

TENNESSEE VALLEY AUTHORITY

RADIOLOGICAL HEALTH STAFF

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RADIOLOGICAL IMPACT ASSESSMENT

SEQUOYAH NUCLEAR PLANT

JANUARY - DECEMBER 1982

TVA/POWER/RHS

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Introduction

Potential doses to individuals and populations have been calculated for the time period January 1 through December 31, 1982 in compliance with the requirements of Radiological Effluent Technical Specification 6.9.i.9. Dose calculations are based on Regulatory Guides 1.109, 1.111, and 1.113 to determine compliance with the dose objectives contained in 10 CFR 50 Appendix I and 40 CFR 190. The dose calculations have been made using the measured releases listed in tables 1-2 as input in the Gaseous Effluent Licensing Code (for gaseous releases) and the Quarterly Water Assessment Code (for liquid releases). Dispersion of radioactive effluents in the environment has been calculated using meteorological data and river flow data measured during this period.

Meteorological Data

Meteorological data were measured, and average quarterly joint frequency distributions (JFDs) for ground-level releases were calculated. The ground-level JFD was derived from windspeeds and directions measured 10 meters above ground-level and from the vertical temperature gradient between 10 and 45 meters.

The windspeeds were divided into nine windspeed ranges. For calculational purposes, calms were distributed into the lowest windspeed range (0-0.5 mph) according to the directional probabilities in the 0.6-1.4 mph range. The quarterly JFDs are listed in tables 3 through 6 for ground-level releases.

Gaseous Effluents

Ground-level dispersion models were applied to all releases. Radionuclides in gaseous effluents were assumed to be released continuously. Dose estimates for external air exposures were made at the site boundary. External doses to the skin and total body were estimated for the nearest resident in each sector. Internal doses were estimated for real receptors due to the ingestion, inhalation, and external exposure pathways. The milk ingestion doses were calculated for farms where milk is consumed without commercial preparation. All receptor locations and points of interest are listed in table 2a. Doses are given in tables 7 through 10 for these individual exposure pathways at the maximum exposure locations.

Population doses were calculated for an estimated 1,057,010 persons living within a 50-mile radius of the plant site. Population doses were calculated assuming that each individual consumes vegetables and meat produced within the sector annulus in which he resides. Doses from milk ingestion were calculated from data on milk production within 50 miles of the plant site. Doses from external pathways, inhalation, and beef and vegetable ingestion are based on the 50-mile human population distribution. Population dose estimates for the gaseous effluents are presented in table 11.

## Liquid Effluents

Doses from liquid effluents were calculated using measured hydraulic data. The average river flows at the plant site were 61,480 cubic feet per second (cfs) for the first quarter, 15,550 cfs for the second quarter, 30,280 cfs for the third quarter, and 43,340 cfs for the fourth quarter. Radioactivity concentrations in the Tennessee River were calculated assuming that releases in liquid effluents were continuous.

Doses were calculated for recreation, consumption of fish, and drinking water from public water supplies between the plant site and the mouth of the Tennessee River. The maximum individual dose from drinking water was assumed to be that calculated at the nearest downstream public water supply (C. F. Industries, Inc.). The maximum potential recreation dose was calculated for a location immediately downstream from the plant outfall. Dose estimates for the liquid effluents are presented in tables 12 through 15.

## Direct Radiation

External gamma radiation levels were measured by thermoluminescent dosimeters (TLDs) deployed around SQN. During the preoperational period from August 1975 to January 1980, these levels averaged approximately 23 mR/quarter at onsite stations and 19 mR/quarter offsite. These data reflect a difference of 2-5 mR/quarter (average approximately 4 mR/quarter) between onsite and offsite radiation levels. These higher values measured onsite may be attributable to natural variations in environmental radiation levels, earth moving activities onsite, the mass of concrete employed in the construction of the plant, or other influences.

Analysis of environmental TLD data for the period of November 1981 to November 1982 showed that external gamma radiation levels averaged approximately 18.1 mR/quarter at onsite stations and 15.8 mR/quarter offsite. This indicates that there was no identifiable increase in dose rate levels attributable to direct radiation from plant equipment and/or gaseous effluents. Fluctuations in natural background dose rates and in TLD readings tend to mask any small increments which may be due to plant operations.

## Dose Summary

Doses calculated for this year result from the low-level effluent releases of units 1 and 2. For gaseous effluents released in the first quarter, the maximum gamma and beta air doses were calculated to be 0.02 and 0.13 mrad, respectively. During the second quarter, the gamma and beta air doses were 0.16 and 0.71 mrad. For the third quarter, the gamma and beta air doses were 0.20 mrad and 1.10 mrad. During the fourth quarter the gamma and beta air doses were 0.04 mrad and 0.20 mrad.

These quarterly doses are well below the annual air dose guidelines (as specified in Appendix I to 10 CFR 50) of 20 and 40 mrad for gamma and beta radiation, respectively, for two reactor units. The maximum doses from air submersion to the skin and total body during the first quarter were calculated to be 0.03 and 0.02 mrem. During the second quarter, the skin and total body submersion doses were 0.25 and 0.13 mrem, respectively. For the third quarter these doses were 0.20 mrem and 0.10 mrem for the skin and total body. And for the fourth quarter these doses were 0.06 mrem and 0.03 mrem for the skin and total body. These compare with annual dose guidelines of 30 mrem to the skin and 10 mrem to the total body. Internal doses to the maximum exposed organ were estimated to be 0.01, 0.12, 0.003, and 0.008 mrem for the first, second, third, and fourth quarters, respectively. These compare with the annual dose guideline of 30 mrem to the maximum exposed organ. The maximum exposed individual was determined based on actual existing pathways. Therefore, these doses were calculated with consideration of ingestion of meat, milk, and vegetables, inhalation, and exposures to external sources of radiation.

For liquid effluents released in the first quarter, the maximum individual doses to the adult total body and the maximum exposed organ (child bone) were calculated to be 0.09 and 0.14 mrem, respectively. In the second quarter, the maximum doses to the total body and bone were calculated to be 0.14 and 0.68 mrem, respectively. In the third quarter, the maximum doses to the total body and bone were calculated to be 0.22 and 0.35 mrem, respectively. In the fourth quarter, the maximum doses to the total body and bone were calculated to be 1.5 and 1.8 mrem, respectively. Summing the maximum doses for the four quarters, total calculated doses of 2.0 mrem to the total body and 3.0 mrem to the bone were determined. These compare with annual dose guidelines as specified in Appendix I to 10 CFR 50 of 6 and 20 mrem to the total body and maximum exposed organ (bone), respectively, for two units.

Maximum organ doses to the population from gaseous effluents during the first quarter were estimated to be 0.10 man-rem to the bone and 0.099 man-rem to the liver. For the second quarter, population doses were 0.68 man-rem to the lung and 0.66 man-rem to the gastro-intestinal tract. For the third quarter, these doses were 0.48 and 0.49 man-rem for the total body and thyroid, respectively. For the fourth quarter, these doses were 0.12 man-rem for the total body and 0.15 man-rem for the thyroid.

From liquid releases during the first quarter, the total population along the Tennessee River was estimated to receive 0.43 man-rem to the total body and 2.8 to the maximum exposed organ (gastro-intestinal tract). For the second quarter, the Tennessee River population was estimated to receive 5.5 man-rem to the total body and 23 man-rem to the maximum organ (bone). For the third quarter, the total population along the Tennessee River was estimated to receive 4.1 man-rem to the total body and 8.7 man-rem to the maximum organ (bone). For the fourth quarter, the Tennessee River population was estimated to receive 3.2 man-rem to the total body and 8.8 man-rem to the maximum organ (gastro-intestinal tract).

Population doses can be compared to the natural background dose to the 1,057,010 persons living within 50 miles of the plant of about 159,500 man-rem/yr (based on an average individual background dose of about 150 mrem/yr).

To determine compliance with 40 CFR 190, the annual dose contributions to the maximum individual from SQN radioactive effluents and all other nearby uranium fuel-cycle sources have been considered. No nearby fuel-cycle facilities other than SQN have been identified which would significantly expose the maximum individual. The dose to the maximum individual has been conservatively estimated by: first, summing the total body air submersion dose, the critical organ dose from gaseous effluents, and the critical organ dose from liquid effluents (direct radiation, as reported above, is not identifiable over background levels) for each quarter; then, taking the sum for each quarter and summing over four quarters. Using this method the total dose to the maximum individual for the twelve consecutive months in 1982 has been calculated to be 3.4 mrem. This is below the limit of 40 CFR 190 (25 mrem/yr).

In addition, no routine activities within the site boundary by members of the public have been identified which would lead to their radiation exposure.

For the purposes of determining plant performance over its operational period a summary of the quarterly doses for the past three years is presented in table 16.

In summary, all annual gaseous and liquid effluent doses calculated were below the guidelines of Appendix I to 10 CFR 50 and below the annual limits specified in the SQN Technical Specifications for plant operation.

TABLE 1

## SEQUOYAH NUCLEAR PLANT GASEOUS EFFLUENT RELEASES - 1982

Nuclide	1st Quarter (Ci)	2nd Quarter (Ci)	3rd Quarter (Ci)	4th Quarter (Ci)
Xe-131m	1.97(-1) <sup>a</sup>	5.03(-1)	5.32(-1)	1.07(+1)
Xe-133	5.54(+2)	1.75(+3)	2.51(+3)	4.74(+2)
Xe-133m	1.08(+0)	5.24(+1)	4.46(+1)	4.51(+0)
Xe-135	1.82(+1)	1.45(+2)	1.23(+2)	1.00(+1)
Xe-135m	-	-	-	-
Xe-138	-	-	-	-
I-131	7.22(-6)	8.78(-6)	2.32(-4)	7.32(-4)
I-133	-	9.66(-7)	1.11(-6)	2.46(-4)
Ar-41	1.63(-1)	1.18(+1)	1.84(+0)	9.91(-1)
Cr-51	-	-	-	-
Mn-54	-	2.08(-3)	-	1.31(-5)
Co-58	-	1.13(-1)	-	6.54(-3)
Co-60	-	-	-	2.65(-5)
Sr-89	1.71(-6)	-	2.49(-7)	4.19(-8)
Sr-90	5.95(-6)	9.98(-7)	-	-
Tc-99m	3.54(-8)	-	-	2.19(-6)
Nb-95	-	-	-	-
Rb-88	-	5.70(-3)	-	-
Kr-85m	8.34(-2)	7.89(+0)	8.80(+0)	5.17(-3)
Kr-85	1.66(-1)	5.12(-1)	6.16(-2)	5.70(-1)
Kr-87	-	8.28(-5)	2.84(-3)	-
Kr-88	-	9.44(-4)	8.32(-3)	-
Ce-144	2.79(-7)	-	-	-

a. 1.97(-1) = 1.97 x 10<sup>-1</sup>

TABLE 2

## SEQUOYAH NUCLEAR PLANT LIQUID EFFLUENTS - 1982

Nuclide	Activity( $\mu\text{Ci}/\text{Quarter}$ )			
	First	Second	Third	Fourth
H-3	1.7E8 <sup>a</sup>	3.2E8	3.4E8	9.3E7
Na-24	3.7E5	5.3E4	2.0E3	9.9E0
P-32	2.2E4	9.0E4	3.3E4	4.2E4
Cr-51	4.3E5	9.1E3	4.9E3	2.4E5
Mn-54	3.5E4	9.1E3	2.8E4	1.0E5
Fe-55	3.2E4	0.0	5.1E4	1.5E6
Fe-59	5.6E4	3.8E3	2.9E2	3.5E4
Co-57	4.2E2	0.0	7.6E2	9.9E3
Co-58	6.6E5	9.3E4	8.3E5	3.3E6
Co-60	7.3E4	1.6E4	8.5E4	1.2E6
Zn-65	2.6E3	0.0	0.0	8.6E3
Kr-85	0.0	1.7E5	4.4E3	0.0
Kr-85m	0.0	2.5E2	4.5E2	0.0
Sr-89	8.9E4	0.0	6.7E3	6.1E3
Sr-90	0.0	3.0E3	0.0	0.0
Sr-92	0.0	0.0	0.0	1.2E3
Y-91m	0.0	6.1E3	0.0	0.0
Zr-95	2.8E4	3.3E2	2.2E2	3.7E4
Nb-95	2.8E4	3.3E2	2.2E2	3.7E4
Nb-97	0.0	0.0	0.0	9.0E2
Nb-97m	0.0	0.0	1.0E0	0.0
Mo-99	0.0	0.0	9.7E2	0.0
Tc-99m	2.9E0	2.0E2	1.73E	3.6E0
Ru-103	0.0	0.0	0.0	3.1E2
Ru-106	0.0	2.7E2	0.0	0.0
Ag-110m	0.0	0.0	0.0	9.9E3
Sb-124	0.0	0.0	3.5E3	2.6E3
I-131	1.7E3	2.7E4	6.4E4	9.0E3
I-133	2.9E2	4.9E3	2.9E3	1.1E2
I-135	0.0	0.0	2.6E2	0.0
Te-132	0.0	9.3E0	0.0	0.0
Xe-133	7.8E3	7.4E4	3.9E4	1.1E5

<sup>a</sup>. 1.7E8 =  $1.7 \times 10^8$



TABLE 2 (Contd.)

SEQUOYAH NUCLEAR PLANT LIQUID EFFLUENTS - 1982

<u>Nuclide</u>	<u>Activity(<math>\mu</math>Ci/Quarter)</u>			
	<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Fourth</u>
Xe-133m	0.0	0.0	1.9E2	0.0
Xe-135	4.9E3	2.4E4	3.7E4	2.9E2
Cs-134	1.3E3	1.2E3	1.6E4	1.7E3
Cs-136	0.0	0.0	5.1E2	0.0
Cs-137	4.4E3	5.0E4	3.5E4	5.0E3
Ce-144	5.4E3	1.1E4	4.5E2	0.0
W-187	1.4E3	9.1E3	2.2E2	0.0
Total	1.8E8	3.2E8	3.5E8	9.9E7

TABLE 2A

## RECEPTOR LOCATIONS AND POINTS OF INTEREST

POINT	SECTOR	DISTANCE (M)	ELEVATION (M)	CHI-OVER-Q (S/M+3)	D-OVER-Q (I/M+2)
1 LAND SITE BOUNDARY	N	950.	-6.	4.05E-06	1.09E-08
2 LAND SITE BOUNDARY	NNE	2260.	-6.	1.78E-06	4.33E-09
3 LAND SITE BOUNDARY	NE	1910.	-6.	2.05E-06	5.73E-09
4 LAND SITE BOUNDARY	ENE	1680.	-6.	6.70E-07	1.28E-09
5 LAND SITE BOUNDARY	E	1570.	-6.	5.62E-07	1.19E-09
6 LAND SITE BOUNDARY	ESE	1460.	-6.	7.23E-07	1.10E-09
7 LAND SITE BOUNDARY	SE	1460.	-6.	6.22E-07	1.64E-09
8 LAND SITE BOUNDARY	SSE	1550.	-6.	1.53E-06	3.44E-09
9 LAND SITE BOUNDARY	S	1570.	-6.	3.98E-06	9.77E-09
10 LAND SITE BOUNDARY	SSW	1840.	-6.	5.14E-06	1.14E-08
11 LAND SITE BOUNDARY	SW	2470.	-6.	9.78E-07	1.59E-09
12 LAND SITE BOUNDARY	WSW	910.	-6.	1.40E-06	1.46E-09
13 LAND SITE BOUNDARY	W	670.	-6.	1.77E-06	1.46E-09
14 LAND SITE BOUNDARY	WNW	660.	-6.	1.54E-06	1.76E-09
15 LAND SITE BOUNDARY	NW	660.	-6.	2.82E-06	3.21E-09
16 LAND SITE BOUNDARY	NNW	730.	-6.	5.9E-06	1.65E-08
17 RESIDENT, GARDEN	N	1344.	0.	2.39E-06	6.22E-09
18 RESIDENT, GARDEN	NNE	2812.	0.	1.29E-06	2.99E-09
19 RESIDENT, GARDEN	NE	3438.	55.	8.61E-07	2.10E-09
20 RESIDENT, GARDEN, BEEF	ENE	2187.	12.	4.55E-07	8.24E-10
21 RESIDENT	E	1812.	0.	4.53E-07	9.45E-10
22 RESIDENT	ESE	1812.	43.	5.22E-07	7.96E-10
23 RESIDENT	SE	1719.	0.	4.86E-07	1.26E-09
24 RESIDENT	SSE	2250.	24.	8.91E-07	1.85E-09
25 RESIDENT, GARDEN	S	2375.	0.	2.20E-06	4.39E-09
26 RESIDENT	SSW	2250.	0.	3.87E-06	8.12E-09
27 RESIDENT	SW	2969.	0.	7.53E-07	1.13E-09
28 RESIDENT	WSW	1067.	17.	1.10E-06	1.12E-09
29 RESIDENT, GARDEN	W	938.	6.	1.06E-06	8.42E-10
30 RESIDENT, GARDEN	WNW	1812.	12.	3.51E-07	3.39E-10
31 RESIDENT, GARDEN	NW	1188.	12.	1.14E-06	1.23E-09
32 RESIDENT	NNW	781.	0.	5.30E-06	1.48E-08
33 GARDEN	E	2656.	12.	2.57E-07	4.94E-10
34 GARDEN	ESE	2031.	37.	4.42E-07	6.51E-10
35 GARDEN	SE	2062.	3.	5.72E-07	9.27E-10
36 GARDEN, BEEF	SSE	2344.	30.	8.39E-07	1.72E-09
37 GARDEN	SSW	2750.	0.	2.90E-06	5.77E-09
38 GARDEN	SW	3438.	0.	6.17E-07	9.78E-10
39 GARDEN	WSW	1067.	17.	1.10E-06	1.12E-09
40 GARDEN	NNW	1875.	15.	1.41E-06	3.54E-09
41 BEEF	NNE	2600.	2.	1.45E-06	3.41E-09
42 BEEF	NE	3438.	0.	8.61E-07	2.10E-09
43 BEEF	E	2187.	12.	3.43E-07	6.87E-10
44 BEEF	ESE	3125.	55.	2.34E-07	3.12E-10
45 BEEF	SE	2656.	85.	2.55E-07	6.03E-10
46 BEEF	S	6553.	46.	5.30E-07	7.44E-10
47 BEEF	W	700.	0.	1.65E-06	1.36E-09
48 BEEF	WSW	2062.	12.	4.16E-07	3.82E-10
49 BEEF	WNW	700.	0.	1.41E-06	1.60E-09
50 BEEF	NW	688.	0.	2.64E-06	3.00E-09
51 BEEF	NNW	1524.	2.	1.92E-06	4.96E-09
52 MILK COW ADULT	N	4219.	0.	4.42E-07	8.99E-10
53 MILK COW ADULT	NNE	4531.	6.	6.48E-07	1.31E-09
54 MILK COW ADULT	NE	5625.	61.	4.25E-07	8.83E-10
55 MILK COW ADULT	SSW	3594.	0.	1.99E-06	3.64E-09
56 MILK COW ADULT	WNW	1875.	18.	3.35E-07	3.20E-10
57 MILK COW ADULT	NW	2031.	6.	5.12E-07	5.10E-10

TABLE 3

SEQUOYAH NUCLEAR PLANT METEOROLOGICAL DATA  
GROUND-LEVEL JOINT  
FREQUENCY DISTRIBUTION IN PERCENT  
FIRST QUARTER 1982

## STABILITY CLASS A

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.0	0.0	0.0	0.0	0.250	0.050	0.0	0.0	0.301
NNE	0.0	0.0	0.0	0.200	0.150	0.701	0.100	0.0	0.0	1.152
NE	0.0	0.0	0.100	0.150	0.401	0.301	0.0	0.0	0.0	0.952
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.050	0.0	0.050	0.100	0.0	0.0	0.200
S	0.0	0.0	0.0	0.050	0.0	0.100	0.100	0.0	0.0	0.250
SSW	0.0	0.0	0.0	0.150	0.100	0.952	0.0	0.0	0.0	1.202
SW	0.0	0.0	0.050	0.0	0.100	0.401	0.100	0.0	0.0	0.651
WSW	0.0	0.0	0.0	0.0	0.050	0.0	0.050	0.0	0.0	0.100
W	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.050
WNW	0.0	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.050
NW	0.0	0.0	0.0	0.0	0.050	0.250	0.0	0.0	0.0	0.301
NNW	0.0	0.0	0.0	0.0	0.150	1.002	0.0	0.0	0.0	1.152
TOTALS	0.0	0.0	0.150	0.601	1.052	4.057	0.501	0.0	0.0	6.361

## STABILITY CLASS B

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.0	0.050	0.0	0.0	0.100	0.0	0.0	0.0	0.150
NNE	0.0	0.0	0.050	0.0	0.301	0.150	0.050	0.0	0.0	0.551
NE	0.0	0.0	0.0	0.250	0.351	0.200	0.0	0.0	0.0	0.801
ENE	0.0	0.0	0.0	0.050	0.050	0.0	0.0	0.0	0.0	0.100
E	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.050
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.050
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.050	0.050	0.100	0.0	0.0	0.0	0.200
SSW	0.0	0.0	0.0	0.100	0.301	0.351	0.050	0.0	0.0	0.801
SW	0.0	0.0	0.0	0.050	0.250	0.250	0.0	0.0	0.0	0.551
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.050
W	0.0	0.0	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.050
WNW	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.050
NW	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.050
NNW	0.0	0.0	0.0	0.0	0.050	0.050	0.050	0.0	0.0	0.150
TOTALS	0.0	0.0	0.100	0.601	1.453	1.202	0.250	0.0	0.0	3.606

TABLE 3 (CONT'D)

## STABILITY CLASS C

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.49	2.40	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.0	0.050	0.0	0.050	0.100	0.0	0.0	0.0	0.200
NNE	0.0	0.0	0.100	0.050	0.250	0.451	0.0	0.0	0.0	0.851
NE	0.0	0.0	0.200	0.391	0.501	0.050	0.0	0.0	0.0	1.052
ENE	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.050
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
SE	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
SSE	0.0	0.0	0.0	0.0	0.050	0.050	0.0	0.0	0.0	0.100
S	0.0	0.0	0.050	0.0	0.050	0.150	0.0	0.0	0.0	0.250
SSW	0.0	0.0	0.050	0.050	0.351	0.301	0.0	0.0	0.0	0.752
SW	0.0	0.0	0.0	0.100	0.200	0.150	0.0	0.0	0.0	0.450
WSW	0.0	0.0	0.0	0.0	0.0	0.050	0.050	0.0	0.0	0.100
W	0.0	0.0	0.0	0.100	0.050	0.0	0.0	0.0	0.0	0.150
WNW	0.0	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.050
NW	0.0	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.050
NNW	0.0	0.0	0.0	0.050	0.050	0.150	0.0	0.0	0.0	0.250
TOTALS	0.0	0.0	0.551	0.701	1.553	1.553	0.050	0.0	0.0	4.404

## STABILITY CLASS D

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.008	0.050	0.551	1.302	1.453	2.104	0.0	0.0	0.0	5.468
NNE	0.008	0.050	1.503	2.615	2.354	3.216	0.100	0.0	0.0	9.846
NE	0.055	0.351	1.252	0.651	0.250	0.100	0.0	0.0	0.0	2.660
ENE	0.0	0.0	0.050	0.050	0.0	0.0	0.0	0.0	0.0	0.100
E	0.016	0.100	0.200	0.0	0.0	0.0	0.0	0.0	0.0	0.317
ESE	0.0	0.0	0.150	0.0	0.0	0.0	0.0	0.0	0.0	0.150
SE	0.0	0.0	0.150	0.050	0.0	0.0	0.0	0.0	0.0	0.200
SSE	0.008	0.050	0.050	0.150	0.250	0.050	0.0	0.0	0.0	0.558
S	0.008	0.050	0.250	0.301	0.100	0.351	0.0	0.0	0.0	1.060
SSW	0.016	0.100	1.302	1.102	1.102	1.753	0.0	0.0	0.0	5.375
SW	0.016	0.100	0.751	1.102	1.102	0.902	0.200	0.0	0.0	4.173
WSW	0.016	0.100	0.150	0.250	0.050	0.250	0.150	0.0	0.0	0.966
W	0.0	0.0	0.0	0.100	0.0	0.150	0.050	0.0	0.0	0.301
WNW	0.0	0.0	0.0	0.250	0.351	0.250	0.0	0.0	0.0	0.851
NW	0.0	0.0	0.200	0.351	0.200	0.451	0.0	0.0	0.0	1.202
NNW	0.0	0.0	0.301	0.451	1.202	2.404	0.0	0.0	0.0	4.358
TOTALS	0.151	0.952	6.862	8.725	8.415	11.981	0.501	0.0	0.0	37.586

TABLE 3 (CONT'D)

STABILITY CLASS E

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.79	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.026	0.250	1.102	0.701	0.751	0.250	0.0	0.0	0.0	3.081
NNE	0.021	0.200	2.254	1.853	0.551	0.100	0.0	0.0	7.0	4.980
NE	0.005	0.050	0.501	0.551	0.0	0.0	0.0	0.0	0.0	1.107
ENE	0.005	0.050	0.100	0.050	0.0	0.0	0.0	0.0	0.0	0.205
E	0.005	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.055
ESE	0.005	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.255
SE	0.016	0.150	0.100	0.050	0.0	0.0	0.0	0.0	0.0	0.317
SSE	0.010	0.100	0.250	0.200	0.100	0.100	0.050	0.0	0.0	0.811
S	0.005	0.050	0.351	0.301	0.751	0.351	0.150	0.0	0.0	1.958
SSW	0.005	0.050	1.402	1.653	2.003	0.651	0.0	0.0	0.0	5.765
SW	0.005	0.050	1.102	2.765	2.254	1.002	0.0	0.0	0.0	7.173
WSW	0.005	0.050	0.301	0.301	0.100	0.250	0.100	0.0	0.0	1.107
W	0.005	0.050	0.401	0.250	0.0	0.100	0.0	0.0	0.0	0.806
WNW	0.005	0.050	0.100	0.551	0.050	0.050	0.0	0.0	0.0	0.606
NW	0.026	0.250	0.501	0.200	0.050	0.0	0.0	0.0	0.0	1.022
NNW	0.0	0.0	0.301	0.351	0.351	0.200	0.0	0.0	0.0	1.202
TOTALS	0.149	1.453	8.765	9.577	6.962	3.055	0.301	0.0	0.0	30.262

STABILITY CLASS F

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.79	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.0	0.351	0.050	0.0	0.0	0.0	0.0	0.0	0.401
NNE	0.017	0.200	1.302	0.551	0.0	0.0	0.0	0.0	0.0	2.071
NE	0.013	0.150	0.251	0.150	0.0	0.0	0.0	0.0	0.0	1.165
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.009	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.109
ESE	0.009	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.109
SE	0.004	0.050	0.100	0.0	0.050	0.0	0.0	0.0	0.0	0.204
SSE	0.009	0.100	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.159
S	0.017	0.200	0.301	0.100	0.0	0.0	0.0	0.0	0.0	0.618
SSW	0.004	0.050	1.002	0.651	0.050	0.0	0.0	0.0	0.0	1.757
SW	0.004	0.050	1.152	2.254	0.301	0.0	0.0	0.0	0.0	3.761
WSW	0.004	0.050	0.150	0.0	0.050	0.050	0.0	0.0	0.0	0.305
W	0.004	0.050	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.104
WNW	0.004	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.054
NW	0.0	0.0	0.050	0.050	0.0	0.0	0.0	0.0	0.0	0.100
NNW	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.050
TOTALS	0.098	1.152	5.359	3.857	0.451	0.050	0.0	0.0	0.0	10.967

TABLE 3 (CONT'D)

STABILITY CLASS G										
SECTOR	WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED									TOTALS
	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.99	13.00	
N	0.0	0.0	0.200	0.0	0.0	0.0	0.0	0.0	0.0	0.200
NNE	0.0	0.100	0.001	0.100	0.0	0.0	0.0	0.0	0.0	1.002
NE	0.0	0.100	0.601	0.0	0.0	0.0	0.0	0.0	0.0	0.701
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.050	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.100
ESE	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.100
SE	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
SSE	0.0	0.050	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.150
S	0.0	0.0	0.301	0.0	0.0	0.0	0.0	0.0	0.0	0.301
SSW	0.0	0.150	0.001	0.791	0.0	0.0	0.0	0.0	0.0	1.042
SW	0.0	0.050	1.002	0.002	0.100	0.0	0.0	0.0	0.0	2.054
WSW	0.0	0.100	0.200	0.0	0.0	0.0	0.0	0.0	0.0	0.301
W	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.100
WNW	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.050
TOTALS	0.0	0.751	4.257	1.793	0.100	0.0	0.0	0.0	0.0	6.912

TABLE 4

SEQUOYAH NUCLEAR PLANT METEOROLOGICAL DATA  
GROUND-LEVEL JOINT  
FREQUENCY DISTRIBUTION IN PERCENT  
SECOND QUARTER 1982

## STABILITY CLASS A

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.50	13.00	TOTALS
N	0.0	0.0	0.251	0.291	0.100	0.050	0.0	0.0	0.0	0.563
NNE	0.0	0.0	0.251	1.225	1.175	0.613	0.0	0.0	0.0	3.264
NE	0.0	0.0	0.362	0.813	0.613	0.251	0.0	0.0	0.0	2.039
ENE	0.0	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.100
E	0.0	0.0	0.050	0.100	0.0	0.0	0.0	0.0	0.0	0.151
ESE	0.0	0.0	0.0	0.151	0.0	0.0	0.0	0.0	0.0	0.151
SE	0.0	0.0	0.100	0.151	0.0	0.0	0.0	0.0	0.0	0.251
SSE	0.0	0.0	0.0	0.251	0.050	0.0	0.0	0.0	0.0	0.301
S	0.0	0.0	0.050	0.251	0.151	0.151	0.0	0.0	0.0	0.603
SSW	0.0	0.0	0.151	0.813	1.547	0.412	0.0	0.0	0.0	2.962
SW	0.0	0.0	0.0	0.362	0.713	0.201	0.0	0.0	0.0	1.275
WSW	0.0	0.0	0.0	0.0	0.100	0.0	0.201	0.0	0.0	0.301
W	0.0	0.0	0.050	0.050	0.0	0.050	0.050	0.0	0.0	0.201
WNW	0.0	0.0	0.0	0.0	0.0	0.100	0.0	0.0	0.0	0.100
NW	0.0	0.0	0.0	0.050	0.0	0.512	0.0	0.0	0.0	0.562
NNW	0.0	0.0	0.0	0.0	0.100	0.100	0.0	0.0	0.0	0.201
<b>TOTALS</b>	<b>0.0</b>	<b>0.0</b>	<b>1.265</b>	<b>4.514</b>	<b>4.542</b>	<b>2.440</b>	<b>0.251</b>	<b>0.0</b>	<b>0.0</b>	<b>13.064</b>

## STABILITY CLASS H

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.50	13.00	TOTALS
N	0.002	0.0	0.050	0.100	0.050	0.0	0.0	0.0	0.0	0.201
NNE	0.002	0.0	0.050	0.251	0.251	0.201	0.0	0.0	0.0	0.755
NE	0.007	0.0	0.151	0.301	0.100	0.050	0.0	0.0	0.0	0.610
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.007	0.0	0.151	0.0	0.0	0.0	0.0	0.0	0.0	0.151
ESE	0.0	0.0	0.0	0.151	0.0	0.0	0.0	0.0	0.0	0.151
SE	0.005	0.0	0.100	0.151	0.0	0.0	0.0	0.0	0.0	0.256
SSE	0.0	0.0	0.0	0.151	0.050	0.0	0.0	0.0	0.0	0.201
S	0.002	0.0	0.050	0.412	0.0	0.050	0.0	0.0	0.0	0.514
SSW	0.013	0.0	0.251	0.713	0.251	0.0	0.050	0.0	0.0	1.279
SW	0.003	0.0	0.050	0.713	0.301	0.0	0.0	0.050	0.0	1.168
WSW	0.003	0.0	0.050	0.050	0.050	0.0	0.0	0.0	0.0	0.154
W	0.0	0.0	0.0	0.0	0.100	0.050	0.0	0.0	0.0	0.151
WNW	0.002	0.0	0.050	0.050	0.0	0.050	0.0	0.0	0.0	0.153
NW	0.0	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.050
NNW	0.002	0.0	0.050	0.0	0.050	0.050	0.0	0.0	0.0	0.153
<b>TOTALS</b>	<b>0.048</b>	<b>0.0</b>	<b>1.004</b>	<b>3.043</b>	<b>1.205</b>	<b>0.552</b>	<b>0.050</b>	<b>0.050</b>	<b>0.0</b>	<b>5.953</b>

TABLE 4 (CONT'D)

STABILITY CLASS C										
WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.003	0.0	0.100	0.100	0.0	0.050	0.0	0.0	0.0	0.253
NNE	0.001	0.0	0.050	0.100	0.251	0.151	0.0	0.0	0.0	0.553
NE	0.011	0.0	0.412	0.100	0.0	0.0	0.0	0.0	0.0	0.523
ENE	0.001	0.0	0.050	0.050	0.0	0.0	0.0	0.0	0.0	0.101
E	0.001	0.0	0.050	0.050	0.0	0.0	0.0	0.0	0.0	0.101
ESE	0.004	0.0	0.151	0.0	0.0	0.0	0.0	0.0	0.0	0.155
SE	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.050
SSE	0.004	0.0	0.151	0.151	0.0	0.0	0.0	0.0	0.0	0.305
S	0.001	0.0	0.050	0.301	0.0	0.0	0.0	0.0	0.0	0.352
SSW	0.007	0.0	0.201	0.462	0.100	0.100	0.0	0.0	0.0	0.871
SW	0.004	0.0	0.301	0.763	0.201	0.201	0.0	0.0	0.0	1.474
WSW	0.003	0.0	0.100	0.050	0.050	0.0	0.0	0.0	0.0	0.204
W	0.003	0.0	0.100	0.0	0.0	0.0	0.050	0.0	0.0	0.154
WNW	0.0	0.0	0.0	0.050	0.100	0.0	0.0	0.0	0.0	0.151
NW	0.0	0.0	0.0	0.0	0.151	0.0	0.0	0.0	0.0	0.151
NNW	0.001	0.0	0.050	0.050	0.100	0.100	0.0	0.0	0.0	0.302
TOTALS	0.048	0.0	1.767	2.279	0.954	0.403	0.050	0.0	0.0	5.702

STABILITY CLASS D										
WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.050	0.713	0.412	0.251	0.251	0.0	0.0	0.0	1.677
NNE	0.0	0.050	0.763	1.024	1.175	1.024	0.0	0.0	0.0	4.037
NE	0.0	0.050	0.713	0.301	0.0	0.0	0.0	0.0	0.0	1.864
ENE	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.100
E	0.0	0.050	0.251	0.050	0.0	0.0	0.0	0.0	0.0	0.351
ESE	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.100
SE	0.0	0.0	0.251	0.050	0.050	0.0	0.0	0.0	0.0	0.351
SSE	0.0	0.0	0.562	0.362	0.151	0.462	0.0	0.0	0.0	1.536
S	0.0	0.100	1.275	1.687	0.412	0.613	0.0	0.0	0.0	4.087
SSW	0.0	0.0	1.426	2.249	1.326	1.547	0.0	0.0	0.0	6.587
SW	0.0	0.050	1.074	1.426	0.914	0.151	0.050	0.0	0.0	3.665
WSW	0.0	0.0	0.663	0.462	0.151	0.050	0.050	0.0	0.0	1.376
W	0.0	0.050	0.251	0.050	0.100	0.050	0.0	0.0	0.0	0.502
WNW	0.0	0.050	0.151	0.201	0.0	0.050	0.0	0.0	0.0	0.452
NW	0.0	0.0	0.151	0.151	0.201	0.050	0.100	0.0	0.0	0.653
NNW	0.0	0.100	0.412	0.251	0.412	0.100	0.0	0.0	0.0	1.275
TOTALS	0.0	0.653	8.756	8.676	5.141	4.388	0.201	0.0	0.0	27.916







TABLE 5

SEQUOYAH NUCLEAR PLANT METEOROLOGICAL DATA  
 GROUND-LEVEL JOINT  
 FREQUENCY DISTRIBUTION IN PERCENT  
 THIRD QUARTER 1982

STABILITY CLASS A

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED

SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.0	0.140	0.319	0.230	0.050	0.0	0.0	0.0	0.779
NNE	0.0	0.0	0.459	1.877	0.639	0.140	0.0	0.0	0.0	3.115
NE	0.0	0.0	0.599	0.549	0.050	0.0	0.0	0.0	0.0	1.198
ENE	0.0	0.0	0.319	0.140	0.0	0.0	0.0	0.0	0.0	0.499
E	0.0	0.0	0.409	0.140	0.050	0.0	0.0	0.0	0.0	0.599
ESE	0.0	0.0	0.090	0.090	0.050	0.0	0.0	0.0	0.0	0.230
SE	0.0	0.0	0.0	0.090	0.0	0.0	0.0	0.0	0.0	0.090
SSE	0.0	0.0	0.050	0.409	0.549	0.0	0.0	0.0	0.0	1.009
S	0.0	0.0	0.0	0.639	0.549	0.050	0.0	0.0	0.0	1.239
SSW	0.0	0.0	0.050	0.599	1.278	0.050	0.0	0.0	0.0	1.977
SW	0.0	0.0	0.050	0.819	0.499	0.230	0.0	0.0	0.0	1.597
WSW	0.0	0.0	0.0	0.090	0.0	0.0	0.0	0.0	0.0	0.090
W	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.050
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.050
NNW	0.0	0.0	0.0	0.090	0.0	0.140	0.0	0.0	0.0	0.230
TOTALS	0.0	0.0	2.206	5.940	3.943	0.659	0.0	0.0	0.0	12.748

STABILITY CLASS B

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED

SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.0	0.090	0.140	0.090	0.0	0.0	0.0	0.0	0.319
NNE	0.0	0.0	0.409	0.549	0.050	0.090	0.0	0.0	0.0	1.098
NE	0.0	0.0	0.499	0.140	0.050	0.0	0.0	0.0	0.0	0.689
ENE	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
E	0.0	0.0	0.230	0.0	0.0	0.0	0.0	0.0	0.0	0.230
ESE	0.0	0.0	0.090	0.0	0.0	0.0	0.0	0.0	0.0	0.090
SE	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.050
SSE	0.0	0.0	0.050	0.140	0.0	0.0	0.0	0.0	0.0	0.190
S	0.0	0.0	0.140	0.459	0.319	0.0	0.0	0.0	0.0	0.919
SSW	0.0	0.0	0.140	0.819	0.270	0.0	0.0	0.0	0.0	1.229
SW	0.0	0.0	0.050	0.499	0.230	0.0	0.0	0.0	0.0	0.779
WSW	0.0	0.0	0.090	0.140	0.0	0.0	0.0	0.0	0.0	0.230
W	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
WNW	0.0	0.0	0.090	0.050	0.0	0.0	0.0	0.0	0.0	0.140
NW	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.050
NNW	0.0	0.0	0.050	0.0	0.140	0.050	0.0	0.0	0.0	0.240
TOTALS	0.0	0.0	2.026	2.945	1.198	0.140	0.0	0.0	0.0	6.349

TABLE 5 (CONT'D)

STABILITY CLASS C

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.40	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.0	0.140	0.050	0.150	0.0	0.0	0.0	0.0	0.360
NNE	0.0	0.0	0.639	0.549	0.140	0.0	0.0	0.0	0.0	1.328
NE	0.0	0.0	0.549	0.0	0.0	0.0	0.0	0.0	0.0	0.549
ENE	0.0	0.0	0.230	0.050	0.0	0.0	0.0	0.0	0.0	0.280
E	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
ESE	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.050
SE	0.0	0.0	0.050	0.050	0.0	0.0	0.0	0.0	0.0	0.100
SSE	0.0	0.0	0.050	0.230	0.0	0.0	0.0	0.0	0.0	0.280
S	0.0	0.0	0.180	0.459	0.050	0.090	0.0	0.0	0.0	0.779
SSW	0.0	0.0	0.369	0.689	0.270	0.0	0.0	0.0	0.0	1.328
SW	0.0	0.0	0.140	0.729	0.090	0.0	0.0	0.0	0.0	0.959
WSW	0.0	0.0	0.050	0.050	0.0	0.0	0.0	0.0	0.0	0.100
W	0.0	0.0	0.090	0.0	0.050	0.0	0.0	0.0	0.0	0.140
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.050	0.050	0.0	0.0	0.0	0.0	0.100
NNW	0.0	0.0	0.030	0.140	0.090	0.090	0.0	0.0	0.0	0.409
TOTALS	0.0	0.0	2.625	3.095	0.918	0.180	0.0	0.0	0.0	6.818

STABILITY CLASS D

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.40	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.050	1.687	0.729	0.090	0.0	0.0	0.0	0.0	2.556
NNE	0.0	0.0	1.278	1.507	0.369	0.0	0.0	0.0	0.0	3.155
NE	0.0	0.050	0.599	0.090	0.0	0.0	0.0	0.0	0.0	0.739
ENE	0.0	0.0	0.090	0.0	0.0	0.0	0.0	0.0	0.0	0.090
E	0.0	0.050	0.140	0.0	0.0	0.0	0.0	0.0	0.0	0.190
ESE	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
SE	0.0	0.090	0.180	0.140	0.0	0.0	0.0	0.0	0.0	0.440
SSE	0.0	0.0	0.819	0.689	0.270	0.050	0.0	0.0	0.0	1.827
S	0.0	0.050	2.286	2.426	0.319	0.050	0.0	0.0	0.0	5.131
SSW	0.0	0.090	2.516	1.877	0.689	0.090	0.0	0.0	0.0	5.261
SW	0.0	0.090	1.418	1.098	0.499	0.0	0.0	0.0	0.0	3.105
WSW	0.0	0.050	0.319	0.270	0.180	0.140	0.0	0.0	0.0	0.958
W	0.0	0.0	0.499	0.050	0.050	0.0	0.0	0.0	0.0	0.599
WNW	0.0	0.090	0.270	0.050	0.050	0.050	0.0	0.0	0.0	0.509
NW	0.0	0.050	0.230	0.230	0.319	0.0	0.0	0.0	0.0	0.829
NNW	0.0	0.0	0.409	0.459	0.319	0.090	0.0	0.0	0.0	1.278
TOTALS	0.0	0.659	12.788	9.653	3.155	0.469	0.0	0.0	0.0	26.724





TABLE 6

SEQUOYAH NUCLEAR PLANT METEOROLOGICAL DATA  
GROUND-LEVEL JOINT  
FREQUENCY DISTRIBUTION IN PERCENT  
FOURTH QUARTER 1982

## STABILITY CLASS A

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.0	0.0	0.050	0.366	0.470	0.0	0.0	0.0	0.986
NNE	0.0	0.0	0.090	1.270	0.850	0.470	0.0	0.0	0.0	2.680
NE	0.0	0.0	0.240	0.240	0.090	0.0	0.0	0.0	0.0	0.650
ENE	0.0	0.0	0.0	0.090	0.0	0.0	0.0	0.0	0.0	0.090
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.050	0.190	0.090	0.0	0.0	0.0	0.330
S	0.0	0.0	0.050	0.050	0.190	0.090	0.0	0.0	0.0	0.380
SSW	0.0	0.0	0.050	0.240	0.420	0.120	0.0	0.0	0.0	0.830
SW	0.0	0.0	0.0	0.420	0.710	0.050	0.0	0.0	0.0	1.180
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.090	0.0	0.0	0.0	0.0	0.0	0.090
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.050
NNW	0.0	0.0	0.0	0.050	0.140	0.0	0.0	0.0	0.0	0.190
TOTALS	0.0	0.0	0.520	2.591	2.971	1.310	0.0	0.0	0.0	7.392

## STABILITY CLASS B

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.0	0.0	0.0	0.090	0.190	0.0	0.0	0.0	0.180
NNE	0.0	0.0	0.140	0.120	0.140	0.330	0.0	0.0	0.0	0.800
NE	0.0	0.0	0.380	0.140	0.0	0.0	0.0	0.0	0.0	0.520
ENE	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.050
SE	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.050
SSE	0.0	0.0	0.0	0.140	0.050	0.150	0.0	0.0	0.0	0.240
S	0.0	0.0	0.050	0.050	0.0	0.140	0.0	0.0	0.0	0.240
SSW	0.0	0.0	0.0	0.190	0.240	0.140	0.0	0.0	0.0	0.570
SW	0.0	0.0	0.090	0.090	0.090	0.050	0.0	0.0	0.0	0.320
WSW	0.0	0.0	0.050	0.050	0.0	0.0	0.0	0.0	0.0	0.100
W	0.0	0.0	0.0	0.090	0.0	0.0	0.0	0.0	0.0	0.090
WNW	0.0	0.0	0.0	0.0	0.0	0.150	0.0	0.0	0.0	0.050
NW	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.050
NNW	0.0	0.0	0.0	0.0	0.0	0.050	0.0	0.0	0.0	0.050
TOTALS	0.0	0.0	0.760	1.090	0.610	0.900	0.0	0.0	0.0	3.360

TABLE 6 (CONT'D)

STABILITY CLASS C

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.0	0.050	0.090	0.090	0.500	0.0	0.0	0.0	0.290
NNE	0.0	0.0	0.090	0.090	0.190	0.280	0.0	0.0	0.0	0.650
NE	0.0	0.0	0.290	0.090	0.050	0.0	0.0	0.0	0.0	0.420
ENE	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.090	0.0	0.0	0.0	0.0	0.0	0.0	0.090
SSE	0.0	0.0	0.0	0.090	0.0	0.190	0.190	0.0	0.0	0.320
S	0.0	0.0	0.050	0.140	0.090	0.090	0.0	0.0	0.0	0.370
SSW	0.0	0.0	0.090	0.140	0.280	0.140	0.0	0.0	0.0	0.640
SW	0.0	0.0	0.090	0.420	0.380	0.090	0.0	0.0	0.0	0.980
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
NW	0.0	0.0	0.050	0.0	0.090	0.090	0.0	0.0	0.0	0.230
NNW	0.0	0.0	0.0	0.050	0.0	0.050	0.0	0.0	0.0	0.100
TOTALS	0.0	0.0	0.890	1.110	1.170	0.980	0.140	0.0	0.0	4.191

STABILITY CLASS D

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED										
SECTOR	0.13	0.45	1.10	1.99	2.80	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.0	0.750	0.750	0.610	0.940	0.0	0.0	0.0	3.051
NNE	0.005	0.090	1.560	2.541	1.560	2.070	0.090	0.0	0.0	7.917
NE	0.003	0.050	0.000	0.190	0.090	0.0	0.0	0.0	0.0	1.133
ENE	0.008	0.140	0.090	0.0	0.0	0.0	0.0	0.0	0.0	0.238
E	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
ESE	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.050
SE	0.0	0.0	0.190	0.0	0.0	0.0	0.0	0.0	0.0	0.190
SSE	0.008	0.140	0.240	0.330	0.660	0.540	0.190	0.0	0.0	2.509
S	0.008	0.140	1.080	0.710	0.190	0.280	0.0	0.0	0.0	2.409
SSW	0.005	0.090	1.320	1.080	0.610	0.330	0.0	0.0	0.0	3.436
SW	0.003	0.050	1.040	1.230	0.330	0.240	0.0	0.0	0.0	2.894
WSW	0.003	0.050	0.520	0.050	0.090	0.090	0.0	0.0	0.0	0.203
W	0.0	0.0	0.280	0.050	0.240	0.050	0.0	0.0	0.0	0.620
WNW	0.003	0.050	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.103
NW	0.0	0.0	0.140	0.140	0.090	0.090	0.0	0.0	0.0	0.460
NNW	0.003	0.050	0.140	0.380	0.610	0.710	0.0	0.0	0.0	1.893
TOTALS	0.049	0.850	8.252	7.452	5.131	5.741	0.280	0.0	0.0	27.755



TABLE 6 (CONT'D)

STABILITY CLASS E

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WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED

SECTOR	0.13	0.45	1.10	1.99	2.90	4.45	6.91	9.59	13.00	TOTALS
N	0.005	0.140	2.501	1.376	0.940	0.190	0.0	0.0	0.0	5.146
NNE	0.027	0.800	2.361	1.160	0.970	0.140	0.0	0.0	0.0	4.978
NE	0.003	0.090	0.420	0.090	0.0	0.0	0.0	0.0	0.0	0.603
ENE	0.005	0.140	0.550	0.0	0.0	0.0	0.0	0.0	0.0	0.195
E	0.009	0.280	0.350	0.0	0.0	0.0	0.0	0.0	0.0	0.339
ESE	0.009	0.280	0.550	0.0	0.0	0.0	0.0	0.0	0.0	0.339
SE	0.011	0.330	0.190	0.090	0.0	0.0	0.0	0.0	0.0	0.621
SSE	0.005	0.140	0.610	0.570	0.570	1.130	0.190	0.0	0.0	3.216
S	0.009	0.280	1.040	0.750	0.570	0.710	0.090	0.0	0.0	3.450
SSW	0.017	0.520	2.361	1.130	0.660	0.750	0.0	0.0	0.0	5.438
SW	0.011	0.330	2.401	1.841	0.850	0.350	0.0	0.0	0.0	5.812
WSW	0.0	0.0	0.850	0.280	0.0	0.0	0.0	0.0	0.0	1.130
W	0.005	0.140	0.420	0.190	0.0	0.0	0.050	0.0	0.0	0.805
WNW	0.011	0.330	0.330	0.350	0.0	0.0	0.0	0.0	0.0	1.051
NW	0.005	0.140	0.380	0.240	0.190	0.190	0.0	0.0	0.0	1.145
NNW	0.009	0.280	0.710	0.520	0.190	0.150	0.0	0.0	0.0	1.759
TOTALS	0.141	4.221	14.723	8.632	4.441	3.541	0.330	0.0	0.0	36.029

STABILITY CLASS F

---

WIND SPEEDS IN METERS PER SECOND FROM THE SECTORS INDICATED

SECTOR	0.13	0.45	1.10	1.99	2.90	4.45	6.91	9.59	13.00	TOTALS
N	0.0	0.330	3.491	0.280	0.050	0.0	0.0	0.0	0.0	4.151
NNE	0.0	0.520	3.911	0.420	0.0	0.0	0.0	0.0	0.0	4.851
NE	0.0	0.330	0.900	0.0	0.0	0.0	0.0	0.0	0.0	1.230
ENE	0.0	0.140	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.190
E	0.0	0.050	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.100
ESE	0.0	0.090	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.140
SE	0.0	0.050	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.100
SSE	0.0	0.190	0.330	0.0	0.0	0.0	0.0	0.0	0.0	0.520
S	0.0	0.0	0.380	0.090	0.0	0.0	0.0	0.0	0.0	0.470
SSW	0.0	0.050	0.940	0.330	0.0	0.0	0.0	0.0	0.0	1.320
SW	0.0	0.050	0.710	0.280	0.0	0.0	0.0	0.0	0.0	1.040
WSW	0.0	0.090	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.140
W	0.0	0.050	0.190	0.050	0.0	0.0	0.0	0.0	0.0	0.290
WNW	0.0	0.0	0.140	0.140	0.0	0.0	0.0	0.0	0.0	0.280
NW	0.0	0.0	0.140	0.190	0.0	0.0	0.0	0.0	0.0	0.330
NNW	0.0	0.190	0.750	0.420	0.0	0.0	0.0	0.0	0.0	1.360
TOTALS	0.0	2.130	12.133	2.200	0.050	0.0	0.0	0.0	0.0	16.514



TABLE 7

SEQUOYAH NUCLEAR PLANT - INDIVIDUAL DOSES FROM GASEOUS EFFLUENTS  
FIRST QUARTER 1982

<u>Effluent</u>	<u>Pathway</u>	<u>Guideline*</u>	<u>Point</u>	<u>Dose</u>
Noble gases	T Air dose	10	Max. Exp. <sup>1</sup>	$2.4 \times 10^{-2}$ mrad
	β Air dose	20	Max. Exp. <sup>1</sup>	$1.3 \times 10^{-1}$ mrad
	Total body <sup>2</sup>	5	Residence <sup>3</sup>	$1.6 \times 10^{-2}$ mrem
	Skin <sup>2</sup>	15	Residence <sup>3</sup>	$3.2 \times 10^{-2}$ mrem
Iodines/ particulates				
	Bone (critical organ)	15	Real Pathway <sup>4</sup>	$1.3 \times 10^{-2}$ mrem

Breakdown of Iodine/Particulate Exposures (mrem)

	<u>Child</u>	<u>Adult</u>
Beef ingestion <sup>5</sup>	$1.5 \times 10^{-5}$	$1.8 \times 10^{-5}$
Inhalation	$4.5 \times 10^{-5}$	$3.0 \times 10^{-5}$
Vegetable ingestion	$1.3 \times 10^{-2}$	$5.9 \times 10^{-3}$
Ground contamination	$1.3 \times 10^{-8}$	$1.3 \times 10^{-8}$
Total	$1.3 \times 10^{-2}$	$5.9 \times 10^{-3}$

\*These are the annual guidelines per unit defined by Appendix I to 10 CFR 50.

1. Maximum exposure point is at 1,840 meters in the SSW sector.
2. Dose from air submersion.
3. Receptor is at 2,250 meters in the SSW sector.
4. Real pathway location is at 2,750 meters in the SSW sector.
5. Maximum exposure point is at 2,600 meters in the NNE sector.

TABLE 8

SEQUOYAH NUCLEAR PLANT - INDIVIDUAL DOSES FROM GASEOUS EFFLUENTS  
SECOND QUARTER 1982

<u>Effluent</u>	<u>Pathway</u>	<u>Guideline*</u>	<u>Point</u>	<u>Dose</u>
Noble gases	γ Air dose	10	Max. Exp. <sup>1</sup>	$1.6 \times 10^{-1}$ mrad
	β Air dose	20	Max. Exp. <sup>1</sup>	$7.1 \times 10^{-1}$ mrad
	Total body <sup>2</sup>	5	Residence <sup>3</sup>	$1.3 \times 10^{-1}$ mrem
	Skin <sup>2</sup>	15	Residence <sup>3</sup>	$2.5 \times 10^{-1}$ mrem
Iodines/ particulates				
	GI Tract (critical organ)	15	Real Pathway <sup>4</sup>	$1.2 \times 10^{-1}$ mrem

Breakdown of Iodine/Particulate Exposures (mrem)

	<u>Teen</u>	<u>Adult</u>
Beef ingestion <sup>5</sup>	$4.0 \times 10^{-3}$	$7.6 \times 10^{-3}$
Inhalation	$7.8 \times 10^{-4}$	$8.8 \times 10^{-4}$
Vegetable ingestion	$1.0 \times 10^{-1}$	$1.0 \times 10^{-1}$
Ground contamination	$1.5 \times 10^{-2}$	$1.5 \times 10^{-2}$
Total	$1.2 \times 10^{-1}$	$1.2 \times 10^{-1}$

\*These are the annual guidelines per unit defined by Appendix I to 10 CFR 50.

1. Maximum exposure point is at 730 meters in the NNW sector.
2. Dose from air submersion.
3. Receptor is at 781 meters in the NNW sector.
4. Real pathway location is at 1,344 meters in the N sector.
5. Maximum exposure point is at 688 meters in the NW sector.

TABLE 9

SEQUOYAH NUCLEAR PLANT - INDIVIDUAL DOSES FROM GASEOUS EFFLUENTS  
THIRD QUARTER 1982

<u>Effluent</u>	<u>Pathway</u>	<u>Guideline*</u>	<u>Point</u>	<u>Dose</u>
Noble gases	T Air dose	10	Max. Exp. <sup>1</sup>	$2.0 \times 10^{-1}$ mrad
	$\beta$ Air dose	20	Max. Exp. <sup>1</sup>	$1.1 \times 10^{+0}$ mrad
	Total body <sup>2</sup>	5	Residence <sup>3</sup>	$9.5 \times 10^{-2}$ mrem
	Skin <sup>2</sup>	15	Residence <sup>3</sup>	$2.0 \times 10^{-1}$ mrem
Iodines/ particulates				
	Thyroid (critical organ)	15	Real Pathway <sup>4</sup>	$2.9 \times 10^{-3}$ mrem

Breakdown of Iodine/Particulate Exposures (mrem)

	<u>Child</u>	<u>Adult</u>
Vegetable ingestion	$2.4 \times 10^{-3}$	$1.1 \times 10^{-3}$
Beef ingestion <sup>5</sup>	$1.1 \times 10^{-5}$	$1.0 \times 10^{-5}$
Inhalation	$4.4 \times 10^{-4}$	$2.2 \times 10^{-4}$
Ground contamination	$5.2 \times 10^{-7}$	$5.2 \times 10^{-7}$
Total	$2.9 \times 10^{-3}$	$1.3 \times 10^{-3}$

\*These are the annual guidelines per unit defined by Appendix I to 10 CFR 50.

1. Maximum exposure point is at 1,570 meters in the S sector.
2. Dose from air submersion.
3. Receptor is at 2,375 meters in the S sector.
4. Maximum exposure point is at 1,344 meters in the N sector.
5. Maximum exposure point is at 688 meters in the NW sector.

TABLE 10

SEQUOYAH NUCLEAR PLANT - INDIVIDUAL DOSES FROM GASEOUS EFFLUENTS  
FOURTH QUARTER 1982

<u>Effluent</u>	<u>Pathway</u>	<u>Guideline*</u>	<u>Point</u>	<u>Dose</u>
Noble gases	γ Air dose	10	Max. Exp. <sup>1</sup>	$3.6 \times 10^{-2}$ mrad
	β Air dose	20	Max. Exp. <sup>1</sup>	$2.0 \times 10^{-1}$ mrad
	Total body <sup>2</sup>	5	Residence <sup>3</sup>	$2.8 \times 10^{-2}$ mrem
	Skin <sup>2</sup>	15	Residence <sup>3</sup>	$5.8 \times 10^{-2}$ mrem
Iodines/ particulates				
	Thyroid (critical organ)	15	Real Pathway <sup>4</sup>	$7.7 \times 10^{-3}$ mrem

Breakdown of Iodine/Particulate Exposures (mrem)

	<u>Child</u>	<u>Adult</u>
Vegetable ingestion	$5.3 \times 10^{-3}$	$2.5 \times 10^{-3}$
Beef ingestion <sup>5</sup>	$4.0 \times 10^{-5}$	$3.6 \times 10^{-5}$
Inhalation	$1.4 \times 10^{-3}$	$6.7 \times 10^{-4}$
Ground contamination	$9.4 \times 10^{-4}$	$9.4 \times 10^{-4}$
Total	$7.7 \times 10^{-3}$	$4.1 \times 10^{-3}$

\*These are the annual guidelines per unit defined by Appendix I to 10 CFR 50.

1. Maximum exposure point is at 730 meters in the NNW sector.
2. Dose from air submersion.
3. Receptor is at 781 meters in the NNW sector.
4. Receptor is located at 1,344 meters in the N sector.
5. Pathway is located at 1,524 meters in the NNW sector.

TABLE 11

SEQUOYAH NUCLEAR PLANT -  
GASEOUS EFFLUENT POPULATION DOSES  
FIRST QUARTER 1982

	liver					bone				
	INFANT	CHILD	TEEN	ADULT	TOTALS	INFANT	CHILD	TEEN	ADULT	TOTALS
SUBMERSION	3.34E-03	2.09E-02	1.33E-02	6.14E-02	9.83E-02	3.34E-03	2.09E-02	1.33E-02	6.14E-02	9.38E-02
GROUND	1.71E-09	1.07E-08	6.77E-07	3.15E-08	5.06E-08	1.71E-09	1.07E-08	6.79E-09	3.15E-08	5.06E-08
INHALATION	1.74E-08	2.23E-07	7.42E-08	3.17E-07	6.52E-07	5.71E-06	1.30E-04	5.96E-05	2.57E-04	4.52E-04
COW MILK	5.30E-08	1.35E-07	4.07E-08	1.37E-07	3.66E-07	2.26E-05	1.28E-04	3.94E-05	1.66E-04	3.56E-04
BEEF INGESTION	0.0	4.59E-09	2.20E-09	1.19E-08	1.87E-08	0.0	2.43E-05	1.18E-05	8.05E-05	1.16E-04
VEG INGESTION	0.0	4.60E-08	2.24E-08	1.15E-07	1.83E-07	0.0	3.61E-04	1.80E-04	1.16E-03	1.70E-03
TOTAL MAN-REM	3.34E-03	2.09E-02	1.33E-02	6.14E-02	9.86E-02	3.37E-03	2.15E-02	1.35E-02	6.31E-02	1.01E-01

SECOND QUARTER 1982

	g.i. tract					lung				
	INFANT	CHILD	TEEN	ADULT	TOTALS	INFANT	CHILD	TEEN	ADULT	TOTALS
SUBMERSION	1.73E-02	1.04E-01	6.47E-02	3.14E-01	5.13E-01	1.73E-02	1.04E-01	6.47E-02	3.14E-01	5.13E-01
GROUND	1.34E-03	8.37E-03	5.33E-03	2.47E-02	3.47E-02	1.40E-03	8.37E-03	5.33E-03	2.47E-02	3.47E-02
INHALATION	4.10E-05	1.17E-03	1.54E-03	7.31E-03	9.42E-03	2.93E-03	3.43E-02	2.00E-02	6.47E-02	1.26E-01
COW MILK	1.07E-04	7.44E-04	6.54E-04	3.34E-03	4.47E-03	0.0	0.0	0.0	0.0	0.0
BEEF INGESTION	0.0	3.90E-03	5.05E-03	4.25E-02	5.14E-02	0.0	0.0	0.0	0.0	0.0
VEG INGESTION	0.0	3.00E-03	3.43E-03	3.13E-02	3.82E-02	0.0	0.0	0.0	0.0	0.0
TOTAL MAN-REM	1.89E-02	1.25E-01	8.51E-02	4.28E-01	6.57E-01	2.16E-02	1.54E-01	9.40E-02	4.08E-01	6.78E-01

TABLE 11 (CONT'D)  
THIRD QUARTER 1982

	THYROID					TOTAL BODY				
	INFANT	CHILD	TEEN	ADULT	TOTALS	INFANT	CHILD	TEEN	ADULT	TOTALS
SUBMERSION	1.63E-02	1.02E-01	6.47E-02	3.00E-01	4.82E-01	1.63E-02	1.02E-01	6.47E-02	3.00E-01	4.82E-01
GROUND	3.27E-08	2.04E-07	1.30E-07	6.02E-07	9.68E-07	3.27E-08	2.04E-07	1.30E-07	6.02E-07	9.68E-07
INHALATION	1.05E-04	1.06E-03	4.11E-04	1.57E-03	3.15E-03	1.59E-07	1.92E-06	7.84E-07	2.84E-06	5.69E-06
COW MILK	5.30E-04	1.36E-03	3.61E-04	1.37E-03	3.61E-03	7.11E-07	2.34E-06	6.66E-07	2.39E-06	6.11E-06
REEF INGESTION	0.0	4.05E-05	1.72E-05	1.05E-04	1.62E-04	0.0	7.08E-08	3.21E-08	1.85E-07	2.89E-07
VEG INGESTION	0.0	4.08E-04	1.75E-04	1.01E-03	1.59E-03	0.0	7.21E-07	3.29E-07	1.80E-06	2.85E-06
TOTAL MAN-REM	1.69E-02	1.04E-01	6.56E-02	3.04E-01	4.91E-01	1.63E-02	1.02E-01	6.47E-02	3.00E-01	4.82E-01

FOURTH QUARTER 1982

	THYROID					TOTAL BODY				
	INFANT	CHILD	TEEN	ADULT	TOTALS	INFANT	CHILD	TEEN	ADULT	TOTALS
SUBMERSION	3.92E-03	2.44E-02	1.56E-02	7.21E-02	1.16E-01	3.92E-03	2.44E-02	1.56E-02	7.21E-02	1.16E-01
GROUND	1.01E-04	6.31E-04	4.02E-04	1.86E-03	3.00E-03	1.01E-04	6.31E-04	4.02E-04	1.86E-03	3.00E-03
INHALATION	4.84E-04	4.91E-03	1.88E-03	7.13E-03	1.44E-02	1.66E-06	1.52E-05	6.31E-06	2.39E-05	4.65E-05
COW MILK	1.67E-03	4.29E-03	1.14E-03	4.31E-03	1.14E-02	8.93E-06	3.45E-05	1.07E-05	4.41E-05	9.82E-05
BEEF INGESTION	0.0	1.51E-04	6.41E-05	3.90E-04	6.06E-04	0.0	1.29E-04	5.53E-05	3.23E-04	5.07E-04
VEG INGESTION	0.0	1.52E-03	6.54E-04	3.77E-03	5.94E-03	0.0	9.91E-05	4.28E-05	2.34E-04	3.76E-04
TOTAL MAN-REM	6.18E-03	3.59E-02	1.97E-02	8.95E-02	1.51E-01	4.03E-03	2.53E-02	1.61E-02	7.45E-02	1.20E-01



TABLE 12  
 LIQUID EFFLUENT DOSES  
 SEQUOYAH NUCLEAR PLANT ROUTINE RELEASES  
 FIRST QUARTER 1982

	BONE =====	GI TRACT == =====	THYROID =====	TOTAL BODY =====	LIVER =====	SKIN =====
<b>I. WATER INGESTION AT ICI AMERICA, INC. (VAAP)</b>						
A. MAXIMUM INDIVIDUAL CHILD (MREM)	8.1E-03	2.5E-03	2.5E-03	2.1E-03	2.1E-03	2.1E-03
B. MAXIMUM INDIVIDUAL ADULT (MREM)	3.4E-03	2.7E-03	1.6E-03	1.4E-03	1.4E-03	1.4E-03
C. TENNESSEE RIVER POPULATION (MAN-REM)	4.5E-01	2.5E-01	1.8E-01	1.6E-01	1.6E-01	1.6E-01
<b>II. FISH INGESTION FROM CHICKAMAUGA LAKE BELOW SQN</b>						
A. MAXIMUM INDIVIDUAL CHILD (MREM)	3.8E-02	1.0E-02	2.2E-03	2.1E-03	4.5E-03	2.1E-03
B. MAXIMUM INDIVIDUAL ADULT (MREM)	2.7E-02	3.9E-03	3.3E-03	3.2E-03	4.7E-03	3.2E-03
C. TENNESSEE RIVER POPULATION (MAN-REM)	2.0E+00	2.4E+00	2.2E-01	2.1E-01	3.5E-01	2.1E-01
<b>III. RECREATION AT CHICKAMAUGA LAKE BELOW SQN</b>						
A. SHORELINE INDIVIDUAL (MREM) POPULATION (MAN-REM)	8.4E-02 6.3E-02	7.4E-02 5.3E-02	6.7E-02 4.8E-02	7.8E-02 5.6E-02	6.6E-02 4.7E-02	9.3E-02 6.7E-02
B. IN-WATER INDIVIDUAL (MREM) POPULATION (MAN-REM)	1.4E-03 2.1E-04	1.3E-03 1.8E-04	1.3E-03 1.7E-04	1.3E-03 1.8E-04	1.1E-03 1.6E-04	1.5E-03 2.2E-04
C. ABOVE-WATER INDIVIDUAL (MREM) POPULATION (MAN-REM)	1.4E-03 5.5E-04	1.3E-03 4.7E-04	1.3E-03 4.4E-04	1.2E-03 4.8E-04	1.1E-03 4.2E-04	1.5E-03 5.8E-04
<b>IV. TOTAL</b>						
A. MAXIMUM INDIVIDUAL CHILD (MREM)	1.4E-01	9.0E-02	7.4E-02	6.4E-02	7.4E-02	1.0E-01
B. MAXIMUM INDIVIDUAL ADULT (MREM)	1.2E-01	1.2E-01	7.4E-02	6.5E-02	7.4E-02	1.3E-01
C. TENNESSEE RIVER POPULATION (MAN-REM)	2.5E+00	2.8E+00	4.4E-01	4.3E-01	5.6E-01	4.4E-01

TABLE 13  
LIQUID EFFLUENT DOSSES  
SEQUOYAH NUCLEAR PLANT ROUTINE RELEASES  
SECOND QUARTER 1982

	BONE ====	GI TRACT ==	THYROID =====	TOTAL BODY =====	LIVER =====	SKIN =====
<b>I. WATER INGESTION AT ICI AMERICA, INC. (VAAP)</b>						
A. MAXIMUM INDIVIDUAL CHILD (MREM)	3.5E-02	1.4E-02	3.7E-02	1.5E-02	1.7E-02	1.5E-02
B. MAXIMUM INDIVIDUAL ADULT (MREM)	1.9E-02	1.2E-02	2.2E-02	1.1E-02	1.2E-02	1.1E-02
C. TENNESSEE RIVER POPULATION (MAN-REM)	2.2E+00	1.3E+00	2.1E+00	1.2E+00	1.3E+00	1.2E+00
<b>II. FISH INGESTION FROM CHICKAMAUGA LAKE BELOW SON</b>						
A. MAXIMUM INDIVIDUAL CHILD (MREM)	5.9E-01	1.5E-02	3.7E-02	3.2E-02	1.0E-01	3.2E-02
B. MAXIMUM INDIVIDUAL ADULT (MREM)	4.1E-01	4.5E-02	7.4E-02	6.9E-02	1.0E-01	6.9E-02
C. TENNESSEE RIVER POPULATION (MAN-REM)	2.1E+01	1.5E+00	4.3E+00	4.2E+00	7.6E+00	4.2E+00
<b>III. RECREATION AT CHICKAMAUGA LAKE BELOW SON</b>						
A. SHORELINE INDIVIDUAL (MREM) POPULATION (MAN-REM)	6.9E-02 1.4E-01	5.8E-02 1.2E-01	5.3E-02 1.1E-01	6.1E-02 1.3E-01	5.1E-02 1.1E-01	7.3E-02 1.5E-01
B. IN-WATER INDIVIDUAL (MREM) POPULATION (MAN-REM)	8.6E-04 3.2E-04	7.6E-04 2.6E-04	7.5E-04 2.3E-04	7.5E-04 2.7E-04	6.6E-04 2.3E-04	9.0E-04 3.3E-04
C. ABOVE-WATER INDIVIDUAL (MREM) POPULATION (MAN-REM)	8.4E-04 8.4E-04	7.5E-04 6.7E-04	7.4E-04 6.1E-04	7.4E-04 7.1E-04	6.4E-04 6.1E-04	8.8E-04 8.7E-04
<b>IV. TOTAL</b>						
A. MAXIMUM INDIVIDUAL CHILD (MREM)	6.8E-01	9.0E-02	1.3E-01	1.1E-01	1.7E-01	1.2E-01
B. MAXIMUM INDIVIDUAL ADULT (MREM)	5.0E-01	1.2E-01	1.5E-01	1.4E-01	1.7E-01	1.5E-01
C. TENNESSEE RIVER POPULATION (MAN-REM)	2.3E+01	2.9E+00	6.5E+00	5.5E+00	9.1E+00	5.5E+00

TABLE 14  
LIQUID EFFLUENT DOSES  
SEQUOYAH NUCLEAR PLANT ROUTINE RELEASES  
THIRD QUARTER 1982

	BONE ====	GI TRACT == =====	THYROID =====	TOTAL BODY =====	LIVER =====	SKIN =====
<b>I. WATER INGESTION AT ICI AMERICA, INC. (VAAP)</b>						
A. MAXIMUM INDIVIDUAL CHILD (MREM)	1.2E-02	7.8E-03	3.7E-02	7.4E-03	8.5E-03	7.4E-03
B. MAXIMUM INDIVIDUAL ADULT (MREM)	6.6E-03	7.3E-03	2.0E-02	5.7E-03	5.8E-03	5.7E-03
C. TENNESSEE RIVER POPULATION (MAN-REM)	8.3E-01	7.7E-01	2.1E+00	6.6E-01	7.0E-01	6.6E-01
<b>II. FISH INGESTION FROM CHICKAMAUGA LAKE BELOW SQN</b>						
A. MAXIMUM INDIVIDUAL CHILD (MREM)	1.4E-01	4.0E-03	1.8E-02	1.2E-02	4.7E-02	1.2E-02
B. MAXIMUM INDIVIDUAL ADULT (MREM)	9.9E-02	1.3E-02	4.3E-02	3.6E-02	5.1E-02	3.6E-02
C. TENNESSEE RIVER POPULATION (MAN-REM)	7.2E+00	7.0E-01	3.1E+00	2.8E+00	4.9E+00	2.8E+00
<b>III. RECREATION AT CHICKAMAUGA LAKE BELOW SQN</b>						
A. SHORELINE INDIVIDUAL (MREM) POPULATION (MAN-REM)	2.0E-01 6.6E-01	1.7E-01 5.6E-01	1.5E-01 5.0E-01	1.8E-01 5.8E-01	1.5E-01 4.9E-01	2.1E-01 7.0E-01
B. IN-WATER INDIVIDUAL (MREM) POPULATION (MAN-REM)	1.3E-03 1.4E-03	9.7E-04 1.1E-03	8.4E-04 9.2E-04	1.1E-03 1.1E-03	9.0E-04 9.8E-04	1.3E-03 1.4E-03
C. ABOVE-WATER INDIVIDUAL (MREM) POPULATION (MAN-REM)	1.2E-03 3.6E-03	9.5E-04 2.8E-03	8.3E-04 2.4E-03	1.0E-03 3.0E-03	8.8E-04 2.6E-03	1.3E-03 3.7E-03
<b>IV. TOTAL</b>						
A. MAXIMUM INDIVIDUAL CHILD (MREM)	3.5E-01	1.8E-01	2.1E-01	2.0E-01	2.1E-01	2.3E-01
B. MAXIMUM INDIVIDUAL ADULT (MREM)	3.1E-01	1.9E-01	2.2E-01	2.2E-01	2.1E-01	2.5E-01
C. TENNESSEE RIVER POPULATION (MAN-REM)	8.7E+00	2.0E+00	5.7E+00	4.1E+00	6.1E+00	4.2E+00

TABLE 15  
LIQUID EFFLUENT DOSES  
SEQUOYAH NUCLEAR PLANT ROUTINE RELEASES  
FOURTH QUARTER 1982

	BONE	GI TRACT	THYROID	TOTAL BODY	LIVER	SKIN
	====	== =====	=====	=====	=====	====
<b>I. WATER INGESTION AT</b>						
ICI AMERICA, INC. (VAAP)						
A. MAXIMUM INDIVIDUAL CHILD (MREM)	7.6E-03	6.3E-03	7.0E-03	3.9E-03	3.0E-03	3.9E-03
B. MAXIMUM INDIVIDUAL ADULT (MREM)	3.3E-03	1.1E-02	3.6E-03	2.1E-03	1.8E-03	2.1E-03
C. TENNESSEE RIVER POPULATION (MAN-REM)	4.4E-01	9.4E-01	4.2E-01	2.6E-01	2.2E-01	2.6E-01
<b>II. FISH INGESTION FROM</b>						
CHICKAMAUGA LAKE BELOW SQN						
A. MAXIMUM INDIVIDUAL CHILD (MREM)	9.6E-02	2.2E-02	6.8E-03	6.1E-03	1.0E-02	6.1E-03
B. MAXIMUM INDIVIDUAL ADULT (MREM)	6.8E-02	9.5E-02	6.3E-03	7.6E-03	1.1E-02	7.6E-03
C. TENNESSEE RIVER POPULATION (MAN-REM)	4.6E+00	5.5E+00	5.9E-01	5.6E-01	8.5E-01	5.6E-01
<b>III. RECREATION AT</b>						
CHICKAMAUGA LAKE BELOW SQN						
A. SHORELINE INDIVIDUAL (MREM)	1.7E+00	1.5E+00	1.3E+00	1.5E+00	1.3E+00	1.8E+00
POPULATION (MAN-REM)	2.6E+00	2.3E+00	2.1E+00	2.4E+00	2.0E+00	2.8E+00
B. IN-WATER INDIVIDUAL (MREM)	5.0E-03	4.0E-03	3.5E-03	4.3E-03	3.6E-03	5.2E-03
POPULATION (MAN-REM)	2.7E-03	2.2E-03	1.9E-03	2.3E-03	2.0E-03	2.8E-03
C. ABOVE-WATER INDIVIDUAL (MREM)	4.9E-03	3.9E-03	3.4E-03	4.2E-03	3.5E-03	5.1E-03
POPULATION (MAN-REM)	7.1E-03	5.7E-03	5.1E-03	6.1E-03	5.2E-03	7.5E-03
<b>IV. TOTAL</b>						
A. MAXIMUM INDIVIDUAL CHILD (MREM)	1.2E+00	1.5E+00	1.4E+00	1.5E+00	1.3E+00	1.8E+00
B. MAXIMUM INDIVIDUAL ADULT (MREM)	1.9E+00	1.6E+00	1.4E+00	1.5E+00	1.3E+00	1.8E+00
C. TENNESSEE RIVER POPULATION (MAN-REM)	7.7E+00	8.8E+00	3.1E+00	3.2E+00	3.1E+00	3.6E+00

TABLE 16  
SEQUOYAH NUCLEAR PLANT  
THREE-YEAR SUMMARY OF QUARTERLY DOSES

Year	Quarter	Air-γ (mrad)	Air-β (mrad)	Air Submersion		Real Pathway Max. Organ (mrem)	Liquids Effluents	
				Skin (mrem)	T.B. (mrem)		T.B. (mrem)	Max. Organ (mrem)
1980	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2	$1.8 \times 10^{-11}$	$1.8 \times 10^{-7}$	0	0	0.02 bone	0.02	0.06 GIT
	3	0.01	0.01	0.02	0.01	$3.1 \times 10^{-7}$ GIT	0.35	9.1 bone*
	4	0.21	1.3	0.27	0.12	0.17 bone	0.53	14 bone*
1981	1	0.23	1.3	0.35	0.18	$2.8 \times 10^{-4}$ GIT	0.28	6.9 bone
	2	0.06	0.28	0.10	0.05	0.03 Thyr.	0.06	0.34 bone**
	3	0.28	1.5	0.44	0.22	$6.4 \times 10^{-4}$ Thyr.	0.16	0.99 bone
	4	0.12	0.68	0.16	0.08	$3.3 \times 10^{-4}$ bone	0.03	0.30 bone
1982	1	0.02	0.13	0.03	0.02	0.01 bone	0.09	0.14 bone
	2	0.16	0.71	0.25	0.13	0.12 GIT	0.14	0.68 bone
	3	0.20	1.10	0.20	0.10	0.003 Thyr.	0.22	0.35 bone
	4	0.04	0.20	0.06	0.03	0.008 Thyr.	1.5	1.8 bone

\* The validity of these doses is discussed in TVA report RH-81-2-SQ1, "Radiological Impact Assessment, Sequoyah Nuclear Plant, July - December 1980."

\*\*During 1st Quarter 1981, operation of additional radwaste equipment was initiated to reduce P-32 releases.

## ENCLOSURE 3

TABLE I-1GTRR 5 Mw

October 22, 1971

NUCLEAR INSTRUMENTATION

<u>Instrument Name and Function</u>	<u>Indicator Location</u>	<u>Chamber Type and Location</u>	<u>Scram</u>		<u>Alarm</u>	
			<u>Circuit Designation</u>	<u>Annunciator Plate</u>	<u>Alarm Circuit</u>	<u>Annunciator Plate</u>
Flux Amplifier No.1 power range monitor	CR	UIC (H18)	a. Power Trip No.1	Power Trip No.1		
			b. Trouble Sig. -Low Voltage -Channel Check Pulse	Low Ion Chamber Voltage		
			c. Calib. Sw.	Calib. Sw.		
Flux Amplifier No.2 power range monitor	CR	UIC (H17)	a. Power Trip No.2	Power Trip No.2		
			b. Trouble Sig. -Low Voltage -Channel Check Pulse	Low Ion Chamber Voltage		
			c. Calib. Sw.	Calib. Sw.		
Log N-Period Ampli- fier No.1 intermediate range monitor	CR	CIC (H22B)	Pos. Period Neg. Period Ion Chamber Volt.	Pos. Period Neg. Period Low Ion Chamber Volt.		
			Chassis Intlk. Calib. Sw.	Calib. Sw.		
Log N-Period Ampli- fier No.2 intermediate range monitor	CR	CIC (H21B)	Pos. Period Neg. Period Ion Chamber Volt.	Pos. Period Neg. Period Low Ion Chamber Volt.		
			Chassis Intlk. Calib. Sw.	Calib. Sw.		