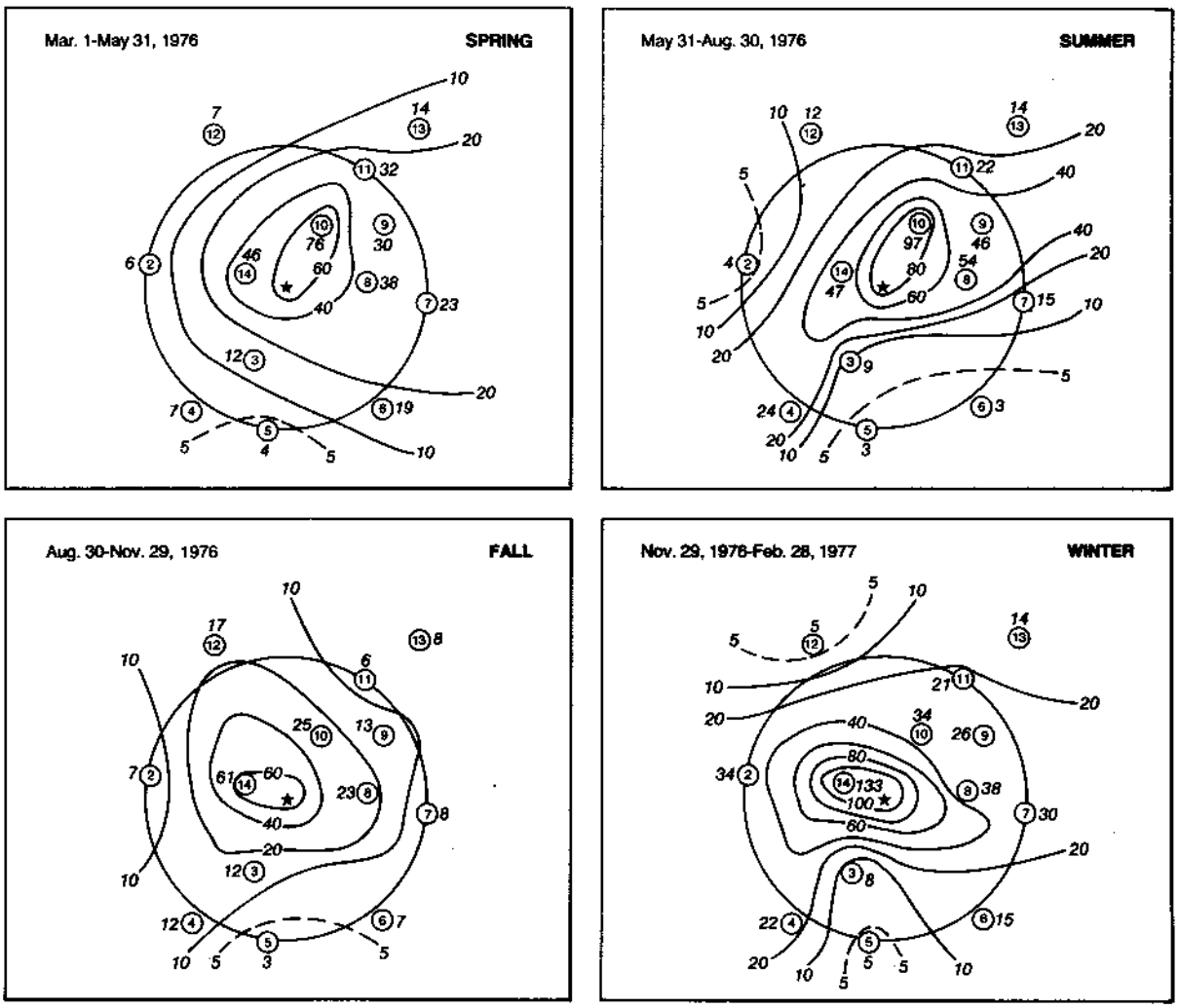

Figure 4b. (See legend Figure 4a).

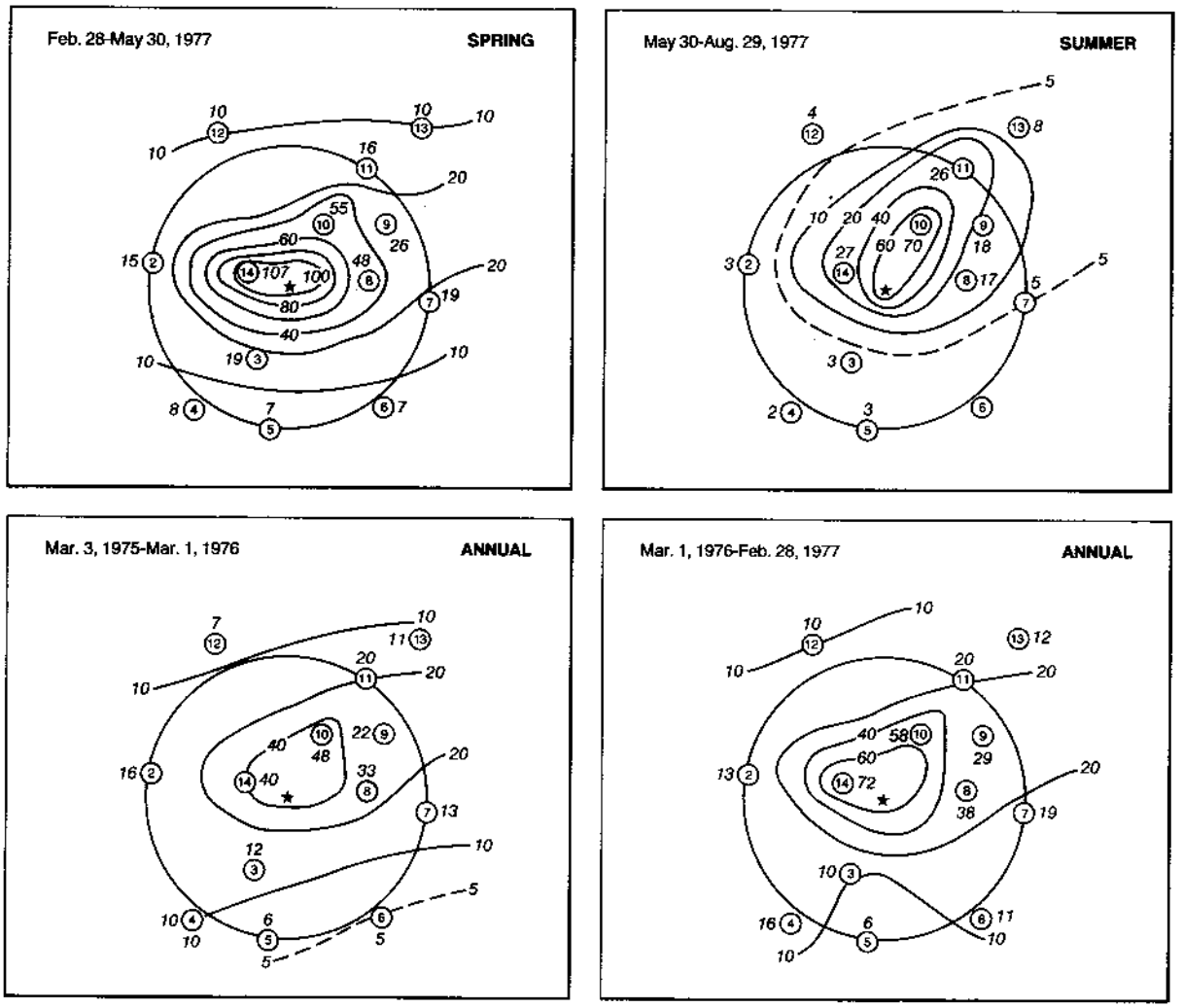

Figure 4c. (See legend Figure 4a).

Table 10. Comparison of the Average Seasonal Source Term and the Average Excess Kr-85 Concentration

	Spring		Summer		Fall		Winter	
	Ci/mo	pCi/SCM	Ci/mo	pCi/SCM	Ci/mo	pCi/SCM	Ci/mo	pCi/SCM
1975	51,000*	20	35,000*	9	23,000	8	75,000	36
1976	54,000	24	64,000	27	57,000	16	66,000	30
1977	72,000	27	30,000	15	--	--	--	--

*Average monthly emission of 51,200 Ci was assumed for March 1975 - July 1975.

Table 11. Magnetic Tapes

Name	Availability
1. Hourly Krypton-85 Emission Rates. (March 3, 1975 through September 1977) CONFIDENTIAL RESTRICTED DATA	Dept. of Energy Division of Nuclear Fuel Cycle and Production Washington, DC 20585
2. Surface Weather Observations. NCC Library TD-9687 (See Appendix A for format)	National Climatic Center NOAA Digital Products Section Federal Building Asheville, NC 28801
3. Rawinsonde Observations. NCC Library TD-9743 (See Appendix B for format)	(Same as 2)
4. *Savannah River Experiment (SRE), 1975-1977. NCC Library TD-9790	(Same as 2)

a. Meteorological Tower Observations (1 tape)
(See Appendix C for format)

b. Savannah River Experiment Meteorological Data Base (3 tapes; 1975, 1976, 1977)
(See Appendix D for format)

c. Monthly Wind-Rose Data and Hourly Acoustic Mixed Depth (1 tape)
(See Appendix E and F for format)

d. Weekly and Twice-Daily Average Krypton-85 Concentration Data (1 tape)
(See Appendix I for format)

*When ordering any of the tapes listed under SRE, requests must include specific title(s) of individual tape(s) desired.

sophisticated mesoscale models (Draxler, 1980) which are being tested against the SRP data.

The Savannah River Laboratory is using the ^{85}Kr data base to compare simple time-dependent trajectory models with the stability wind rose models. In addition the data will be used to validate existing three-dimensional computer models under development at SRL. These models incorporate Galerkin and second-moment techniques to include the effect of subgrid scale resolution.

It is expected that these data will prove useful to other air pollution modellers as well.

11. ACKNOWLEDGMENTS

This work was supported by the Office of Health and Environmental Research, Department of Energy.

We acknowledge the support and services provided by the McClellan Central Laboratory, McClellan AFB, CA, and the U.S. Air Force in performing a significant portion of the laboratory analyses.

We wish to thank the following organizations for permitting the ^{85}Kr samplers to be placed at their facilities: South Carolina Department of Health and Environmental Control, Columbia, SC; National Weather Service Office of Bush Field, Augusta, GA; Georgia Forestry Commission at Millen, Statesboro, and Thompson, GA; Warren County Police Department, Warrenton, GA; South Carolina Highway Department maintenance facilities at Greenwood, St. George, St. Matthews, Bamberg, Wagener, and Ridgeland, SC; Georgia Department of Transportation maintenance facilities at Swainsboro and engineering office at Statesboro; and E.I. duPont de Nemours and Company at Camden, SC. Many individuals at the above facilities provided excellent assistance throughout the duration of the study. Their efforts have added significantly to the success of this study.

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Ferber, G.J., K. Telegadas, J.L. Heffter and M.E. Smith (1977): Air Concentrations of Krypton-85 in the Midwest United States During January through May 1974, Atmospheric Environment, 11, p. 379-385.

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Telegadas, K., G.J. Ferber, J.L. Heffter and R.R. Draxler (1978): Calculated and Observed Seasonal and Annual Krypton-85 Concentrations at 30-150 km from a Point Source, Atmospheric Environment, 12, p. 1769-1775.

Turner, D.B. (1964): A Diffusion Model for an Urban Area, J. Appl. Meteorol. 3(1): p. 83-91.

APPENDIX A

SURFACE WEATHER OBSERVATIONS
MAGNETIC TAPE FORMAT

TAPE CHARACTERISTICS

TYPE - 9 track, 1600 bpi, BINARY (8 bits/byte)
LABEL - BLP
RECFM - FB
LRECL - 100
BLKSIZE - 10000

TAPE ORGANIZATION

One file per month per tape

DATA ORGANIZATION

All records are the same. Each record contains one observation at one time for one station.

DATA FORMAT

Parameter, units or WMO code, and length in bytes are as follows for each record:

block station number, code 4
year, GMT, 2
month, GMT, 2
day, GMT, 2
hour, GMT, 2
minute, GMT, 2
report type, code, 2
observation type, code, 2
latitude, degrees/minutes, 2
longitude, degrees/minutes, 2
station elevation, meters, 2
special ship, code, 2
quadrant, code, 2
wind indicator, code, 2
call letters, EBCDIC, 4
station control, code, 2
wind direction, degrees, 2
wind speed, tenths m/s, 2
wind gusts, tenths m/s, 2
sea level pressure, tenths millibars, 2
barometric tendency, code, 2
dry bulb temperature, tenths degrees Kelvin, 2
dew point depression, tenths degrees Kelvin, 2

altimeter setting, hundredths inches, 2
6 hr precipitation amount, code, 2
sky cover, code, 2
past weather, code, 2
visibility, meters, 4
visibility characteristic, code, 2
present weather, code, 2
present weather, code, 2
present weather, code, 2
present weather, code, 2
station pressure, tenths millibars, 2
cloud cover, code, 2
type of low cloud, code, 2
height of low cloud, code, 2
type of middle cloud, code, 2
type of high cloud, code, 2
amount of cloud, code, 2
cloud classification, code, 2
cloud type, code, 2
height of cloud base, code, 2
cloud height device, code, 2
cloud layer characteristic, EBCDIC, 2
ceiling, code, 2

SPECIAL CODES

Missing data are given by -1 in the field.

APPENDIX B

RAWINSONDE OBSERVATIONS
MAGNETIC TAPE FORMAT

TAPE CHARACTERISTICS

TYPE - 9 track, 1600 bpi, EBCDIC
LABEL - None
RECFM - VB
LRECL - 35
BLKSIZE - 3100

TAPE ORGANIZATION

4 observation times per day (0,6,12,18 GMT)
2 files per month (day 01 to 15/ day 16 to last)
12 files per tape (6 months)

DATA ORGANIZATION PER OBSERVATION TIME

Time identification record for winds (ID REC)
Station identification record (STA REC)
Wind data, one record per level (WIND RECS)

Time identification record for temperature (ID REC)
Station identification record (STA REC)
Temperature data, one record per level (TEMP RECS)

DATA FORMAT

ID REC:	MONTH	YEAR	DAY	HOUR (Z)	NUMBER OF REPORTS	NUMBER OF RECORDS	MET FIELD
	A3	I4	I2	I2	I4	I5	A1 W = WINDS, T = TEMPS

STA REC:	BLOCK STATION	LATITUDE (DEG)	LONGITUDE (DEG)	STATION HGT. (M, MSL)	STATION AVG. TERRAIN HGT. (M, MSL)	NO. OF REPORTING LEVELS
	I5	F5.2	F7.2	I5	I5	I2

WIND RECS:	WIND HGT. (M, MSL)	WIND DIRECTION (DEC.)	WIND SPEED (M/S)
	I5	F3.0	F4.1

TEMP RECS:	TEMPERATURE (HGT. (M, MSL))	PRESSURE (Mb)	TEMPERATURE (DEG K)
	I4	F5.1	F4.1

SPECIAL CODES

Missing data are given by 9's in the field.

APPENDIX C

METEOROLOGICAL TOWER OBSERVATIONS
MAGNETIC TAPE FORMAT

TAPE CHARACTERISTICS

TYPE - 9 track, 1600 bpi, EBCDIC
LABEL - None
RECFM - FB
LRECL - 150
BLKSIZE - 7500

TAPE ORGANIZATION

One observation time each hour. Times are given as Local Standard Time. 1 file per tape (1975 through 1977)

DATA ORGANIZATION PER OBSERVATION TIME

Time identification record - year, month, day, hour, and number of observation records to follow (5I5). One observation record for each tower.

DATA FORMAT

thirty variables each observation in 30I5 EBCDIC format

variable-type (units)

1 - Block station number
2 - Upper Measurement Level (meters x 10)
3 - Wind Direction (degrees x 10)
4 - Wind Speed (meters/sec x 10)
5 - Range (degrees x 10)
6 - Ambient Temperature (^{o}Kelvin x 10)
7 - Not used
8 - Not used
9 - Intermediate Measurements Level (meters x 10)
10 - Wind Direction (degrees x 10)
11 - Wind Speed (meters/sec x 10)
12 - Range (degrees x 10)
13 - Ambient Temperature (^{o}Kelvin x 10)
14 - Not used
15 - Not used
16 - Lower Measurements Level (meters x 10)
17 - Wind Direction (degrees x 10)
18 - Wind Speed (meters/sec x 10)
19 - Range (degrees x 10)
20 - Ambient Temperature (^{o}Kelvin x 10)

21 - Dew Point (^{o}Kelvin x 10)
22 - Not used
23 - Temp Diff (Upper-Lower) (^{o}C/100 meters x 10 ÷ 100)
24 - Temp Diff (Upper-Intermediate) (^{o}C/100 meters x 10 ÷ 100)
25 - Temp Diff (Intermediate-Lower) (^{o}C/100 meters x 10 ÷ 100)
26 - Precipitation (mm x 10)
27 - Solar Radiation (cal/cm^{2}/min x 100)
28 - Not used
29 - Not used
30 - Not used

SPECIAL CODES

Not all variables appear with each tower. Missing data are given by -1 in the field.

APPENDIX D

SRE-MDB
MAGNETIC TAPE FORMAT

TAPE CHARACTERISTICS

TYPE - 9 track, 1600 bpi, EBCDIC
LABEL - None
RECFM - FB
LRECL - 24
BLKSIZE - 12000

TAPE ORGANIZATION

One observation time each hour (GMT)
One file per month; 12 files per tape

DATA ORGANIZATION PER OBSERVATION TIME

Group 1 - Time identification record.

Group 2 - One record for each surface observation this hour.

Group 3 - Several records; header and one for each level of sounding for upper air stations. Tower data is within this group and can be identified by the block station number (72001 to 72009).

DATA FORMAT

Format given in parenthesis

Group 1 - year (I2)
month (I2)
day (I2)
hour (I2)
number of surface stations (I2)
total number of upper air stations (I2)
not used (I2)
not used (I2)
total number of records this hour (I3)

Group 2 - block station number (I6)
station longitude *100 (I5)
station latitude *100 (I4)
station elevation in meters (I4)
wind direction in degrees (I3, 2X, /)
wind speed m/s *10 (I3)
station pressure millibars *10 (I5)
ambient temperature degrees Kelvin *10 (I4)

dew point depression degrees *10 (I4)
previous six hour precipitation mm (I3)
Pasquill stability class (I2)

Group 3 - record 1 - block station number (I5)
station longitude *100 (I5)
station latitude *100 (I4)
station height in meters (I4)
station height above average terrain (I4)
number of subsequent levels and records for this station (I2)

record 2 - observation height in meters (I4)
wind direction degrees (I3)
wind speed m/s *10 (I3)
pressure millibars *10 (I5)
temperature degrees Kelvin *10 (I4)

record 3 - repeat record 2 until finished then repeat record 1 for a new station

SPECIAL CODES

Missing data are given by a -1 in the field.

APPENDIX E

MONTHLY STABILITY WIND ROSE STATISTICS AND HOURLY METEOROLOGICAL DATA REPRESENTING THE AVERAGE SRP WIND AT A HEIGHT OF 62 M ABOVE GROUND LEVEL

TAPE CHARACTERISTICS

TYPE - 9-track, 1600 bpi, EBCDIC
LABEL - None
RECFM - FB
LRECL - 486
BLKSIZE - 4860

TAPE ORGANIZATION

Monthly wind rose statistics on file 1. 15-min average meteorological data at one-hour intervals on file 2. Hourly acoustic mixed depth on file 3 (described in Appendix F). All times GMT.

DATA ORGANIZATION

File 1

Group 1 - Number of wind rose summaries

Group 2 - Identification record

Group 3 - Multiple records containing the stability wind rose statistics and average wind speed for time periods given in Table 2. (Wind speeds were calculated from the average reciprocal wind speed.)

DATA FORMAT

File 1

Group 1 -	NWROSE number of wind rose summaries	I2
Group 2 -	NTOT total number of hours of data	I8
	JSTART start time of statistics YYDDD	I8
	JEND end time of statistics YYDDD (YY is last two digits of year DDD is Julian day of year)	I8
Group 3 - Record 1		
(F(KDIR), KDIR=1,16)	number of hours that wind direction is coming from each of 16 sectors KDIR=1 for N sector, KDIR=2 for NNE sector, KDIR=3 for NE sector, etc.	16I3

Group 3 (con't)

u	average wind speed for all directions within each wind speed and stability class	F5.1
ISPD	wind speed class	I2
ISTAB	atmospheric stability class	I2

Wind speed and stability class limiting values are:

ISPD	Wind Speed Limits m/sec	ISTAB	SIGA Limits deg
1	$0<u\leq 2$	1	$23<SIGA\leq 80$
2	$2<u\leq 4$	2	$18<SIGA\leq 23$
3	$4<u\leq 6$	3	$13<SIGA\leq 18$
4	$6<u\leq 8$	4	$8<SIGA\leq 13$
5	$8<u\leq 12$	5	$4<SIGA\leq 8$
6	$12<u\leq 50$	6	$2<SIGA\leq 4$
Record 2-42	same as Record 1	7	$0<SIGA\leq 2$

DATA ORGANIZATION

File 2

Group 1 - number of years of hourly wind data

Group 2 - several records giving average meteorological data for each hour of each day of year; missing data indicated with -99.0. All times GMT.

DATA FORMAT

File 2

Group 1 -	NYRS number of years of data	I3
Group 2 Record 1	IYEAR last two digits of year	I2
	JDAY Julian day of year	I4
	(IHR(I),DIR(I),SPD(I),SIGA(I),SIGE(I),I=1,24) Average meteorological data for each hour of day where:	120I4

HR	hour of day GMT
DIR	wind direction deg x 10
SPD	wind speed (m/sec) x 10
SIGA	standard deviation of wind azimuth deg x 10
SIGE	standard deviation of elevation angle deg x 10

Missing data indicated with -99.0
Record 1 is repeated for 366 days of year

APPENDIX F

HOURLY ACOUSTIC MIXED DEPTH AND ACOUSTIC CATEGORY

TAPE CHARACTERISTICS

TYPE - 9-track, 1600 bpi, EBCDIC
LABEL - None
RECFM - FB
LRECL - 486
BLKSIZE - 4860

TAPE ORGANIZATION

File 1 and File 2 described in Appendix E.

File 3 contains acoustic data for each hour of the SRE. Time are in GMT.

DATA ORGANIZATION PER DAY

Group 1 - NTOT total number of days data available		I6
Group 2		
Record 1		
IYEAR	last two digits of year	I2
MONTH	month	I2
IDAY	day	I2
(H(I),I=1,24)	mixing depth in meters for each hour of day beginning with 0000 GMT and only with 2300 GMT missing data indicated with 9999	24I4
(C(I),I=1,24)	acoustic category for each hour of day as given in Table 6.	24I2
Record 2		
End of file. Same as Record 1.		

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS

Sampling Periods:

1. March 3, 1975 - October 4, 1976
2. November 22, 1976 - February 11, 1977
3. February 28, 1977 - April 1, 1977
4. May 2, 1977 - July 1, 1977
5. August 1, 1977 - September 19, 1977

Explanation of Appendix:

Col. 1. Sampling location (see Table 1 and Figure 1).

Col. 2. Julian date (day of the year each sample collection began, see Tables 7 and 8).

Col. 3. Time (GMT) each sample collection began.

Col. 4. Julian date the sample collection was terminated.

Col. 5. Time (GMT) sample collection terminated.

Col. 6. Sample collection duration to nearest whole day.

Col. 7. Observed average ^{85}Kr concentration during sample collection (pCi/SCM).

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
MARCH 1975 - DECEMBER 1975

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
MAR 3						
2	62	14	69	14	7	27.0
3	62	15	69	21	7	26.8
4	62	14	69	15	7	18.2
5	62	14	69	13	7	25.6
6	62	21	69	13	7	16.3
7	62	13	65	19	3	27.5
7	66	12	69	19	3	15.4
8	62	14	69	14	7	18.7
9	62	18	69	12	7	18.7
10	62	12	69	12	7	122.2
11	62	14	69	14	7	19.4
12	62	14	69	13	7	17.2
13	62	13	69	13	7	58.3
14	62	13	69	14	7	78.0
MAR 10						
2	69	14	76	14	7	31.4
3	69	21	76	15	7	18.0
4	69	14	76	13	7	25.5
5	69	13	76	13	7	23.5
6	69	13	76	21	7	23.7
7	69	19	76	19	7	27.4
8	69	14	76	14	7	21.7
9	69	12	76	12	7	16.8
10	69	12	76	12	7	39.3
11	69	12	72	15	3	30.5
11	72	15	76	14	4	25.1
12	70	15	76	13	6	19.9
13	69	13	72	14	3	21.7
13	73	17	76	14	3	12.5
14	69	14	76	13	7	111.4
MAR 17						
2	76	14	83	13	7	15.7
3	76	15	83	14	7	29.6
4	76	13	83	19	7	19.9
5	76	13	83	12	7	47.3
6	76	21	83	21	7	14.8
7	76	19	83	12	7	15.6
9	76	12	83	12	7	17.8
10	76	13	83	12	7	124.7
11	76	13	79	15	3	15.4
11	79	15	83	14	4	113.9
12	76	13	83	13	7	18.7
13	78	15	80	14	2	17.2
14	76	13	83	13	7	33.7
MAR 24						
2	83	14	90	15	7	78.2
3	83	14	90	17	7	15.8
4	83	19	90	14	7	15.0
5	83	13	90	13	7	16.0
6	83	21	90	13	7	15.0
7	83	12	90	16	7	14.9
8	83	13	90	13	7	15.0
9	83	12	90	14	7	15.4
10	83	12	90	12	7	20.0
11	83	14	90	15	7	15.4
12	83	13	90	13	7	19.3
13	83	19	90	13	7	15.2
14	83	14	90	13	7	123.5
MAR 31						
2	90	15	97	13	7	17.3
3	90	17	97	12	7	15.3
4	90	14	97	13	7	15.3
5	90	13	97	13	7	15.7
6	90	13	97	14	7	15.2
7	90	16	97	18	7	15.2
8	90	13	97	12	7	15.3
9	90	14	97	15	7	17.1
10	90	12	97	12	7	39.5
11	90	15	97	14	7	16.6
12	90	13	97	13	7	15.4
13	90	13	97	13	7	17.1
14	90	14	97	15	7	17.9

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
MARCH 1975 - DECEMBER 1975

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
APR 7						
2	97	14	104	12	7	43.3
3	97	12	104	14	7	73.9
4	97	13	104	15	7	49.7
5	97	14	104	14	7	24.3
6	97	14	104	16	7	20.4
7	97	14	104	14	7	20.7
8	97	12	104	12	7	24.5
9	97	16	104	12	7	21.6
10	97	12	104	12	7	24.7
11	97	13	104	13	7	22.9
12	98	22	104	13	6	45.0
13	97	13	104	14	7	20.6
14	97	15	104	13	7	201.3
APR 14						
2	104	13	111	14	7	16.6
3	104	14	111	12	7	18.3
4	104	15	111	13	7	15.4
5	104	15	111	13	7	15.5
6	104	16	111	21	7	18.9
7	104	12	111	12	7	60.3
8	104	12	105	13	1	17.0
8	105	16	111	14	6	84.4
9	104	13	111	13	7	86.8
10	104	12	111	12	7	87.6
11	104	13	111	14	7	40.3
12	104	13	111	13	7	15.6
13	104	14	111	13	7	23.4
14	104	15	111	12	7	16.5
APR 21						
2	111	14	118	12	7	77.9
3	111	12	118	13	7	15.3
4	111	14	118	13	7	14.9
5	111	13	118	13	7	15.4
6	111	21	118	13	7	15.5
7	111	12	118	13	7	21.2
8	111	15	118	15	7	18.1
9	111	13	118	14	7	25.1
10	111	12	118	12	7	68.9
11	111	14	118	14	7	50.6
12	111	13	118	13	7	15.5
13	111	13	118	13	7	32.0
14	111	16	118	13	7	167.7
APR 28						
2	118	14	125	13	7	22.3
3	118	17	125	14	7	16.8
4	118	13	125	17	7	16.6
5	118	13	125	14	7	16.1
6	118	13	122	13	4	15.3
7	118	13	125	13	7	23.9
8	118	14	125	12	7	55.9
9	118	14	125	15	7	129.0
10	118	12	125	12	7	66.5
11	118	14	125	14	7	30.6
12	118	13	122	14	4	18.6
12	122	16	125	12	3	92.8
13	118	13	125	14	7	17.5
14	118	13	125	20	7	43.4
MAY 5						
2	125	14	132	15	7	17.0
3	125	14	132	12	7	22.2
4	127	12	132	17	5	26.7
5	125	14	132	13	7	19.2
6	125	13	132	14	7	15.3
7	125	12	132	15	7	15.6
8	125	12	128	12	3	20.2
8	128	12	132	15	4	17.5
9	125	15	132	15	7	20.4
11	125	13	132	13	7	23.1
12	125	13	132	16	7	16.8
13	125	14	132	13	7	22.8
14	125	20	132	12	7	39.1

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
MARCH 1975 - DECEMBER 1975

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
MAY 12						
2	132	15	135	18	3	18.1
2	135	19	139	19	4	37.1
3	132	12	139	15	7	17.0
5	132	13	139	13	7	15.5
6	132	14	139	13	7	15.0
7	132	15	139	15	7	30.6
8	132	15	139	14	7	136.0
9	132	15	139	12	7	44.0
10	132	12	139	12	7	25.2
11	132	13	139	13	7	19.9
12	132	16	139	13	7	21.5
13	132	13	140	15	8	16.9
14	132	18	139	18	7	127.0
MAY 19						
2	139	19	147	12	8	15.6
3	139	15	146	11	7	23.6
4	139	19	147	14	8	17.2
5	139	13	147	12	8	21.3
6	139	13	146	15	7	16.3
7	139	15	146	12	7	18.0
8	139	14	143	20	4	53.3
8	143	20	146	12	3	44.9
9	139	12	146	12	7	63.7
10	139	12	146	12	7	119.1
11	139	13	146	13	7	32.5
12	139	13	146	13	7	16.1
13	140	16	147	14	7	28.9
14	139	18	146	12	7	137.5
MAY 26						
2	147	14	153	14	6	14.6
3	146	11	153	22	7	19.5
4	147	13	153	13	6	16.8
5	147	12	153	13	6	17.3
6	146	15	153	20	7	14.4
7	146	12	153	13	7	17.6
8	146	12	153	14	7	19.0
9	146	12	148	13	2	18.9
9	148	13	153	13	5	16.1
10	146	12	153	12	7	45.8
11	146	13	153	13	7	29.0
12	146	13	153	17	7	14.8
13	147	14	153	13	6	16.6
14	146	12	153	12	7	19.0
JUN 2						
2	153	14	160	14	7	14.7
3	153	22	160	12	7	14.9
5	153	13	160	13	7	14.7
6	153	20	160	13	7	17.2
7	155	15	161	17	6	68.5
8	153	14	160	13	7	61.3
9	153	13	160	14	7	52.1
10	153	12	160	12	7	16.3
11	153	14	160	14	7	14.8
12	153	17	160	13	7	92.2
13	153	13	160	14	7	14.9
14	153	12	154	16	1	15.2
JUN 9						
3	160	12	167	14	7	14.6
4	161	17	167	16	6	14.5
5	160	13	167	13	7	14.6
7	161	17	167	14	6	16.6
8	160	14	167	12	7	16.9
9	160	14	167	15	7	16.1
10	160	12	167	12	7	14.6
11	160	14	167	13	7	14.4
12	160	13	167	15	7	14.6
13	160	13	167	13	7	14.9
14	160	14	167	14	7	16.6

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
MARCH 1975 - DECEMBER 1975

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	TIME (GMT)	END OF SAMPLE JULIAN DATE	TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
JUN 16						
2	168	15	174	14	6	279.0
3	167	14	174	13	7	21.0
4	167	16	174	14	7	20.1
5	167	13	174	13	7	21.9
7	167	14	174	12	7	25.4
9	167	15	174	15	7	22.1
10	167	12	174	12	7	47.1
11	167	13	174	13	7	30.9
12	167	15	174	14	7	14.6
13	167	13	174	13	7	27.3
14	167	14	174	14	7	31.3
JUN 23						
2	174	15	181	14	7	48.1
3	174	13	181	13	7	71.1
4	174	14	181	14	7	80.5
5	174	13	181	13	7	42.6
6	174	13	181	20	7	14.4
7	174	12	181	15	7	14.6
8	177	14	181	12	4	14.8
9	174	15	181	12	7	15.1
10	174	12	181	12	7	16.5
12	174	14	181	12	7	15.1
13	174	13	181	13	7	15.1
14	174	15	181	12	7	183.4
JUN 30						
2	181	13	188	13	7	24.5
3	181	13	188	14	7	28.1
4	181	14	188	17	7	34.0
5	181	13	188	13	7	16.0
6	181	20	188	13	7	15.6
7	181	15	188	15	7	15.2
8	182	12	188	13	6	15.9
9	181	12	188	12	7	41.4
10	181	12	188	12	7	224.2
11	181	13	188	13	7	48.3
12	181	12	188	13	7	18.0
14	181	12	188	13	7	46.2
JUL 7						
2	188	14	195	13	7	14.9
3	188	14	195	17	7	14.7
4	188	17	195	13	7	15.4
5	188	13	190	14	2	14.9
5	190	17	195	21	5	14.4
6	188	13	195	13	7	14.5
8	188	14	196	12	8	14.6
9	188	12	195	15	7	17.3
10	188	12	195	12	7	16.5
11	188	13	195	14	7	14.9
12	188	14	195	13	7	14.7
14	188	14	195	16	7	15.6
JUL 14						
2	195	14	202	14	7	14.5
3	195	17	202	15	7	14.5
4	195	13	202	14	7	14.6
5	195	21	202	15	7	14.6
6	195	18	202	21	7	14.3
7	195	18	202	15	7	14.6
8	196	13	199	14	3	14.7
8	199	14	202	15	3	14.7
9	195	15	202	13	7	14.7
10	195	12	202	12	7	14.7
11	195	14	202	13	7	14.5
12	195	13	202	13	7	14.6
13	195	20	202	14	7	14.6
14	195	16	202	14	7	14.5

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
MARCH 1975 - DECEMBER 1975

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
JUL 21						
2	202	14	209	14	7	14.6
3	202	15	209	12	7	14.4
4	202	14	209	12	7	14.3
5	202	15	209	13	7	14.4
6	202	21	209	14	7	14.6
8	202	15	209	13	7	14.5
9	202	13	209	12	7	14.4
11	202	13	209	13	7	14.7
12	202	13	209	14	7	14.6
13	202	13	209	13	7	14.6
14	202	14	209	13	7	14.6
JUL 28						
2	209	14	216	15	7	14.4
3	209	12	216	16	7	14.2
4	209	12	211	14	2	14.6
4	211	14	216	17	5	14.4
5	209	13	216	13	7	14.3
6	209	14	216	13	7	13.7
8	209	13	216	14	7	14.5
9	209	12	216	15	7	14.6
11	209	13	216	14	7	14.5
12	209	14	216	16	7	14.4
13	209	13	216	14	7	14.4
14	209	13	216	13	7	14.4
AUG 4						
2	216	15	223	13	7	14.4
3	216	16	223	14	7	14.3
4	216	17	218	12	2	14.1
4	218	12	220	15	2	14.1
5	216	13	223	13	7	14.4
6	216	13	223	13	7	14.1
8	216	14	223	14	7	14.4
9	216	15	223	19	7	14.5
10	216	12	223	12	7	14.6
11	216	14	223	13	7	14.5
12	216	16	223	13	7	14.4
13	216	14	220	19	4	14.6
13	220	19	221	13	1	14.6
14	216	13	223	14	7	14.1
AUG 11						
2	223	13	230	14	7	14.4
3	223	14	230	12	7	14.2
4	224	15	230	14	6	14.4
5	223	13	230	13	7	14.4
6	223	13	230	20	7	14.0
8	223	14	230	14	7	14.4
9	223	19	230	14	7	14.6
10	223	12	230	12	7	14.4
11	223	13	230	13	7	14.4
12	223	14	230	14	7	14.4
14	223	14	230	14	7	14.4
AUG 18						
2	230	14	237	13	7	14.4
3	230	12	237	13	7	15.6
4	230	14	237	14	7	19.2
5	230	13	237	13	7	14.4
6	230	20	238	13	8	14.6
8	230	14	239	21	9	15.7
9	230	14	237	12	7	14.5
10	230	12	237	12	7	14.4
11	230	13	237	13	7	14.4
12	230	14	231	21	1	14.3
12	231	21	237	17	6	14.4
13	230	13	237	13	7	14.5
14	230	14	237	13	7	14.9

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
MARCH 1975 - DECEMBER 1975

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
AUG 25						
2	237	13	244	14	7	14.9
3	237	13	244	14	7	20.0
5	237	13	245	13	8	17.0
6	238	13	245	15	7	14.3
8	239	21	244	12	5	13.3
9	237	12	245	12	8	23.6
10	237	12	244	12	7	66.0
11	237	13	245	14	8	30.9
12	237	17	244	16	7	14.7
13	241	17	248	14	7	18.7
14	237	13	244	13	7	21.9
SEP 1						
2	248	14	251	14	3	14.7
3	244	14	251	12	7	16.7
4	246	18	251	15	5	15.0
5	245	13	251	13	6	16.2
6	245	15	251	14	6	14.8
8	245	12	251	13	6	31.1
9	245	12	251	12	6	22.1
10	244	12	251	12	7	34.1
11	245	14	251	14	6	17.5
12	244	16	251	13	7	14.8
13	248	14	255	14	7	15.0
14	244	13	251	14	7	16.1
SEP 8						
2	251	14	258	14	7	17.7
3	251	12	258	21	7	16.4
4	251	14	258	14	7	30.5
5	251	13	258	14	7	17.6
6	251	14	258	16	7	17.7
8	251	13	259	14	8	30.3
10	251	12	258	12	7	31.5
11	251	14	258	14	7	19.1
12	251	13	258	13	7	16.2
13	255	14	258	12	3	17.3
14	251	14	258	21	7	27.2
SEP 15						
3	258	21	265	19	7	17.5
4	258	14	265	14	7	43.6
5	258	14	265	13	7	14.7
6	258	16	265	14	7	14.6
7	258	16	265	13	7	14.6
8	259	14	265	14	6	18.6
9	258	12	265	12	7	14.9
10	258	12	265	12	7	25.8
11	258	14	265	14	7	23.1
12	258	13	265	13	7	14.8
13	258	14	265	13	7	18.3
14	258	21	265	14	7	16.6
SEP 22						
3	265	19	272	12	7	14.9
5	265	13	272	13	7	14.8
6	265	14	272	13	7	15.3
7	265	13	272	14	7	14.9
8	265	14	272	18	7	15.4
9	265	12	272	12	7	16.6
10	265	12	272	12	7	16.5
11	265	14	272	14	7	15.2
12	265	13	272	15	7	15.1
13	265	13	272	13	7	15.8
14	265	14	272	12	7	15.6

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
MARCH 1975 - DECEMBER 1975

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
SEP 29						
2	273	15	279	13	6	15.0
3	272	12	279	15	7	45.6
4	272	14	279	19	7	64.8
5	275	14	279	13	4	15.1
6	272	13	274	12	2	14.3
6	274	12	279	13	5	15.3
7	272	14	279	14	7	14.8
8	272	18	279	18	7	15.0
9	272	12	279	12	7	15.0
10	272	12	279	12	7	15.0
11	272	13	279	13	7	15.1
12	272	15	279	15	7	14.9
13	272	13	279	13	7	14.9
14	272	12	279	11	7	14.9
OCT 6						
2	279	13	286	13	7	16.7
3	279	15	286	21	7	14.9
4	279	19	287	13	8	16.3
5	279	13	287	13	8	14.8
6	279	13	286	20	7	14.8
7	279	14	286	14	7	17.2
9	279	12	286	12	7	17.3
10	279	12	286	12	7	36.5
11	279	14	286	13	7	16.0
12	279	15	286	13	7	15.3
13	279	13	286	14	7	15.4
14	279	11	286	13	7	20.3
OCT 13						
2	286	13	293	13	7	15.1
3	286	21	293	12	7	14.8
4	287	13	293	14	6	14.9
5	287	13	293	13	6	14.8
6	286	20	293	13	7	15.4
8	287	17	293	14	6	15.3
9	286	12	293	12	7	38.8
10	286	12	293	12	7	119.2
11	286	13	293	14	7	22.9
12	288	15	293	14	5	17.4
13	286	14	293	13	7	20.9
14	286	13	293	13	7	84.3
OCT 20						
2	293	13	300	14	7	14.5
3	293	12	300	12	7	62.1
4	293	14	300	14	7	43.0
5	293	13	300	12	7	15.8
6	293	14	300	14	7	19.0
7	293	14	300	14	7	14.6
8	293	14	300	13	7	14.7
9	293	12	300	13	7	16.5
10	293	12	300	12	7	18.3
13	293	13	300	13	7	14.8
14	293	13	300	12	7	17.2
OCT 27						
2	300	15	307	15	7	18.7
3	300	13	307	16	7	22.3
4	300	15	307	15	7	25.8
5	300	14	307	14	7	14.9
6	300	14	307	14	7	14.9
7	300	15	307	15	7	14.8
8	300	14	307	15	7	14.7
9	300	14	307	13	7	14.8
10	300	13	307	13	7	15.1
13	300	14	304	17	4	14.9
13	304	17	314	14	10	14.9
14	300	16	307	14	7	32.7

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
MARCH 1975 - DECEMBER 1975

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
NOV 3						
2	307	15	314	15	7	21.4
3	307	16	314	14	7	16.7
5	307	14	314	14	7	14.7
6	307	14	314	14	7	14.7
7	307	15	314	15	7	14.7
8	307	15	314	21	7	14.7
9	307	13	314	13	7	14.9
10	307	13	314	13	7	14.9
14	307	15	314	13	7	57.0
NOV 10						
2	314	15	321	15	7	16.4
3	314	14	321	13	7	16.3
4	316	19	321	14	5	15.4
5	314	14	321	13	7	15.6
6	314	14	321	20	7	27.6
7	314	15	321	15	7	16.1
8	314	21	321	15	7	19.8
9	314	13	317	13	3	14.7
9	317	13	321	15	4	77.6
10	314	13	321	13	7	15.0
13	314	14	321	14	7	15.1
14	314	13	321	14	7	45.2
NOV 17						
2	321	15	328	16	7	16.1
3	321	13	328	17	7	48.3
4	321	14	328	15	7	32.2
5	321	14	328	14	7	36.7
6	321	20	328	20	7	88.2
7	321	15	328	20	7	30.2
8	321	15	328	15	7	39.2
9	321	15	328	14	7	17.9
10	321	13	328	13	7	19.6
13	321	14	328	14	7	15.9
14	321	14	328	14	7	17.5
NOV 24						
2	328	16	335	15	7	132.7
3	328	17	335	13	7	18.1
4	328	15	335	18	7	34.8
5	328	14	335	14	7	17.4
6	328	20	335	13	7	17.5
7	328	20	335	16	7	86.2
8	328	15	335	15	7	266.0
9	328	14	335	14	7	23.1
10	328	13	335	13	7	16.7
13	328	15	335	15	7	16.3
14	328	14	335	14	7	112.2
DEC 1						
2	335	15	342	13	7	50.6
3	335	13	342	13	7	106.2
4	335	18	342	15	7	107.6
5	335	14	342	14	7	58.8
6	335	14	342	14	7	15.2
7	335	16	342	18	7	18.7
8	335	15	342	16	7	64.9
9	335	14	342	15	7	148.4
10	335	13	342	13	7	148.1
12	335	16	342	14	7	24.6
13	335	15	342	15	7	65.5
14	335	14	342	14	7	106.1

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
MARCH 1975 - DECEMBER 1975

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
DEC 8						
2	342	16	349	15	7	40.2
3	342	13	349	13	7	20.2
4	342	15	349	16	7	18.7
5	342	14	349	14	7	17.2
6	342	14	349	15	7	15.7
7	342	18	349	14	7	94.7
8	342	16	349	14	7	38.1
9	342	15	349	15	7	90.9
10	342	13	349	13	7	259.0
12	342	14	349	14	7	118.7
13	342	15	349	15	7	100.1
14	342	14	349	13	7	149.0
DEC 15						
2	349	15	356	16	7	15.7
3	349	13	357	13	8	15.5
4	349	16	356	14	7	15.3
5	349	13	356	14	7	15.3
6	349	15	357	14	8	43.3
7	349	15	356	14	7	18.5
8	349	14	356	15	7	25.0
9	349	15	356	14	7	51.9
10	349	13	356	13	7	111.7
13	349	15	356	14	7	96.0
14	349	13	356	15	7	20.8
DEC 22						
2	356	16	363	14	7	43.0
3	357	13	363	14	6	15.2
4	356	14	363	15	7	16.6
5	356	14	363	14	7	18.2
6	357	14	363	16	6	33.2
7	356	14	363	15	7	32.3
8	356	16	363	13	7	31.8
9	356	14	363	17	7	15.7
10	356	13	363	13	7	19.3
12	356	15	363	18	7	15.7
13	356	14	364	14	8	18.7
DEC 29						
2	363	17	5	17	7	33.0
3	363	14	5	14	7	21.4
4	363	15	5	14	7	16.7
5	363	14	5	14	7	16.4
6	363	16	5	14	7	15.6
7	363	15	5	20	7	89.0
8	363	14	5	15	7	16.6
9	363	17	5	13	7	16.7
10	364	14	5	13	6	16.5
12	363	18	5	16	7	16.6
13	364	21	365	15	1	15.4
13	365	15	5	14	5	16.0
14	363	15	5	14	7	140.3

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
JANUARY 1976- DECEMBER 1976

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	TIME (GMT)	END OF SAMPLE JULIAN DATE	TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
JAN 5						
2	5	17	12	18	7	16.8
3	5	14	12	16	7	97.9
4	5	14	12	14	7	32.1
5	5	14	12	14	7	18.3
6	5	14	12	14	7	30.0
7	5	20	12	18	7	35.3
8	5	15	12	14	7	56.6
9	5	13	7	13	2	16.0
9	7	13	12	14	5	39.4
10	5	13	12	13	7	147.7
12	5	16	12	14	7	15.4
13	5	14	12	14	7	32.4
14	5	14	12	14	7	41.3
JAN 12						
2	12	13	19	15	7	25.2
3	12	16	19	15	7	27.3
4	12	14	19	16	7	22.0
5	12	14	19	14	7	76.9
6	12	14	20	21	8	17.1
7	12	18	20	14	8	18.8
8	12	14	20	13	8	19.7
9	12	14	20	13	8	16.6
10	12	13	20	12	8	20.5
13	12	14	19	15	7	16.1
14	12	14	19	15	7	37.1
JAN 19						
3	19	15	26	15	7	32.7
4	19	16	26	14	7	16.0
5	19	14	26	14	7	17.8
6	20	21	26	21	6	15.8
7	20	14	26	14	6	98.3
8	20	13	26	15	6	186.6
9	20	13	26	14	6	18.9
10	20	12	26	13	6	262.4
12	19	16	26	15	7	44.3
13	19	15	26	16	7	46.4
14	19	15	26	14	7	20.8
JAN 26						
2	26	16	33	15	7	15.8
3	26	15	33	20	7	16.4
4	26	14	33	15	7	15.0
5	26	14	33	21	7	15.3
6	26	21	33	14	7	17.8
7	26	14	33	14	7	31.4
8	26	15	33	15	7	165.4
9	26	14	33	14	7	73.7
10	26	13	33	13	7	38.4
12	26	15	33	14	7	15.8
13	26	16	33	14	7	18.0
14	26	14	33	15	7	15.9
FEB 2						
2	33	15	40	15	7	15.1
3	33	20	40	17	7	15.1
4	33	15	40	19	7	15.0
5	33	21	40	14	7	15.1
6	33	14	40	14	7	17.5
7	33	14	40	14	7	43.9
8	33	15	40	19	7	156.8
9	33	14	40	14	7	53.1
10	33	13	40	13	7	54.5
11	35	17	40	15	5	82.7
12	33	14	40	14	7	15.0
13	33	14	40	14	7	28.3
14	33	15	40	15	7	15.1

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
JANUARY 1976- DECEMBER 1976

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
FEB 9						
2	40	15	47	15	7	26.8
3	40	17	47	15	7	28.3
4	40	19	47	16	7	15.4
5	40	14	47	14	7	17.1
6	40	14	48	14	8	22.1
7	40	14	48	14	8	35.2
8	40	19	48	13	8	181.9
9	40	14	48	14	8	46.6
10	40	13	47	15	7	52.1
11	40	14	48	13	8	50.6
12	40	14	48	14	8	17.5
13	40	14	47	15	7	36.8
14	40	15	47	13	7	50.1
FEB 16						
2	47	15	54	16	7	23.7
3	47	15	54	13	7	15.3
4	47	16	54	15	7	14.8
5	47	14	54	14	7	14.7
6	48	14	54	16	6	15.1
7	48	14	54	15	6	25.8
8	48	13	54	17	6	36.9
9	48	14	54	14	6	41.6
10	47	15	54	13	7	247.7
11	48	13	54	14	6	93.1
12	48	14	54	15	6	14.7
13	47	15	54	15	7	55.8
14	47	14	54	14	7	42.9
FEB 23						
2	54	18	61	16	7	18.4
3	54	13	61	16	7	20.7
4	54	15	61	14	7	26.1
5	54	13	61	14	7	23.2
6	54	16	61	14	7	21.8
7	54	15	61	16	7	27.4
8	54	17	61	15	7	225.4
9	54	14	61	14	7	220.2
10	54	13	61	13	7	170.2
11	54	14	61	14	7	63.6
12	54	15	61	15	7	17.9
14	54	14	61	15	7	30.5
MAR 1						
2	61	16	68	17	7	14.7
3	61	16	68	17	7	25.0
4	61	14	68	15	7	17.9
5	61	14	68	14	7	22.2
6	61	14	68	14	7	106.6
7	61	16	68	16	7	14.4
8	61	15	68	14	7	29.9
9	61	14	68	15	7	59.1
12	61	15	68	18	7	15.0
13	61	14	68	14	7	43.6
14	61	15	68	15	7	18.4
MAR 8						
2	68	17	75	16	7	18.9
3	68	17	75	16	7	33.2
4	68	15	75	15	7	20.6
5	68	14	75	14	7	23.9
6	68	14	75	14	7	111.2
7	68	15	75	15	7	124.0
8	68	14	75	16	7	135.8
9	68	15	75	15	7	46.2
10	68	13	75	13	7	72.4
11	68	15	75	15	7	60.8
13	68	14	75	15	7	23.9
14	68	15	75	15	7	40.2

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
JANUARY 1976- DECEMBER 1976

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	TIME (GMT)	END OF SAMPLE JULIAN DATE	TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
MAR 15						
2	75	16	82	18	7	15.1
3	75	16	77	20	2	35.7
3	77	20	82	16	5	26.4
4	75	15	82	15	7	19.0
5	75	14	82	14	7	24.9
6	75	14	82	14	7	36.3
7	75	15	82	18	7	58.2
8	75	16	82	15	7	126.1
9	75	15	82	14	7	64.7
10	75	13	82	13	7	217.8
11	75	15	82	14	7	107.4
12	75	15	82	14	7	27.7
14	75	15	82	15	7	106.4
MAR 22						
2	82	17	89	15	7	16.4
3	82	15	89	13	7	22.9
4	82	15	89	21	7	23.7
5	82	14	89	14	7	16.3
6	82	21	89	16	7	15.1
7	82	18	89	16	7	16.1
8	82	15	89	16	7	15.5
9	82	14	89	15	7	35.3
10	82	13	89	13	7	118.8
11	82	14	89	14	7	27.0
12	82	14	89	18	7	20.6
13	82	19	89	14	7	24.3
14	82	15	89	13	7	81.2
MAR 29						
2	89	15	96	20	7	14.9
3	89	13	96	15	7	15.9
4	89	21	96	20	7	15.3
5	89	14	90	18	1	14.8
5	90	19	96	15	6	14.9
6	89	21	96	16	7	19.9
7	89	16	96	16	7	59.8
8	89	16	96	14	7	46.9
11	89	14	96	15	7	23.6
12	89	18	96	14	7	16.9
13	89	14	96	14	7	22.0
14	89	13	96	13	7	20.6
APR 5						
2	96	20	103	14	7	15.9
3	96	15	103	16	7	38.4
4	96	20	103	18	7	27.6
9	96	14	103	14	7	44.8
10	96	13	103	13	7	42.2
11	96	15	103	14	7	29.1
12	96	14	103	19	7	18.5
13	96	15	103	14	7	17.5
14	96	13	103	14	7	61.7
APR 12						
2	103	15	110	20	7	16.9
3	103	16	110	15	7	17.3
4	103	18	110	18	7	16.3
8	103	14	110	14	7	32.8
9	103	14	110	13	7	28.7
10	103	13	110	13	7	193.7
11	103	14	110	14	7	85.2
12	103	19	110	14	7	17.0
13	103	14	110	15	7	44.3
14	103	14	110	16	7	18.2

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
JANUARY 1976- DECEMBER 1976

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	TIME (GMT)	END OF SAMPLE JULIAN DATE	TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
APR 19						
2	110	20	117	18	7	16.9
3	110	15	117	16	7	26.0
4	110	18	117	21	7	22.6
5	110	14	117	21	7	28.4
6	110	14	117	14	7	39.6
7	110	21	117	15	7	27.7
8	110	14	117	14	7	24.1
9	110	13	117	13	7	27.7
10	110	13	117	13	7	35.4
11	110	14	117	15	7	28.6
12	110	14	117	14	7	21.2
13	110	15	117	18	7	18.5
14	110	16	117	14	7	55.6
APR 26						
2	117	17	124	15	7	32.4
4	117	21	124	17	7	43.5
5	117	20	124	14	7	16.1
6	117	13	124	20	7	15.4
7	117	14	124	15	7	34.3
8	117	13	124	21	7	121.3
10	117	12	124	12	7	16.6
11	117	16	124	14	7	15.1
12	117	13	124	13	7	31.2
13	117	17	124	14	7	15.3
14	117	13	124	15	7	245.0
MAY 3						
2	124	16	131	17	7	15.7
3	124	17	131	12	7	27.4
5	124	14	131	14	7	14.8
6	124	20	132	13	8	15.0
7	124	15	132	20	8	15.6
8	124	21	132	14	8	18.1
10	124	12	131	14	7	139.5
11	124	13	132	12	8	66.3
12	124	13	131	13	7	39.3
14	124	15	131	13	7	22.0
MAY 10						
2	131	17	138	13	7	15.4
3	131	15	138	15	7	15.9
4	131	14	138	15	7	16.5
5	131	14	138	13	7	15.3
6	132	13	138	20	6	15.1
7	132	20	138	17	6	53.9
8	132	14	138	21	6	62.3
10	131	13	138	12	7	83.5
11	132	12	138	14	6	33.3
12	131	13	138	14	7	21.6
14	131	13	138	18	7	15.6
MAY 17						
2	138	13	148	20	10	44.6
3	138	15	145	12	7	15.0
4	138	15	145	14	7	15.0
5	138	13	139	13	1	15.0
5	139	13	145	13	6	14.9
6	138	20	145	13	7	14.8
7	138	17	145	13	7	15.7
8	138	21	145	14	7	16.9
9	139	18	145	13	6	55.5
10	138	12	145	12	7	23.2
11	138	14	145	14	7	19.4
12	138	14	145	15	7	15.0
13	140	15	145	15	5	17.7
14	138	17	145	14	7	14.9

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
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SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	TIME (GMT)	END OF SAMPLE JULIAN DATE	TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
MAY 24						
2	148	20	154	14	6	14.4
3	145	12	152	16	7	14.9
5	145	13	151	13	6	15.0
6	145	13	152	20	7	14.8
7	145	13	152	17	7	14.9
8	145	14	152	14	7	15.3
9	145	13	152	14	7	43.7
10	145	12	152	12	7	24.9
11	145	14	152	13	7	15.2
12	145	15	152	16	7	15.0
13	145	15	153	14	8	15.0
14	145	14	152	13	7	81.2
MAY 31						
2	154	14	159	13	5	15.2
3	152	16	159	14	7	19.1
4	152	13	159	17	7	159.1
5	153	13	159	15	6	14.9
6	152	20	160	20	8	15.1
7	152	17	162	14	10	15.1
8	152	14	159	14	7	15.0
9	152	14	159	13	7	16.2
10	152	12	159	12	7	24.9
11	152	14	154	13	2	14.6
11	154	13	159	13	5	19.7
12	152	16	159	14	7	21.2
13	153	14	156	17	3	20.2
13	156	17	166	13	10	27.6
14	152	13	159	13	7	24.8
JUN 7						
2	159	13	166	13	7	29.5
3	159	14	166	14	7	95.0
4	159	17	166	14	7	78.2
5	159	15	166	14	7	24.3
6	160	20	166	13	6	19.9
8	159	15	166	12	7	129.8
9	159	14	166	16	7	17.9
10	159	12	166	12	7	63.5
11	159	14	166	14	7	44.4
12	159	14	166	17	7	60.3
14	159	12	166	12	7	88.3
JUN 14						
2	166	14	176	15	10	15.5
3	166	14	173	13	7	17.2
4	166	14	173	15	7	16.8
5	166	14	173	13	7	15.0
6	166	13	173	16	7	14.7
8	166	12	173	12	7	66.8
9	166	16	173	13	7	130.8
10	166	12	173	12	7	65.8
11	166	14	173	13	7	26.7
12	166	17	173	14	7	36.4
13	166	13	174	15	8	21.1
14	166	13	173	20	7	187.7
JUN 21						
2	176	15	180	15	4	15.1
3	175	15	180	16	5	14.4
4	173	15	180	14	7	14.5
5	174	14	180	14	6	14.4
6	173	16	180	13	7	14.6
8	173	13	176	17	3	56.6
8	176	19	180	14	4	18.9
9	173	13	180	13	7	18.1
10	173	12	180	12	7	69.4
11	173	13	180	12	7	30.6
12	173	14	180	13	7	69.3
13	174	15	180	14	6	23.9
14	173	20	180	14	7	75.0

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WEEKLY KR-85 CONCENTRATIONS
JANUARY 1976- DECEMBER 1976

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	TIME (GMT)	END OF SAMPLE JULIAN DATE	TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
JUN 28						
2	180	15	188	14	8	15.5
3	180	16	187	16	7	20.1
4	180	14	188	15	8	14.6
5	180	14	188	14	8	15.9
6	180	13	188	19	8	14.3
7	184	16	188	18	4	18.2
9	180	13	188	14	8	70.5
10	180	12	187	15	7	55.4
11	180	12	188	13	8	18.1
13	180	14	188	15	8	17.6
14	180	14	187	13	7	20.4
JUL 5						
2	188	14	194	14	6	15.1
3	187	16	194	12	7	14.9
4	188	15	194	13	6	14.6
5	188	13	194	14	6	14.6
6	188	19	194	13	6	14.6
7	188	18	194	13	6	36.4
9	188	14	194	13	6	71.1
10	187	15	194	12	7	132.3
11	188	13	194	12	6	71.0
12	187	13	194	13	7	15.0
13	188	15	194	14	6	29.2
14	187	13	194	13	7	57.8
JUL 12						
2	194	14	203	14	9	20.2
3	194	12	201	16	7	18.3
4	194	13	201	15	7	15.5
5	194	14	201	13	7	22.0
6	194	13	201	15	7	15.5
7	194	13	201	13	7	120.5
8	197	15	202	12	5	338.4
9	194	13	201	13	7	26.1
10	194	12	201	12	7	24.1
11	194	12	201	14	7	22.1
12	194	13	202	12	8	15.2
13	194	14	201	15	7	17.0
14	194	13	201	14	7	120.9
JUL 19						
2	203	14	212	15	9	16.3
3	201	17	208	15	7	16.7
4	201	17	208	15	7	16.8
5	201	13	208	14	7	16.6
6	201	15	209	15	8	16.5
7	201	13	208	14	7	20.2
8	202	12	209	19	7	44.1
9	201	13	208	13	7	55.2
10	201	12	208	12	7	176.6
11	201	14	208	13	7	83.8
12	202	12	208	15	6	19.6
13	201	15	208	15	7	56.1
14	201	14	207	12	6	26.0
14	207	12	208	15	1	17.3
JUL 26						
3	211	14	215	16	4	14.6
4	208	15	215	20	7	14.9
5	208	14	215	14	7	15.0
6	209	15	215	14	6	14.9
7	208	14	215	13	7	20.9
8	209	20	215	14	6	80.1
9	208	13	215	13	7	241.9
10	208	12	215	12	7	72.8
11	208	13	215	13	7	19.9
12	208	15	215	13	7	15.6
13	208	15	215	20	7	73.2
14	208	15	215	14	7	15.2

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
JANUARY 1976- DECEMBER 1976

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	TIME (GMT)	END OF SAMPLE JULIAN DATE	TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
AUG 2						
2	218	19	222	24	4	15.7
3	215	16	222	11	7	17.2
4	215	20	222	14	7	69.1
6	215	14	229	18	14	15.2
7	215	13	222	19	7	17.2
9	215	13	222	13	7	20.5
10	215	12	222	13	7	19.4
11	215	13	222	13	7	16.7
12	215	18	222	13	7	19.8
13	215	15	219	20	4	16.8
13	219	20	223	15	4	16.8
14	215	14	222	12	7	35.2
AUG 9						
2	222	24	230	14	8	18.6
3	222	11	229	14	7	15.2
4	222	14	229	14	7	18.2
5	222	15	225	12	3	15.0
5	225	12	229	13	4	14.8
7	222	19	229	12	7	15.6
8	225	21	230	13	5	14.7
9	222	13	229	13	7	17.6
10	222	13	229	12	7	279.3
11	222	13	229	13	7	74.4
12	222	13	229	13	7	17.6
13	223	16	230	15	7	29.5
14	222	12	224	4	2	21.1
14	224	4	229	12	5	44.0
AUG 16						
2	230	14	236	15	6	15.2
3	229	14	236	11	7	17.4
4	229	14	236	14	7	31.7
5	229	13	236	13	7	21.4
6	229	18	236	21	7	35.6
7	229	12	236	19	7	15.0
8	230	13	237	12	7	15.1
9	229	13	236	13	7	15.6
10	229	12	236	12	7	41.9
11	229	13	236	12	7	17.9
12	229	13	236	16	7	15.1
13	230	16	236	14	6	15.7
14	229	13	236	13	7	15.5
AUG 23						
2	236	16	244	23	8	20.2
3	236	11	243	14	7	15.7
4	236	14	244	12	8	27.4
5	236	13	243	14	7	15.9
6	236	21	243	13	7	15.9
7	236	19	243	19	7	16.9
8	237	12	243	13	6	16.2
9	236	13	243	12	7	79.4
10	236	12	243	12	7	422.2
11	236	12	243	13	7	34.2
12	236	16	243	12	7	17.4
13	236	14	243	14	7	18.5
14	237	18	243	18	6	108.1
AUG 30						
3	243	14	250	18	7	19.8
5	243	14	250	19	7	18.3
6	243	13	251	13	8	21.1
7	243	19	251	14	8	18.7
8	243	14	251	12	8	19.7
9	243	12	250	14	7	27.5
10	243	12	250	20	7	48.3
11	243	13	251	13	8	24.9
12	243	17	251	14	8	34.2
14	243	18	244	15	1	78.8
14	244	16	245	13	1	15.9
14	245	13	246	13	1	243.5
14	246	13	247	12	1	34.7
14	247	13	250	13	3	30.6

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SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	TIME (GMT)	END OF SAMPLE JULIAN DATE	TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
SEP 6						
2	252	14	260	15	8	20.6
3	250	18	257	13	7	35.8
4	251	12	257	13	6	22.9
5	250	19	257	13	7	18.9
6	251	13	258	20	7	15.6
7	251	14	257	19	6	16.9
9	250	14	257	14	7	18.9
10	250	20	257	12	7	17.4
11	251	13	257	13	6	17.1
12	251	14	258	16	7	17.2
14	250	13	251	13	1	32.5
14	251	13	257	13	6	35.4
SEP 13						
2	260	15	264	15	4	15.5
3	257	13	264	12	7	15.9
4	257	13	264	13	7	27.6
5	257	13	264	14	7	15.3
6	258	20	264	14	6	15.6
7	257	19	264	13	7	48.5
8	257	14	261	13	4	28.3
8	261	15	264	13	3	137.7
9	257	14	264	14	7	42.6
10	257	12	264	12	7	144.2
11	257	13	264	12	7	20.8
12	258	16	264	13	6	15.3
13	257	14	264	14	7	16.8
14	257	13	264	14	7	15.5
SEP 20						
2	264	15	271	13	7	27.8
3	264	12	271	13	7	22.9
4	264	13	271	14	7	26.3
5	264	14	271	13	7	17.9
6	264	14	271	16	7	16.4
7	264	13	271	14	7	23.9
8	264	13	271	14	7	40.4
9	264	14	265	12	1	42.3
9	265	12	271	15	6	48.9
10	264	12	271	12	7	54.0
11	264	12	265	13	1	115.2
11	265	13	271	13	6	21.6
12	264	13	271	13	7	81.7
13	264	14	271	15	7	17.2
14	264	14	267	20	3	108.5
14	268	13	271	14	3	637.7
SEP 27						
2	271	13	275	21	4	15.3
2	275	22	278	12	3	16.2
3	271	13	278	12	7	15.2
4	271	14	275	21	4	15.3
4	275	22	278	21	3	16.1
5	271	13	275	21	4	14.9
7	275	13	278	13	3	27.2
8	271	14	275	21	4	63.0
9	271	15	275	21	4	32.9
9	275	22	278	12	3	18.1
10	271	12	275	21	4	30.0
11	271	13	275	21	4	30.7
11	275	22	278	12	3	18.8
12	271	13	275	21	4	20.4
12	275	22	278	12	3	16.4
13	271	15	273	16	2	14.5
14	271	14	275	21	4	269.2
14	275	22	278	12	3	25.2

TWICE DAILY SAMPLES TAKEN BETWEEN
OCTOBER 4 AND NOVEMBER 19, 1977 (SEE APPENDIX H)

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
JANUARY 1976- DECEMBER 1976

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	TIME (GMT)	END OF SAMPLE JULIAN DATE	TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
NOV 22						
2	327	13	334	18	7	16.2
3	327	13	334	14	7	15.6
5	327	13	334	13	7	15.7
6	327	13	334	14	7	15.7
7	327	10	334	20	7	22.0
8	327	10	334	14	7	26.4
10	327	13	334	13	7	19.1
11	327	14	334	13	7	15.7
14	327	13	334	14	7	14.9
NOV 29						
2	334	18	341	14	7	75.4
3	334	14	341	13	7	34.7
4	334	20	341	13	7	89.2
5	335	13	341	13	6	21.0
6	334	17	341	13	7	103.7
7	334	20	341	14	7	16.9
8	334	14	341	14	7	17.1
9	334	19	341	13	7	17.0
10	334	14	341	12	7	19.2
11	334	15	341	13	7	16.8
12	334	14	336	13	2	15.4
12	336	13	341	13	5	24.3
13	334	17	341	15	7	17.1
14	334	14	341	13	7	20.6
DEC 6						
2	341	14	344	16	3	28.0
3	341	13	348	14	7	30.9
4	341	13	348	13	7	148.1
5	342	13	348	13	6	20.0
6	341	14	348	16	7	23.5
7	341	14	348	14	7	108.0
8	341	14	349	14	8	137.1
9	341	20	348	20	7	29.2
10	341	12	348	12	7	33.5
11	341	14	348	13	7	28.6
12	341	13	348	14	7	19.3
13	341	17	348	14	7	28.6
14	341	14	348	13	7	104.8
DEC 13						
2	348	24	355	13	7	16.9
3	351	21	355	14	4	36.8
4	348	13	351	15	3	29.0
4	351	19	355	13	4	15.4
5	349	13	355	14	6	16.2
6	350	17	355	13	5	27.7
7	350	20	355	14	5	17.4
8	349	18	355	14	6	20.4
10	348	13	352	15	4	19.9
10	352	16	355	13	3	336.0
11	348	14	355	14	7	45.0
12	348	14	355	16	7	16.2
14	348	17	355	17	7	16.1
DEC 20						
3	355	14	362	14	7	19.4
4	355	13	362	13	7	19.0
5	355	14	362	13	7	18.4
6	355	14	362	13	7	19.3
7	355	14	363	14	8	19.1
8	355	14	3	14	14	16.2
9	355	14	363	13	8	20.5
10	355	13	362	14	7	59.8
11	355	14	362	13	7	33.8
12	355	16	362	20	7	18.4
14	355	17	362	15	7	19.6

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
JANUARY 1976- DECEMBER 1976

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	TIME (GMT)	END OF SAMPLE JULIAN DATE	TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
DEC 27						
2	363	21	3	14	6	15.2
3	362	14	3	14	7	15.5
4	362	13	3	14	7	15.6
5	362	13	3	13	7	15.6
7	363	14	3	14	6	17.3
9	363	13	3	14	6	20.6
10	362	14	3	17	7	54.5
12	362	20	3	13	7	15.6
13	363	20	3	14	6	15.6
14	362	15	3	16	7	15.8

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
JANUARY 1977-SEPTEMBER 1977

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	TIME (GMT)	END OF SAMPLE JULIAN DATE	TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
JAN 3						
2	3	14	10	13	7	225.6
3	3	14	10	16	7	20.8
4	3	13	10	13	7	19.4
5	3	13	6	15	3	15.5
5	6	21	10	13	4	26.2
6	3	14	10	13	7	23.8
7	3	15	10	15	7	30.6
8	3	17	10	13	7	17.4
9	3	13	10	13	7	15.9
10	3	17	10	13	7	19.7
11	3	14	10	13	7	17.0
12	3	14	10	14	7	20.7
13	3	15	10	13	7	16.3
14	3	16	10	16	7	331.9
JAN 10						
2	10	14	18	13	8	16.7
3	10	16	17	14	7	15.7
4	10	13	17	13	7	15.8
5	10	13	14	15	4	16.0
5	14	15	17	13	3	15.7
6	10	14	17	13	7	28.2
7	10	15	17	15	7	28.8
8	10	14	17	14	7	19.0
9	10	14	17	13	7	16.4
10	10	13	17	13	7	16.5
11	10	14	17	13	7	16.3
12	10	14	17	15	7	15.5
13	10	14	12	20	2	15.3
13	12	21	17	14	5	16.0
14	10	16	17	14	7	46.7
JAN 17						
2	18	17	24	13	6	16.0
3	17	14	20	14	3	15.8
3	20	18	24	15	4	16.0
4	17	13	24	13	7	15.7
5	17	13	24	16	7	15.8
6	17	14	21	14	4	26.8
6	21	17	24	13	3	51.8
7	17	15	20	14	3	202.3
7	20	19	24	13	4	58.8
8	17	14	24	14	7	149.0
9	17	14	21	14	4	15.9
9	21	19	24	13	3	15.8
10	17	13	24	13	7	15.4
11	17	14	24	13	7	15.9
12	17	15	24	16	7	16.6
13	17	15	24	14	7	15.7
14	17	14	24	14	7	39.3
JAN 24						
2	24	14	28	20	4	207.2
3	24	15	29	8	5	15.5
4	24	13	29	8	5	15.7
5	24	16	29	8	5	15.5
6	24	14	31	13	7	15.9
7	24	14	31	14	7	46.6
8	24	14	31	15	7	71.8
9	24	13	31	13	7	104.3
10	25	15	31	10	6	50.2
11	24	14	29	8	5	45.1
12	24	16	31	13	7	34.1
13	24	15	29	8	5	146.9
14	24	14	28	22	4	1761.5
14	28	22	31	8	3	33.4
JAN 31						
6	31	15	38	13	7	16.4
7	31	14	38	13	7	56.5
8	31	15	38	14	7	54.4
9	31	15	38	13	7	46.4
10	31	10	38	12	7	24.6
12	31	14	38	14	7	17.5

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS JANUARY 1977-SEPTEMBER 1977

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
FEB 7						
6	38	17	42	22	4	19.9
7	38	14	42	20	4	25.6
8	38	14	42	21	4	72.5
9	38	13	42	20	4	157.0
10	38	12	42	21	4	94.1

TWICE DAILY SAMPLES TAKEN BETWEEN JANUARY 31 AND FEBRUARY 27, 1977 (SEE APPENDIX H)

FEB 28						
2	59	10	63	20	4	32.2
3	59	16	66	14	7	171.8
4	59	13	66	13	7	75.7
5	59	13	66	18	7	41.1
6	59	10	63	14	4	25.6
7	59	10	66	13	7	28.7
8	59	10	66	13	7	43.7
9	60	21	66	13	6	28.8
10	59	10	66	13	7	49.4
11	59	9	66	13	7	38.7
14	59	10	61	18	2	16.1
14	63	17	66	13	3	15.3
MAR 7						
2	66	17	73	13	7	32.9
3	66	14	73	14	7	20.4
4	66	18	73	13	7	17.2
5	66	18	73	17	7	17.4
6	67	18	73	13	6	15.5
7	66	14	73	14	7	20.5
8	66	15	70	21	4	17.9
9	66	14	73	13	7	19.3
10	66	13	73	13	7	18.5
11	66	14	73	14	7	22.4
14	66	14	73	13	7	440.4
MAR 14						
2	73	14	80	13	7	19.4
3	73	14	80	13	7	19.9
4	73	13	80	13	7	16.5
5	73	17	80	16	7	17.5
6	73	14	80	13	7	45.0
7	73	14	80	14	7	30.8
8	74	19	80	13	6	15.2
9	73	14	80	14	7	27.4
10	73	13	80	13	7	17.8
11	73	15	80	13	7	15.6
12	73	19	80	13	7	16.1
13	73	14	80	14	7	16.0
14	73	13	80	14	7	62.3
MAR 21						
2	80	14	87	14	7	18.6
3	80	13	87	13	7	16.9
4	80	13	87	13	7	17.8
5	80	16	87	16	7	17.1
7	80	14	81	13	1	21.5
7	81	14	87	14	6	71.4
8	80	13	87	13	7	57.5
9	80	14	81	13	1	20.3
9	81	13	87	14	6	143.6
10	80	13	87	13	7	61.3
11	80	14	87	13	7	31.0
12	80	13	87	13	7	15.8
13	80	15	87	13	7	17.6
14	80	14	87	14	7	121.2

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS JANUARY 1977-SEPTEMBER 1977

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
MAR 28						
2	87	14	90	16	3	14.9
2	90	16	91	2	1	16.5
3	87	13	91	20	4	63.8
4	87	13	91	20	4	16.8
5	87	16	91	20	4	44.0
6	87	14	91	20	4	21.2
7	87	14	91	18	4	18.7
8	87	14	91	20	4	24.5
9	87	14	91	4	4	22.2
10	87	13	91	21	4	45.0
11	87	14	91	20	4	17.4
12	87	13	91	23	4	81.1
13	87	14	91	20	4	16.1
14	87	14	91	20	4	112.0

TWICE DAILY SAMPLES TAKEN BETWEEN APRIL 1 AND MAY 1, 1977 (SEE APPENDIX H)

MAY 2						
2	122	16	129	13	7	15.3
3	122	12	129	12	7	15.2
4	122	9	129	12	7	15.2
5	122	12	129	12	7	14.7
6	122	12	129	12	7	15.3
7	125	17	129	12	4	15.1
9	122	9	125	19	3	16.0
9	126	19	129	12	3	16.8
10	123	20	129	12	6	27.7
11	124	18	129	13	5	27.3
12	122	12	129	12	7	38.4
13	122	8	129	12	7	16.9
14	122	9	127	23	5	112.3
14	127	23	129	12	2	28.4
MAY 9						
2	129	13	136	12	7	21.2
3	129	12	136	12	7	21.5
4	129	12	136	12	7	15.9
5	129	12	136	12	7	16.1
6	129	13	136	12	7	16.8
7	129	13	136	12	7	18.2
8	129	14	136	15	7	19.3
9	129	13	136	12	7	29.3
10	129	12	136	12	7	34.4
11	129	14	136	13	7	20.7
12	129	13	136	12	7	23.0
13	129	13	136	13	7	18.5
14	129	13	136	14	7	91.1
MAY 16						
2	136	13	143	13	7	38.1
3	136	12	143	12	7	23.9
4	136	12	143	12	7	17.2
5	136	13	143	12	7	23.2
6	136	13	143	12	7	17.6
7	136	13	143	13	7	19.9
8	136	15	143	13	7	82.6
9	136	13	143	12	7	51.1
10	136	12	143	12	7	224.3
12	136	12	143	12	7	26.6
13	136	13	143	12	7	24.8
14	136	14	142	13	6	142.9

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS
JANUARY 1977-SEPTEMBER 1977

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
MAY 23						
2	143	13	150	12	7	111.4
3	143	12	150	12	7	17.3
4	143	12	146	12	3	47.2
6	143	13	150	14	7	15.3
7	143	13	150	13	7	15.3
8	143	14	150	13	7	17.3
9	143	13	150	13	7	16.3
10	143	12	150	12	7	30.3
11	143	14	144	18	1	15.6
11	145	19	150	12	5	18.2
13	143	13	151	12	8	15.8
14	143	18	150	12	7	181.9
MAY 30						
2	150	13	157	12	7	19.1
3	150	13	157	17	7	24.5
4	150	12	157	13	7	23.1
5	152	12	157	12	5	31.3
6	150	14	157	12	7	17.0
7	150	13	157	13	7	15.9
8	150	13	157	13	7	23.1
9	150	13	153	12	3	20.7
9	153	12	157	12	4	55.8
10	150	12	157	12	7	229.7
12	150	12	157	12	7	20.3
13	151	13	157	12	6	43.1
JUN 6						
2	157	13	164	12	7	15.6
3	157	12	164	12	7	19.8
4	157	12	164	12	7	16.0
6	157	12	164	11	7	18.1
7	157	13	164	13	7	26.2
8	157	14	164	14	7	57.3
9	157	13	159	14	2	21.4
9	159	15	164	15	5	19.6
10	157	12	164	11	7	106.1
11	157	13	164	12	7	24.0
12	157	12	164	14	7	17.3
13	157	13	164	13	7	19.1
14	157	12	164	12	7	22.8
JUN 13						
2	164	13	171	12	7	19.9
3	164	12	171	12	7	21.4
4	164	12	171	12	7	16.6
5	164	12	171	12	7	17.4
6	164	12	171	12	7	25.3
7	164	13	171	18	7	49.5
8	164	15	171	14	7	75.9
9	164	15	165	12	1	17.3
9	165	12	171	12	6	29.0
10	164	11	168	12	4	231.4
10	168	19	171	12	3	24.9
11	164	13	171	13	7	26.8
12	164	14	171	14	7	17.7
13	164	13	171	13	7	19.0
14	164	13	166	14	2	554.0
14	166	17	171	15	5	63.4
JUN 20						
2	171	13	178	12	7	14.9
3	171	12	173	12	2	15.1
3	173	18	178	14	5	14.6
4	171	12	178	12	7	15.0
5	171	12	178	12	7	15.5
6	171	19	178	12	7	15.3
7	171	18	178	18	7	16.6
8	171	14	178	13	7	18.4
9	171	13	178	13	7	15.2
11	171	13	178	12	7	15.2
12	174	14	177	13	3	15.2
13	171	14	178	13	7	15.1
14	171	15	178	14	7	16.3

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS JANUARY 1977-SEPTEMBER 1977

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	START OF SAMPLE TIME (GMT)	END OF SAMPLE JULIAN DATE	END OF SAMPLE TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
JUN 27						
2	178	13	182	20	4	14.7
3	178	13	182	17	4	14.9
4	178	12	182	19	4	15.0
5	178	21	182	19	4	15.0
6	178	19	182	19	4	15.0
7	180	18	182	19	2	17.8
8	178	13	182	19	4	160.7
9	178	13	182	19	4	216.2
10	178	12	182	19	4	17.1
11	178	14	182	19	4	15.4
12	178	13	182	20	4	15.0
13	178	14	182	21	4	15.9
14	178	14	182	19	4	15.0

TWICE DAILY SAMPLES TAKEN BETWEEN JULY 1 AND JULY 31, 1977 (SEE APPENDIX H)

AUG 1						
2	213	12	220	12	7	26.1
3	213	9	220	12	7	19.0
4	213	9	220	12	7	18.1
5	213	9	220	12	7	19.3
7	213	9	220	12	7	16.6
8	213	9	220	13	7	17.0
9	213	9	220	12	7	19.3
11	213	9	214	10	1	15.2
11	214	13	220	12	6	33.3
12	213	9	216	14	3	18.2
12	216	16	220	19	4	51.0
13	213	8	220	12	7	23.3
14	213	9	214	19	1	15.0
AUG 8						
2	220	13	227	12	7	14.9
3	220	12	227	12	7	15.0
4	220	12	227	12	7	15.3
5	220	12	227	12	7	15.0
7	220	13	227	12	7	15.0
8	220	12	227	13	7	14.8
9	220	13	227	13	7	14.8
10	220	11	227	12	7	16.9
12	220	20	227	21	7	14.9
13	220	14	227	13	7	15.1
14	220	12	225	1	5	15.4
14	225	1	227	14	2	14.2
AUG 15						
2	227	13	234	18	7	15.4
3	227	12	234	12	7	15.2
5	227	12	234	12	7	14.7
7	227	13	234	13	7	15.3
8	227	12	234	12	7	15.1
9	227	13	234	12	7	14.9
10	227	12	234	12	7	15.4
11	227	13	234	12	7	15.4
13	227	14	234	13	7	15.0
14	227	2	229	14	2	14.9
14	229	18	234	12	5	15.2

APPENDIX G

WEEKLY KR-85 CONCENTRATIONS JANUARY 1977-SEPTEMBER 1977

SAMPLING LOCATION	START OF SAMPLE JULIAN DATE	TIME (GMT)	END OF SAMPLE JULIAN DATE	TIME (GMT)	SAMPLE DURATION (DAYS)	KR-85 (PCI/SCM)
AUG 22						
2	234	18	241	12	7	14.8
3	234	12	241	12	7	14.9
4	234	12	241	12	7	15.0
7	234	13	241	12	7	15.0
9	234	13	241	12	7	15.0
11	234	13	241	12	7	15.1
12	234	15	241	21	7	15.1
13	234	13	241	13	7	14.9
14	236	13	238	17	2	15.1
14	238	19	241	12	3	14.6
AUG 29						
2	241	13	249	12	8	16.9
3	241	12	248	12	7	15.3
4	241	12	248	12	7	15.2
5	241	12	249	12	8	15.0
7	241	13	249	13	8	15.3
8	241	13	249	12	8	15.2
9	241	13	248	12	7	15.0
10	241	12	249	11	8	15.2
11	241	13	248	12	7	14.1
12	241	21	250	12	9	16.5
14	241	13	243	14	2	33.0
SEP 5						
2	249	13	255	12	6	15.0
3	248	12	255	12	7	14.9
4	248	12	255	12	7	17.3
5	250	19	255	12	5	14.2
8	249	12	255	12	6	15.2
9	249	12	255	12	6	14.8
10	249	11	255	12	6	16.7
11	248	13	255	12	7	15.0
12	250	12	258	12	8	15.6
13	250	13	255	13	5	14.8
14	249	14	255	16	6	14.9
SEP 12						
2	255	13	262	12	7	15.3
4	255	12	262	12	7	15.1
5	255	13	262	19	7	14.9
7	255	13	262	12	7	14.8
9	255	15	262	13	7	15.7
10	255	12	262	12	7	24.2
11	255	13	262	12	7	14.9
12	258	13	263	13	5	14.9
14	255	16	262	15	7	14.3

APPENDIX H

TWICE-DAILY KR-85 CONCENTRATIONS

Sampling Period:

1. Fall: October 4, 1976 - November 19, 1976
2. Winter: January 31, 1977 - February 27, 1977
3. Spring: April 1, 1977 - May 1, 1977
4. Summer: July 1, 1977 - July 31, 1977

Explanation of Appendix:

Line 1: Calendar date (Julian date; start of sampling)
A indicates AM, P indicates PM sample.

Col. 1: Sampling location (see Table 1 and Figure 1)

Col. 2: Time (GMT) each sample collection began.

Col. 3: Sample duration (hours)

Col. 4: Observed average ^{85}Kr concentration during sample collection (pCi/SCM)

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
OCTOBER-NOVEMBER 1976

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
OCT 4 278(A)			
02	1300	08.0	16.4
03	1200	09.0	16.3
08	1300	23.0	16.3
09	1300	08.0	17.8
10	1200	09.0	17.4
11	1300	08.0	17.5
12	1300	08.0	15.7
14	1300	08.0	25.2
OCT 4 278(P)			
02	2200	14.0	15.8
04	2200	14.0	16.3
07	2200	14.0	15.0
12	2200	14.0	17.6
14	2200	14.0	18.4
OCT 5 279(A)			
02	1300	08.0	18.9
03	1200	09.0	15.7
04	1300	08.0	15.8
05	1300	08.0	21.9
06	1305	07.9	15.5
08	1307	07.8	16.1
09	1300	08.0	15.7
10	1200	10.0	16.3
11	1330	07.5	15.9
OCT 5 279(P)			
02	2200	14.0	188.8
05	2200	14.0	17.0
06	2200	14.0	17.4
10	2200	14.0	15.5
11	2200	14.0	15.1
12	2200	14.0	376.0
14	2200	14.0	675.9
OCT 6 280(A)			
02	1300	08.0	33.6
03	1200	09.0	172.1
04	1330	07.5	15.0
05	1300	08.0	19.7
06	1300	08.0	14.6
07	1300	08.0	15.8
09	1305	07.9	16.0
10	1200	09.0	16.8
11	1325	07.5	15.9
12	1300	08.0	81.8
13	1312	06.8	14.4
14	1300	08.2	54.7

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
OCT 6 280(P)			
02	2200	14.0	18.4
07	2200	14.0	16.1
08	2200	14.0	16.2
09	2200	14.0	16.1
11	2200	14.5	16.2
12	2200	14.0	44.6
13	2100	15.0	17.8
14	2200	15.0	17.4
OCT 7 281(A)			
02	1300	08.0	17.4
03	1200	24.0	16.9
04	1315	07.8	19.1
05	1300	08.0	16.7
06	1300	08.0	17.7
08	1305	23.0	17.0
09	1300	72.0	15.4
10	1200	09.0	16.8
11	1325	07.5	16.9
12	1300	08.0	19.5
OCT 7 281(P)			
02	2200	15.0	16.0
04	2200	14.0	15.8
05	2200	14.0	16.7
06	2200	14.0	16.5
10	2200	14.0	16.6
12	2200	14.0	770.2
14	2200	14.0	17.1
OCT 8 282(A)			
03	1300	08.0	14.7
04	1300	94.8	26.1
05	1300	08.0	16.5
06	1300	08.0	74.4
07	1300	08.0	14.7
08	1307	70.9	18.0
10	1200	71.0	15.9
11	1325	07.5	19.1
12	1300	08.0	108.9
13	1305	06.9	15.9
14	1300	07.2	15.3
OCT 8 282(P)			
02	2200	62.0	15.6
03	2200	62.0	19.6
05	2200	86.0	23.1
06	2200	62.0	79.8
11	2200	62.5	15.6
12	2200	62.0	16.0
13	2100	63.1	15.8
14	2300	61.0	15.7

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
OCTOBER-NOVEMBER 1976

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
OCT 11 285(A)			
02	1300	08.0	15.7
03	1300	23.0	15.8
07	1300	08.0	18.3
08	1310	23.0	15.8
09	1300	08.0	15.8
10	1200	09.0	16.2
12	1300	08.0	16.1
14	1300	08.0	18.9
OCT 11 285(P)			
02	2100	15.0	15.7
06	2200	14.0	15.8
07	2200	14.0	15.7
09	2200	14.0	15.7
10	2100	14.0	15.7
11	2155	14.5	16.0
12	2200	14.0	15.6
13	2115	14.9	15.5
14	2200	14.3	15.7
OCT 12 286(A)			
02	1300	08.0	16.7
03	1300	08.1	15.8
04	1310	07.8	17.9
05	1300	08.0	16.9
06	1300	08.0	16.2
09	1300	08.0	15.9
10	1200	09.0	19.5
12	1300	08.0	15.7
OCT 12 286(P)			
02	2200	14.0	15.4
03	2200	23.0	15.5
04	2200	14.0	15.7
05	2200	14.0	16.0
09	2200	14.0	15.8
11	2200	14.4	15.3
13	2130	14.5	17.7
14	2210	13.6	15.8
OCT 13 287(A)			
02	1300	08.0	15.2
04	1300	08.0	14.9
05	1300	08.0	16.3
06	1300	08.0	15.7
08	1312	07.7	15.5
09	1300	08.0	15.4
10	1200	09.0	16.0
11	1325	07.5	15.9

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
OCT 13 287(P)			
02	2100	15.0	15.3
03	2200	14.0	15.8
04	2200	14.0	15.5
06	2200	14.0	15.4
07	2200	14.0	15.8
09	2200	14.0	15.9
12	2200	14.0	15.4
13	2122	14.8	15.7
14	2230	13.5	15.1
OCT 14 288(A)			
02	1300	08.0	17.7
03	1300	08.0	16.0
04	1300	08.0	15.8
07	1310	07.8	15.5
08	1205	24.0	15.2
09	1300	08.0	15.8
10	1200	09.0	15.5
11	1325	07.5	16.1
12	1300	08.0	15.8
14	1155	10.5	15.3
OCT 14 288(P)			
02	2200	15.0	16.7
03	2300	13.0	18.0
04	2200	14.0	14.9
05	2200	14.0	15.3
06	2200	14.0	16.9
07	2200	15.0	15.6
09	2200	14.0	15.6
10	2200	13.0	47.6
11	2155	14.5	15.2
12	2200	14.0	15.4
13	2100	15.0	15.3
14	2225	14.0	15.3
OCT 15 289(A)			
02	1300	08.0	15.3
03	1200	07.0	15.8
04	1300	08.0	17.1
05	1300	08.0	20.2
06	1300	08.0	15.5
07	1300	08.0	17.0
08	1345	07.3	49.0
09	1300	07.9	44.4
10	1200	09.0	36.6
12	1300	08.0	15.9
13	1315	07.2	17.6
OCT 15 289(P)			
05	2200	62.0	134.2
08	2200	62.0	33.6
09	2200	14.0	191.4
10	2200	61.0	92.5
11	2155	62.5	27.3
12	2200	63.0	15.8
14	2200	61.9	17.0

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
OCTOBER-NOVEMBER 1976

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
OCT 18 292(A)			
02	1300	08.0	15.8
04	1300	08.0	21.0
05	1300	08.0	29.3
08	1300	08.0	17.5
09	1300	08.0	22.9
11	1325	07.5	19.9
12	1300	08.0	38.7
14	1200	09.0	15.8
OCT 18 292(P)			
02	2200	14.0	16.0
04	2200	14.0	430.3
07	2200	14.0	15.5
08	2200	14.1	15.7
09	2200	14.0	29.2
11	2155	14.5	16.2
14	2100	15.0	15.9
OCT 19 293(A)			
02	1300	08.0	15.9
04	1300	08.0	35.4
05	1300	08.0	15.3
06	1300	08.0	16.9
07	1300	08.0	16.0
08	1300	08.0	16.1
11	1325	07.6	15.6
13	1330	06.5	16.2
OCT 19 293(P)			
03	1800	21.2	151.7
04	2200	14.0	97.3
05	2200	14.0	18.3
06	2200	14.0	15.8
10	2200	13.0	15.9
11	2155	14.5	15.5
13	2100	15.0	15.5
14	2100	09.0	15.4
OCT 20 294(A)			
02	1530	05.5	22.5
03	1510	20.8	21.4
04	1300	08.0	30.5
05	1300	08.0	69.3
06	1300	08.0	28.3
07	1300	08.0	18.5
08	1300	08.0	15.7
09	1300	08.0	17.4
10	1200	09.0	17.7
11	1325	07.5	17.2
12	1400	07.0	18.5
13	1318	06.7	13.9

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
OCT 20 294(P)			
02	2200	14.0	17.8
04	2200	14.0	16.0
05	2200	14.0	16.4
06	2200	14.0	17.5
09	2200	14.0	16.5
10	2200	13.0	20.8
11	2155	14.5	16.4
12	2200	14.0	16.6
13	2100	15.2	17.9
14	2200	14.0	15.1
OCT 21 295(A)			
02	1300	08.0	22.5
03	1320	07.7	16.3
04	1300	08.0	16.1
05	0900	10.0	15.4
06	1300	08.0	18.9
10	1200	09.0	15.7
11	1325	07.5	15.7
12	1300	08.0	16.1
14	1300	08.0	15.8
OCT 21 295(P)			
04	2200	14.0	15.7
06	2200	14.0	16.3
08	2200	14.0	28.3
11	2155	16.6	15.7
13	2115	09.0	15.8
14	2050	15.2	15.9
OCT 22 296(A)			
02	1300	08.0	16.5
03	1545	05.4	17.1
06	1300	08.0	57.0
07	1300	08.0	16.5
08	1300	08.0	16.0
11	1430	71.3	17.7
14	1300	09.0	15.0
OCT 22 296(P)			
02	2200	62.0	20.0
03	2200	62.0	21.9
04	2200	62.0	19.1
05	2100	10.0	20.1
06	2200	62.0	19.5
07	2200	62.0	17.6
08	2200	62.0	28.0
10	2200	61.0	36.4
14	2300	61.0	138.6

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
OCTOBER-NOVEMBER 1976

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
OCT 25 Z99(A)			
02	1300	08.0	19.1
04	1300	08.0	15.9
05	0900	10.0	16.9
07	1300	08.0	15.7
08	1420	06.7	16.3
09	1300	08.0	16.3
10	1200	09.0	16.8
11	1350	07.2	24.1
12	1300	08.0	57.8
14	1300	07.0	29.9
OCT 25 Z99(P)			
03	2200	14.0	14.9
04	2200	14.0	15.1
05	2100	10.0	15.0
06	2200	14.0	15.1
08	2200	14.5	15.1
09	2200	14.0	15.5
10	2200	13.0	15.2
12	2200	14.0	17.3
OCT 26 300(A)			
02	1300	08.0	15.8
03	1300	08.0	34.6
04	1300	08.0	17.0
06	1300	08.0	15.8
08	1337	07.4	15.8
10	1200	09.0	15.8
11	1335	07.3	23.6
12	1300	08.0	15.8
14	1300	08.0	15.7
OCT 26 300(P)			
03	2200	14.0	80.7
04	2200	14.0	87.8
06	2200	14.0	15.6
08	2200	14.0	15.8
09	2200	14.0	15.6
10	2200	13.0	15.5
12	2200	14.0	15.7
OCT 27 301(A)			
03	1225	30.6	16.2
05	1300	06.0	17.8
06	1300	06.0	16.2
07	1300	06.0	16.8
08	1300	06.0	16.9
10	1200	07.0	16.0
11	1245	06.5	15.6
12	1300	06.0	16.2
14	1255	06.1	17.1
OCT 27 301(P)			
02	2100	10.0	15.7
05	2100	10.0	15.5
06	2100	10.0	15.7
07	2100	10.0	15.8
08	2100	10.0	15.7
09	2100	10.0	15.9
10	2100	10.0	15.8
11	2100	10.0	15.2
12	2100	15.7	15.9
14	2100	10.0	15.6
OCT 28 302(A)			
02	0900	11.0	16.4
04	0900	10.0	16.4
05	0900	10.0	16.5
06	0900	10.0	15.8
08	0900	10.0	16.1
09	0900	10.0	16.5
10	0900	10.0	16.2
11	0900	10.0	15.6
12	1345	06.3	16.3
13	0830	10.5	16.3
14	0900	10.0	15.9
OCT 28 302(P)			
02	2200	09.0	14.8
03	2100	10.0	16.4
04	2100	10.0	15.9
05	2100	10.0	15.6
07	2100	10.0	16.1
09	2100	10.0	15.7
10	2100	10.0	15.7
14	2100	10.0	14.0
OCT 29 303(A)			
02	0900	10.0	194.7
03	0900	10.0	16.0
04	0900	10.0	16.2
05	0900	10.0	15.9
06	0900	10.0	15.6
07	0900	10.0	15.6
09	0900	10.0	15.8
10	0900	10.0	15.7
14	0900	10.0	347.0
OCT 29 303(P)			
02	2100	10.0	157.6
03	2100	10.0	18.4
04	2100	10.0	15.7
05	2100	10.0	35.0
06	2100	10.0	15.8
10	2100	10.0	15.8
12	2100	10.0	15.6
14	2100	10.0	242.5

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
OCTOBER-NOVEMBER 1976

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
NOV 1 306(A)			
02	1000	10.0	25.9
04	1000	10.0	21.5
05	1000	10.0	563.3
06	1000	10.0	17.0
07	1000	10.0	15.7
08	1000	10.0	15.2
09	1000	10.0	15.5
10	1000	10.0	15.9
NOV 1 306(P)			
02	2200	10.0	16.3
03	2200	10.0	69.0
05	2200	10.0	18.2
06	2200	10.0	15.8
07	2200	10.0	16.6
08	2200	15.0	17.5
09	2200	10.0	16.0
10	2200	10.0	15.8
12	2200	10.0	16.7
13	2200	10.0	16.1
NOV 2 307(A)			
02	1000	29.5	16.2
03	1000	10.0	20.3
04	1000	10.0	49.2
13	1000	10.0	15.6
14	1515	04.8	16.4
NOV 2 307(P)			
03	2200	10.0	19.6
14	2200	10.0	16.0
NOV 3 308(A)			
02	1630	03.5	16.2
03	1000	10.0	15.5
04	1000	10.0	15.9
05	1000	10.0	16.2
06	1000	10.0	16.0
07	1000	10.0	16.0
09	1000	10.0	16.0
10	1000	10.0	15.7
12	1000	10.0	16.5
14	1240	06.3	16.5
NOV 3 308(P)			
03	2200	10.0	15.8
04	2200	10.0	15.8
05	2200	10.0	15.7
06	2200	10.0	15.9
10	2200	10.0	15.8
14	2200	10.0	16.1
NOV 4 309(A)			
02	1000	10.0	16.1
03	1000	10.0	16.2
04	1000	10.0	16.1
06	1000	10.0	16.5
07	1000	06.0	30.5
09	1000	10.0	103.0
10	1000	10.0	16.6
12	1730	02.5	16.5
13	1000	10.0	15.9
14	1000	09.0	16.0
NOV 4 309(P)			
02	2200	10.0	16.1
03	2200	10.0	16.0
04	2200	10.0	16.3
05	2200	10.0	16.2
06	2200	10.0	15.8
07	2200	10.0	20.8
08	2200	10.0	17.5
09	2200	10.0	23.1
10	2200	10.0	15.5
13	2200	16.3	15.9
14	2200	10.0	16.2
NOV 5 310(A)			
02	1000	10.0	16.0
03	1000	10.0	15.8
04	1000	10.0	16.3
05	1000	10.0	16.7
06	1000	10.0	15.9
08	1000	10.0	17.7
09	1000	10.0	16.9
10	1000	10.0	16.2
12	1400	06.0	15.7
13	1420	06.7	16.7
14	1000	10.0	16.6
NOV 5 310(P)			
02	2200	10.0	15.9
03	2200	10.0	16.0
04	2200	10.0	15.9
05	2200	10.0	16.4
06	2200	10.0	16.3
07	2200	10.0	15.6
09	2200	10.0	16.4
10	2200	10.0	16.5
11	2200	10.0	28.2
13	2200	10.0	16.1

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
OCTOBER-NOVEMBER 1976

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
NOV 6 311(A)			
14	1000	10.0	144.6
NOV 8 313(A)			
02	1000	10.0	15.8
03	1000	10.0	16.0
06	1000	10.0	19.1
07	1000	10.0	15.9
09	1000	10.0	15.9
11	1425	05.6	19.4
14	1000	10.0	22.4
NOV 8 313(P)			
05	2200	10.0	15.9
06	2200	10.0	15.9
07	2200	10.0	16.2
08	2200	10.0	56.9
09	2200	10.0	15.9
10	2200	10.0	16.0
11	2200	10.0	16.1
13	2200	10.0	15.6
14	2200	10.0	15.9
NOV 9 314(A)			
02	1000	10.0	15.9
03	1000	10.0	15.9
05	1000	10.0	17.0
08	1000	10.0	386.0
09	1000	10.0	57.2
10	1000	10.0	15.8
11	1000	10.0	15.6
13	1000	10.0	16.2
14	1000	10.0	16.3
NOV 9 314(P)			
03	2200	10.0	16.3
04	2200	10.0	15.8
05	2200	10.0	16.0
07	2200	10.0	16.4
09	2200	10.0	19.4
10	2200	10.0	16.9
11	2200	10.0	15.8
13	2200	10.0	27.3
14	2200	10.0	15.8
NOV 10 315(A)			
02	1000	10.0	15.7
03	1000	10.0	17.5
05	1000	10.0	17.6
06	1000	10.0	16.5
07	1000	10.0	15.9
08	1000	10.0	19.4
09	1000	10.0	16.0
10	1000	10.0	15.7
11	1000	10.0	16.4
14	1000	10.0	15.5
NOV 10 315(P)			
02	2200	10.0	15.6
03	2200	10.0	15.5
04	2200	10.0	15.7
05	2200	10.0	15.7
06	2200	10.0	15.8
07	2200	10.0	15.1
08	2200	10.0	16.0
09	2200	10.0	20.4
10	2200	10.0	15.5
11	2200	10.0	20.0
13	2200	10.0	14.9
14	2200	10.0	15.6
NOV 11 316(A)			
02	1000	10.0	15.2
04	1000	10.0	15.5
06	1300	07.0	16.1
13	1000	10.0	15.6
NOV 11 316(P)			
02	2200	10.0	15.2
03	2200	10.0	15.2
04	2200	10.0	15.2
05	2200	10.0	16.0
06	2200	10.0	15.7
13	2200	10.0	24.9
14	2200	10.0	17.3
NOV 12 317(A)			
02	1000	10.0	16.4
03	1000	10.0	15.4
07	1000	10.0	18.1
08	1000	10.0	16.1
09	1000	10.0	34.9
10	1000	10.0	16.8
13	1000	10.0	16.9
14	1000	10.0	15.6

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
OCTOBER-NOVEMBER 1976

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
NOV 12 317(P)			
02	2200	10.0	15.9
03	2200	10.0	16.1
04	2200	10.0	25.2
05	2200	10.0	16.0
07	2200	10.0	16.4
10	2200	10.0	181.5
11	2200	63.8	16.0
14	2200	10.0	15.8
NOV 13 318(A)			
14	1000	10.0	16.5
NOV 13 318(P)			
14	2200	12.0	16.0
NOV 14 319(A)			
14	1000	10.0	15.8
NOV 15 320(A)			
02	1000	11.0	15.6
03	1000	10.0	66.2
04	1300	07.0	17.0
05	1000	10.0	91.1
06	1000	10.0	15.9
07	1000	10.0	15.8
12	1430	05.5	15.8
14	1000	10.0	16.0
NOV 15 320(P)			
03	2200	15.0	244.2
04	2200	15.0	16.2
05	2200	10.0	72.9
06	2200	10.0	15.5
09	2200	10.0	15.7
10	2200	10.0	16.0
11	2200	15.3	28.7
12	2110	15.8	15.6
14	2200	12.5	15.5
NOV 16 321(A)			
02	1000	10.0	15.4
03	1300	09.0	22.3
05	1000	10.0	16.1
06	1000	10.0	15.7
07	1000	10.0	15.8
08	1000	10.0	16.1
10	1000	10.0	15.5
11	1420	05.7	16.1
12	1300	08.0	15.7
13	1000	10.0	16.6
14	1030	09.5	15.4
NOV 16 321(P)			
02	2200	10.0	16.2
03	2200	15.0	15.9
04	2200	10.0	175.7
06	2200	10.0	15.8
07	2200	10.0	17.4
08	2200	10.0	22.1
09	2200	10.0	15.9
10	2200	10.0	15.8
11	2200	15.3	15.7
12	2100	16.0	16.2
13	2200	10.0	18.1
14	2200	10.0	15.3
NOV 17 322(A)			
02	1000	08.5	15.7
03	1300	09.0	15.7
04	1300	07.0	17.5
05	1000	08.5	18.8
07	1000	10.0	16.0
08	1000	10.0	15.7
10	1000	10.0	15.8
11	1415	05.8	15.8
12	1300	08.0	15.4
13	1000	10.0	15.9
14	1000	10.0	15.9
NOV 17 322(P)			
02	2200	10.0	18.7
03	2200	10.0	18.9
05	2030	11.5	16.6
06	2200	10.0	15.9
08	2200	10.0	17.4
10	2200	10.0	16.3
11	2200	15.5	16.4
12	2200	10.0	15.6
14	2200	10.0	19.9

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
OCTOBER-NOVEMBER 1976

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
NOV 18 323(A)			
02	1000	10.0	17.1
03	1000	10.0	23.9
04	1000	10.0	17.9
06	1000	10.0	26.2
07	1000	10.0	20.3
08	1000	10.0	19.6
10	1000	10.0	17.2
11	1430	05.5	15.9
12	1000	10.0	16.1
13	1000	10.0	16.1
14	1000	10.0	17.3
NOV 18 323(P)			
02	2200	10.0	15.7
03	2200	10.0	15.8
04	2200	10.0	15.8
05	2200	10.0	16.0
06	2200	10.0	16.6
07	2200	10.0	59.0
08	2200	10.0	80.0
09	2200	10.0	39.9
10	2200	10.0	64.0
11	2200	10.0	21.9
12	2200	10.0	15.6
14	2200	10.0	15.8

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
NOV 19 324(A)			
02	1000	10.0	15.6
03	1000	10.0	15.5
04	1000	10.0	16.1
05	1000	10.0	18.8
06	1000	10.0	15.0
08	1000	10.0	254.9
10	1000	10.0	16.9
11	1000	10.0	15.6
12	1000	10.0	15.9
13	1000	10.0	17.3
14	1000	10.0	15.8
NOV 19 324(P)			
02	2200	10.0	15.8
03	2200	10.0	15.3
04	2200	10.0	15.1
05	2200	10.0	15.1
09	2200	10.0	26.8
11	2200	10.0	15.0
12	2200	10.0	15.2
13	2200	10.0	15.2
14	2200	11.0	15.6

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
JANUARY-FEBRUARY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
JAN 31	31(A)		
03	1000	10.0	15.5
05	1000	10.0	15.5
11	1000	10.0	15.6
13	1000	10.0	16.3
14	1000	10.0	15.8
JAN 31	31(P)		
03	2200	10.0	15.7
04	2200	10.0	15.6
05	2200	10.0	15.4
11	2200	10.0	15.5
13	2200	10.0	15.8
14	2200	10.0	15.9
FEB 1	32(A)		
02	1000	10.0	15.6
03	1000	12.0	15.8
04	1000	10.0	18.9
05	1000	10.0	15.7
11	1000	10.0	15.6
13	0945	10.0	15.5
FEB 1	32(P)		
02	2200	10.0	15.7
03	2400	10.0	15.6
04	2200	10.0	15.6
05	2200	10.0	15.7
11	2200	10.0	15.4
14	2200	10.0	15.9
FEB 2	33(A)		
02	1000	10.0	17.7
03	1200	09.9	15.6
04	1000	10.0	15.7
05	1000	10.0	15.6
11	1000	10.0	15.8
14	1000	10.0	117.7
FEB 2	33(P)		
02	2200	10.0	28.8
04	2200	10.0	15.6
05	2200	10.0	16.0
11	2200	10.0	15.9
13	2145	10.0	21.9
14	2200	10.0	17.4
FEB 3	34(A)		
02	1000	10.0	17.2
03	1000	10.0	16.0
04	1000	10.0	15.6
05	1000	10.0	15.6
11	1000	10.0	15.6
13	1000	10.0	15.8
14	1000	10.0	433.6
FEB 3	34(P)		
02	2200	10.0	18.3
03	2200	10.0	16.1
04	2200	10.0	15.5
05	2200	10.0	15.6
13	2145	10.0	98.4
14	2200	10.0	87.2
FEB 4	35(A)		
02	1000	10.0	15.5
03	1000	10.0	15.8
04	1000	10.0	15.5
05	1000	10.0	15.6
11	1000	10.0	16.4
13	0945	10.0	23.0
14	1000	10.0	18.6
FEB 4	35(P)		
02	2200	10.0	16.4
03	2200	10.0	15.3
04	2200	10.0	15.2
05	2200	10.0	15.0
11	2200	10.0	15.3
13	2145	10.0	15.3
14	2200	10.0	15.9

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
JANUARY-FEBRUARY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
FEB 5 36(A)			
14	1000	10.0	15.3
FEB 5 36(P)			
14	2200	10.0	15.3
FEB 6 37(A)			
14	1000	10.0	15.7
FEB 7 38(A)			
02	1000	10.0	29.9
03	1000	10.0	34.6
04	1000	10.0	219.0
05	1000	10.0	110.9
11	1000	10.0	23.0
13	0945	10.0	15.8
14	1000	10.0	16.2
FEB 7 38(P)			
03	2200	10.0	46.1
04	2200	10.0	149.5
05	2200	10.0	17.4
11	2200	10.0	16.1
13	2145	10.0	15.8
14	2200	10.0	59.6
FEB 8 39(A)			
02	1000	10.0	86.8
03	1000	10.0	21.9
04	1000	10.0	32.1
05	1000	10.0	17.6
11	1000	10.0	15.7
13	0945	10.0	15.8
14	1000	10.0	27.3
FEB 8 39(P)			
02	2200	10.0	20.9
03	2200	10.0	16.1
04	2200	10.0	17.8
05	2200	10.0	16.6
11	2200	10.0	15.5
13	2145	10.0	15.7
14	2200	10.0	17.1
FEB 9 40(A)			
03	1000	10.0	20.5
04	1000	10.0	20.2
05	1000	10.0	20.8
11	1000	10.0	18.6
13	0945	10.0	17.8
14	1000	10.0	31.9
FEB 9 40(P)			
02	2200	10.0	38.8
03	2200	10.0	26.7
04	2200	10.0	27.7
05	2200	10.0	26.0
11	2200	10.0	25.9
13	2145	10.0	25.9
14	2200	10.0	35.1
FEB 10 41(A)			
02	1000	10.0	25.7
03	1000	10.0	26.9
04	1000	10.0	27.6
05	1000	10.0	27.2
11	1000	10.0	29.8
13	0945	10.0	28.3
14	1000	10.0	32.4

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
JANUARY-FEBRUARY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
FEB 10 41(P)			
02	2200	10.0	15.5
03	2200	10.0	19.2
04	2200	10.0	17.5
05	2200	10.0	20.5
11	2200	10.0	18.4
13	2145	10.0	18.0
14	2200	10.0	17.1
FEB 11 42(A)			
02	1000	10.0	15.5
03	1000	10.0	18.7
04	1000	10.0	19.6
05	1000	10.0	20.2
11	1000	10.0	253.6
13	0945	10.0	125.7
14	1000	10.0	16.7
FEB 11 42(P)			
02	2200	10.0	16.2
03	2200	10.0	20.6
04	2200	10.0	15.4
05	2200	10.0	21.9
06	2200	10.0	22.9
07	2200	10.0	22.3
08	2200	10.0	33.4
09	2200	10.0	116.7
10	2200	10.0	54.9
11	2200	10.0	17.2
12	2200	10.0	21.7
13	2145	10.0	16.8
14	2200	10.0	16.7
FEB 12 43(A)			
14	1000	10.0	18.2
FEB 12 43(P)			
14	2200	10.0	16.3
FEB 13 44(A)			
14	1000	10.0	15.7
FEB 13 44(P)			
14	2200	10.0	15.3
FEB 14 45(A)			
02	1000	10.0	15.6
03	1000	10.0	15.8
04	1000	10.0	15.4
06	1000	10.8	15.4
07	1000	10.0	16.7
08	1000	10.0	19.2
09	1000	10.0	15.9
10	1000	10.0	17.5
11	1000	10.0	15.5
13	0945	12.0	15.1
FEB 14 45(P)			
02	2200	10.0	15.7
03	2200	10.0	15.5
04	2200	10.0	15.4
05	2200	10.0	15.3
06	2200	10.0	15.3
08	2200	10.0	16.1
10	2200	10.0	15.6
11	2200	10.0	15.6
12	2200	15.0	15.9
13	2145	10.0	16.2
14	2200	10.0	15.2
FEB 15 46(A)			
04	1000	10.0	15.3
06	1000	10.0	15.3
07	1000	10.0	15.5
09	1000	10.0	18.1
10	1000	10.0	15.3
12	1400	06.7	15.4
13	0945	12.0	15.6

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
JANUARY-FEBRUARY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
FEB 15 46(P)			
03	2200	10.0	16.2
04	2200	10.0	15.3
05	2200	10.0	15.2
06	2200	10.0	15.3
07	2200	10.0	15.2
09	2200	10.0	15.6
10	2200	10.0	15.3
11	2200	10.0	15.2
12	2200	10.0	15.3
14	2200	10.0	15.3
FEB 16 47(A)			
02	1000	10.0	15.3
03	1000	10.0	15.5
04	1000	10.0	15.9
05	1000	10.0	15.5
06	1000	10.0	15.5
07	1000	10.0	15.3
09	1000	10.0	15.5
10	1000	10.0	37.8
11	1000	10.0	16.4
13	0945	10.0	15.4
FEB 16 47(P)			
02	2200	10.0	15.8
03	2200	10.0	15.5
04	2200	10.0	15.7
05	2200	10.0	15.6
06	2200	10.0	51.5
07	2200	10.0	15.4
09	2200	10.0	15.2
11	2200	10.0	16.1
12	2200	10.0	15.7
13	2145	10.0	15.3
14	2200	10.0	15.6
FEB 17 48(A)			
02	1000	11.0	15.9
03	1000	10.0	15.5
04	1000	10.0	15.6
05	1000	10.0	72.0
06	1000	10.0	54.0
07	1000	10.0	15.9
08	1000	10.0	25.1
09	1000	10.0	16.0
10	1000	10.0	15.7
12	1000	10.0	15.7
13	0945	10.0	15.8
14	1000	10.0	15.9
FEB 17 48(P)			
02	2200	10.0	17.3
03	2200	10.0	18.2
04	2200	10.0	15.4
06	2200	10.0	39.8
07	2200	10.0	259.9
09	2200	10.0	31.9
10	2200	10.0	16.8
11	2200	10.0	16.6
12	2200	10.0	15.5
13	2200	10.0	15.8
14	2200	10.0	15.5

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
FEB 18 49(A)			
02	1000	10.0	15.6
03	1000	10.0	15.3
04	1000	10.0	15.3
05	1000	10.0	15.6
06	1000	10.0	23.3
07	1000	10.0	49.2
08	1000	10.0	25.5
09	1000	10.0	142.5
10	1000	10.0	165.1
11	1000	10.0	258.3
12	1000	10.0	15.7
14	1000	10.0	15.5
FEB 18 49(P)			
02	2200	10.0	18.4
06	2200	10.0	15.2
07	2200	10.0	17.3
08	2200	10.0	16.3
09	2200	10.0	49.9
10	2200	10.0	123.9
14	2200	10.0	15.1
FEB 19 50(A)			
14	1000	10.0	16.0
FEB 19 50(P)			
14	2200	10.0	16.1
FEB 20 51(P)			
14	2200	10.0	15.4

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
JANUARY-FEBRUARY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
FEB	21	52(A)	
02	1000	10.0	16.5
04	1000	10.0	15.7
05	1000	10.0	15.3
13	1000	10.0	15.3
14	1000	10.0	16.1
FEB	21	52(P)	
04	2200	10.0	15.3
05	2200	10.0	15.3
13	2200	10.0	15.5
14	2200	10.0	15.3
FEB	22	53(A)	
02	1000	10.0	18.2
03	1000	10.0	15.3
04	1000	10.0	15.3
05	1000	10.0	15.4
06	1000	10.0	15.3
07	1000	10.0	48.2
08	1000	10.0	40.8
09	1000	08.0	22.7
10	1000	10.0	308.1
11	1000	10.0	677.2
12	1000	10.0	15.4
13	0945	10.0	62.9
14	1000	10.0	15.8
FEB	22	53(P)	
02	2200	10.0	15.8
03	2200	10.0	15.3
05	2200	10.0	15.3
06	2200	10.0	15.3
07	2200	10.0	15.6
08	2200	10.0	15.5
09	2000	10.0	15.3
10	2200	10.0	23.9
11	2200	10.0	19.5
12	2200	10.0	15.3
13	2145	10.0	16.9
14	2200	10.0	15.5
FEB	23	54(A)	
02	1000	10.0	15.3
04	1000	10.0	15.3
05	1000	10.0	15.4
07	1000	10.0	15.2
08	1000	10.0	16.3
10	1000	10.0	15.8
11	1000	10.0	15.3
12	1000	10.0	15.2
13	0945	10.0	15.6
14	1000	10.0	15.4
FEB	23	54(P)	
02	2200	10.0	15.3
03	2200	10.0	15.6
04	2200	15.0	15.1
06	2200	10.0	15.0
10	2200	10.0	15.2
11	2200	10.0	15.4
12	2200	10.0	15.4
FEB	24	55(A)	
02	1000	10.0	15.1
03	1000	10.0	15.1
04	1400	06.0	14.9
07	1000	10.0	15.2
08	1000	10.0	15.0
10	1000	10.0	15.2
11	1000	10.0	15.1
13	0945	10.0	15.2
14	1000	10.0	15.1
FEB	24	55(P)	
02	2200	10.0	15.5
03	2200	10.0	15.5
04	2200	10.0	15.1
05	2200	10.0	15.1
07	2200	10.0	15.0
09	2200	10.0	15.5
10	2200	10.0	15.6
11	2200	10.0	15.7
12	2200	10.0	14.8
13	2145	10.0	15.1
14	2200	10.0	15.4
FEB	25	56(A)	
03	1000	10.0	15.2
04	1000	10.0	15.1
05	1000	10.0	15.1
07	1000	10.0	15.5
09	1000	10.0	15.8
10	1000	10.0	15.1
11	1000	10.0	15.6
13	0945	10.0	15.2
14	1000	10.0	15.3
FEB	25	56(P)	
02	2200	10.0	15.2
03	2200	10.0	15.0
04	2200	10.0	15.3
05	2200	10.0	15.3
06	2200	10.0	15.1
07	2200	10.0	15.5
08	2200	10.0	15.4
09	2200	10.0	19.6
11	2200	10.0	93.0
12	2200	10.0	16.6
13	2145	10.0	48.3

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
JANUARY-FEBRUARY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)	SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
14 FEB	26 1000	57(A) 10.0	15.3	14 FEB	27 1000	58(A) 10.0	14.7
14 FEB	26 1000	57(P) 10.0	15.3	14 FEB	27 2200	58(P) 10.0	15.1

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
APRIL-MAY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
APR 1 91(P)			
03	2000	12.0	70.3
04	2200	10.0	32.8
05	2200	09.0	42.7
06	2200	10.0	15.8
10	2200	10.0	20.5
11	2200	10.0	17.0
13	2145	10.0	15.8
14	2200	10.0	48.5
APR 2 92(A)			
14	1000	10.0	16.9
APR 2 92(P)			
14	2200	10.0	15.1
APR 3 93(P)			
14	2200	10.0	14.8
APR 4 94(A)			
03	1000	10.0	16.9
05	1000	10.0	15.6
07	1000	10.0	15.1
08	1000	10.0	16.7
09	1000	10.0	19.1
10	1000	10.0	16.8
11	1000	10.0	15.5
12	1300	07.0	37.0
13	0945	10.0	15.1
14	1000	10.0	14.9
APR 4 94(P)			
02	2200	22.0	15.1
03	2200	10.0	14.9
07	2200	10.0	14.9
08	2200	10.0	15.0
09	2200	10.0	15.9
10	2200	10.0	14.9
11	2200	10.0	14.7
12	2200	10.0	17.3
13	2115	10.0	14.8
14	2200	10.0	14.5
APR 5 95(A)			
03	1000	10.0	15.4
04	1000	10.0	15.2
05	1000	10.0	15.2
06	1000	10.0	15.1
07	1000	10.0	14.9
08	1000	10.0	15.0
09	1000	10.0	15.1
10	1000	10.0	15.2
11	1000	10.0	15.3
13	0915	10.0	15.0
14	1000	10.0	15.1
APR 5 95(P)			
03	2200	10.0	15.9
04	2200	10.0	16.0
05	2200	10.0	16.8
08	2200	10.0	18.2
11	2200	10.0	16.0
12	2200	34.0	15.8
13	2115	10.0	15.8
14	2200	10.0	16.1
APR 6 96(A)			
02	1000	10.0	15.8
04	1000	10.0	15.9
05	1000	10.0	15.9
06	1000	10.0	15.9
07	1000	10.0	200.1
08	1000	10.0	631.5
10	1000	10.0	16.1
11	1000	10.0	15.7
13	0915	10.0	15.7
14	1400	06.0	15.7
APR 6 96(P)			
03	2200	10.0	15.5
04	2200	10.0	15.5
06	2200	10.0	15.6
07	2200	10.0	143.7
08	2200	10.0	172.9
10	2200	10.0	15.7
13	2115	10.0	15.6
14	2200	10.0	15.6

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
APRIL-MAY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
APR 7 97(A)			
02	1000	10.0	15.3
03	1000	10.0	15.5
04	1000	10.0	15.4
06	1000	10.0	18.2
07	1000	10.0	65.6
08	1000	10.0	33.8
09	1000	10.0	16.6
10	1000	10.0	55.7
11	1000	10.0	24.3
12	1000	10.0	15.6
13	0915	10.0	15.8
14	1000	10.0	15.5
APR 7 97(P)			
03	2200	10.0	15.2
04	2200	10.0	15.4
05	2200	10.0	15.8
10	2200	10.0	162.6
12	2200	10.0	15.3
13	2115	10.0	35.8
14	2200	10.0	15.2
APR 8 98(A)			
02	1000	10.0	15.2
03	1000	10.0	15.2
04	1000	10.0	14.9
05	1000	10.0	15.8
06	1000	10.0	14.9
07	1000	10.0	34.2
09	1000	10.0	68.7
10	1000	10.0	52.6
12	1000	10.0	15.2
14	1000	10.0	15.2
APR 8 98(P)			
03	2200	10.0	14.6
04	2200	10.0	15.4
08	2200	10.0	68.1
09	2200	10.0	15.3
10	2200	10.0	15.4
12	2200	10.0	15.5
APR 9 99(A)			
14	1000	10.0	15.6
APR 9 99(P)			
14	2200	10.0	15.4
APR 10 100(A)			
14	1000	10.0	15.4
APR 10 100(P)			
14	2200	10.0	15.3
APR 11 101(A)			
02	1000	10.0	15.3
03	1000	10.0	15.4
04	1000	10.0	16.2
05	1000	10.0	20.5
06	1000	10.0	16.0
07	1000	10.0	15.4
08	1000	10.0	25.6
09	1000	10.0	295.9
10	1000	10.0	198.8
11	1000	10.0	46.6
12	1000	10.0	15.1
13	0915	10.0	146.5
14	1000	10.0	15.3
APR 11 101(P)			
02	2200	10.0	15.8
05	2200	10.0	15.4
06	2200	10.0	15.5
08	2200	10.0	16.7
09	2200	10.0	55.3
10	2200	10.0	57.4
11	2200	10.0	93.6
12	2200	10.0	15.3
13	2115	10.0	60.3
14	2200	10.0	15.3

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
APRIL-MAY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
APR 12 102(A)			
03	1000	10.0	16.6
04	1000	10.0	16.1
05	1000	10.0	15.9
06	1000	10.0	15.4
07	1000	10.0	17.4
09	1000	10.0	16.9
11	1000	10.0	18.8
12	1000	10.0	15.3
13	0915	10.0	31.9
APR 12 102(P)			
03	2200	10.0	19.2
04	2200	10.0	19.3
06	2200	10.0	15.4
07	2200	10.0	17.0
10	2200	10.0	16.8
11	2200	10.0	17.3
13	2115	10.0	18.1
14	2200	10.0	18.0
APR 13 103(A)			
02	1000	10.0	17.8
03	1000	10.0	17.4
04	1000	10.0	16.8
05	1000	10.0	18.1
06	1000	10.0	15.4
07	1000	10.0	16.8
08	1000	10.0	16.8
11	1000	10.0	154.5
13	0915	10.0	81.5
14	1000	10.0	18.1
APR 13 103(P)			
02	2200	10.0	18.1
03	2200	10.0	16.4
04	2200	10.0	15.6
06	2200	10.0	15.1
07	2200	10.0	17.0
09	2200	10.0	16.6
12	2200	10.0	25.5
13	2115	10.0	20.8
14	2200	10.0	34.6
APR 14 104(A)			
03	1000	10.0	15.2
04	1300	07.0	15.7
05	1000	10.0	14.7
06	1000	10.0	15.0
07	1000	06.0	15.2
08	1000	10.0	15.3
09	1000	10.0	15.8
10	1000	10.0	16.8
11	1000	10.0	17.2
12	1000	10.0	17.2
13	0915	10.0	18.4
14	1000	10.0	15.9

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
APR 14 104(P)			
02	2200	10.0	17.5
04	2200	10.0	14.9
05	2200	10.0	21.1
06	2200	10.0	15.0
07	2200	10.0	15.4
08	2200	10.0	16.6
10	2200	10.0	355.6
11	2200	10.0	20.9
12	2200	10.0	18.2
13	2115	10.0	17.9
14	2200	10.0	17.5
APR 15 105(A)			
03	1000	10.0	17.7
04	1000	10.0	15.3
05	1000	10.0	15.3
06	1000	10.0	15.4
07	1000	10.0	112.3
08	1000	10.0	136.5
09	1000	10.0	158.8
10	1000	10.0	34.0
11	1000	10.0	46.5
12	1000	10.0	16.5
13	0915	10.0	14.5
14	1000	10.0	16.1
APR 15 105(P)			
03	2200	10.0	15.4
04	2200	10.0	16.2
06	2200	10.0	15.1
08	2200	10.0	42.6
09	2200	10.0	25.1
10	2200	10.0	17.1
11	2200	10.0	15.5
12	2200	10.0	15.3
13	2115	10.0	15.7
14	2200	10.0	36.2
APR 16 106(A)			
14	1000	10.0	18.0
APR 16 106(P)			
14	2200	10.0	15.5

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
APRIL-MAY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
APR 17 107(A)			
14	1000	10.0	15.5
APR 17 107(P)			
14	2200	10.0	1055.9
APR 18 108(A)			
02	1000	10.0	79.4
03	1000	10.0	16.1
04	1000	10.0	15.9
05	1000	10.0	17.1
06	1000	10.0	15.7
07	1000	10.0	19.5
08	1000	10.0	18.6
09	1000	10.0	16.6
11	1000	22.0	18.5
12	1000	10.0	85.2
13	0915	12.0	15.5
APR 18 108(P)			
02	2200	10.0	18.1
03	2200	10.0	15.8
04	2200	10.0	15.7
05	2200	10.0	16.9
10	2200	10.0	15.9
13	2115	10.0	17.7
APR 19 109(A)			
02	1000	10.0	16.1
03	1000	10.0	15.4
05	1000	10.0	15.4
07	1000	10.0	15.5
08	1000	10.0	16.1
09	1000	10.0	107.2
10	1000	10.0	145.4
11	1000	27.0	30.0
12	1000	10.0	21.2
13	0915	10.0	279.6
14	1000	10.0	15.9
APR 19 109(P)			
02	2200	10.0	17.2
03	2200	10.0	15.7
04	2200	10.0	15.6
07	2200	10.0	15.5
08	2200	10.0	16.5
09	2200	10.0	17.4
12	2200	10.0	17.7
13	2115	10.0	25.4
14	2200	10.0	17.6
APR 20 110(A)			
02	1000	10.0	15.8
03	1000	10.0	15.7
04	1000	10.0	15.7
05	1000	10.0	15.5
06	1000	10.0	15.3
07	1000	10.0	15.6
08	1000	10.0	16.0
09	1000	10.0	16.3
10	1000	10.0	1452.2
12	1000	10.0	16.2
13	0915	10.0	16.8
14	1000	10.0	25.6
APR 20 110(P)			
02	2200	10.0	16.5
03	2200	10.0	15.3
04	2200	10.0	15.6
06	2200	10.0	16.3
07	2200	10.0	15.8
09	2200	10.0	15.6
11	2200	10.0	17.8
12	2200	10.0	87.6
13	2115	10.0	25.0
APR 21 111(A)			
02	1000	10.0	15.4
03	1000	10.0	15.3
04	1000	10.0	17.9
05	1000	10.0	15.2
06	1000	10.0	15.2
07	1000	10.0	15.4
08	0920	10.0	15.5
09	1000	10.0	15.3
10	1000	10.0	16.1
11	1000	10.0	15.2
12	1000	10.0	18.1
13	0915	10.0	16.5
14	1000	10.0	797.2
APR 21 111(P)			
02	2200	10.0	15.3
03	2200	10.0	16.9
06	2200	10.0	15.2
07	2200	10.0	15.4
08	2200	10.0	15.3
09	2200	10.0	15.2
10	2200	10.0	15.2
12	2200	10.0	15.7
13	2115	10.0	15.5
14	2200	10.0	19.8

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
APRIL-MAY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
APR 22 112(A)			
02	1000	10.0	15.2
03	1000	10.0	15.3
04	1000	10.0	15.2
05	1000	10.0	16.3
06	1000	10.0	15.2
07	1000	10.0	15.6
08	1000	10.0	15.2
09	1000	10.0	15.2
11	1000	10.0	15.2
12	1000	10.0	62.2
13	0915	10.0	15.1
14	1000	10.0	1168.3
APR 22 112(P)			
03	2200	10.0	15.4
05	2200	10.0	14.0
06	2200	10.0	15.4
07	2200	10.0	15.2
09	2200	10.0	15.4
10	2200	10.0	15.2
12	2200	10.0	16.0
13	2115	10.0	17.3
14	2200	10.0	18.2
APR 23 113(A)			
14	1000	10.0	15.9
APR 23 113(P)			
14	2200	10.0	15.2
APR 24 114(A)			
14	0900	10.0	15.4
APR 24 114(P)			
14	2100	10.0	15.7
APR 25 115(A)			
02	0900	10.0	15.7
03	0900	10.0	16.1
04	0900	10.0	15.6
05	0900	08.5	15.8
06	0900	10.0	58.5
07	0900	10.0	27.7
08	0900	10.0	397.8
09	0900	10.0	28.6
10	0900	10.0	15.7
11	0900	10.0	16.0
12	0900	10.0	15.5
13	0815	10.0	15.8
14	0900	10.0	15.6
APR 25 115(P)			
02	2100	10.0	15.8
04	2100	10.0	16.3
06	2100	10.0	16.2
07	2100	10.0	21.9
09	2100	10.0	16.0
12	2100	10.0	15.7
14	2100	10.0	15.8
APR 26 116(A)			
02	0900	10.0	15.9
03	0900	10.0	15.9
06	0900	10.0	16.0
07	0900	10.0	16.0
08	0900	10.0	15.9
10	0900	10.0	16.0
12	0900	10.0	15.9
13	0815	10.0	15.8
14	0900	10.0	15.9
APR 26 116(P)			
03	2100	10.0	15.8
06	2100	10.0	16.0
08	2100	10.0	17.0
09	2100	10.0	15.5
10	2100	10.0	17.5
11	2100	10.0	17.2
13	2015	10.0	16.0
14	2100	10.0	16.2

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
APRIL-MAY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
APR 27 117(A)			
02	0900	10.0	15.7
03	0900	12.0	15.7
04	0900	10.0	15.9
05	0830	10.0	15.6
06	0900	10.0	15.9
07	0900	10.0	83.0
08	0900	22.0	26.8
09	0900	10.0	15.9
10	0900	10.0	15.6
11	0900	10.0	15.9
12	0900	10.0	15.7
13	0815	10.0	15.9
14	0900	10.0	15.9
APR 27 117(P)			
02	2100	10.0	15.6
03	2345	10.0	15.6
06	2100	10.0	15.7
09	2100	10.0	41.0
10	2100	10.0	18.0
11	2100	10.0	16.2
12	2100	10.0	15.6
14	2100	10.0	15.5
APR 28 118(A)			
02	1200	07.0	15.4
04	0900	10.0	15.6
05	0900	10.0	18.3
06	0900	10.0	15.5
07	0900	10.0	427.4
08	0900	10.0	1573.6
09	0900	10.0	132.5
10	0900	10.0	15.6
12	0900	10.0	15.6
13	0815	10.0	15.5
APR 28 118(P)			
02	2100	10.0	18.3
03	2100	10.0	17.2
04	2100	10.0	15.5
05	2100	10.0	15.9
06	2100	10.0	15.6
07	2100	10.0	28.6
08	2100	10.0	29.4
09	2100	10.0	71.2
11	2100	10.0	15.4
12	2100	10.0	15.4
13	2015	10.0	17.6
14	2100	10.0	15.4
APR 29 119(A)			
04	0900	10.0	15.5
06	0900	10.0	15.4
07	0900	10.0	16.0
09	0900	10.0	17.0
10	0900	10.0	15.6
11	0900	10.0	15.4
12	0900	10.0	15.7
13	0815	10.0	15.4
14	0900	10.0	15.4
APR 29 119(P)			
03	2100	10.0	16.5
04	2100	10.0	16.3
06	2100	10.0	16.3
07	2100	10.0	16.4
09	2100	10.0	15.6
10	2100	10.0	15.8
13	2015	10.0	15.5
14	2100	10.0	15.8
APR 30 120(A)			
14	0900	10.0	25.2
APR 30 120(P)			
14	2100	10.0	30.7
MAY 1 121(A)			
14	0900	10.0	50.0
MAY 1 121(P)			
14	2100	10.0	16.5

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
JULY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
JUL 1 182(P)			
02	2100	10.0	16.3
03	2100	10.0	15.0
04	2100	10.0	15.1
06	2100	10.0	16.5
07	2100	10.0	16.3
09	2100	10.0	33.9
10	2100	10.0	15.1
11	2100	10.0	15.0
12	2100	10.0	14.8
13	2100	10.0	14.8
JUL 2 183(A)			
14	0900	10.0	15.1
JUL 3 184(A)			
14	0900	10.0	15.0
JUL 4 185(A)			
02	0900	10.0	15.0
03	0900	10.0	14.9
14	0900	10.0	15.0
JUL 4 185(P)			
02	2100	10.0	15.2
14	2100	10.0	15.6
JUL 5 186(A)			
02	0900	10.0	15.1
03	0900	10.0	15.5
05	0900	10.0	14.9
07	0900	10.0	15.2
09	0900	10.0	16.1
10	0900	10.0	15.0
11	0900	10.0	15.0
12	0900	10.0	15.2
13	0830	06.8	16.0
14	0900	10.0	14.8
JUL 5 186(P)			
02	2100	10.0	15.0
03	2100	10.0	15.2
05	2100	10.0	15.2
08	2100	10.0	15.3
11	2100	10.0	15.1
12	2100	10.0	15.1
JUL 6 187(A)			
03	0900	10.0	15.2
04	0900	10.0	15.5
05	0900	10.0	15.0
07	0900	10.0	15.3
08	0900	10.0	15.1
09	0900	10.0	15.1
10	0900	10.0	15.1
11	0900	10.0	15.2
12	0900	10.0	15.5
13	0830	10.0	15.1
14	0900	10.0	15.2
JUL 6 187(P)			
02	2100	10.0	15.3
03	2100	10.0	15.2
04	2100	10.0	15.3
05	2100	10.0	15.3
07	2100	10.0	15.2
09	2100	10.0	15.1
10	2100	10.0	15.3
11	2100	10.0	15.1
13	2030	10.0	15.2
14	2100	10.0	15.2
JUL 7 188(A)			
02	0900	10.0	16.3
03	0900	08.5	15.3
04	0900	10.0	16.6
05	0900	10.0	15.1
06	0900	10.0	15.9
07	0900	10.0	15.1
08	0900	10.0	15.4
09	0900	10.0	15.3
10	0900	10.0	15.1
11	0900	10.0	15.1
12	0900	10.0	15.1
13	0830	10.0	15.9
14	0900	10.0	15.2

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
JULY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
JUL 7 188(P)			
03	2100	10.0	15.1
05	2100	10.0	15.0
06	2100	10.0	15.2
07	2100	10.0	15.3
08	2100	10.0	15.0
10	2100	10.0	15.0
11	2100	10.0	15.0
12	2100	10.0	15.1
13	2030	10.0	15.1
14	2100	10.0	15.1
JUL 8 189(A)			
02	0900	10.0	17.1
03	0900	10.0	14.9
04	0900	10.0	14.6
05	0900	10.0	15.0
07	0900	10.0	15.0
08	0900	10.0	15.0
09	0900	10.0	15.0
10	0900	10.0	15.0
11	0900	10.0	15.1
13	0830	10.0	15.1
14	0900	10.0	15.1
JUL 8 189(P)			
02	2100	10.0	14.8
04	2100	10.0	19.4
05	2100	10.0	15.0
07	2100	10.0	15.1
10	2100	10.0	16.7
12	2100	10.0	15.6
13	2030	10.0	15.2
14	2100	10.0	15.1
JUL 9 190(A)			
14	0900	10.0	14.9
JUL 9 190(P)			
14	2100	10.0	15.0
JUL 10 191(A)			
14	0900	10.0	15.0
JUL 10 191(P)			
14	2100	10.0	15.0
JUL 11 192(A)			
02	0900	10.0	15.0
03	0900	10.0	14.9
04	0900	10.0	14.7
05	0900	10.0	14.8
07	0900	10.0	18.9
08	0900	10.0	31.1
09	0900	10.0	127.3
10	0900	10.0	43.4
11	0900	10.0	15.0
12	0900	10.0	14.[illegible]
13	0830	10.0	15.
14	0900	10.0	15.0
JUL 11 192(P)			
02	2100	10.0	14.9
03	2100	10.0	15.2
05	2100	10.0	17.0
06	1600	15.0	14.9
07	2100	10.0	15.5
08	2100	10.0	15.0
09	2100	10.0	18.5
11	2100	10.0	22.4
12	2100	10.0	14.9
13	2045	10.0	45.2
14	2100	10.0	14.8
JUL 12 193(A)			
02	0900	10.0	14.9
06	0900	04.0	18.1
08	0900	10.0	15.1
09	0900	10.0	26.2
10	0900	10.0	161.9
11	0900	10.0	74.6
13	0845	10.0	111.4
14	0900	10.0	15.0

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
JULY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
JUL 12 193(P)			
03	2100	10.0	15.6
04	2100	10.0	19.1
07	2100	10.0	15.2
10	2100	10.0	18.9
14	2100	10.0	15.1
JUL 13 194(A)			
03	0900	10.0	15.1
04	0900	10.0	14.8
07	0900	10.0	15.1
09	0900	10.0	15.0
10	0900	10.0	15.2
11	0900	10.0	14.8
12	0900	10.0	15.0
14	0900	10.0	15.0
JUL 13 194(P)			
04	2100	10.0	17.3
07	2100	10.0	17.2
08	2100	10.0	15.0
10	2100	10.0	15.5
11	2100	10.0	15.6
12	2100	10.0	15.1
13	2045	10.0	15.6
14	2100	10.0	15.0
JUL 14 195(A)			
02	0900	10.0	17.9
03	0900	10.0	17.3
05	0900	10.0	16.0
07	0900	10.0	17.2
08	0900	10.0	17.4
09	0900	10.0	18.6
10	0900	10.0	17.9
11	0900	10.0	16.9
12	0900	10.0	16.1
13	0845	10.0	16.9
14	0900	10.0	17.0
JUL 14 195(P)			
03	2100	10.0	15.4
04	1725	13.6	16.5
05	2100	10.0	16.7
07	2100	10.0	16.3
08	2100	10.0	15.9
10	2100	10.0	15.8
11	2100	10.0	15.6
13	2045	10.0	16.1
14	2100	10.0	18.3
JUL 15 196(A)			
02	0900	10.0	16.5
03	0900	10.0	15.6
04	0900	10.0	15.6
05	0900	10.0	15.4
07	0900	10.0	15.9
09	0900	10.0	15.8
10	0900	10.0	239.1
11	0900	10.0	28.2
12	0900	10.0	18.7
13	0845	10.0	15.9
14	0900	10.0	42.5
JUL 15 196(P)			
02	2200	10.0	16.0
03	2100	10.0	16.2
04	2100	10.0	15.9
07	2100	10.0	25.5
08	2100	10.0	15.9
10	2100	10.0	18.4
11	2100	10.0	16.5
12	2100	10.0	22.5
14	2100	10.0	17.5
JUL 16 197(A)			
14	0900	10.0	16.0
JUL 16 197(P)			
14	2100	10.0	16.2
JUL 17 198(A)			
14	0900	10.0	16.0

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
JULY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
JUL 17 198(P)			
14	2100	10.0	15.4
JUL 18 199(A)			
02	0900	10.0	15.2
03	0900	10.0	15.1
04	0900	10.0	15.2
05	0900	10.0	15.2
07	0900	10.0	15.2
08	0900	10.0	15.4
09	0900	10.0	15.2
10	0900	10.0	15.3
11	1200	07.0	15.1
12	0900	10.0	15.9
13	1300	05.8	16.1
14	0900	10.0	36.1
JUL 18 199(P)			
02	2100	10.0	15.1
03	2100	10.0	15.0
04	2100	10.0	15.4
07	2100	10.0	15.0
09	2100	10.0	15.3
10	2100	10.0	15.0
12	2100	10.0	15.2
13	2030	10.0	33.2
14	2100	10.0	15.0
JUL 19 200(A)			
02	0900	10.0	15.0
03	0900	10.0	15.0
05	0900	10.0	14.9
07	0900	10.0	15.2
08	0900	10.0	18.1
09	0900	10.0	15.4
10	0900	10.0	2275.6
11	0900	10.0	1525.1
12	0900	10.0	15.1
13	0830	12.0	15.4
14	0900	10.0	15.0
JUL 19 200(P)			
02	2100	10.0	14.9
03	2100	10.0	15.0
04	2100	10.0	15.2
05	2100	10.0	15.2
10	2100	10.0	82.4
14	2100	10.0	15.0
JUL 20 201(A)			
03	0900	10.0	15.9
05	0900	10.0	15.1
07	0900	10.0	15.0
08	0900	10.0	15.3
09	0900	05.0	16.1
10	0900	10.0	20.0
11	0900	08.5	18.2
12	0900	10.0	15.6
13	0830	10.0	22.8
14	0900	09.3	15.0
JUL 20 201(P)			
03	2100	10.0	17.6
05	2100	10.0	15.4
07	2100	10.0	15.3
08	2100	10.0	15.3
09	1600	10.0	15.2
10	2100	10.0	15.5
11	2100	10.0	15.4
12	2100	10.0	15.2
14	2100	10.0	15.0
JUL 21 202(A)			
02	0900	10.0	15.1
03	0900	10.0	15.1
04	0900	10.0	15.3
05	0900	10.0	15.2
08	0900	10.0	15.8
09	0500	09.0	15.6
10	0900	10.0	15.2
11	0900	10.0	15.2
12	0900	10.0	15.0
13	0830	10.0	16.2
14	0900	10.0	15.2
JUL 21 202(P)			
04	2100	10.0	15.1
05	2100	10.0	16.0
07	2100	10.0	15.3
08	2100	10.0	15.3
09	2100	10.0	15.5
11	2100	10.0	15.3
13	2030	10.0	16.2
14	2100	10.0	16.4
JUL 22 203(A)			
02	0900	10.0	15.2
03	0900	10.0	16.2
04	0900	10.0	15.0
05	0900	10.0	15.1
07	0900	10.0	15.3
08	0900	10.0	15.2
09	0900	10.0	16.4
11	0900	10.0	15.2
12	0900	10.0	15.4
13	0830	10.0	15.9
14	0900	10.0	15.0

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
JULY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
JUL 22 203(P)			
03	2100	10.0	16.9
05	2100	10.0	15.2
09	2100	10.0	15.1
10	2100	10.0	15.1
11	2100	10.0	15.0
14	2100	10.0	15.4
JUL 23 204(P)			
14	2100	10.0	15.8
JUL 24 205(A)			
14	0900	10.0	15.9
JUL 24 205(P)			
14	2100	10.0	15.9
JUL 25 206(A)			
03	0900	10.0	15.9
04	0900	10.0	15.9
05	0900	10.0	15.7
07	0900	10.0	16.0
08	0900	10.0	15.9
10	0900	10.0	381.6
11	0900	10.0	104.6
12	0900	10.0	16.7
13	0830	10.0	169.4
14	0900	10.0	15.8
JUL 25 206(P)			
03	2100	10.0	15.9
04	2100	10.0	18.1
07	2100	10.0	16.0
08	2100	10.0	15.8
09	2100	10.0	18.7
10	2100	10.0	29.7
11	2100	10.0	31.1
12	2100	10.0	15.4
14	2100	10.0	25.6
JUL 26 207(A)			
03	0900	10.0	15.6
04	0900	10.0	15.6
05	0900	10.0	15.9
07	0900	10.0	15.6
08	0900	10.0	15.7
09	0900	10.0	15.7
10	0900	10.0	71.7
11	0900	10.0	75.2
12	0900	10.0	14.9
13	0830	10.0	54.5
JUL 26 207(P)			
03	2100	10.0	15.3
04	2100	10.0	15.0
05	2100	10.0	16.0
07	2100	10.0	15.4
08	2100	10.0	17.0
09	2100	10.0	19.8
10	2100	10.0	19.9
11	2100	10.0	20.1
12	2100	10.0	30.2
13	2030	10.0	19.0
14	2100	10.0	16.5
JUL 27 208(A)			
02	0900	10.0	18.6
04	0900	10.0	18.7
05	0900	10.0	17.6
07	0900	10.0	15.7
08	0900	10.0	18.1
10	0900	10.0	16.3
11	0900	10.0	16.1
12	0900	10.0	16.0
13	0830	10.0	16.2
14	0900	10.0	16.8
JUL 27 208(P)			
02	2100	10.0	16.0
04	2100	10.0	16.1
05	2100	10.0	16.1
07	2100	10.0	15.9
08	2100	10.0	15.9
09	1830	17.5	15.9
10	2100	10.0	15.8
11	2100	10.0	15.9
12	2100	10.0	15.7
13	2030	10.0	16.1
14	2100	10.0	15.9

APPENDIX H

TWICE DAILY KR-85 CONCENTRATION
JULY 1977

SAMPLING LOCATION	START TIME (GMT)	SAMPLE DURATION (HOURS)	KR-85 (PCI/SCM)
JUL 28 209(A)			
02	0900	05.0	15.8
03	0900	10.0	16.0
04	0900	10.0	15.9
05	0900	10.0	15.9
07	0900	10.0	15.7
08	0900	10.0	15.6
09	1200	07.0	15.8
10	0900	10.0	15.9
12	0900	10.0	17.4
13	0830	10.0	15.9
14	0900	10.0	15.9
JUL 28 209(P)			
02	2100	10.0	15.8
03	2100	10.0	16.0
04	2100	10.0	16.0
05	2100	10.0	16.1
08	2100	10.0	15.7
09	2100	10.0	16.0
10	2100	10.0	15.9
12	2100	10.0	18.2
13	2030	10.0	16.0
14	2100	10.0	16.1
JUL 29 210(A)			
03	0900	10.0	15.6
04	0900	10.0	15.6
05	0900	10.0	15.5
07	0900	10.0	15.8
09	0900	10.0	16.0
10	0900	10.0	15.7
11	0900	10.0	15.9
12	0900	10.0	16.1
13	0830	10.0	16.5
14	0900	10.0	15.8
JUL 29 210(P)			
03	2100	10.0	16.1
04	2100	10.0	16.4
05	2100	10.0	14.9
07	2100	10.0	16.3
08	2100	10.0	19.0
09	2100	10.0	207.5
10	2100	10.0	15.4
11	2100	10.0	15.3
14	2100	10.0	15.4
JUL 30 211(A)			
14	0900	10.0	15.0
JUL 30 211(P)			
14	2100	10.0	15.1
JUL 31 212(A)			
14	0900	10.0	16.1
JUL 31 212(P)			
14	2100	10.0	15.0

APPENDIX I

WEEKLY AND TWICE-DAILY AVERAGE KRYPTON-85 CONCENTRATION DATA MAGNETIC TAPE FORMAT

TAPE CHARACTERISTICS

TYPE - 9 track, 1600 bpi, EBCDIC
LABEL - None
RECFM - FB
LRECL - File 1: 60 File 2: 80
BLKSIZE - File 1: 6000 File 2: 800

TAPE ORGANIZATION

File 1: Weekly concentration data
File 2: Twice-daily concentration data

DATA FORMAT

File 1: One sampler per record as follows:

station number (3X,I2)
year (1X,I2)
starting day (1X,I3)
starting hour (9X,I2)
ending day (3X,I3)
ending hour (5X,I2)
sample duration days (3X,F5.1)
concentration (3X,F6.1)

File 2: One sample per record as follows:

station number (3X,I2)
year (1X,I2)
starting day (1X,I3)
AM (A) or PM (P) designator (3X,A1)
starting time - hour, minutes (3X,I4)
sample duration hours (16X,F5.1)
concentration (3X,F6.1)