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Plutonium in Autopsy Tissue

by

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Work partially supported by the US AEC Division of Biology and Medicine.

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ABSTRACT

Since 1959, selected tissues from deceased humans have been examined for the presence of plutonium. The original purpose was to correlate plutonium body burden calculated from urine assay and actual burden determined by analysis of autopsy materials. The tissues have provided data on plutonium deposition in man resulting from general distribution of plutonium in the environment through global fallout and that resulting from plutonium fabrication or research and development operations.

Lung, liver, kidney, lymph, and skeletal tissue are the principal materials examined. The analytical data, the significance of the findings, and the considerable uncertainties in the radiochemical analysis and calculations are discussed. The data will be completely evaluated in other Los Alamos Scientific Laboratory reports.

The results are contained in the appendixes to this report. Median concentrations in the organs and tissues of a general population (not occupationally exposed) were (each number represents dis/min Pu per kg): liver,1.4; lung, 0.8; lymph nodes, 3.0; bone, 0.6; and kidney, 0.6. Plutonium concentration is generally higher in the tissues of those who have been occupationally exposed to plutonium; the concentration obviously depends upon the nature of the exposure and its severity and duration.

I. INTRODUCTION

Since 1959, the Los Alamos Scientific Laboratory Industrial Hygiene Group has collected necropsy material for analysis. The analysis consists of plutonium measurement by variations of the methods routinely used in the bioassay program to determine plutonium in the urine of employees potentially exposed to plutonium.

The original intent of our tissue-analysis effort was to seek confirmation or denial of the validity of estimates of plutonium body burdens by urinalysis. In at least one notable case,[1] confirmation of estimates of body burden made during life was obtained by analysis of tissues from the deceased. The ubiquity of plutonium in the environment has since led us to examine autopsy material from the general population, to learn whether plutonium exists in detectable amounts in the tissues of individuals from that population.

Harley[2] has estimated that the testing of nuclear weapons distributed ~300 kCi of ^{238}Pu over the surface of the earth before the beginning of the moratorium. Tests by France and China have added about 5%. More recently, ^{238}Pu became detectable in the environment because of the burnup of a SNAP generator. It is therefore expected that plutonium can be detected in the tissue of nonoccupationally exposed humans. Tissue data are limited because of the various tissue-analysis problems that will be discussed.

Magno[3] reported an average of 0.14 to 1.1 pCi of ^{239}Pu/kg wet weight in the lungs, with the bone

concentrations ranging from 0.04 to 0.12 pCi/kg. Tarasov et al.[4] tried to correlate the measured air concentration in each year with the lung concentration of humans over the age of 50 who did not suffer from any pulmonary pathology. Their data suggest that pulmonary deposition is consistent with air concentration. They gave:

0.15 ± 0.1 pCi of ^{239}Pu/kg in the lung for 1965, and
0.11 ± 0.2 pCi of ^{239}Pu/kg in the lung for 1966.

The concentrations in the tracheobronchial lymph nodes for the same period were 6.85 ± 8.5 and 9.6 ± 7.6 pCi/kg, respectively. Takizawa[5] analyzed two to five cases per year from the Niigata District in Japan from 1960 to 1967; his analyses showed that the lung contained 0.012 to 0.038 pCi/kg. Takizawa stated that he found 2.36 pCi ^{239}Pu/kg in the genital organs of a 70-yr-old woman and 6.3 pCi/kg in her bone. Krey et al.[6] reported the following results for a group of cases.

PLUTONIUM CONCENTRATION

	(dis/min)/kg
Lung	1.74 ± 0.17
Lymph Node	11 ± 4
Kidney	0.99 ± 0.22
Gonad	7.9 ± 1.9

They concluded that the lung and lymph-node deposition confirmed values that might be calculated from airborne contamination.

Because of the variable values reported above, the AEC provided a number of samples from metropolitan New York City so that we might confirm or deny the plutonium concentrations previously reported.

II. TISSUE SAMPLES

A. Sample Selection

The local pathologist provides samples from as many autopsies as possible. No attempt is made to exclude any case. Therefore, we receive a number of samples from outside the geographical area as a result of traumatic accidents occurring within the jurisdiction of the pathologist. Most of the samples, however, are from residents of Los Alamos, New Mexico. This is a single-industry town, with a population of approximately 14,000, containing a research laboratory. The industry includes a plutonium-research development laboratory. Studies of the plutonium in the environs of this laboratory have been documented.[7-9]

A special series of samples were collected in New York City through the cooperation of Dr. John Harley of the New York Operations Office of the A.E.C. These samples were from males and were received by the medical examiner's office. Generally only small weights of each organ were made available, but the gonads were included. The limited mass available for these analyses permitted detection of ~0.03 dis/min of plutonium in the aliquot, or a lower limit of 1.5 (dis/min)/kg if a 20-g sample was used.

Since June 1970, this program has been expanded to include a number of other areas, using a similar selection of cases.

B. Sample Storage

The pathologist selects the tissues and packages each separately in a plastic bag. These tissues are held in a freezer until released by the pathologist for chemical processing. A small section of the lung, liver, kidney, and lymph node is preserved for analysis for other metals.

C. Autopsy Samples

Lung. Both lungs are normally received and treated without special preparation. Small amounts of tissue other than lung normally accompany the sample. No attempt is made to separate the lower bronchial lymph nodes or other lymphatic tissue from the lung tissue itself. The weight recorded is the weight actually received at the time of preparation and represents both lungs. The amount of plutonium in the lung includes that in the pulmonary lymph tissue.

Liver. The whole organ is normally received and prepared for chemical analysis.

Kidney. At least one kidney has been used in each case. Every attempt is made to obtain both kidneys for analysis.

Gonads. The gonads were included in samples received from New York City and Denver, Colorado.

Lymph Nodes The lymphatic tissue of the tracheobronchial region is received for analysis. Usually it includes only the lymph nodes of that region and is only a small part of the total lymph-node mass. In a few cases, adnexal tissue is included.

Bone. Unless otherwise designated, all bone samples are wedges from the 4th and 5th lumbar vertebrae. The bone weights include only a small amount of adnexal tissue. If other types of bones are available, they are analyzed separately.

III. ANALYTICAL PROCEDURE

A. Method

1. Each tissue is placed in an appropriate vessel for dry ashing. The liver and lung are placed in porcelain evaporating dishes, and the other tissues are placed in Pyrex beakers of appropriate size. Since June of 1971, all tissues have been air dried at 100 to 150°C to remove excess water.

2. The samples are placed on shelves in a muffle furnace to prevent direct heating of the vessel. The temperature-programed muffle furnace is operated from 200 to 500°C, reaching maximum temperature in 24 h. The samples are held an additional 24 h at 500°C partly to whiten them.

3. After the samples cool in the furnace, the liver and lung residues are transferred to 800-cm^3 beakers. The vessels are thoroughly washed with 2*N* nitric acid, and the washing, combined with the residue, is evaporated to dryness.

4. Each residue is heated repeatedly with nitric and hydrofluoric acid until it remains white. From 1968 to 1971, we used hydrogen peroxide in conjunction with nitric acid to speed the ashing process, but because of concentrated hydrogen peroxide's high metal content, we no longer use it. Excess HF is removed by repeated evaporation with nitric acid.

5. Each residue is finally dissolved in 2*N* nitric acid and transferred to a volumetric flask. Except for the lung and bone samples, the procedure brings about complete dissolution of the residue. The following volumetric flasks are normally used for each sample.

Liver	1000-cm^3	Lymph Nodes	50-cm^3
Lung	1000-cm^3	Bone	250-cm^3
Kidney	100-cm^3	Gonads	50-cm^3

6. Each sample is mixed well and stored pending analysis of groups of samples.

7. At the time of analysis, aliquots are taken from each sample as indicated in Table I. Each aliquot is "spiked" with ^{236}Pu at a level of 2 dis/min and evaporated to dryness, treated with concentrated nitric acid several times, and allowed to evaporate almost to dryness. The salts of the lung and liver are dissolved in 200 cm^3 of 8*N* nitric acid, sodium nitrite is added, and the mixture is allowed to stand overnight before anion-exchange separation.

TABLE I

FRACTIONS ANALYZED

	Through 1969		Since 1970 & Repeats	
Tissue	Aliquot (cm^3)	% of Total	Aliquot (cm^3)	% of Total
Lung	50	5	500	50
Liver	50	5	500	50
Kidney	10	10	50	50
Lymph Node	10	20	10	20
Bone	10	4	50	20

Normally, all the salts except the lung and bone are in solution. These latter two suspensions are shaken before aliquoting as listed above. Most of the tissue salts are in solution after evaporation and redissolution in 8*N* HNO^3. All the salts are treated with hydrofluoric acid, and the excess HF is removed by repeated nitric acid evaporation and treatment with boric acid.

8. Each aliquot is subjected to anion exchange on a Bio-Rad AG 1 x 2 anion-exchange resin, using a modification of the procedure of Campbell and Moss.[10] The 6-mm by 10-cm columns are eluted with dilute hydrochloric acid, and the eluate is evaporated to dryness and prepared for electrodeposition using an acid oxalate electrolyte. The plutonium is electroplated on 1/2-in.-diam stainless steel plates and counted by alpha spectrometry, using a 300-mm^2 silicon-surface barrier detector. The column effluents that do not contain plutonium are saved for possible future use. Each sample is counted for 1000 min with a counter efficiency of 30% and a counter background of 0.004 ± 0.003 counts/min. The ^{239}Pu reagent blank is 0.007 ± 0.004 counts/min, including the ^{236}Pu internal standard.

Until 1967, we analyzed all samples by Schwendiman and Healy's[11] method, using nuclear-track alpha counting, preceded by electrodeposition as stated above. We have reanalyzed many samples from that time which contained analytically significant amounts, using ^{236}Pu tracer added when the aliquot is taken. Schwendiman and Healy's method cannot be used in the presence of added ^{236}Pu tracer. We have also reanalyzed a number of samples of analytical significance using larger aliquots to demonstrate that the plutonium recovery was essentially complete.

B. Replicate Analyses

Our former procedure was to select 50-cm^3 aliquots of a 1000-cm^3 solution of lung or liver tissue for analysis. This is 1/20th of the total weight, or ~50 g of the lung or ~60 g of liver, a quantity satisfactory for a surveillance of occupational-exposure cases. We reanalyzed 15 lung and liver tissue solutions containing measurable amounts of plutonium, using a 500-cm^3 aliquot.

Measurements from analysis of large (500-cm^3) and small (50-cm^3) aliquots indicate that use of the large aliquot reduces the standard deviation of the individual analysis significantly, but also show no statistically significant difference in results obtained from analyzing large or small aliquots of the same solution. Replicate analyses of various tissue-ash solutions analyzed at the same time by the same method indicate good agreement among aliquots. Table II indicates the typical degree of replication.

C. Effect of Salts on Plutonium Recovery

Because our chosen procedure involves an isolation technique (ion exchange) without a preconcentration step, we investigated the effects of normally occurring salts in tissue-sample solutions. We used a solution of bone and lung from a case known to have a detectable plutonium burden for analysis. Each aliquot was evaporated to dryness and made to the same volume for ion-exchange separation. The mass of salt in each solution was determined by weighing an evaporated aliquot. The results are shown in Table III.

Because these results suggest that analysis of unnecessarily large aliquots can lead to low recoveries, we use no more than 50 cm^3 in aliquoting highly concentrated solutions. Each aliquot is evaporated to dryness, treated with nitric acid, and made to 500 cm^3 with 8*N* nitric acid for ion-exchange isolation to reduce the salt concentration. By increasing the total volume of the tissue-salt solution and increasing the column size to 6 mm by 10 cm, we have minimized the effects of high ionic strength noted above.

D. Recovery of Plutonium During Analysis

The use of ^{236}Pu to evaluate the radiochemical separation does not represent an attempt to determine total yield of the overall procedure; accordingly, the tracer is added at the time of aliquotting, not at the time of ashing. The library of tissue solutions is still available for analysis for other nuclides. Examples of tracer recovery are given in Table IV.

TABLE II

TYPICAL REPLICATION OF VALUES
(dis/min per aliquot)

Solution	1	2	3	Mean
A	0.38	0.62	0.36	0.45
B	0.01	0.00	0.02	0.01
C	0.33	0.39	0.53	0.42
D	1.1	1.4	1.2	1.2
E	0.07	0.03	0.11	0.07
F	5.9	7.8	5.3	6.3
G	28	25		26.5
H	38	35	40	38
I	3.5	3.7		3.6
J	0.11	0.10		

TABLE III

EFFECT OF SALTS ON PLUTONIUM RECOVERY

Tissue Solution Analyzed (cm^3)	Bone		Lung	
	Measured Activity (dis/min/cm^3)	Mass of Solids (g)	Measured Activity (dis/min/cm^3)	Mass of Solids (g)
1	0.39	0.058	5.31	0.014
2	0.39	0.117	4.16	0.027
3	0.34	0.175	4.25	0.041
5	0.37	0.292	3.75	0.068
10	0.32	0.584	3.32	0.137
15	0.25	0.876	3.42	0.206
25	0.23	1.46	3.78	0.342
50	0.15	2.92	3.34	0.685

TABLE IV

RECOVERY OF ^{236}Pu FROM TISSUE SOLUTIONS

Tissue	Bone	Liver	Lung	Gonad
No. of Samples	9	9	9	9
Mean Recovery (%)	80.1	74.1	74.1	85.7
Standard Deviation	13.4	18.9	12.3	26.7

The analytical losses after the tissue is ashed are low, and may be estimated from the percentages of recovery given above.

E. Overall Recovery

We spiked beef tissues of the same weight as human organs with ^{236}Pu and used the outlined procedure to ash and analyze the tissue for plutonium. The overall recovery was 87 ± 8%.

F. Observed Losses

Because some insoluble material normally defies dissolution in 2*N* nitric acid, we conducted additional studies. The salts, probably silicates and phosphates, cannot be brought into complete solution at this stage. We used solutions of tissue salts from individuals known to have been occupationally exposed to plutonium in the following study. We examined paired aliquots of the solution and of the insoluble residue in the following manner.

The suspension (in 2*N* nitric acid) was well mixed during aliquoting to produce as homogeneous a mixture as possible. Small aliquots of the suspension were taken and centrifuged. The insoluble portion and the centrifugate were separated and spiked with ^{236}Pu as an internal tracer. Each portion was evaporated to dryness, treated repeatedly with hydrofluoric acid and nitric acid, and finally evaporated repeatedly with nitric acid to remove the excess HF. Any fluoride surviving the evaporation was complexed as the fluoborate, after which the solutions were carried through the ion-exchange procedure and the separated plutonium was counted by alpha spectrometry. The results indicate that the loss by incomplete dissolution of the plutonium from the salts in the procedure *without* repeated HF treatment may be as much as 20%.

IV. RESULTS

All of the results obtained under this program are reported in the appendixes:

Appendix A - Tables of Individual Cases
Appendix B - Cumulative Frequency Distributions
Appendix C - Summary Tables

The tables of individual cases contain the most detailed, properly available information about each case examined. Included are case numbers, assigned by this laboratory and unrelated to any numbers assigned by pathologists or hospitals, occupation at time of death, age, sex, city of residence, and cause of death as described by the pathologist. The cause of death is also described by the HEW Code Number.[12] Laboratory data included are: weight of organ (or tissue) as received; total volume of ash solution; aliquot of ash solution analyzed; disintegrations per minute of plutonium in the aliquot; of plutonium in the total sample, and of plutonium per gram of sample (concentration); and disintegrations per minute per standard organ, calculated for convenience, weights of standard organs having been defined by ICRP Publication 2.[13]

The cumulative frequency distributions (Appendix B) are presented for convenience in viewing the results on a population basis rather than the individual basis used in Appendix A.

The summary tables (Appendix C) are the least detailed, and briefly present the median values (50th percentile) derived from Appendix B.

V. EVALUATION OF RESULTS

The plutonium concentrations in the analyzed tissues cannot be compared directly because the portions of the organs analyzed were never identical. To put the data on a common basis, therefore, we converted the results per aliquot to disintegrations per minute per kilogram and disintegrations per minute per standard organ weight. We used these data to estimate the concentration of plutonium in human tissues per unit of weight for each of the population groups listed in Appendix A.

Because of incomplete knowledge of sample selection, incomplete tissue collection, and uncertainties in the assay, we have not tried to evaluate statistical differences among groups of data, but have chosen to leave the testing to another study involving additional data with better controls.

Histograms of the frequency distribution of the data for each type of tissue from Appendix A were found to be skewed to the right. We therefore assumed that the data are distributed log-normally, and demonstrated the validity of that assumption by plotting the cumulative frequency of the number of samples against the plutonium concentration on logarithmic normal-probability graph paper. The data thus plotted gave acceptable straight-line fits, and these graphs are presented in Appendix B.

Every data point obtained experimentally is included in Appendix B. It is obvious that excluding all those results that were below our detection limit would increase the median unrealistically; therefore, results that were, in fact, below our detection limit are assigned an artificial value of 0.03 (dis/min)/kg simply to aid in the presentation of the data.

This assignment makes the plots flatten at the lower section, consistent with limitations of measurement sensitivity. Similar deviation from the straight-line fit at the upper end is associated with a selection against an upper

limit of sample specification. From the logarithmic-probability plots, we estimated the median, or 50th percentile, data points for each distribution expressed as disintegrations per minute per kilogram. The estimates are shown in Table C-I (Appendix C). The median values for each tissue type and population group suggest that there are no significant differences among the population groups except for the high-potential-exposure group.

Other aspects of the plutonium concentration in human tissue may be obtained from the log-normal probability graphs. We combined the data from Tables A-I through A-III and A-VII into a single unexposed population group and plotted the data for each tissue on log-normal probability graphs. These graphs provided estimates of the median, the 95th percentile, and the 5th percentile. These points include 90% of the results. These data are shown in Table C-II, along with similarly derived estimates of the occupationly exposed groups.

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APPENDIX A

TABLES OF INDIVIDUAL CASES

The data tabulations are divided into convenient population categories based on residential area and occupational exposure.

TABLE A-I. Los Alamos residents with no occupational exposure to plutonium.

TABLE A-II. Nonresidents of Los Alamos with no known occupational exposure to plutonium.

TABLE A-III. Colorado cases analyzed for plutonium.

Former employees of the Los Alamos Scientific Laboratory were grouped according to their potential exposure to plutonium. If the work area or job assignment was directly related to plutonium handling, or known potential exposure of short duration, the case was considered as having a high potential exposure and placed in Table A-V or A-VI. Because of the nature of the Laboratory's work, all other former employees have a potential for exposure to plutonium; these cases are listed in Table A-IV.

TABLE A-IV. LASL employees known to have a potential exposure to plutonium.

TABLE A-V. LASL employees known to have a high plutonium-exposure potential.

TABLE A-VI. Special cases. Cases discussed in other reports[1] and for which other than the standard set of tissues were analyzed for plutonium.

TABLE A-VII. New York City cases analyzed for plutonium. (These cases are listed separately because of the differences in weight of organs received and because the gonads were always included.)

The minimum reporting level (MRL) is based on the total counts, background, and recovery statistics. The MRL is 0.03 dis/min of plutonium found in the aliquot analyzed.

Uranium, mercury, and other elements have been determined and will be reported elsewhere. Tissues received during the past three years have been examined by gamma spectroscopy to determine ^{40}K, ^{137}Cs, and other radionuclides used therapeutically. Americium 241 and ^{238}Pu will be reported separately. A complete review of the occupationally exposed cases reported here has been published.[1,4]

TABLE A-1 RESIDENTS OF LOS ALAMOS, NM OCCUPATIONAL EXPOSURE TO PLUTONIUM

*<MRL = MINIMUM REPORTING LEVEL = 0.03 D/M PER SAMPLE VOL ANALYZED BASED ON TOTAL COUNTS, ENGLAND RECOVERY STATISTICS

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER ORGAN WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	1- 69	SEX M	LIVER	1213.0	250	100	1.251	3.13	2.58	4.30
OCCUPATION	UNEMPLOYED	AGE 69	LUNG	890.0	1000	50	0.000	<MRL*	<MRL*	
RESIDENT	LOS ALAMOS	YEARS 15	LYMPH	0.0	100	10	.150	1.50	227.27	2.27
STATE	NEW MEXICO		KIDNEY	100.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	PNEUMONIA	YEAR 1959	RIB	136.0	250	100	.022	<MRL*	<MRL*	
MEM CODE NO.	491.0	RG NA	VERTEBRAE	172.0	200	100	.004	.19	1.69	7.65
			SPLEEN	125.0	250	100	.700	1.77	14.16	2.12
CASE NO.	1- 64	SEX M	LIVER	615.0	500	50	.040	.08	.65	1.11
OCCUPATION	STUDENT	AGE 16	LYMPH	0.5	25	10	.010	<MRL*	<MRL*	
RESIDENT	LOS ALAMOS	YEARS 16	KIDNEY	320.0	100	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		SPLEEN	234.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	GUNSHOT IN HEAD	YEAR 1960								
MEM CODE NO.	E979.0	RG NA								
CASE NO.	1- 78	SEX M	LIVER	781.0	500	50	.060	.08	.06	1.46
OCCUPATION	CHILD	AGE 07	LUNG	210.0	500	50	.020	<MRL*	<MRL*	
RESIDENT	LOS ALAMOS	YEARS 07	LYMPH	5.0	25	10	.020	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	135.0	100	10	.010	<MRL*	<MRL*	
CAUSE OF DEATH	ENCEPHALITIS	YEAR 1960								
MEM CODE NO.	343.0	RG NA								
CASE NO.	1- 76	SEX F	LIVER	336.0	500	50	.200	2.00	6.06	10.30
OCCUPATION	CHILD	AGE 11	LUNG	700.0	500	50	.490	4.90	7.00	7.00
RESIDENT	LOS ALAMOS	YEARS 11	LYMPH	30.0	25	10	.050	.13	4.17	.04
STATE	NEW MEXICO		KIDNEY	95.0	100	10	.040	.40	4.21	1.26
CAUSE OF DEATH	ACUTE MENINGITIS	YEAR 1960								
MEM CODE NO.	340.9	RG NA								
CASE NO.	1- 88	SEX M	LIVER	776.0	500	50	.100	1.00	1.29	2.19
OCCUPATION	CHILD	AGE 08	LUNG	307.0	250	50	.470	2.35	7.65	7.65
RESIDENT	LOS ALAMOS	YEARS 08	LYMPH	1.0	25	10	.040	.10	100.00	1.00
STATE	NEW MEXICO		KIDNEY	124.0	100	10	.010	<MRL*	<MRL*	
CAUSE OF DEATH	BRAIN TUMOR	YEAR 1960								
MEM CODE NO.	193.3	RG NA								
CASE NO.	1- 90	SEX M	LIVER	2528.0	1000	50	.040	.08	.32	.54
OCCUPATION	RETIRED	AGE 89	LUNG	1010.0	1000	500	.332	.66	.66	.66
RESIDENT	LOS ALAMOS	YEARS NA	LYMPH	10.0	50	10	.020	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	270.0	100	10	.010	<MRL*	<MRL*	
CAUSE OF DEATH	LEUKEMIA	YEAR 1960								
MEM CODE NO.	204.0	RG NA								
CASE NO.	1- 96	SEX F	LIVER	906.0	1000	50	.030	.06	.66	1.13
OCCUPATION	HOUSEWIFE	AGE 59	LUNG	576.0	1000	500	.203	.41	.70	.70
RESIDENT	LOS ALAMOS	YEARS 05	LYMPH	7.0	50	10	.020	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	180.0	100	10	.030	.30	1.67	.59
CAUSE OF DEATH	CANCER	YEAR 1960								
MEM CODE NO.	199.0	RG NA								
CASE NO.	1-100	SEX M	LIVER	2409.0	1000	50	.120	2.40	1.00	1.69
OCCUPATION	RESIDENT	AGE 56	LUNG	1292.0	1000	50	.360	7.20	5.57	5.57
RESIDENT	LOS ALAMOS	YEARS 02	LYMPH	23.0	50	10	.070	.35	15.22	.15
STATE	NEW MEXICO		KIDNEY	202.0	100	10	.050	.50	2.48	.74
CAUSE OF DEATH	CORONARY OCC	YEAR 1960								
MEM CODE NO.	420.1	RG NA								
CASE NO.	1-102	SEX F	LIVER	1400.0	1000	50	.080	1.20	.86	1.46
OCCUPATION	HOUSEWIFE	AGE 55	LUNG	686.0	1000	50	.130	2.60	3.82	3.82
RESIDENT	LOS ALAMOS	YEARS 05	LYMPH	35.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	255.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	RHEUMATIC HEART	YEAR 1960								
MEM CODE NO.	416.0	RG NA								
CASE NO.	1-106	SEX M	LIVER	1141.0	1000	50	.060	1.20	1.05	1.79
OCCUPATION	RESIDENT	AGE 61	LUNG	1388.0	1000	50	.050	1.00	.72	.72
RESIDENT	LOS ALAMOS	YEARS 08	LYMPH	20.0	50	10	.030	.15	5.77	.06
STATE	NEW MEXICO		KIDNEY	230.0	100	10	.040	.40	1.67	.59
CAUSE OF DEATH	EMPHYSEMA	YEAR 1960								
MEM CODE NO.	527.1	RG NA								
CASE NO.	1-110	SEX M	LUNG	759.0	1000	50	.150	3.00	3.95	3.95
OCCUPATION	RESIDENT	AGE 47	LYMPH	16.0	50	10	.033	.15	9.37	.09
RESIDENT	LOS ALAMOS	YEARS 13	KIDNEY	250.0	100	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO									
CAUSE OF DEATH	CORONARY OCC	YEAR 1960								
MEM CODE NO.	420.1	RG NA								
CASE NO.	1-118	SEX M	LIVER	1355.0	1000	50	.050	1.00	.74	1.25
OCCUPATION	RESIDENT	AGE 35	LUNG	617.0	1000	50	0.000	<MRL*	<MRL*	
RESIDENT	LOS ALAMOS	YEARS 00	LYMPH	10.0	50	10	.010	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	249.0	100	10	.010	<MRL*	<MRL*	
CAUSE OF DEATH	NASAL SHOCK	YEAR 1961								
MEM CODE NO.	451.9	RG NA								

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE ANALYZED (CC)	VOLUME SAMPLE (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER GRAM WEIGHT (DIS/MIN)	ACTIVITY MDA NO (DIS/MIN)	ACTIVITY PER STANDARD GRAM (DIS/MIN)
CASE NO.	1-134	SEX F	LIVER	1734.0	1000	50	.030	.03	.35	.59
OCCUPATION	HOUSEWIFE	AGE 48	LUNG	675.0	1000	50	.010	<MRL*	<MRL*	
RESIDENT	LOS ALAMOS	YEARS 01	LYMPH	5.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	277.0	100	10	.010	<MRL*	<MRL*	
CAUSE OF DEATH	NOSE CANCER	YEAR 1961								
NEW CODE NO.	160.0	RD NA								
CASE NO.	1-138	SEX F	LIVER	1317.0	1000	50	.060	1.20	.91	1.55
OCCUPATION	HOUSEWIFE	AGE 76	LUNG	611.0	1000	500	.250	.52	.85	.85
RESIDENT	LOS ALAMOS	YEARS 02	LYMPH	10.0	50	10	.120	.60	37.50	.37
STATE	NEW MEXICO		KIDNEY	283.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	RUPTURED AORTA	YEAR 1961								
NEW CODE NO.	451.9	RD NA								
CASE NO.	2- 8	SEX F	LIVER	1192.0	1000	50	.005	<MRL*	<MRL*	
OCCUPATION	HOUSEWIFE	AGE 53	LUNG	720.0	1000	50	.230	4.60	6.39	6.39
RESIDENT	LOS ALAMOS	YEARS 14	LYMPH	11.0	50	10	.005	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	200.0	100	10	.002	<MRL*	<MRL*	
CAUSE OF DEATH	CANCER	YEAR 1961								
NEW CODE NO.	199.0	RD NA								
CASE NO.	2- 10	SEX M	LIVER	957.0	1000	50	.120	2.40	2.91	4.26
OCCUPATION	RETIRED	AGE 68	LUNG	345.0	100	10	.113	1.13	3.28	3.28
RESIDENT	LOS ALAMOS	YEARS 07	LYMPH	7.0	50	10	.210	1.05	150.00	1.50
STATE	NEW MEXICO		KIDNEY	176.0	100	10	.012	<MRL*	<MRL*	
CAUSE OF DEATH	ARTERIOSCLEROSIS	YEAR 1961								
NEW CODE NO.	450.0	RD NA								
CASE NO.	2- 20	SEX F	LIVER	1825.0	1000	50	.042	.84	.82	1.39
OCCUPATION	HOUSEWIFE	AGE 62	LUNG	765.0	1000	50	.088	<MRL*	<MRL*	
RESIDENT	LOS ALAMOS	YEARS 05	LYMPH	3.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	235.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	UNKNOWN	YEAR 1961								
NEW CODE NO.	NA	RD NA								
CASE NO.	2- 34	SEX F	LIVER	1627.0	1000	50	.089	1.78	1.69	1.86
OCCUPATION	HOUSEWIFE	AGE 71	LUNG	875.0	1000	500	.796	1.59	1.82	1.82
RESIDENT	LOS ALAMOS	YEARS 14	LYMPH	20.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO									
CAUSE OF DEATH	PULMON EMBOLISM	YEAR 1962								
NEW CODE NO.	469 0	RD NA								
CASE NO.	2- 36	SEX M	LIVER	1585.0	1000	250	1.903	6.41	4.26	7.24
OCCUPATION	MOTEL MNGR	AGE 68	LUNG	498.0	1000	500	.482	.96	1.97	1.97
RESIDENT	LOS ALAMOS	YEARS 00	LYMPH	13.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	279.0	100	10	.006	<MRL*	<MRL*	
CAUSE OF DEATH	MYOCARDIAL INF	YEAR 1962								
NEW CODE NO.	420.1	RD NA								
CASE NO.	2- 60	SEX F	LIVER	2799.0	1000	50	.016	<MRL*	<MRL*	
OCCUPATION	HOUSEWIFE	AGE 66	LUNG	441.0	500	50	.302	3.02	6.05	6.65
RESIDENT	LOS ALAMOS	YEARS 12	LYMPH	3.0	50	10	.003	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	226.0	100	10	.003	<MRL*	<MRL*	
CAUSE OF DEATH	CANCER	YEAR 1962	VERTEBRAE	154.0	250	10	.007	<MRL*	<MRL*	
NEW CODE NO.	199.0	RD NA								
CASE NO.	2- 90	SEX M	LIVER	1203.0	1000	50	.150	3.00	2.09	4.24
OCCUPATION	STUDENT	AGE 16	LUNG	775.0	1000	50	.200	4.00	5.16	5.16
RESIDENT	LOS ALAMOS	YEARS 15	LYMPH	5.0	50	10	.040	.20	40.00	.48
STATE	NEW MEXICO		KIDNEY	268.0	100	10	.010	<MRL*	<MRL*	
CAUSE OF DEATH	HEAD INJURIES	YEAR 1962	VERTEBRAE	182.0	250	10	.030	.75	4.12	20.05
NEW CODE NO.	853.0	RD NA								
CASE NO.	2- 92	SEX F	LIVER	1333.0	1000	50	.040	.80	.60	1.02
OCCUPATION	HOUSEWIFE	AGE 72	LUNG	669.0	1000	50	.060	1.20	1.79	1.79
RESIDENT	LOS ALAMOS	YEARS 03	LYMPH	4.0	50	10	.010	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	295.0	100	10	.030	.30	1.18	.35
CAUSE OF DEATH	UNKNOWN	YEAR 1962								
NEW CODE NO.	NA	RD NA								
CASE NO.	2-102	SEX F	LIVER	1615.0	1000	50	.106	2.12	1.31	2.23
OCCUPATION	CLERK	AGE 44	LUNG	1198.0	1000	50	.421	8.42	7.08	7.08
RESIDENT	LOS ALAMOS	YEARS 16	LYMPH	3.0	50	10	.110	.55	183.33	1.83
STATE	NEW MEXICO		KIDNEY	237.0	100	10	.002	<MRL*	<MRL*	
CAUSE OF DEATH	DRUGS	YEAR 1962	VERTEBRAE	247.0	250	10	.224	5.60	20.97	148.82
NEW CODE NO.	972.0	RD NA								
CASE NO.	2-122	SEX F	LIVER	1200.0	1000	50	0.000	<MRL*	<MRL*	
OCCUPATION	CLERK	AGE 51	LUNG	949.0	1000	50	0.000	<MRL*	<MRL*	
RESIDENT	LOS ALAMOS	YEARS 10	LYMPH	11.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	123.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	CANCER OF BREAST	YEAR 1962	RIB	169.0	250	10	0.000	<MRL*	<MRL*	
NEW CODE NO.	174.0	RD NA								

				TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY FOR TOTAL SAMPLE (DIS/MIN)	ACTIVITY PER KILOGRAM TISSUE (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	2-124	SEX	F	LIVER	1304.0	1000	25	.104	6.56	4.74	8.06
OCCUPATION	MAILMAN	AGE	45	LUNG	940.0	100	25	.177	.71	.75	.75
RESIDENT	LOS ALAMOS	YEARS	17	LYMPH	13.0	50	10	.032	.16	12.31	.12
STATE	NEW MEXICO			KIDNEY	180.0	100	10	0.000	<MRL.	<MRL.	
CAUSE OF DEATH	NEPHRITIS	YEAR	1962								
NEW CODE NO.	592.0	KG	NA								
CASE NO.	2-134	SEX	F	LIVER	905.0	1000	25	.041	1.04	1.01	2.00
OCCUPATION	HOUSEWIFE	AGE	92	LUNG	505.0	1000	500	.018	1.26	2.12	2.11
RESIDENT	LOS ALAMOS	YEARS	03	LYMPH	9.0	50	10	0.000	<MRL.	<MRL.	
STATE	NEW MEXICO			KIDNEY	163.0	100	10	.015	<MRL.	<MRL.	
CAUSE OF DEATH	CANCER	YEAR	1963	VERTEBRAE	304.0	250	10	0.000	<MRL.	<MRL.	
NEW CODE NO.	199.0	KG	NA								
CASE NO.	2-136	SEX	F	LIVER	1141.0	1000	25	.113	4.92	3.96	6.73
OCCUPATION	HOUSEWIFE	AGE	54	KIDNEY	265.0	100	10	.025	<MRL.	<MRL.	
RESIDENT	LOS ALAMOS	YEARS	18								
STATE	NEW MEXICO										
CAUSE OF DEATH	UNKNOWN	YEAR	1963								
NEW CODE NO.	NA	KG	NA								
CASE NO.	2-140	SEX	M	LIVER	2753.0	1000	50	0.000	<MRL.	<MRL.	
OCCUPATION	REPAIRMAN	AGE	52	LUNG	1525.0	1000	500	1.039	2.08	1.36	1.36
RESIDENT	LOS ALAMOS	YEARS	07	LYMPH	14.0	50	10	0.000	<MRL.	<MRL.	
STATE	NEW MEXICO			KIDNEY	368.0	100	10	.020	<MRL.	<MRL.	
CAUSE OF DEATH	CARDIAC	YEAR	1963	VERTEBRAE	300.0	500	10	.020	<MRL.	<MRL.	
NEW CODE NO.	NA	KG	NA								
CASE NO.	2-146	SEX	F	LIVER	1564.0	1000	25	.038	1.28	.77	1.38
OCCUPATION	HOUSEWIFE	AGE	42	LUNG	1188.0	1000	500	.595	1.19	1.00	1.00
RESIDENT	LOS ALAMOS	YEARS	11	LYMPH	2.0	50	10	.030	.15	75.00	.75
STATE	NEW MEXICO			KIDNEY	265.0	100	10	.030	.30	1.13	.34
CAUSE OF DEATH	MYOCARDIAL INF	YEAR	1963	RIB	215.0	500	10	.108	5.03	23.26	162.79
NEW CODE NO.	420.1	KG	NA								
CASE NO.	3- 36	SEX	M	LIVER	1185.0	1000	25	.078	3.12	2.63	4.48
OCCUPATION	INS AGENT	AGE	92	LUNG	866.0	1000	500	.945	1.09	2.13	2.13
RESIDENT	LOS ALAMOS	YEARS	04	LYMPH	7.0	50	10	.087	.63	62.14	.62
STATE	NEW MEXICO			KIDNEY	315.0	100	10	.056	5.56	17.65	5.30
CAUSE OF DEATH	PERITONITIS	YEAR	1967	RIB	145.0	250	10	0.000	<MRL.	<MRL.	
NEW CODE NO.	576.0	KG	NA								(DIS/MIN)
CASE NO.	3- 38	SEX	F	LIVER	1750.0	1000	250	3.560	14.24	8.14	13.83
OCCUPATION	HOUSEWIFE	AGE	63	LUNG	843.6	1000	500	1.108	2.22	2.63	2.63
RESIDENT	LOS ALAMOS	YEARS	NA	LYMPH	20.0	50	10	.050	.25	12.50	.13
STATE	NEW MEXICO			KIDNEY	199.0	100	25	8.200	8.83	44.22	13.27
CAUSE OF DEATH	HEART ATTACK	YEAR	1967	RIB	170.0	250	50	1.039	6.15	47.54	335.59
NEW CODE NO.	447.0	KG	NA								
CASE NO.	3- 42	SEX	M	LIVER	2015.0	1000	25	.056	2.24	2.21	3.75
OCCUPATION	NA	AGE	61	LUNG	1030.0	1000	25	.061	2.44	2.37	2.37
RESIDENT	LOS ALAMOS	YEARS	NA	LYMPH	12.0	50	10	.051	.25	21.25	.21
STATE	NEW MEXICO			KIDNEY	355.0	100	10	.055	.55	1.55	.46
CAUSE OF DEATH	ARTERIOSCLEROSIS	YEAR	1967	RIB	130.0	250	10	.186	4.65	35.77	250.38
NEW CODE NO.	450.0	KG	NA								
CASE NO.	3- 48	SEX	M	LIVER	1870.0	1000	25	.069	2.76	1.48	2.51
OCCUPATION	STUDENT	AGE	17	LUNG	1215.0	1000	25	.003	2.52	2.07	2.07
RESIDENT	LOS ALAMOS	YEARS	17	LYMPH	18.0	50	10	.021	<MRL.	<MRL.	
STATE	NEW MEXICO			KIDNEY	330.0	100	10	.022	<MRL.	<MRL.	
CAUSE OF DEATH	TRAUMATIC INJ	YEAR	1967	RIB	110.0	250	100	.095	.24	2.16	15.11
NEW CODE NO.	E825.0	KG	NA								
CASE NO.	3- 54	SEX	F	LIVER	2100.0	1000	25	.061	2.44	1.12	1.90
OCCUPATION	HOUSEWIFE	AGE	41	LUNG	600.0	1000	25	.072	2.88	4.50	4.80
RESIDENT	LOS ALAMOS	YEARS	14	LYMPH	10.0	50	10	.209	1.04	104.50	1.04
STATE	NEW MEXICO			KIDNEY	350.0	100	10	.114	1.14	3.26	.98
CAUSE OF DEATH	CANCER OF RECTUM	YEAR	1967	RIB	136.0	250	10	.004	<MRL.	<MRL.	
NEW CODE NO.	154.0	KG	NA								
CASE NO.	3- 60	SEX	M	LIVER	2060.0	1000	25	.205	8.20	3.48	6.77
OCCUPATION	REALTOR	AGE	56	LUNG	1091.0	1000	25	.036	1.39	1.25	1.25
RESIDENT	LOS ALAMOS	YEARS	02	KIDNEY	276.0	100	10	.024	<MRL.	<MRL.	
STATE	NEW MEXICO			RIB	126.0	250	10	.027	<MRL.	<MRL.	
CAUSE OF DEATH	CIRRHOSIS	YEAR	1967								
NEW CODE NO.	581.0	KG	NA								
CASE NO.	3- 62	SEX	M	LIVER	1522.0	1000	25	.078	3.12	2.05	3.49
OCCUPATION	BAKER	AGE	57	LUNG	767.0	1000	25	.270	10.81	14.36	14.36
RESIDENT	LOS ALAMOS	YEARS	24	LYMPH	10.0	50	10	.031	[illegible]	15.52	[illegible]
STATE	NEW MEXICO			KIDNEY	280.0	100	10	[illegible]	[illegible]	[illegible]	[illegible]
CAUSE OF DEATH	CARDIAC	YEAR	1967	RIB	88.0	250	10	.006	[illegible]	[illegible]	331.25
NEW CODE NO.	422.9	KG	NA								

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER ORGAN WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	S- 34	SEX F	LIVER	1270.0	1000	500	.019	<MRL*	<MRL*	
OCCUPATION	HOUSEWIFE	AGE 35	LUNG	563.0	1000	250	.171	.68	1.21	1.21
RESIDENT	LOS ALAMOS	YEARS NA	LYMPH	3.0	50	10	.005	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	213.0	100	10	.010	<MRL*	<MRL*	
CAUSE OF DEATH	SUNSHT GND	YEAR 1969	RIB	76.0	100	50	0.000	<MRL*	<MRL*	
NEW CODE NO.	E979.0	RD NA								
CASE NO.	S- 38	SEX M	LIVER	1656.0	1000	500	.192	.38	.26	.49
OCCUPATION	NA	AGE 85	LUNG	1010.0	1000	500	.112	.22	.22	.22
RESIDENT	LOS ALAMOS	YEARS NA	LYMPH	10.0	50	10	.014	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	258.0	100	10	.023	<MRL*	<MRL*	
CAUSE OF DEATH	PULMONARY INF	YEAR 1969	RIB	178.0	250	100	.047	.12	.69	0.84
NEW CODE NO.	485.0	RD NA								
CASE NO.	S- 56	SEX F	LIVER	1434.0	1000	250	.067	.27	.19	.32
OCCUPATION	HOUSEWIFE	AGE 73	LUNG	1058.0	1000	250	.212	.85	.81	.81
RESIDENT	LOS ALAMOS	YEARS 72	LYMPH	3.0	50	10	.006	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	264.0	100	10	.044	.44	1.67	.58
CAUSE OF DEATH	HEART ATTACK	YEAR 19 0	VERTEBRAE	78.0	100	10	.056	.58	8.29	58.00
NEW CODE NO.	420.1	RD NA								
CASE NO.	S- 58	SEX F	LIVER	900.0	250	100	.718	1.79	1.99	3.39
OCCUPATION	BNK CLERK	AGE 37	LUNG	675.0	500	250	.794	1.59	2.36	2.36
RESIDENT	WHITE ROCK	YEARS 37	LYMPH	2.0	50	10	.044	.22	110.00	1.10
STATE	NEW MEXICO		KIDNEY	193.0	200	10	.010	<MRL*	<MRL*	
CAUSE OF DEATH	CANCER	YEAR 19 0	VERTEBRAE	75.0	250	100	.013	<MRL*	<MRL*	
NEW CODE NO.	199.0	RD NA								
CASE NO.	S- 60	SEX F	LIVER	1577.0	500	250	.133	.27	.17	.29
OCCUPATION	HOUSEWIFE	AGE 67	LUNG	430.0	500	250	.132	.26	.61	.61
RESIDENT	LOS ALAMOS	YEARS 67	LYMPH	5.0	50	10	.044	.22	44.00	.44
STATE	NEW MEXICO		KIDNEY	255.0	200	10	.013	<MRL*	<MRL*	
CAUSE OF DEATH	HEART ATTACK	YEAR 19 0	VERTEBRAE	104.0	200	100	.039	.08	.78	5.46
NEW CODE NO.	420.1	RD NA								
CASE NO.	S- 74	SEX F	LUNG	1219.0	500	250	.366	.61	.50	.50
OCCUPATION	HOUSEWIFE	AGE 48	LYMPH	27.0	25	10	.026	<MRL*	<MRL*	
RESIDENT	LOS ALAMOS	YEARS NA	KIDNEY	414.0	100	10	.019	<MRL*	<MRL*	
STATE	NEW MEXICO		RIB	90.0	200	100	.265	.57	5.82	40.71
CAUSE OF DEATH	COR PULMONALE	YEAR 1970								
NEW CODE NO.	434.7	RD NA								
CASE NO.	S- 86	SEX F	LIVER	1785.0	500	250	1.624	3.25	1.82	3.09
OCCUPATION	STUDENT	AGE 17	LUNG	543.0	500	250	.156	.31	.57	.57
RESIDENT	LOS ALAMOS	YEARS 17	LYMPH	5.0	25	10	.018	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	222.0	100	10	.105	1.05	4.73	1.42
CAUSE OF DEATH	HEAD INJURY	YEAR 1970	RIB	56.0	200	100	.036	.07	1.44	10.08
NEW CODE NO.	850.0	RD NA								
CASE NO.	S-110	SEX F	LIVER	957.0	500	100	.502	2.51	2.62	4.46
OCCUPATION	HOUSEWIFE	AGE 87	LUNG	881.0	1000	250	.241	.96	1.28	1.28
RESIDENT	LOS ALAMOS	YEARS NA	LYMPH	14.0	25	10	.088	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	299.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	PUL EMBOLISM	YEAR 1971	RIB	81.0	200	100	.064	.13	1.56	11.06
NEW CODE NO.	465.9	RD NA								
CASE NO.	7- 2	SEX F	LIVER	1140.0	1000	250	.920	3.68	3.23	5.49
OCCUPATION	HOUSEWIFE	AGE 88	LUNG	648.0	1000	250	.080	.24	.37	.37
RESIDENT	LOS ALAMOS	YEARS NA	LYMPH	4.1	25	10	.006	1.52	369.51	3.70
STATE	NEW MEXICO		KIDNEY	178.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	HEART ATTACK	YEAR 1971								
NEW CODE NO.	434.1	RD NA								
CASE NO.	7- 14	SEX F	LIVER	1275.0	1000	250	1.300	5.20	4.08	6.93
OCCUPATION	HOUSEWIFE	AGE 69	LUNG	967.0	1000	250	.605	2.42	2.50	2.50
RESIDENT	LOS ALAMOS	YEARS NA								
STATE	NEW MEXICO									
CAUSE OF DEATH	STROKE	YEAR 1971								
NEW CODE NO.	334.0	RD NA								

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TABLE A-II NON-RESIDENTS OF LOS ALAMOS, NO OCCUPATIONAL EXPOSURE TO PLUTONIUM

<NRL = MINIMUM REPORTING LEVEL = 0.03 DPM PER SAMPLE VOL ANALYZED BASED ON TOTAL COUNTS, BKG AND RECOVERY STATISTICS

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER ORGAN WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	1- 72	SEX M	LIVER	1705.0	1000	50	.060	1.20	.70	1.55
OCCUPATION	RETIRED	AGE 76	LUNG	804.0	1000	500	.334	.67	.76	.76
RESIDENT	NEW ORLEANS	YEARS NA	LYMPH	20.0	25	10	.060	.15	7.50	.37
STATE	LOUISIANA		KIDNEY	300.0	100	10	0.000	<NRL*	<NRL*	
CAUSE OF DEATH	POST OP SHOCK	YEAR 1960								
NEW CODE NO.	998.0	RG NA								
CASE NO.	1- 78	SEX F	LIVER	1361.0	1000	50	0.000	<NRL*	<NRL*	
OCCUPATION	HOUSEWIFE	AGE 72	LUNG	475.0	1000	500	.097	1.39	2.93	2.93
RESIDENT	LAS VEGAS	YEARS NA	LYMPH	12.0	25	10	0.000	<NRL*	<NRL*	
STATE	NEW MEXICO		KIDNEY	242.0	100	10	.030	.30	1.24	.37
CAUSE OF DEATH	POST OP SHOCK	YEAR 1960								
NEW CODE NO.	998.0	RG NA								
CASE NO.	1- 82	SEX F	LUNG	853.0	1000	500	1.366	2.73	3.20	3.20
OCCUPATION	RESIDENT	AGE 75	LYMPH	16.0	100	10	.010	<NRL*	<NRL*	
RESIDENT	SCRANTON	YEARS NA	KIDNEY	320.0	100	10	.030	0.30	25.94	7.78
STATE	PENNA.									
CAUSE OF DEATH	CARDIAC	YEAR 1960								
NEW CODE NO.	428.3	RG NA								
CASE NO.	1- 84	SEX F	LUNG	1068.0	1000	500	.916	1.83	1.72	1.72
OCCUPATION	HOUSEWIFE	AGE 88	LYMPH	6.0	100	10	.010	<NRL*	<NRL*	
RESIDENT	NA	YEARS NA	KIDNEY	234.0	100	10	.110	1.10	4.70	1.41
STATE	NA									
CAUSE OF DEATH	POST OP SHOCK	YEAR 1960								
NEW CODE NO.	998.0	RG NA								
CASE NO.	1- 86	SEX F	LIVER	2220.0	1000	50	.000	1.00	.72	1.23
OCCUPATION	HOUSEWIFE	AGE 69	LUNG	456.0	1000	500	1.101	2.20	3.96	3.96
RESIDENT	SANTA FE	YEARS NA	LYMPH	2.0	50	10	.010	<NRL*	<NRL*	
STATE	NEW MEXICO		KIDNEY	459.0	100	10	.010	<NRL*	<NRL*	
CAUSE OF DEATH	LEUKEMIA	YEAR 1960								
NEW CODE NO.	204.0	RG NA								
CASE NO.	1- 92	SEX F	LIVER	1100.0	1000	50	.050	1.00	.65	1.44
OCCUPATION	HOUSEWIFE	AGE 77	LUNG	517.0	1000	500	.982	1.80	3.49	3.49
RESIDENT	NA	YEARS NA	LYMPH	3.0	50	10	.010	<NRL*	<NRL*	
STATE	NA		KIDNEY	266.0	100	10	0.000	<NRL*	<NRL*	
CAUSE OF DEATH	ARTERIOSCLEROSIS	YEAR 1960								
NEW CODE NO.	420.0	RG NA								
CASE NO.	1- 98	SEX F	LIVER	854.0	1000	50	.030	.60	.70	1.19
OCCUPATION	HOUSEWIFE	AGE 89	LUNG	834.0	1000	500	.339	.68	.81	.81
RESIDENT	NOVA SCOTIA	YEARS 8	LYMPH	14.0	50	10	.090	.45	32.14	.32
STATE	BRITISH CO		KIDNEY	143.0	100	10	.040	.40	2.80	.84
CAUSE OF DEATH	PNEUMONIA	YEAR 1960								
NEW CODE NO.	493.9	RG NA								
CASE NO.	1-104	SEX M	LIVER	2120.0	1000	50	.060	1.20	.57	.96
OCCUPATION	NA	AGE 31	LUNG	1460.0	1000	500	1.249	2.50	1.71	1.71
RESIDENT	NA	YEARS NA	LYMPH	11.0	25	10	.060	1.00	145.45	1.45
STATE	NA		KIDNEY	378.0	100	10	.140	1.40	3.73	1.12
CAUSE OF DEATH	ALCOHOLISM	YEAR 1960								
NEW CODE NO.	301.0	RG NA								
CASE NO.	1-142	SEX F	LIVER	1400.0	1000	50	.140	2.80	1.89	3.22
OCCUPATION	HOUSEWIFE	AGE 78	LUNG	644.0	1000	500	.598	1.20	1.85	1.85
RESIDENT	NA	YEARS NA	LYMPH	28.0	50	10	.100	.50	17.86	.18
STATE	NA		KIDNEY	170.0	100	10	.130	1.30	7.65	2.29
CAUSE OF DEATH	MYOCARDIAL HYPER	YEAR 1961								
NEW CODE NO.	422.9	RG NA								
CASE NO.	1-144	SEX F	LIVER	2070.0	1000	50	.040	.80	.39	.66
OCCUPATION	HOUSEWIFE	AGE 45	LUNG	1615.0	1000	500	.630	1.26	.89	.89
RESIDENT	NA	YEARS NA	LYMPH	7.0	50	10	.140	.70	100.00	1.00
STATE	NA		KIDNEY	267.0	100	10	.040	.40	1.50	.45
CAUSE OF DEATH	PNEUMONIA	YEAR 1961								
NEW CODE NO.	490.9	RG NA								
CASE NO.	1-146	SEX F	LIVER	1140.0	1000	50	.180	3.60	3.13	5.33
OCCUPATION	HOUSEWIFE	AGE 58	LUNG	775.0	1000	50	.210	4.20	5.42	5.42
RESIDENT	NA	YEARS NA	LYMPH	4.0	50	10	0.000	<NRL*	<NRL*	
STATE	NA		KIDNEY	291.0	100	10	.060	.60	2.06	.62
CAUSE OF DEATH	BREAST CANCER	YEAR 1961								
NEW CODE NO.	170.0	RG NA								
CASE NO.	1-148	SEX M	LIVER	1292.0	1000	50	.060	.60	.62	1.05
OCCUPATION	FORST SERV	AGE 76	LUNG	918.0	1000	500	.593	1.19	2.33	2.33
RESIDENT	SANTA FE	YEARS NA	LYMPH	21.0	50	10	.010	<NRL*	<NRL*	
STATE	NEW MEXICO		KIDNEY	175.0	100	10	0.000	<NRL*	<NRL*	
CAUSE OF DEATH	RUPTURED AORTA	YEAR 1961								
NEW CODE NO.	451.9	RG NA								

LANL

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER WET ANAL (DIS/MIN)	ACTIVITY PER GRAM WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	2- 8	SEX M	LIVER	1665.0	1000	50	.048	.06	.58	.98
OCCUPATION	RETIRED	AGE 78	LUNG	705.0	1000	500	.006	1.81	2.31	2.31
RESIDENT	NA	YEARS NA	LYMPH	7.0	50	10	0.000	<MRL*	<MRL*	
STATE	NA		KIDNEY	310.0	100	10	.040	.40	1.29	.39
CAUSE OF DEATH	RUPT VENTRICLE	YEAR 1961								
MED CODE NO.	420.1	RG NA								
CASE NO.	2- 12	SEX M	LIVER	1460.0	1000	50	.052	1.04	.71	1.20
OCCUPATION	RETIRED	AGE 78	LUNG	1167.0	1000	50	.015	<MRL*	<MRL*	
RESIDENT	NA	YEARS NA	LYMPH	33.0	50	10	.020	<MRL*	<MRL*	
STATE	NEW JERSEY		KIDNEY	200.0	100	10	.026	<MRL*	<MRL*	
CAUSE OF DEATH	NEPHRITIS	YEAR 1961								
MED CODE NO.	593.0	RG NA								
CASE NO.	2- 16	SEX F	LIVER	2835.0	1000	50	.003	<MRL*	<MRL*	
OCCUPATION	NA	AGE 54	LUNG	943.0	1000	50	.045	.98	.95	.95
RESIDENT	NA	YEARS NA	LYMPH	14.0	50	10	.009	<MRL*	<MRL*	
STATE	NA		KIDNEY	430.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	NA	YEAR 1961								
MED CODE NO.	NA	RG NA								
CASE NO.	2- 18	SEX F	LIVER	857.0	1000	50	.034	.60	.79	1.38
OCCUPATION	NA	AGE 59	LUNG	570.0	1000	50	.005	<MRL*	<MRL*	
RESIDENT	NA	YEARS NA	LYMPH	20.0	50	10	.019	<MRL*	<MRL*	
STATE	NA		KIDNEY	254.0	100	10	.017	<MRL*	<MRL*	
CAUSE OF DEATH	BILE NEPHROSIS	YEAR 1961								
MED CODE NO.	593.0	RG NA								
CASE NO.	2- 22	SEX F	LIVER	1505.0	1000	50	.018	<MRL*	<MRL*	
OCCUPATION	HOUSEWIFE	AGE 68	LUNG	541.0	1000	50	.002	<MRL*	<MRL*	
RESIDENT	NA	YEARS NA	LYMPH	8.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW JERSEY		KIDNEY	480.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	PANCREAS CANCER	YEAR 1961								
MED CODE NO.	157.0	RG NA								
CASE NO.	2- 24	SEX M	LIVER	1150.0	1000	50	.114	2.28	1.98	2.37
OCCUPATION	NA	AGE 74	LUNG	1404.0	1000	50	.104	2.08	1.49	1.49
RESIDENT	NA	YEARS NA	LYMPH	20.0	50	10	0.000	<MRL*	<MRL*	
STATE	NA		KIDNEY	207.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	CEREBRAL HEM	YEAR 1961								
MED CODE NO.	331.0	RG NA								
CASE NO.	2- 28	SEX F	LIVER	1480.0	1000	50	.494	9.88	6.68	11.38
OCCUPATION	HOUSEWIFE	AGE 71	LUNG	863.0	1000	50	1.567	31.34	30.32	30.32
RESIDENT	NA	YEARS NA	LYMPH	11.0	50	10	.028	<MRL*	<MRL*	
STATE	NA		KIDNEY	272.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	BILIARY OCC	YEAR 1961								
MED CODE NO.	586 1	RG NA								
CASE NO.	2- 32	SEX M	LIVER	845.0	1000	50	.119	2.38	2.02	4.79
OCCUPATION	RETIRED	AGE 88	LUNG	675.0	1000	50	.052	1.04	1.19	1.19
RESIDENT	ESPANOLA	YEARS NA	KIDNEY	200.0	100	10	.018	<MRL*	<MRL*	
STATE	NEW MEXICO									
CAUSE OF DEATH	EMPHYSEMA	YEAR 1962								
MED CODE NO.	527 1	RG NA								
CASE NO.	2- 38	SEX M	LIVER	840.0	1000	50	.063	1.26	1.58	8.85
OCCUPATION	RETIRED	AGE 86	LUNG	918.0	1000	500	.341	.68	.75	.75
RESIDENT	CHARLOTTE	YEARS NA	LYMPH	9.0	50	10	0.000	<MRL*	<MRL*	
STATE	N CAROLINA		KIDNEY	162.0	100	10	.004	<MRL*	<MRL*	
CAUSE OF DEATH	NA	YEAR 1962								
MED CODE NO.	NA	RG NA								
CASE NO.	2- 40	SEX M	LIVER	1070.0	1000	50	.014	<MRL*	<MRL*	
OCCUPATION	RETIRED	AGE 87	LUNG	1177.0	1000	500	.363	.73	.62	.62
RESIDENT	ESPANOLA	YEARS NA	LYMPH	4.0	50	10	.006	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	215.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	PNEUMONIA	YEAR 1962	VERTEBRAE	254.0	250	10	0.000	<MRL*	<MRL*	
MED CODE NO.	481.0	RG NA								
CASE NO.	2- 42	SEX M	LIVER	1843.0	1000	50	.016	<MRL*	<MRL*	
OCCUPATION	RETIRED	AGE 77	LUNG	742.0	1000	500	.138	.28	.37	.37
RESIDENT	ESPANOLA	YEARS NA	LYMPH	8.0	50	10	.003	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	350.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	UNKNOWN	YEAR 1962								
MED CODE NO.	NA	RG NA								
CASE NO.	2- 62	SEX F	LIVER	1409.0	1000	50	.090	1.80	.67	1.14
OCCUPATION	HOUSEWIFE	AGE 72	LUNG	916.0	1000	500	.271	.54	.55	.55
RESIDENT	NA	YEARS NA	LYMPH	12.0	50	10	0.000	<MRL*	<MRL*	
STATE	TEXAS		KIDNEY	211.0	100	10	.014	<MRL*	<MRL*	
CAUSE OF DEATH	NA	YEAR 1962	RIB	229.0	250	10	0.000	<MRL*	<MRL*	
MED CODE NO.	NA	RG NA								

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CASE NO.	2- 72	SEX M	LIVER	1121.0	1000	50	.050	1.00	.84	1.52
OCCUPATION	NA	AGE 67	LUNG	14.0	50	10	0.000	<MRL*	<MRL*	
RESIDENT	ESPANOLA	YEARS NA	KIDNEY	272.0	100	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO									
CAUSE OF DEATH	CARDIAC	YEAR 1962								
NEW CODE NO.	430.7	RG NA								
CASE NO.	2-104	SEX F	LIVER	948.0	1000	50	.020	<MRL*	<MRL*	
OCCUPATION	CHILD	AGE 12	LUNG	163.0	100	10	.760	7.60	46.63	46.63
RESIDENT	ESPANOLA	YEARS NA	LYMPH	1.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	175.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	LEUKEMIA	YEAR 1962	RIB	79.0	100	10	0.000	<MRL*	<MRL*	
NEW CODE NO.	204.9	RG NA								
CASE NO.	2-106	SEX M	LIVER	1383.0	1000	50	.020	<MRL*	<MRL*	
OCCUPATION	TRUCK DRIV	AGE 27	LUNG	615.0	1000	50	.060	1.20	1.65	1.95
RESIDENT	ESPANOLA	YEARS NA	KIDNEY	214.0	100	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		RIB	259.0	500	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	INJURIES	YEAR 1962								
NEW CODE NO.	E825.0	RG NA								
CASE NO.	2-108	SEX F	LIVER	1117.0	1000	50	.030	.60	.54	.91
OCCUPATION	HOUSEWIFE	AGE 68	LUNG	631.0	1000	50	.010	<MRL*	<MRL*	
RESIDENT	ESPANOLA	YEARS NA	LYMPH	11.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	180.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	NEPHRITIS	YEAR 1962	RIB	214.0	250	10	.070	1.75	8.16	87.24
NEW CODE NO.	180.0	RG NA								
CASE NO.	2-114	SEX F	LIVER	1575.0	1000	50	.030	.60	.38	.65
OCCUPATION	HOUSEWIFE	AGE 64	LUNG	1300.0	1000	50	.180	3.60	2.76	2.76
RESIDENT	HASTINGS	YEARS NA	KIDNEY	288.0	100	10	0.000	<MRL*	<MRL*	
STATE	NEBRASKA									
CAUSE OF DEATH	CORONARY THROMBO	YEAR 1962								
NEW CODE NO.	420.1	RG NA								
CASE NO.	2-118	SEX F	LIVER	1210.0	1000	50	.090	1.80	1.49	2.93
OCCUPATION	HOUSEWIFE	AGE 70	LUNG	573.0	1000	50	.110	2.20	3.84	3.84
RESIDENT	ANTON	YEARS NA	LYMPH	7.0	50	10	.110	.55	70.17	.79
STATE	TEXAS		KIDNEY	217.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	CANCER OF PELVIS	YEAR 1962	RIB	283.0	250	25	0.000	<MRL*	<MRL*	
NEW CODE NO.	199.0	RG NA								
CASE NO.	2-120	SEX M	LIVER	1341.0	1000	50	0.000	<MRL*	<MRL*	
OCCUPATION	NA	AGE 23	LYMPH	11.0	50	10	0.000	<MRL*	<MRL*	
RESIDENT	ALBUQUERQUE	YEARS NA	KIDNEY	235.0	100	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		RIB	225.0	250	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	SKULL FRACTURE	YEAR 1962								
NEW CODE NO.	E825.	RG NA								
CASE NO.	2-126	SEX F	LIVER	2945.0	1000	25	.032	1.28	.43	.74
OCCUPATION	DENT ASST	AGE 36	LUNG	1340.0	1000	25	.054	2.16	1.60	1.60
RESIDENT	POJOAQUE	YEARS NA	LYMPH	0.0	50	10	.156	.78	97.50	.97
STATE	NEW MEXICO		KIDNEY	201.0	100	10	.026	<MRL*	<MRL*	
CAUSE OF DEATH	LEUKEMIA	YEAR 1962								
NEW CODE NO.	204.3	RG NA								
CASE NO.	2-130	SEX M	LIVER	1273.0	1000	50	0.000	<MRL*	<MRL*	
OCCUPATION	RETIRED	AGE 89	LUNG	805.0	1000	500	.470	.94	1.66	1.66
RESIDENT	LAS VEGAS	YEARS NA	LYMPH	23.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	252.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	MYOCARDIAL INF	YEAR 1963	RIB	485.0	500	10	0.000	<MRL*	<MRL*	
NEW CODE NO.	420.1	RG NA								
CASE NO.	2-140	SEX M	LIVER	888.0	1000	25	.185	4.20	5.25	8.92
OCCUPATION	NA	AGE 71	LUNG	679.0	1000	500	1.632	3.26	4.81	4.81
RESIDENT	TIERRA AMARILLA	YEARS NA	LYMPH	10.0	100	10	.018	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	220.0	100	10	.023	<MRL*	<MRL*	
CAUSE OF DEATH	PNEUMONIA	YEAR 1963	RIB	321.0	250	10	.223	5.57	17.37	121.57
NEW CODE NO.	481.0	RG NA								
CASE NO.	2-150	SEX M	LIVER	1143.0	1000	25	.076	2.04	2.66	4.52
OCCUPATION	CHILD	AGE 13	LUNG	1315.0	1000	500	1.150	2.32	1.76	1.76
RESIDENT	OJO CALIENTE	YEARS NA	LYMPH	24.0	50	10	.014	<MRL*	<MRL*	
STATE	NEW MEXICO		RIB	223.0	250	10	.112	2.66	12.56	87.89
CAUSE OF DEATH	LEUKEMIA	YEAR 1963								
NEW CODE NO.	NA	RG NA								
CASE NO.	3- 30	SEX M	LIVER	1050.0	1000	25	.100	4.00	3.81	6.48
OCCUPATION	NA	AGE 54	LUNG	1040.0	1000	500	.670	1.34	1.30	1.30
RESIDENT	CHAMA	YEARS NA	LYMPH	10.0	50	10	.011	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	349.0	100	10	.007	<MRL*	<MRL*	
CAUSE OF DEATH	STOMACH CANCER	YEAR 1967	RIB	75.6	250	10	.231	5.77	77.00	539.00
NEW CODE NO.	151.0	RG NA								

LANL

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			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER WET WGHT (DIS/MIN)	ACTIVITY PER DRY WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD CAESIUM (DIS/MIN)
CASE NO.	3- 32	SEX M	LUNG	1021.0	1000	900	.499	1.00	.97	.97
OCCUPATION	MILITARY	AGE 71	LYMPH	3.0	50	10	0.000	<MRL*	<MRL*	
RESIDENT	SANTA FE	YEARS NA	KIDNEY	360.0	100	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		RIB	125.0	250	10	.040	1.00	8.00	56.00
CAUSE OF DEATH	CANCER	YEAR 1967								
NEW CODE NO.	183.0	RG NA								
CASE NO.	3- 34	SEX M	LIVER	987.0	1000	25	.050	2.32	2.35	4.66
OCCUPATION	COOK,WALTER J	AGE 64	LUNG	1906.0	1000	900	1.052	2.16	2.02	2.02
RESIDENT	25-67 3034 616.0	YEARS NA	LYMPH	24.0	50	10	.020	<MRL*	<MRL*	
STATE	NA		KIDNEY	377.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH		YEAR 1967	RIB	90.0	250	10	.036	.75	8.33	50.33
NEW CODE NO.	NEW	RG NA								
CASE NO.	3- 48	SEX M	LIVER	1000.0	1000	25	.186	4.24	8.64	4.48
OCCUPATION	NA	AGE 47	LUNG	975.0	1000	25	.018	<MRL*	<MRL*	
RESIDENT	ESPANOLA	YEARS NA	LYMPH	16.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	368.0	100	10	.022	<MRL*	<MRL*	
CAUSE OF DEATH	PERITONITIS	YEAR 1967								
NEW CODE NO.	576.0	RG NA								
CASE NO.	3- 50	SEX M	LIVER	1000.0	1000	25	.088	3.20	1.78	3.02
OCCUPATION	NA	AGE 76	LUNG	1410.0	1000	25	.036	1.44	1.02	1.02
RESIDENT	TAOS	YEARS NA	LYMPH	14.0	50	10	.015	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	520.0	100	10	.054	.54	1.04	.31
CAUSE OF DEATH	PNEUMONIA	YEAR 1967	RIB	175.0	250	10	.237	5.92	33.86	237.00
NEW CODE NO.	490.9	RG NA								
CASE NO.	3- 52	SEX F	LIVER	2140.0	1000	25	.020	<MRL*	<MRL*	
OCCUPATION	NA	AGE 28	LUNG	898.0	1000	25	.042	1.68	1.89	1.89
RESIDENT	TAOS	YEARS NA	LYMPH	2.0	50	10	.154	.77	385.00	3.85
STATE	NEW MEXICO		KIDNEY	320.0	100	10	.027	<MRL*	<MRL*	
CAUSE OF DEATH	SKULL FRACTURE	YEAR 1967	RIB	70.0	250	10	.168	4.20	60.00	420.00
NEW CODE NO.	883.0	RG NA								
CASE NO.	3- 56	SEX F	LIVER	1336.0	1000	25	.131	5.24	3.94	6.78
OCCUPATION	HOUSEWIFE	AGE 51	LUNG	965.0	1000	25	.048	1.92	2.03	2.03
RESIDENT	NA	YEARS NA	LYMPH	15.0	50	10	.033	.16	11.00	.11
STATE	NA		KIDNEY	220.0	100	10	.037	.37	1.68	.50
CAUSE OF DEATH	RPTRD SPLEEN	YEAR 1967	RIB	63.0	250	10	.317	7.92	125.79	880.50
NEW CODE NO.	865.0	RG NA								
CASE NO.	3- 64	SEX F	LIVER	1300.0	1000	25	.023	<MRL*	<MRL*	
OCCUPATION	HOUSEWIFE	AGE 78	LUNG	750.0	1000	25	.101	7.24	8.65	9.05
RESIDENT	SANTA FE	YEARS NA	LYMPH	16.0	50	10	.042	.21	13.12	.13
STATE	NEW MEXICO		KIDNEY	160.0	100	10	.003	<MRL*	<MRL*	
CAUSE OF DEATH	PERFORATED ULCER	YEAR 1967	RIB	50.0	250	10	.104	2.60	52.00	364.00
NEW CODE NO.	540.2	RG NA								
CASE NO.	3- 66	SEX M	LIVER	1000.0	1000	25	.029	<MRL*	<MRL*	
OCCUPATION	FARMER	AGE 58	LUNG	1026.0	1000	25	.053	2.12	1.16	1.16
RESIDENT	PENASCO	YEARS NA	LYMPH	3.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	450.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	RHEUMATIC HEART	YEAR 1967	RIB	70.0	100	10	.012	<MRL*	<MRL*	
NEW CODE NO.	416.0	RG NA								
CASE NO.	3- 78	SEX M	LIVER	1000.0	1000	25	.058	2.32	2.32	3.94
OCCUPATION	NA	AGE 83	LUNG	1310.0	1000	25	.157	6.28	4.79	4.79
RESIDENT	ESPANOLA	YEARS NA	LYMPH	6.0	50	10	.016	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	270.0	100	10	.001	<MRL*	<MRL*	
CAUSE OF DEATH	PNEUMONIA	YEAR 1968	RIB	35.0	100	10	.023	<MRL*	<MRL*	
NEW CODE NO.	493.9	RG NA								
CASE NO.	3- 80	SEX F	LIVER	1439.0	1000	25	.051	2.04	1.42	2.42
OCCUPATION	HOUSEWIFE	AGE 75	LUNG	580.0	1000	25	.010	<MRL*	<MRL*	
RESIDENT	NA	YEARS NA	LYMPH	5.0	50	10	0.000	<MRL*	<MRL*	
STATE	NA		KIDNEY	310.0	100	10	.006	<MRL*	<MRL*	
CAUSE OF DEATH	ACUTE ASTHMA	YEAR 1968	RIB	50.0	100	10	.001	<MRL*	<MRL*	
NEW CODE NO.	241.9	RG NA								
CASE NO.	3- 90	SEX M	LIVER	2710.0	1000	25	.114	4.56	1.68	2.86
OCCUPATION	FARMER	AGE 26	LUNG	1026.0	1000	25	.001	<MRL*	<MRL*	
RESIDENT	ENGLOD	YEARS NA	LYMPH	2.0	50	10	.019	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	485.0	100	10	.325	<MRL*	<MRL*	
CAUSE OF DEATH	LEUKEMIA	YEAR 1968	RIB	50.0	100	10	.027	<MRL*	<MRL*	
NEW CODE NO.	953.9	RG NA								
CASE NO.	3- 92	SEX M	LIVER	1365.0	1000	25	.020	<MRL*	<MRL*	
OCCUPATION	TEACHER	AGE 63	LUNG	1210.0	1000	25	.029	<MRL*	<MRL*	
RESIDENT	PODSOUE	YEARS NA	LYMPH	4.0	50	10	.113	.56	141.25	1.41
STATE	NEW MEXICO		KIDNEY	200.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	PNEUMONIA	YEAR 1968	RIB	35.0	100	10	.013	<MRL*	<MRL*	
NEW CODE NO.	493.9	RG NA								

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			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER GRAM WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD MAN (DIS/MIN)
CASE NO.	S- 94	SEX M	LIVER	1670.0	1000	25	.032	1.20	.77	1.30
OCCUPATION	NA	AGE 21	LUNG	865.0	1000	25	3.454	154.18	231.62	231.62
RESIDENT	SANTA FE	YEARS NA	LYMPH	6.0	50	10	.012	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	360.0	100	10	8.000	<MRL*	<MRL*	
CAUSE OF DEATH	NA	YEAR 1968	RIB	100.0	250	10	.002	<MRL*	<MRL*	
NEW CODE NO.	NA	RG NA								
CASE NO.	S- 96	SEX M	LIVER	1625.0	1000	25	.025	<MRL*	<MRL*	
OCCUPATION	FARMER	AGE 57	LUNG	1010.0	1000	25	.011	<MRL*	<MRL*	
RESIDENT	VELARDE	YEARS NA	LYMPH	3.0	50	10	.011	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	295.0	100	10	8.000	<MRL*	<MRL*	
CAUSE OF DEATH	CANCER	YEAR 1968	RIB	150.0	250	10	.006	<MRL*	<MRL*	
NEW CODE NO.	199.0	RG NA								
CASE NO.	S- 4	SEX M	LIVER	2352.0	1000	250	.014	2.46	1.84	1.78
OCCUPATION	COLG OFICL	AGE 49	LUNG	820.0	1000	250	.128	.48	.89	.89
RESIDENT	SANTA FE	YEARS 49								
STATE	NEW MEXICO									
CAUSE OF DEATH	APLPN ACCIDNT	YEAR 1967								
NEW CODE NO.	E866.0	RG NA								
CASE NO.	S- 6	SEX M	LIVER	1260.0	1000	250	1.152	4.61	3.66	6.22
OCCUPATION	NA	AGE 57	LUNG	1042.0	1000	250	.106	.74	.71	.71
RESIDENT	APACHE	YEARS 57								
STATE	RESERVATIO									
CAUSE OF DEATH	ACUTE ALCHOLISM	YEAR 1967								
NEW CODE NO.	301.2	RG NA								
CASE NO.	S- 8	SEX M	LIVER	357.0	1000	250	8.000	10.72	6.83	11.01
OCCUPATION	CONSTRUCTN	AGE 58	LUNG	730.0	900	250	.763	1.83	2.89	2.89
RESIDENT	SANTA FE	YEARS 58								
STATE	NEW MEXICO									
CAUSE OF DEATH	HEART ATTACK	YEAR 1967								
NEW CODE NO.	420.1	RG NA								
CASE NO.	S- 10	SEX M	LIVER	2419.0	1000	250	1.000	4.00	2.83	4.81
OCCUPATION	FRST SERVC	AGE 64	LUNG	1385.0	1000	250	1.500	6.00	5.97	5.97
RESIDENT	SANTA FE	YEARS 64								
STATE	NEW MEXICO									
CAUSE OF DEATH	HEART ATTACK	YEAR 1967								
NEW CODE NO.	420.1	RG NA								
CASE NO.	S- 12	SEX F	LIVER	1660.0	1000	250	.478	1.91	1.19	1.96
OCCUPATION	NA	AGE 28	LUNG	985.0	1000	250	.180	.72	.73	.73
RESIDENT	APACHE	YEARS 28								
STATE	RESV.									
CAUSE OF DEATH	NA	YEAR 1967								
NEW CODE NO.		RG NA								
CASE NO.	S- 28	SEX M	LUNG	1710.0	1000	900	1.816	8.43	1.42	1.42
OCCUPATION	NA	AGE 78								
RESIDENT	SANTA FE	YEARS NA								
STATE	NEW MEXICO									
CAUSE OF DEATH	ART THROMBOSIS	YEAR 1969								
NEW CODE NO.	570.2	RG NA								
CASE NO.	S- 20	SEX M	LIVER	1000.0	1000	500	.101	.36	.23	.38
OCCUPATION	NA	AGE 22	LUNG	830.0	1000	500	.279	.86	.67	.67
RESIDENT	ENSENADA	YEARS NA								
STATE	NEW MEXICO									
CAUSE OF DEATH	SUNSHT WND	YEAR 1969								
NEW CODE NO.	E919.9	RG NA								
CASE NO.	S- 32	SEX M	LIVER	1876.0	1000	500	1.827	2.48	1.31	2.22
OCCUPATION	FRST SERV	AGE 47	LUNG	927.0	1000	500	8.303	4.01	4.97	4.97
RESIDENT	TOAS PUEBLO	YEARS NA								
STATE	NEW MEXICO									
CAUSE OF DEATH	HOMICIDE	YEAR 1969								
NEW CODE NO.	E963.0	RG NA								
CASE NO.	S- 42	SEX F	LIVER	1256.0	1000	900	1.000	2.10	1.72	2.92
OCCUPATION	HOUSEWIFE	AGE 58	LUNG	680.0	500	250	.427	.85	1.26	1.26
RESIDENT	VELARDE	YEARS 58								
STATE	NEW MEXICO									
CAUSE OF DEATH	PANCREAS MEN	YEAR 1969								
NEW CODE NO.	587.0	RG NA								
CASE NO.	S- 44	SEX M	LUNG	1300.0	1000	250	.294	1.10	.85	.85
OCCUPATION	NA	AGE	LYMPH	5.0	25	10	8.000	<MRL*	<MRL*	
RESIDENT	SANTA FE	YEARS 33	KIDNEY	360.0	100	10	8.000	<MRL*	<MRL*	
STATE	NEW MEXICO		VERTEBRAE	85.0	100	10	.070	.70	6.24	87.65
CAUSE OF DEATH	SUBARC HEMORRGE	YEAR 1970								
NEW CODE NO.	330.0	RG NA								

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			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER ORGAN (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	S- 84	SEX M	LIVER	961.0	1000	250	.912	3.65	3.80	6.65
OCCUPATION	NA	AGE 78	LUNG	733.0	1000	250	.159	.63	.86	.86
RESIDENT	DEWITT	YEARS 78	LYMPH	5.0	50	10	.833	.16	33.00	.33
STATE	MICHIGAN		KIDNEY	383.0	100	10	.064	.64	2.11	.63
CAUSE OF DEATH	CARCINOMA	YEAR 19 0	VERTEBRAE	135.0	250	100	.018	<MRL*	<MRL*	
MED CODE NO.	199.0	RG NA								
CASE NO.	S- 82	SEX M	LIVER	975.0	500	250	.382	.76	.78	1.33
OCCUPATION	PETRY WRKR	AGE 64	LUNG	1819.0	500	250	.373	.75	.41	.41
RESIDENT	SANTA FE	YEARS 64	LYMPH	5.0	25	10	.043	.11	21.50	.21
STATE	MEXICO		KIDNEY	297.0	100	10	.023	<MRL*	<MRL*	
CAUSE OF DEATH	CIRRHOSIS	YEAR 19 0	VERTEBRAE	106.0	250	100	.056	.14	1.32	0.25
MED CODE NO.	581.1	RG NA								
CASE NO.	S- 86	SEX M	LUNG	1042.0	500	250	.763	1.53	1.46	1.46
OCCUPATION	NA	AGE 76	LYMPH	3.0	25	10	.046	.11	38.33	.38
RESIDENT	SANTA FE	YEARS 76	KIDNEY	193.0	100	10	.031	.31	1.61	.48
STATE	NEW MEXICO		VERTEBRAE	172.0	250	100	.098	.24	1.42	0.97
CAUSE OF DEATH	NATRL CAUSES	YEAR 19 0								
MED CODE NO.	410.0	RG NA								
CASE NO.	S- 68	SEX M	LIVER	2267.0	500	250	1.979	3.96	1.75	2.97
OCCUPATION	RADIO TECH	AGE 48	LUNG	1824.0	500	250	1.508	3.02	1.65	1.65
RESIDENT	SANTA FE	YEARS 47	LYMPH	4.0	25	10	.069	.17	43.12	.43
STATE	NEW MEXICO		KIDNEY	494.0	100	10	.096	<MRL*	<MRL*	
CAUSE OF DEATH	HEART ATTACK	YEAR 19 0	VERTEBRAE	60.0	250	100	.054	.13	2.25	15.75
MED CODE NO.	410.9	RG NA								
CASE NO.	S- 78	SEX M	LIVER	1563.0	500	250	2.964	5.93	3.79	6.65
OCCUPATION	LABORER	AGE 60	LUNG	687.0	500	250	.684	1.37	1.99	1.99
RESIDENT	SANTA FE	YEARS 59	LYMPH	10.0	25	10	.062	.15	15.50	.15
STATE	NEW MEXICO		KIDNEY	229.0	100	10	.040	.40	1.75	.53
CAUSE OF DEATH	SKULL FRACTURE	YEAR 19 0	VERTEBRAE	120.0	200	100	.027	<MRL*	<MRL*	
MED CODE NO.	E960.0	RG NA								
CASE NO.	S- 72	SEX M	LUNG	710.0	500	250	.182	.39	.43	.43
OCCUPATION	CONTRACTOR	AGE 87	LYMPH	5.0	25	10	.061	.15	30.50	.30
RESIDENT	SANTA FE	YEARS NA	KIDNEY	328.0	100	10	.057	.57	1.78	.53
STATE	NEW MEXICO		VERTEBRAE	125.0	200	100	.110	.24	1.90	13.33
CAUSE OF DEATH	GUNSHOT WOUND	YEAR 19 0								
MED CODE NO.	E919.9	RG NA								
CASE NO.	S- 78	SEX F	LIVER	1295.0	500	250	1.474	2.95	2.28	3.87
OCCUPATION	HOUSEWIFE	AGE 56	LUNG	950.0	500	250	.299	.60	.63	.63
RESIDENT	CORDOVA	YEARS NA	LYMPH	.5.0	25	10	.024	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	283.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	BRAIN TUMOR	YEAR 1970	VERTEBRAE	90.0	200	100	.025	<MRL*	<MRL*	
MED CODE NO.	193.1	RG NA								
CASE NO.	S- 82	SEX F	LIVER	1473.0	500	10	.194	9.70	6.59	11.19
OCCUPATION	HOUSEWIFE	AGE 60	LUNG	807.0	500	250	.121	.24	.38	.38
RESIDENT	CORDOVA	YEARS NA	LYMPH	10.0	25	10	.011	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	197.0	100	10	.014	<MRL*	<MRL*	
CAUSE OF DEATH	NA	YEAR 1970	VERTEBRAE	60.0	200	100	.034	.07	1.13	7.93
MED CODE NO.	NA	RG NA								
CASE NO.	S- 84	SEX F	LIVER	1010.0	500	250	1.793	3.59	3.55	6.84
OCCUPATION	HOUSEWIFE	AGE 76	LUNG	843.0	500	250	.287	.57	.68	.68
RESIDENT	PARKVIEW	YEARS NA	LYMPH	4.0	25	10	.144	.36	45.00	.45
STATE	NEW MEXICO		KIDNEY	254.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	PNEUMONIA	YEAR 1970	VERTEBRAE	60.0	200	100	0.000	<MRL*	<MRL*	
MED CODE NO.	481.9	RG NA								
CASE NO.	S- 88	SEX F	LIVER	2053.0	500	250	.796	1.51	.57	.97
OCCUPATION	HOUSEWIFE	AGE 61	LUNG	655.0	500	100	.284	1.42	2.17	2.17
RESIDENT	CORDOVA	YEARS 61	LYMPH	2.0	25	10	.151	.38	188.75	1.89
STATE	NEW MEXICO		KIDNEY	368.0	100	10	.009	<MRL*	<MRL*	
CAUSE OF DEATH	NA	YEAR 1970	VERTEBRAE	55.0	200	100	.036	.07	1.31	9.16
MED CODE NO.	NA	RG NA								
CASE NO.	S- 90	SEX M	LIVER	2142.0	500	250	2.753	5.51	2.57	4.37
OCCUPATION	HIWAY DEPT	AGE 58	LUNG	910.0	500	250	.314	.63	.69	.69
RESIDENT	SANTA FE	YEARS NA	LYMPH	10.0	25	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	365.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	INJURIES	YEAR 1970	RIB	105.0	200	100	.043	.09	.46	3.25
MED CODE NO.	E229.0	RG NA								
CASE NO.	S- 92	SEX M	LIVER	1727.0	500	250	1.165	2.33	1.35	2.29
OCCUPATION	SALESMAN	AGE 61	LUNG	631.0	500	250	.137	.27	.59	.59
RESIDENT	SANTA FE	YEARS 19	LYMPH	17.0	25	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	356.0	100	10	.000	<MRL*	<MRL*	
CAUSE OF DEATH	ALCHOHOLISM	YEAR 1970	RIB	100.0	200	100	.030	.07	5.48	41.19
MED CODE NO.	326.3	RG NA								

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER GRAM WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD WEIGHT (DIS/MIN)
CASE NO.	S- 9	SEX M	LIVER	1270.0	500	250	3.179	4.36	2.33	3.96
OCCUPATION	T CAT HAND	AGE 52	LUNG	824.0	500	250	.227	.05	.27	.55
RESIDENT	SANTA FE	YEARS NA	LYMPH	7.0	25	10	.038	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	316.0	140	10	.005	<MRL*	<MRL*	
CAUSE OF DEATH	HEART ATTACK	YEAR 1970	RIB	104.0	260	100	.035	.07	.05	4.54
NEW CODE NO.	420.1	RG NA								
CASE NO.	S- 98	SEX M	LIVER	2074.0	500	250	.211	.02	.26	.35
OCCUPATION	NA	AGE 30	LUNG	1572.0	500	250	.205	.01	.26	.26
RESIDENT	SANTA FE	YEARS NA	LYMPH	10.0	25	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	404.0	100	10	.006	<MRL*	<MRL*	
CAUSE OF DEATH	ASPIRATION	YEAR 1970	RIB	93.0	200	100	.059	.12	1.27	6.66
NEW CODE NO.	933.0	RG NA								
CASE NO.	S-106	SEX M	LUNG	650.0	500	250	.276	.55	.85	.85
OCCUPATION	MAINTANCE MAN	AGE 27	LYMPH	3.0	25	10	0.000	<MRL*	<MRL*	
RESIDENT	SANTA FE	YEARS 27	KIDNEY	203.0	100	10	.009	<MRL*	<MRL*	
STATE	NEW MEXICO									
CAUSE OF DEATH	GNSHT WOUND	YEAR 1970								
NEW CODE NO.	E919.0	RG NA								
CASE NO.	S-112	SEX M	LIVER	1425.0	500	100	.756	3.78	2.33	3.95
OCCUPATION	PHYSICIAN	AGE 57	LUNG	1000.0	1000	250	.136	.54	.54	.90
RESIDENT	ESPANOLA	YEARS NA	LYMPH	7.0	25	10	.015	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	307.0	100	10	.005	<MRL*	<MRL*	
CAUSE OF DEATH	DRUGS	YEAR 1970	RIB	91.0	200	100	.018	<MRL*	<MRL*	
NEW CODE NO.	NA	RG NA								
CASE NO.	S-148	SEX M	LIVER	1350.0	1000	250	.669	2.68	1.92	3.27
OCCUPATION	EVIL DOER	AGE 19	LUNG	760.0	1000	250	.043	.17	.23	.23
RESIDENT	ANTON CHICO	YEARS NA	LYMPH	2.0	25	10	.007	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	284.0	100	10	.011	<MRL*	<MRL*	
CAUSE OF DEATH	BULLETS	YEAR 1971	VERTEBRAE	95.0	200	100	.074	.15	1.58	10.91
NEW CODE NO.	E919.0	RG NA								
CASE NO.	T- 10	SEX M	LIVER	1726.0	1000	250	.930	3.72	2.16	3.66
OCCUPATION	NA	AGE 58	LUNG	1917.0	1000	250	.189	.76	.39	.39
RESIDENT	DULCE	YEARS NA	LYMPH	9.5	25	10	.004	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	229.0	100	10	.012	<MRL*	<MRL*	
CAUSE OF DEATH	SEPSIS	YEAR 1971	VERTEBRAE	76.0	200	100	.019	<MRL*	<MRL*	
NEW CODE NO.	853.0	RG NA								
CASE NO.	T- 22	SEX M	LIVER	1474.0	1000	250	.246	.96	.65	1.11
OCCUPATION	NA	AGE 19	LUNG	1025.0	1000	250	.141	.56	.55	.55
RESIDENT	SANTA FE	YEARS NA	LYMPH	3.0	25	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	337.0	100	10	.006	<MRL*	<MRL*	
CAUSE OF DEATH	DRUG OVERDOS	YEAR 1971	VERTEBRAE	102.0	200	100	.030	.06	.59	4.12
NEW CODE NO.	989.0	RG NA								

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TABLE A-III COLORADO CASES ANALYZED FOR PLUTONIUM

<MDL = MINIMUM REPORTING LEVEL = 0.03 D/M PER SAMPLE VOL ANALYZED BASED ON TOTAL COUNTS, BKG, AND RECOVERY STATISTICS

			TISSUE	WET WEIGHT OF SAMPLE (GRAM)	VOLUME OF SAMPLE ANALYZED (CC)	VOLUME OF SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER GRAM WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	S-100	SEX M	LUNG	1355.0	500	250	.331	.06	.49	.69
OCCUPATION	SUPERVISOR	AGE 69	LYMPH	10.0	25	10	.012	<MDL*	<MDL*	
RESIDENT	DENVER	YEARS NA	KIDNEY	488.0	100	10	.010	<MDL*	<MDL*	
STATE	COLORADO		RIB	117.0	200	100	.079	.16	1.35	9.65
CAUSE OF DEATH	CORONARY OCC	YEAR 1970								
NEW CODE NO.	420.1	KG NA								
CASE NO.	S- 2	SEX NA	LIVER	465.0	500	250	.460	1.32	2.84	4.83
OCCUPATION	NA	AGE NA	LUNG	190.0	500	250	.125	.25	1.32	1.32
RESIDENT	NA	YEARS NA	LYMPH	3.0	25	10	.012	<MDL*	<MDL*	
STATE	COLORADO		RIB	162.0	200	50	.000	<MDL*	<MDL*	
CAUSE OF DEATH	NA	YEAR 1970								
NEW CODE NO.	NA	KG NA								
CASE NO.	S- 4	SEX NA	LIVER	500.0	500	250	.644	1.33	2.66	4.53
OCCUPATION	NA	AGE NA	LUNG	325.0	500	250	.548	1.18	3.37	3.37
RESIDENT	NA	YEARS NA	LYMPH	3.0	25	10	.051	.13	42.58	.02
STATE	COLORADO		RIB	150.0	200	50	.033	.13	.88	6.16
CAUSE OF DEATH	NA	YEAR 1970								
NEW CODE NO.	NA	KG NA								
CASE NO.	S- 6	SEX NA	LIVER	387.0	500	250	.412	.82	2.13	3.42
OCCUPATION	NA	AGE NA	LUNG	233.0	500	250	.064	.13	.55	.55
RESIDENT	NA	YEARS NA	LYMPH	25.0	25	10	0.000	<MDL*	<MDL*	
STATE	COLORADO		RIB	151.0	200	50	.021	<MDL*	<MDL*	
CAUSE OF DEATH	NA	YEAR 1970								
NEW CODE NO.	NA	KG NA								
CASE NO.	S- 8	SEX NA	LIVER	1813.0	500	250	1.545	3.09	3.85	5.19
OCCUPATION	NA	AGE NA	LUNG	582.0	500	250	.133	.27	.53	.53
RESIDENT	NA	YEARS NA	LYMPH	10.0	25	10	.024	<MDL*	<MDL*	
STATE	COLORADO		RIB	344.0	200	50	.004	<MDL*	<MDL*	
CAUSE OF DEATH	NA	YEAR 1970								
NEW CODE NO.		KG NA								
CASE NO.	S- 10	SEX NA	LUNG	404.0	500	250	1.000	2.00	6.95	4.95
OCCUPATION	NA	AGE	LYMPH	17.0	25	10	.050	.13	7.35	.07
RESIDENT	NA	YEARS NA	RIB	197.0	200	50	.057	.23	1.16	8.18
STATE	COLORADO									
CAUSE OF DEATH	NA	YEAR 1970								
NEW CODE NO.	NA	KG NA								
CASE NO.	S- 12	SEX NA	LIVER	343.0	500	250	.286	.57	1.67	2.83
OCCUPATION	NA	AGE NA	LUNG	137.0	500	250	.038	.06	.44	.44
RESIDENT	NA	YEARS NA	LYMPH	2.0	25	10	.000	<MDL*	<MDL*	
STATE	COLORADO		RIB	116.0	200	50	.037	.15	1.28	8.93
CAUSE OF DEATH	NA	YEAR 1970								
NEW CODE NO.	NA	KG NA								
CASE NO.	S- 14	SEX NA	LUNG	1165.0	500	250	.594	1.19	1.02	1.02
OCCUPATION	NA	AGE	LYMPH	107.0	25	10	.018	<MDL*	<MDL*	
RESIDENT	NA	YEARS NA	RIB	230.0	200	50	.054	.22	.94	6.57
STATE	COLORADO									
CAUSE OF DEATH	NA	YEAR 1970								
NEW CODE NO.	NA	KG NA								
CASE NO.	S- 16	SEX NA	LIVER	410.0	500	250	.615	1.23	3.08	5.10
OCCUPATION	NA	AGE NA	LUNG	300.0	500	250	.125	.25	.84	.84
RESIDENT	NA	YEARS NA	RIB	229.0	200	50	0.000	<MDL*	<MDL*	
STATE	COLORADO									
CAUSE OF DEATH	NA	YEAR 1970								
NEW CODE NO.	NA	KG NA								
CASE NO.	S- 18	SEX NA	LIVER	715.0	500	250	1.149	2.30	3.21	5.46
OCCUPATION	NA	AGE	LYMPH	3.0	25	10	.009	<MDL*	<MDL*	
RESIDENT	NA	YEARS NA	RIB	125.0	200	50	.063	.25	2.02	14.11
STATE	COLORADO									
CAUSE OF DEATH	NA	YEAR 1970								
NEW CODE NO.	NA	KG NA								
CASE NO.	S- 20	SEX NA	LIVER	913.0	500	250	.518	1.04	1.69	2.87
OCCUPATION	NA	AGE NA	LUNG	663.0	500	250	.192	.38	.87	.87
RESIDENT	NA	YEARS NA	LYMPH	12.0	25	10	0.000	<MDL*	<MDL*	
STATE	COLORADO		RIB	218.0	200	50	0.000	<MDL*	<MDL*	
CAUSE OF DEATH	NA	YEAR 1970								
NEW CODE NO.	NA	KG NA								
CASE NO.	S- 22	SEX NA	LIVER	310.0	500	250	.154	.31	.99	1.69
OCCUPATION	NA	AGE	LYMPH	5.0	25	10	0.000	<MDL*	<MDL*	
RESIDENT	NA	YEARS NA	RIB	136.0	200	50	.020	<MDL*	<MDL*	
STATE	COLORADO									
CAUSE OF DEATH	NA	YEAR 1970								
NEW CODE NO.	NA	KG NA								

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER TOTAL TISSUE (PCI/GRAM)	ACTIVITY PER DRIED WEIGHT (PCI/GRAM)	ACTIVITY PER KG (PCI/KG)	ACTIVITY PER STRONTIUM (PCI/GRAM)
CASE NO.	6- 26	SEX NA	LUNG	428.0	1000	250	.021	<MDL*	<MDL*	
OCCUPATION	NA	AGE	LYMPH	10.0	25	10	.008	<MDL*	<MDL*	
RESIDENT	NA	YEARS NA	RIB	199.0	200	50	.016	<MDL*	<MDL*	
STATE	COLORADO									
CAUSE OF DEATH	NA	YEAR 1970								
NEW CODE NO.	NA	KG NA								
CASE NO.	6- 28	SEX M	LIVER	959.0	1000	250	.022	2.49	2.48	.002
OCCUPATION	SHOEMAKER	AGE 75	LUNG	1215.0	1000	250	.387	1.55	1.27	1.27
RESIDENT	NA	YEARS NA	KIDNEY	358.0	100	10	.044	1.78	1.24	.54
STATE	COLORADO		RIB	23.0	200	50	.023	<MDL*	<MDL*	
CAUSE OF DEATH	HEART DISEASE	YEAR 1971								
NEW CODE NO.	428.1	KG NA								
CASE NO.	6- 30	SEX M	LIVER	2038.0	1000	250	.052	2.21	1.09	1.04
OCCUPATION	SALESMAN	AGE 52	LUNG	1001.0	1000	250	.187	.63	.47	.47
RESIDENT	NA	YEARS NA	LYMPH	244.0	25	10	0.000	<MDL*	<MDL*	
STATE	COLORADO		KIDNEY	470.0	100	10	.042	.82	1.05	.58
CAUSE OF DEATH	CORONARY OCCLUSI	YEAR 1971	GONAD	181.0	100	10	.091	.91	5.03	.28
NEW CODE NO.	428.3	KG NA								
CASE NO.	6- 32	SEX NA	LIVER	847.0	1000	250	.086	3.62	6.14	7.11
OCCUPATION	NA	AGE NA	LUNG	255.0	1000	250	.464	.24	1.00	1.00
RESIDENT	NA	YEARS NA	LYMPH	2.0	25	10	.030	.07	37.50	.37
STATE	COLORADO		RIB	66.0	200	50	0.000	<MDL*	<MDL*	
CAUSE OF DEATH	NA	YEAR 1971								
NEW CODE NO.	NA	KG NA								
CASE NO.	6- 34	SEX NA	LIVER	423.0	1000	250	.327	1.31	3.09	5.26
OCCUPATION	NA	AGE	LUNG	378.0	1000	250	.036	.14	.37	.37
RESIDENT	NA	YEARS NA	RIB	225.0	200	50	0.000	<MDL*	<MDL*	
STATE	COLORADO									
CAUSE OF DEATH	NA	YEAR 1971								
NEW CODE NO.	NA	KG NA								
CASE NO.	6- 36	SEX M	LIVER	1400.0	1000	250	1.073	4.29	3.87	5.21
OCCUPATION	WELDER	AGE 72	KIDNEY	225.0	100	10	.096	.96	4.27	1.28
RESIDENT	NA	YEARS NA	RIB	16.0	200	50	.006	<MDL*	<MDL*	
STATE	COLORADO		GONAD	72.0	100	10	.077	.77	10.69	.43
CAUSE OF DEATH	HEART DISEASE	YEAR 1971								
NEW CODE NO.	428.0	KG NA								
CASE NO.	6- 38	SEX M	LIVER	1745.0	1000	250	.493	1.97	1.10	1.05
OCCUPATION	PHARMACIST	AGE 81	LUNG	1181.0	1000	250	.066	.26	.22	.22
RESIDENT	NA	YEARS NA	LYMPH	10.0	25	10	.027	<MDL*	<MDL*	
STATE	COLORADO		KIDNEY	390.0	100	10	.121	1.21	3.10	.93
CAUSE OF DEATH	HEART FAILURE	YEAR 1971	RIB	37.0	200	50	.026	<MDL*	<MDL*	
NEW CODE NO.	428.2	KG NA								
CASE NO.	6- 40	SEX F	LIVER	1106.0	1000	250	.440	1.88	1.70	2.00
OCCUPATION	NA	AGE 78	LUNG	1211.0	1000	250	.276	1.10	.91	.91
RESIDENT	NA	YEARS NA	KIDNEY	357.0	100	10	-.018	<MDL*	<MDL*	
STATE	COLORADO		RIB	20.0	200	50	0.000	<MDL*	<MDL*	
CAUSE OF DEATH	PULMONARY THROMB	YEAR 1971								
NEW CODE NO.	465.0	KG NA								
CASE NO.	6- 42	SEX M	LIVER	1514.0	1000	250	.855	3.42	2.26	3.84
OCCUPATION	MINISTER	AGE 74	LUNG	1310.0	1000	250	.341	1.36	1.04	1.04
RESIDENT	NA	YEARS NA	LYMPH	93.0	25	10	0.000	<MDL*	<MDL*	
STATE	COLORADO		KIDNEY	1004.0	100	10	-.018	<MDL*	<MDL*	
CAUSE OF DEATH	LIVER ABSCESS	YEAR 1971	RIB	17.0	200	50	.028	<MDL*	<MDL*	
NEW CODE NO.	572.0	KG NA								
CASE NO.	6- 44	SEX M	LIVER	2162.0	1000	250	.613	2.45	1.13	1.93
OCCUPATION	SHOP FOREMAN	AGE 53	LUNG	2251.0	1000	250	.340	1.40	.62	.62
RESIDENT	NA	YEARS NA	LYMPH	2.0	25	10	0.000	<MDL*	<MDL*	
STATE	COLORADO		RIB	30.0	200	50	.016	<MDL*	<MDL*	
CAUSE OF DEATH	ARTERIAL OCC	YEAR 1971	GONAD	60.0	100	10	.110	1.10	10.33	.73
NEW CODE NO.	428.1	KG NA								
CASE NO.	6- 46	SEX F	LIVER	717.0	1000	250	.411	1.64	2.29	3.00
OCCUPATION	HOUSEWIFE	AGE 68	LUNG	1000.0	1000	250	.075	.30	.30	.30
RESIDENT	NA	YEARS NA	LYMPH	5.0	25	10	0.000	<MDL*	<MDL*	
STATE	COLORADO		RIB	255.0	200	50	.017	<MDL*	<MDL*	
CAUSE OF DEATH	MYOCARDIAL INF	YEAR 1971								
NEW CODE NO.	428.1	KG NA								
CASE NO.	6- 48	SEX F	LIVER	983.0	1000	250	.580	2.32	2.29	3.09
OCCUPATION	[illegible]	AGE 59	LUNG	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
RESIDENT	[illegible]	YEARS NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
STATE	[illegible]									
CAUSE OF DEATH	CARCINOMA	YEAR 1971								
NEW CODE NO.	172	KG NA								

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER G ASH WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	0- 58	SEX M	LIVER	1399.0	1000	250	.357	1.43	1.03	1.75
OCCUPATION	MOTEL MNGR	AGE 58	LUNG	1508.0	1000	250	.002	.37	.24	.24
RESIDENT	NA	YEARS NA	LYMPH	6.0	25	10	.017	<MRL*	<MRL*	
STATE	COLORADO		KIDNEY	343.0	100	10	.017	<MRL*	<MRL*	
CAUSE OF DEATH	CORONARY OCC	YEAR 1971	RIB	90.0	200	50	.010	<MRL*	<MRL*	
MED CODE NO.	420.1	KG NA								
CASE NO.	0- 52	SEX F	LIVER	2156.0	1000	250	.322	1.29	.98	1.02
OCCUPATION	HOUSEWIFE	AGE 46	LUNG	1613.0	1000	250	.161	.64	.48	.48
RESIDENT	NA	YEARS NA	LYMPH	3.0	25	10	.036	.09	30.00	.30
STATE	COLORADO		KIDNEY	353.0	100	10	.100	1.00	2.82	.85
CAUSE OF DEATH	DIABETES MELL	YEAR 1971								
MED CODE NO.	260.0	KG NA								
CASE NO.	0- 54	SEX M	LIVER	1078.0	1000	250	.489	1.96	1.81	3.08
OCCUPATION	RET GROCER	AGE 66	LUNG	1575.0	1000	250	.075	.30	.19	.19
RESIDENT	NA	YEARS NA	KIDNEY	488.0	100	10	.049	.49	1.02	.31
STATE	COLORADO		RIB	18.0	200	50	.006	<MRL*	<MRL*	
CAUSE OF DEATH	PERITONITIS	YEAR 1971	GONAD	66.0	100	10	.030	.30	4.61	.18
MED CODE NO.	570	KG NA								
CASE NO.	0- 5A	SEX F	LIVER	1070.0	1000	250	.017	<MRL*	<MRL*	
OCCUPATION	NA	AGE 86	LUNG	925.0	1000	250	.348	1.39	1.50	1.50
RESIDENT	NA	YEARS NA	LYMPH	9.0	25	10	.003	<MRL*	<MRL*	
STATE	COLORADO		KIDNEY	625.0	100	10	.075	<MRL*	<MRL*	
CAUSE OF DEATH	HEART DISEASE	YEAR 1971	RIB	14.0	200	50	.010	<MRL*	<MRL*	
MED CODE NO.	420.0	KG NA								
CASE NO.	0- 56	SEX M	LUNG	978.0	1000	250	.101	.40	.41	.41
OCCUPATION	NA	AGE 72	LYMPH	5.0	25	10	.023	<MRL*	<MRL*	
RESIDENT	NA	YEARS NA	KIDNEY	295.0	100	10	.071	.71	2.44	.05
STATE	COLORADO		RIB	30.0	200	50	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	HEART DISEASE	YEAR 1971								
MED CODE NO.	420.2	KG NA								
CASE NO.	0- 60	SEX M	LIVER	1520.0	1000	250	.471	1.88	1.24	2.11
OCCUPATION	SALESMAN	AGE NA	LUNG	1470.0	1000	250	.118	.47	.32	.32
RESIDENT	NA	YEARS NA	LYMPH	3.0	25	10	0.000	<MRL*	<MRL*	
STATE	COLORADO		RIB	27.0	200	50	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	EMPHYSEMA	YEAR 1971								
MED CODE NO.	502.0	KG NA								
CASE NO.	0- 62	SEX M	LIVER	1000.0	1000	250	1.327	5.31	3.32	5.84
OCCUPATION	FLR MILLER	AGE 71	LUNG	2456.0	1000	250	.129	.52	.21	.21
RESIDENT	NA	YEARS NA	LYMPH	7.0	25	10	.008	<MRL*	<MRL*	
STATE	COLORADO		RIB	142.0	200	50	.020	<MRL*	<MRL*	
CAUSE OF DEATH	EMPHYSEMA	YEAR 1971	GONAD	95.0	100	10	0.000	<MRL*	<MRL*	
MED CODE NO.	527.1	KG NA								
CASE NO.	0- 64	SEX M	LIVER	2311.0	1000	250	.292	1.17	.91	.86
OCCUPATION	FARMER	AGE 75	LUNG	998.0	1000	250	.061	.24	.27	.27
RESIDENT	NA	YEARS NA	LYMPH	8.0	25	10	.014	<MRL*	<MRL*	
STATE	COLORADO		KIDNEY	248.0	100	10	.066	.66	2.66	.08
CAUSE OF DEATH	HEART DISEASE	YEAR 1971	RIB	78.0	200	50	.131	.92	7.69	52.68
MED CODE NO.	420.1	KG NA								
CASE NO.	0- 66	SEX M	LIVER	1867.0	1000	250	1.431	5.72	5.36	9.12
OCCUPATION	CARPENTER	AGE 78	LUNG	1519.0	1000	250	.262	1.05	.69	.69
RESIDENT	NA	YEARS NA	KIDNEY	410.0	100	10	.030	.30	.73	.22
STATE	COLORADO		RIB	120.0	200	50	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	CARCINOMA	YEAR 1971	GONAD	35.0	100	10	.060	.60	17.14	.69
MED CODE NO.	162.1	KG NA								
CASE NO.	0- 68	SEX F	LIVER	1128.0	1000	250	.351	1.40	1.24	2.12
OCCUPATION	HOUSEWIFE	AGE 83	LUNG	958.0	1000	250	.185	.74	.78	.78
RESIDENT	NA	YEARS NA	LYMPH	9.0	25	10	0.000	<MRL*	<MRL*	
STATE	COLORADO		KIDNEY	120.0	100	10	.070	.70	5.83	1.75
CAUSE OF DEATH	MYOCARDIAL INF	YEAR 1971	RIB	185.0	200	50	.057	.23	1.23	8.63
MED CODE NO.	420.1	KG NA	GONAD	3.0	100	10	.060	.60	200.00	8.00
CASE NO.	0- 70	SEX M	LIVER	838.0	1000	250	.351	1.40	1.69	2.88
OCCUPATION	COAL MINR	AGE 69	LUNG	1070.0	1000	250	.223	.89	.83	.83
RESIDENT	NA	YEARS NA	LYMPH	30.0	25	10	.014	<MRL*	<MRL*	
STATE	COLORADO		KIDNEY	197.0	100	10	.007	<MRL*	<MRL*	
CAUSE OF DEATH	PUL EMBOLISM	YEAR 1971	RIB	389.0	200	50	.156	.62	1.04	11.69
MED CODE NO.	465.0	KG NA								
CASE NO.	0- 72	SEX F	LIVER	1328.0	1000	250	.465	1.96	1.48	2.38
OCCUPATION	NA	AGE 68	LUNG	899.0	1000	250	.066	.26	.30	.30
RESIDENT	NA	YEARS NA	LYMPH	168.0	25	10	0.000	<MRL*	<MRL*	
STATE	COLORADO		KIDNEY	272.0	100	10	.010	<MRL*	<MRL*	
CAUSE OF DEATH	PNEUMONIA	YEAR 1971	RIB	198.0	200	50	.208	.83	4.38	30.65
MED CODE NO.	493.0	KG NA								

			TISSUE	WT. OF TISSUE SAMPLE (GRAM)	VOLUME OF SAMPLE ANALYZED (CC)	VOLUME OF SAMPLE (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER DRY WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER WET WEIGHT (DIS/MIN)
CASE NO.	6- 76	SEX M	LIVER	950.0	1000	250	0.000	<MDL*	<MDL*	
OCCUPATION	NA	AGE 66	LUNG	745.0	1000	250	.024	.07	1.17	1.15
RESIDENT	NA	YEARS NA	LYMPH	2.0	25	10	.018	<MDL*	<MDL*	
STATE	COLORADO		KIDNEY	242.0	100	10	.035	.35	3.26	.37
CAUSE OF DEATH	ARTERIOSCLEROSIS	YEAR 1971	RIB	72.0	200	50	.055	.22	3.05	21.35
NEW CODE NO.	420.0	KG NA	GONAD	42.0	100	10	.025	MDL*	MDL*	
CASE NO.	6- 78	SEX M	LIVER	1116.0	1000	250	1.011	9.84	3.42	9.19
OCCUPATION	RETIRED	AGE 65	LUNG	526.0	1000	250	.237	.95	1.07	1.07
RESIDENT	NA	YEARS NA	LYMPH	2.0	25	10	.065	<MDL*	<MDL*	
STATE	COLORADO		RIB	100.0	200	50	.054	.23	2.32	15.94
CAUSE OF DEATH	EMPHYSEMA	YEAR 1971	GONAD	38.0	100	10	.015	<MDL*	<MDL*	
NEW CODE NO.	527.1	KG NA								
CASE NO.	6- 80	SEX M	LUNG	1550.0	1000	250	.874	.36	.78	.78
OCCUPATION	WATCHMEMAN	AGE 69	LYMPH	8.0	25	10	0.000	<MDL*	<MDL*	
RESIDENT	NA	YEARS NA	KIDNEY	248.0	100	10	.034	.34	1.21	.34
STATE	COLORADO		RIB	77.0	200	50	.189	.44	5.66	39.64
CAUSE OF DEATH	PNEUMONITIS	YEAR 1971								
NEW CODE NO.	492.0	KG NA								
CASE NO.	6- 82	SEX NA	LIVER	1879.0	1000	250	.453	1.81	.97	1.64
OCCUPATION	PAINTER	AGE 62	LUNG	1323.0	1000	250	.060	.24	.18	.18
RESIDENT	NA	YEARS NA	LYMPH	4.0	25	10	0.000	<MDL*	<MDL*	
STATE	COLORADO		KIDNEY	698.0	100	10	.033	.33	.48	.14
CAUSE OF DEATH	ARD ANEURISM	YEAR 1971	RIB	104.0	200	50	.067	.27	2.46	17.21
NEW CODE NO.	498.1	KG NA								
CASE NO.	6- 84	SEX M	LIVER	1756.0	1000	250	.048	.19	.11	.19
OCCUPATION	RR INS MAN	AGE 56	LUNG	930.0	1000	250	.284	1.14	1.22	1.22
RESIDENT	NA	YEARS NA	LYMPH	2.0	25	10	.081	<MDL*	<MDL*	
STATE	COLORADO		KIDNEY	448.0	100	10	.043	.43	.92	.28
CAUSE OF DEATH	ARTERIAL OCC	YEAR 1971	RIB	100.0	200	50	.068	.27	1.51	10.58
NEW CODE NO.	332.1	KG NA								
CASE NO.	6- 86	SEX M	LIVER	1014.0	1000	250	.238	.95	.94	1.68
OCCUPATION	MINISTER	AGE 88	LUNG	970.0	1000	250	.366	1.46	1.51	1.51
RESIDENT	NA	YEARS NA	LYMPH	1.5	25	10	0.000	<MDL*	<MDL*	
STATE	COLORADO		KIDNEY	159.0	100	10	.013	<MDL*	<MDL*	
CAUSE OF DEATH	HEART FAILURE	YEAR 1971	RIB	323.0	200	50	.263	1.05	8.55	59.87
NEW CODE NO.	434.1	KG NA								
CASE NO.	6- 88	SEX NA	LIVER	1611.0	1000	250	.446	1.86	1.16	1.97
OCCUPATION	LABORER	AGE 18	LUNG	1613.0	1000	250	.623	2.49	1.56	1.56
RESIDENT	NA	YEARS NA	LYMPH	2.2	25	10	.086	<MDL*	<MDL*	
STATE	COLORADO		RIB	132.0	200	50	.284	1.14	8.61	60.26
CAUSE OF DEATH	PNEUMONIA	YEAR 1971								
NEW CODE NO.	493.9	KG NA								
CASE NO.	6- 90	SEX M	LIVER	2432.0	1000	250	.497	1.99	.82	1.30
OCCUPATION	FARMER	AGE 75	LUNG	1085.0	1000	250	.023	<MDL*	<MDL*	
RESIDENT	NA	YEARS NA	LYMPH	3.8	25	10	.188	.47	156.47	1.57
STATE	COLORADO		RIB	415.0	200	50	.494	1.98	6.76	33.33
CAUSE OF DEATH	PUL INFARCTION	YEAR 1971								
NEW CODE NO.	465.9	KG NA								
CASE NO.	6- 92	SEX M	LIVER	2784.0	1000	250	.128	.51	.18	.31
OCCUPATION	US AR STDS	AGE 65	LUNG	1118.0	1000	250	.072	.29	.26	.26
RESIDENT	NA	YEARS NA	LYMPH	1.7	25	10	.005	<MDL*	<MDL*	
STATE	COLORADO		RIB	370.0	200	50	.036	.14	.37	2.57
CAUSE OF DEATH	GI HEMORRHAGE	YEAR 1971								
NEW CODE NO.	578.2	KG NA								
CASE NO.	6- 94	SEX F	LIVER	858.0	1000	250	.257	1.03	1.21	2.06
OCCUPATION	NA	AGE 79	LUNG	845.0	1000	250	.322	1.29	1.52	1.52
RESIDENT	NA	YEARS NA	LYMPH	3.4	25	10	.005	<MDL*	<MDL*	
STATE	COLORADO		KIDNEY	122.0	100	10	.068	.68	6.56	1.97
CAUSE OF DEATH	CHR BRAIN SYND	YEAR 1971	RIB	255.0	200	50	.194	.78	3.04	21.38
NEW CODE NO.	317.9	KG NA								
CASE NO.	6- 96	SEX F	LIVER	2462.0	1000	250	.092	.37	.15	.25
OCCUPATION	NA	AGE 38	LUNG	1460.0	1000	250	.076	.30	.21	.21
RESIDENT	NA	YEARS NA	KIDNEY	288.0	100	10	-.067	<MDL*	<MDL*	
STATE	COLORADO		RIB	284.0	200	50	.071	.28	1.00	6.98
CAUSE OF DEATH	PULMON EMBOLI	YEAR 1971								
NEW CODE NO.	465.9	KG NA								
CASE NO.	6- 98	SEX M	LIVER	1660.0	1000	250	.028	<MDL*	<MDL*	
OCCUPATION	NA	AGE 28	KIDNEY	170.0	100	10	.018	<MDL*	<MDL*	
RESIDENT	NA	YEARS NA	RIB	300.0	200	50	.118	.44	1.47	10.27
STATE	COLORADO		GONAD	50.3	100	10	.032	.32	6.36	.25
CAUSE OF DEATH	DRUG OVERDOS	YEAR 1971								
NEW CODE NO.	969.A	KG NA								

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER ORGAN WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	0-109	SEX M	LIVER	2010.0	1000	250	1.250	5.04	2.91	4.26
OCCUPATION	P.O. CLERK	AGE 68	RIB	200.0	200	50	.164	.66	3.28	22.96
RESIDENT	NA	YEARS NA								
STATE	COLORADO									
CAUSE OF DEATH	EMPHYSEMA	YEAR 1971								
MED CODE NO.	527.1	KG NA								
CASE NO.	0-102	SEX M	LIVER	1470.0	1000	250	.838	3.35	2.28	3.88
OCCUPATION	M SHP WKR	AGE 66	LUNG	1290.0	1000	250	.122	.49	.38	.38
RESIDENT	NA	YEARS NA	LYMPH	.6	25	10	.007	<MRL*	<MRL*	
STATE	COLORADO		RIB	150.0	200	50	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	KID CANCER	YEAR 1971								
MED CODE NO.	188.0	KG NA								
CASE NO.	0-104	SEX M	LIVER	1210.0	1000	250	1.005	4.02	3.32	5.65
OCCUPATION	PROFESSOR	AGE 66	LUNG	1279.0	1000	250	.122	.49	.38	.38
RESIDENT	NA	YEARS NA	LYMPH	10.0	25	10	.006	<MRL*	<MRL*	
STATE	COLORADO		KIDNEY	320.0	100	10	.055	.55	1.72	.92
CAUSE OF DEATH	MYOCARDIAL INF	YEAR 1971	RIB	160.0	200	50	.016	<MRL*	<MRL*	
MED CODE NO.	420.1	KG NA								
CASE NO.	0-106	SEX M	LUNG	1700.0	1000	250	.029	<MRL*	<MRL*	
OCCUPATION	NA	AGE	KIDNEY	170.0	100	10	.056	.56	3.29	.99
RESIDENT	NA	YEARS NA	RIB	60.0	200	50	.004	<MRL*	<MRL*	
STATE	COLORADO		VERTEBRAE	210.0	200	50	.016	<MRL*	<MRL*	
CAUSE OF DEATH	PULMON EMBOL	YEAR 1971								
MED CODE NO.	491.9	KG NA								
CASE NO.	0-108	SEX M	LIVER	1273.0	1000	250	.103	.65	.91	.87
OCCUPATION	PHYSICIST	AGE 69	LUNG	970.0	1000	250	.635	2.54	2.62	2.62
RESIDENT	NA	YEARS NA	KIDNEY	102.0	100	10	.048	.48	3.02	1.18
STATE	COLORADO		RIB	50.0	200	50	.004	<MRL*	<MRL*	
CAUSE OF DEATH	CARDIO MONSID	YEAR 1971								
MED CODE NO.	462.7	KG NA								
CASE NO.	0-110	SEX M	LIVER	1801.0	1000	100	.421	4.21	2.26	3.88
OCCUPATION	BARBER	AGE 83	LUNG	816.0	1000	250	.093	.37	.46	.46
RESIDENT	NA	YEARS NA	KIDNEY	117.0	100	10	.060	.60	4.19	1.26
STATE	COLORADO		RIB	50.0	200	50	.007	<MRL*	<MRL*	
CAUSE OF DEATH	COLON CANCER	YEAR 1971	VERTEBRAE	225.0	200	50	.007	<MRL*	<MRL*	
MED CODE NO.	153.3	KG NA								
CASE NO.	0-112	SEX F	LIVER	1300.0	1000	250	.436	1.74	1.33	2.25
OCCUPATION	NA	AGE 75	LUNG	550.0	1000	250	.093	.37	.67	.67
RESIDENT	NA	YEARS NA	RIB	54.0	200	50	.012	<MRL*	<MRL*	
STATE	COLORADO									
CAUSE OF DEATH	THYRD CANCER	YEAR 1971								
MED CODE NO.	194.0	KG NA								
CASE NO.	0-114	SEX M	LIVER	1200.0	1000	250	.420	1.68	1.48	2.38
OCCUPATION	NA	AGE 65	LUNG	1431.0	1000	250	.257	1.03	.71	.71
RESIDENT	NA	YEARS NA	KIDNEY	172.0	100	10	.040	.40	2.85	.85
STATE	COLORADO		RIB	127.0	200	50	.010	<MRL*	<MRL*	
CAUSE OF DEATH	EMPHYSEMA	YEAR 1971								
MED CODE NO.	434.7	KG NA								
CASE NO.	0-116	SEX F	LIVER	990.0	1000	250	.407	1.63	1.44	2.80
OCCUPATION	NA	AGE 98	LUNG	3831.0	1000	250	.154	.62	.60	.60
RESIDENT	NA	YEARS NA	KIDNEY	184.0	100	10	.069	.69	6.33	1.98
STATE	COLORADO		VERTEBRAE	104.0	200	50	.004	<MRL*	<MRL*	
CAUSE OF DEATH	PULM INFARCT	YEAR 1971	RIB	52.0	200	50	.000	<MRL*	<MRL*	
MED CODE NO.	485.0	KG NA								
CASE NO.	0-118	SEX M	LIVER	1662.0	1000	250	.748	2.96	1.78	3.03
OCCUPATION	CUSTODIAN	AGE 57	LUNG	1090.0	1000	250	.153	.61	.56	.56
RESIDENT	NA	YEARS NA	KIDNEY	181.0	100	10	.069	.69	3.81	1.14
STATE	COLORADO		RIB	133.0	200	50	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	COR THROMBOS	YEAR 1971								
MED CODE NO.	420.1	KG NA								
CASE NO.	0-120	SEX M	LIVER	1276.0	1000	250	.247	.99	.77	1.32

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER GRAM ASH (DIS/MIN)	ACTIVITY PER M3 (DIS/MIN)	ACTIVITY PER STANDARD GRAM (DIS/MIN)
CASE NO.	6-125	SEX F	LIVER	566.0	1000	250	.023	<MDL*	<MDL*	
OCCUPATION	NA	AGE 45	LUNG	1072.0	1000	250	.044	.19	.19	.18
RESIDENT	NA	YEARS NA	KIDNEY	129.0	100	10	.060	.60	4.62	1.4*
STATE	COLORADO		VERTEBRAE	163.0	200	100	.110	.22	1.35	4.45
CAUSE OF DEATH	CIRRHOSIS	YEAR 1971								
NEW CODE NO.	581.1	KG NA								
CASE NO.	6-126	SEX M	LIVER	1672.0	1000	10	.560	$6.00	52.24	55.41
OCCUPATION	NA	AGE 44	LUNG	2512.0	1000	10	.290	29.00	11.54	11.54
RESIDENT	NA	YEARS NA	KIDNEY	196.0	100	10	.026	<MDL*	<MDL*	
STATE	COLORADO		GONAD	47.0	100	10	.043	.43	9.15	.37
CAUSE OF DEATH	PNEUMONIA	YEAR 1971								
NEW CODE NO.	493.9	KG NA								
CASE NO.	6-128	SEX M	LIVER	606.0	1000	10	.610	61.00	90.92	151.17
OCCUPATION	IND WORKER	AGE 49	LUNG	1534.0	1000	250	.082	.33	.21	.21
RESIDENT	NA	YEARS NA	KIDNEY	196.0	100	10	.040	.40	2.06	.62
STATE	COLORADO		VERTEBRAE	174.0	200	100	.073	.15	.84	5.87
CAUSE OF DEATH	FRACT SKULL	YEAR 1971	GONAD	90.0	100	10	.044	.40	9.60	.38
NEW CODE NO.	801.0	KG NA								
CASE NO.	6-130	SEX M	LIVER	2220.0	1000	10	.150	15.00	6.76	11.49
OCCUPATION	NA	AGE 46	LUNG	1137.0	1000	250	.071	.28	.25	.25
RESIDENT	NA	YEARS NA	KIDNEY	349.0	100	10	<.010	<MDL*	<MDL*	
STATE	COLORADO		VERTEBRAE	140.0	200	100	.091	.18	1.28	9.10
CAUSE OF DEATH	FRACT SKULL	YEAR 1971	GONAD	7.0	100	10	.120	1.20	16.44	.46
NEW CODE NO.	803.0	KG NA								
CASE NO.	6-132	SEX M	LIVER	1372.0	1000	10	.910	91.00	66.33	112.76
OCCUPATION	NA	AGE 89	LUNG	820.0	1000	250	.185	.74	.90	.90
RESIDENT	NA	YEARS NA	KIDNEY	237.0	100	10	.040	.40	1.69	.51
STATE	COLORADO		GONAD	20.0	100	10	.040	.40	20.00	.90
CAUSE OF DEATH	SKULL FRACT	YEAR 1971								
NEW CODE NO.	803.0	KG NA								
CASE NO.	6-134	SEX F	LIVER	752.0	1000	250	.296	1.18	1.57	2.68
OCCUPATION	HOUSEWIFE	AGE 54	LUNG	91..0	1000	250	.113	.45	.50	.50
RESIDENT	NA	YEARS NA	LYMPH	2.2	25	10	.038	.07	34.09	.34
STATE	COLORADO		KIDNEY	113.0	100	10	.080	.80	7.08	2.12
CAUSE OF DEATH	HEART DISEAS	YEAR 1971								
NEW CODE NO.	428.0	KG NA								
CASE NO.	6-135	SEX F	LUNG	1101.0	1000	250	.338	1.35	1.23	1.23
OCCUPATION	NA	AGE 57	LYMPH	4.8	25	10	.180	.45	93.75	.94
RESIDENT	NA	YEARS NA	KIDNEY	99.0	100	10	0.000	<MDL*	<MDL*	
STATE	COLORADO		VERTEBRAE	136.0	500	100	.069	.34	2.54	17.76
CAUSE OF DEATH	NA	YEAR 1971								
NEW CODE NO.	NA	KG NA								
CASE NO.	6-131	SEX NA	LIVER	791.0	1000	250	.284	.82	1.03	1.75
OCCUPATION	NA	AGE 68	LUNG	1119.0	1000	250	.257	1.03	.92	.92
RESIDENT	NA	YEARS NA	KIDNEY	227.0	100	10	.055	.55	2.42	.73
STATE	COLORADO		VERTEBRAE	255.0	500	100	.233	1.16	4.57	31.98
CAUSE OF DEATH	PNEUMONIA	YEAR 1971	GONAD	20.0	100	10	.050	.50	25.00	1.00
NEW CODE NO.	481.0	KG NA								
CASE NO.	6-140	SEX F	LIVER	585.0	1000	250	.266	1.06	1.82	3.09
OCCUPATION	NA	AGE 75	LUNG	399.0	1000	250	.138	.55	1.38	1.38
RESIDENT	NA	YEARS NA	KIDNEY	86.0	100	10	.076	.76	8.84	2.65
STATE	COLORADO		VERTEBRAE	75.0	200	100	.012	<MDL*	<MDL*	
CAUSE OF DEATH	SUICIDE	YEAR 1971								
NEW CODE NO.	E970.	KG NA								
CASE NO.	6-141	SEX M	LIVER	934.0	1000	250	.468	1.87	3.51	5.96
OCCUPATION	NA	AGE 21	LUNG	1040.0	1000	250	.083	.33	.32	.32
RESIDENT	NA	YEARS NA	LYMPH	1.6	25	10	.168	.42	262.50	2.62
STATE	COLORADO		KIDNEY	78.0	100	10	.069	.69	8.85	2.45
CAUSE OF DEATH	GUN AND HEAD	YEAR 1971	VERTEBRAE	105.0	200	100	.041	.08	.77	5.42
NEW CODE NO.	E979.	KG NA	GONAD	20.0	100	10	<0.000	MRL*	MRL*	
CASE NO.	6-144	SEX NA	LIVER	1514.0	1000	250	1.271	5.08	3.35	5.69
OCCUPATION	DENTIST	AGE 84	LUNG	1037.0	1000	250	.118	.47	.46	.46
RESIDENT	NA	YEARS NA	GONAD	72.0	100	10	.100	1.00	13.89	.56
STATE	COLORADO									
CAUSE OF DEATH	NA	YEAR 1971								
NEW CODE NO.	NA	KG NA								
CASE NO.	6-146	SEX M	LIVER	1060.0	1000	250	.560	2.32	1.25	2.12
OCCUPATION	NA	AGE 61	LUNG	1650.0	1000	250	.137	.55	.33	.33
RESIDENT	NA	YEARS NA	LYMPH	4.7	25	10	.085	.21	45.21	.45
STATE	COLORADO		VERTEBRAE	125.0	200	100	.132	.26	2.11	16.78
CAUSE OF DEATH	GUN AND HEAD	YEAR 1971	GONAD	37.0	100	10	.051	.51	13.78	.65
NEW CODE NO.	E918.9	KG NA								

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			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER ORGAN WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	6-148	SEX M	LUNG	1242.0	1000	250	.101	.40	.33	.33
OCCUPATION	NA	AGE 34	LYMPH	6.1	25	10	.068	.17	33.33	.33
RESIDENT	NA	YEARS NA	KIDNEY	235.0	100	10	-.073	<MDL*	<MDL*	
STATE	COLORADO		VERTEBRAE	99.0	200	100	.067	.13	1.35	9.67
CAUSE OF DEATH	PNEUMONIA	YEAR 1971	GONAD	34.0	100	10	.044	.44	12.94	.52
NEW CODE NO.	501.8	KG NA								
CASE NO.	6-150	SEX M	LUNG	1370.0	1000	250	.434	1.74	1.27	1.27
OCCUPATION	NA	AGE 55	LYMPH	2.0	25	10	.157	.39	196.25	1.96
RESIDENT	NA	YEARS NA	KIDNEY	281.0	100	10	.061	.61	2.17	.65
STATE	COLORADO		VERTEBRAE	282.0	500	100	.096	.48	1.70	11.91
CAUSE OF DEATH	NA	YEAR 1971	GONAD	35.0	100	10	.104	1.04	29.71	1.19
NEW CODE NO.	NA	KG NA								

LANL

TABLE A-IV LASL EMPLOYEES KNOWN TO HAVE A POTENTIAL LOW EXPOSURE TO PLUTONIUM

MRL = MINIMUM REPORTING LEVEL = 0.03 D/M PER SAMPLE VOL ANALYZED   BASED ON TOTAL COUNTS+BACKGROUND RECOVERY STATISTICS

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER ORGAN WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	1- 54	SEX M	LUNG	354.0	200	10	.740	14.80	41.81	41.81
OCCUPATION	MACHINIST	AGE 60	LYMPH	23.4	25	10	1.220	3.05	120.60	4.22
RESIDENT	LOS ALAMOS	YEARS 10								
STATE	NEW MEXICO									
CAUSE OF DEATH	CARDIAC	YEAR 1959								
NEW CODE NO.	434.1	KG 76								
CASE NO.	1- 58	SEX M	LIVER	1320.0	1000	100	1.030	10.30	7.80	13.27
OCCUPATION	MACHINIST	AGE 50	LUNG	1020.0	1000	100	1.370	13.70	13.43	13.43
RESIDENT	LOS ALAMOS	YEARS 08	LYMPH	22.0	100	100	.040	.04	1.82	.02
STATE	NEW MEXICO		KIDNEY	222.0	100	100	.020	<MRL.	<MRL.	
CAUSE OF DEATH	CARDIAC	YEAR 1959	VERTEBRAE	124.0	100	100	0.000	<MRL.	<MRL.	
NEW CODE NO.	420.1	KG NA	RIB	163.0	150	100	.020	<MRL.	NA.	
			SPLEEN	363.0	100	100	.000	.00	.16	.02
CASE NO.	1- 60	SEX M	LIVER	2152.0	1000	50	.070	1.40	.65	1.11
OCCUPATION	MATHEMATICIAN	AGE 36	LUNG	712.0	1000	50	.020	<MRL.	<MRL.	
RESIDENT	LOS ALAMOS	YEARS 07	LYMPH	22.5	25	10	0.000	<MRL.	<MRL.	
STATE	NEW MEXICO		KIDNEY	300.0	250	10	.010	<MRL.	<MRL.	
CAUSE OF DEATH	BAC ENDOCARDITIS	YEAR 1960								
NEW CODE NO.	430.0	KG NA								
CASE NO.	1- 74	SEX M	LIVER	1354.0	1000	50	.030	.60	.44	.75
OCCUPATION	MACHINIST	AGE 48	LUNG	1389.0	1000	50	.200	4.00	2.90	2.90
RESIDENT	LOS ALAMOS	YEARS 07	LYMPH	2.0	25.	10	.030	.07	37.50	.37
STATE	NEW MEXICO		KIDNEY	287.0	100	10	.020	<MRL.	<MRL.	
CAUSE OF DEATH	CIRRHOSIS	YEAR 1960								
NEW CODE NO.	356.0	KG NA								
CASE NO.	1- 80	SEX M	LIVER	1720.0	1000	50	.040	.80	.47	.79
OCCUPATION	ACCOUNTANT	AGE 54	LUNG	736.0	1000	50	.210	4.20	5.71	5.71
RESIDENT	LOS ALAMOS	YEARS 12	LYMPH	9.0	50	10	.020	<MRL.	<MRL.	
STATE	NEW MEXICO		KIDNEY	347.0	100	10	2.870	28.70	82.71	24.81
CAUSE OF DEATH	MULTIPLE MYELOMA	YEAR 1960								
NEW CODE NO.	203.0	KG 83								
CASE NO.	1- 94	SEX F	LIVER	1529.0	1000	50	1.200	24.00	15.70	26.68
OCCUPATION	CLERK	AGE 46	LUNG	592.0	1000	50	.860	17.20	29.05	29.05
RESIDENT	LOS ALAMOS	YEARS 11	LYMPH	14.0	50	10	.390	1.95	139.29	1.39
STATE	NEW MEXICO		KIDNEY	221.0	100	10	0.000	<MRL.	<MRL.	
CAUSE OF DEATH	CORONARY OCCLUSI	YEAR 1960								
NEW CODE NO.	420.1	KG NA								
CASE NO.	1-126	SEX M	LIVER	1745.0	1000	50	.070	1.40	.80	1.36
OCCUPATION	TECHNICIAN	AGE 40	LUNG	1043.0	1000	50	.070	1.40	1.34	1.34
RESIDENT	LOS ALAMOS	YEARS 03	LYMPH	16.0	50	10	0.000	<MRL.	<MRL.	
STATE	NEW MEXICO		KIDNEY	286.0	100	10	0.000	<MRL.	<MRL.	
CAUSE OF DEATH	SKULL FRACTURE	YEAR 1961								
NEW CODE NO.	803.0	KG NA								
CASE NO.	1-128	SEX M	LIVER	1776.0	1000	50	.140	2.80	1.58	2.68
OCCUPATION	TECHNICIAN	AGE 31	LUNG	802.0	1000	50	.230	4.60	5.74	5.74
RESIDENT	LOS ALAMOS	YEARS 06	LYMPH	15.0	50	10	.030	.15	10.00	.10
STATE	NEW MEXICO		KIDNEY	307.0	100	10	0.000	<MRL.	<MRL.	
CAUSE OF DEATH	ASPHYXIA	YEAR 1961								
NEW CODE NO.	962.7	KG 71								
CASE NO.	1-130	SEX M	LIVER	2134.0	1000	50	.140	2.80	1.31	2.23
OCCUPATION	MACHINIST	AGE 58	LUNG	1115.0	1000	50	.290	5.80	5.20	5.21
RESIDENT	LOS ALAMOS	YEARS 11	LYMPH	20.0	50	10	.060	.30	15.00	.15
STATE	NEW MEXICO		KIDNEY	325.0	100	10	0.000	<MRL.	<MRL.	
CAUSE OF DEATH	LUNG CANCER	YEAR 1961								
NEW CODE NO.	163.0	KG NA								
CASE NO.	1-132	SEX M	LIVER	2179.0	1000	50	.060	1.20	.55	.94
OCCUPATION	DRAFTSMAN	AGE 32	LUNG	925.0	1000	50	.090	1.80	1.95	1.95
RESIDENT	LOS ALAMOS	YEARS 05	LYMPH	5.0	50	10	0.000	<MRL.	<MRL.	
STATE	NEW MEXICO		KIDNEY	410.0	100	10	0.000	<MRL.	<MRL.	
CAUSE OF DEATH	CORONARY OCC	YEAR 1961								
NEW CODE NO.	420.1	KG NA								
CASE NO.	1-136	SEX M	LIVER	1741.0	1000	50	.150	3.00	1.72	2.93
OCCUPATION	TECHNICIAN	AGE 56	LUNG	880.0	1000	50	.110	2.20	2.64	2.64
RESIDENT	LOS ALAMOS	YEARS 11	LYMPH	16.0	50	10	0.000	<MRL.	<MRL.	
STATE	NEW MEXICO		KIDNEY	282.0	100	10	.730	7.30	25.89	7.77
CAUSE OF DEATH	CORONARY OCC	YEAR 1961								
NEW CODE NO.	420.1	KG NA								
CASE NO.	1-140	SEX M	LIVER	2316.0	1000	50	.090	1.80	.78	1.32
OCCUPATION	CLERK	AGE 38	LUNG	921.0	1000	50	.600	12.00	13.03	13.03
RESIDENT	LOS ALAMOS	YEARS 14	LYMPH	9.0	50	10	.120	.60	66.67	.67
STATE	NEW MEXICO		KIDNEY	515.0	100	10	.020	<MRL.	<MRL.	
CAUSE OF DEATH	MY. INFARCTION	YEAR 1961								
NEW CODE NO.	420.1	KG NA								

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			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ASHED (CC)	ACTIVITY PER WET WEIGHT (DIS/MIN)	ACTIVITY PER ORGAN WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	2- 2	SEX F	LIVER	1894.0	1000	50	.190	3.88	2.01	3.41
OCCUPATION	CLERK	AGE 32	LUNG	1122.0	1000	50	.040	.88	.71	.71
RESIDENT	LOS ALAMOS	YEARS 16	LYMPH	6.0	50	10	.460	2.30	383.33	3.83
STATE	NEW MEXICO		KIDNEY	282.0	100	10	.020	<MRL*	<MRL*	
CAUSE OF DEATH	LEUKEMIA	YEAR 1961								
NEW CODE NO.	204.0	RG NA								
CASE NO.	2- 14	SEX M	LIVER	1550.0	1000	50	.488	9.68	6.19	10.53
OCCUPATION	ELECTRICIA	AGE 63	LUNG	519.0	1000	50	.045	16.98	32.42	32.82
RESIDENT	LOS ALAMOS	YEARS 15	LYMPH	22.0	50	10	.016	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	252.0	100	10	.043	.43	1.71	.51
CAUSE OF DEATH	THROMBO EMBOLISM	YEAR 1961								
NEW CODE NO.	428.1	RG NA								
CASE NO.	2- 20	SEX F	LIVER	2020.0	1000	50	.268	5.28	1.84	3.13
OCCUPATION	HOUSEWIFE	AGE 47	LUNG	810.0	1000	50	.046	.92	1.14	1.14
RESIDENT	LOS ALAMOS	YEARS 2	LYMPH	0.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	253.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	CANCER OF RECTUM	YEAR 1961								
NEW CODE NO.	154.0	RG NA								
CASE NO.	2- 66	SEX M	LIVER	2025.0	1000	50	.070	1.48	.69	1.18
OCCUPATION	TECHNICIAN	AGE 48	LUNG	960.0	1000	50	.030	.68	.62	.62
RESIDENT	LOS ALAMOS	YEARS 11	LYMPH	13.0	50	10	.120	.60	46.15	.46
STATE	NEW MEXICO		KIDNEY	264.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	DRUGS	YEAR 1962	VERTEBRAE	365.0	300	10	0.000	<MRL*	<MRL*	
NEW CODE NO.	972.0	RG NA								
CASE NO.	2- 78	SEX M	LIVER	1768.0	1000	50	.050	1.00	.57	.96
OCCUPATION	EL-MECH TE	AGE 54	LYMPH	18.0	50	10	0.000	<MRL*	<MRL*	
RESIDENT	LOS ALAMOS	YEARS 35	KIDNEY	280.0	100	10	.000	.00	3.21	.96
STATE	NEW MEXICO		VERTEBRAE	251.0	250	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	CARDIAC	YEAR 1962								
NEW CODE NO.	420.1	RG NA								
CASE NO.	2- 94	SEX M	LIVER	995.0	1000	50	.180	3.60	3.62	6.15
OCCUPATION	MICROSCOPY	AGE 62	LUNG	825.0	1000	50	.280	5.60	6.79	6.79
RESIDENT	LOS ALAMOS	YEARS 14	LYMPH	8.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	251.0	100	10	.030	.30	1.20	.30
CAUSE OF DEATH	CARDIAC	YEAR 1962								
NEW CODE NO.	434.0	RG NA								
CASE NO.	2- 98	SEX M	LUNG	605.0	1000	50	.150	3.00	4.96	4.96
OCCUPATION	PHYSICIST	AGE 80	LYMPH	14.0	50	10	.160	.80	57.14	.57
RESIDENT	LOS ALAMOS	YEARS 16	KIDNEY	179.0	100	10	.020	<MRL*	<MRL*	
STATE	NEW MEXICO		VERTEBRAE	31.0	250	25	.010	<MRL*	<MRL*	
CAUSE OF DEATH	CANCER	YEAR 1962								
NEW CODE NO.	NA	RG NA								
CASE NO.	2-126	SEX M	LIVER	2395.0	1000	25	.082	3.28	1.37	2.33
OCCUPATION	RESIDENT	AGE 62	LUNG	1500.0	1000	25	.146	5.84	3.79	3.79
RESIDENT	LOS ALAMOS	YEARS 17	LYMPH	11.0	50	10	.209	1.04	95.00	.95
STATE	NEW MEXICO		KIDNEY	368.0	250	10	.001	1.52	4.14	1.24
CAUSE OF DEATH	CIRRHOSIS	YEAR 1962	VERTEBRAE	300.0	500	10	.043	32.15	107.17	750.17
NEW CODE NO.	581.1	RG 74								
CASE NO.	2-132	SEX M	LIVER	2300.0	1000	50	0.000	<MRL*	<MRL*	
OCCUPATION	REPAIRMAN	AGE 20	LUNG	1650.0	1000	50	0.000	<MRL*	<MRL*	
RESIDENT	LOS ALAMOS	YEARS 18	LYMPH	18.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	478.0	250	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	PNEUMONIA	YEAR 1962								
NEW CODE NO.	490.9	RG NA								
CASE NO.	2-142	SEX M	LIVER	2005.0	1000	50	0.000	<MRL*	<MRL*	
OCCUPATION	ELECT TECH	AGE 47	LUNG	783.0	1000	50	.004	<MRL*	<MRL*	
RESIDENT	LOS ALAMOS	YEARS 15	LYMPH	21.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	365.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	PULMONARY EMBOLISM	YEAR 1963	VERTEBRAE	358.0	500	10	0.000	<MRL*	<MRL*	
NEW CODE NO.	460.0	RG NA								
CASE NO.	2-144	SEX M	LIVER	1880.0	1000	50	0.000	<MRL*	<MRL*	
OCCUPATION	BLDER	AGE 45	LUNG	1720.0	1000	50	0.000	<MRL*	<MRL*	
RESIDENT	LOS ALAMOS	YEARS 05	LYMPH	26.0	50	10	0.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	320.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	PNEUMONIA	YEAR 1963	VERTEBRAE	384.0	500	10	0.000	<MRL*	<MRL*	
NEW CODE NO.	434.2	RG NA								
CASE NO.	3- 28	SEX M	LIVER	2745.0	1000	25	0.000	<MRL*	<MRL*	
OCCUPATION	CRAFTSMAN	AGE 47	LUNG	710.0	1000	500	.008	.20	1.14	1.04
RESIDENT	LOS ALAMOS	YEARS 10	LYMPH	18.0	50	10	.027	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	282.0	100	10	.004	<MRL*	<MRL*	
CAUSE OF DEATH	CANCER	YEAR 1965	VERTEBRAE	120.0	250	10	.028	<MRL*	<MRL*	
NEW CODE NO.	199.0	RG 81								

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER GRAM WET WT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STRONTIUM UNIT (DIS/MIN)
CASE NO.	3- 23	SEX M	LIVER	1550.0	1500	25	.109	4.36	3.78	4.45
OCCUPATION	ASS PRO REC	AGE 51	LUNG	2251.0	1500	25	.053	1.71	1.39	1.51
RESIDENT	LOS ALAMOS	YEARS 10	LYMPH	6.0	50	10	6.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	219.0	100	10	.026	<MRL*	<MRL*	
CAUSE OF DEATH	CORONARY THROMB	YEAR 1966	VERTEBRAE	130.0	850	10	.005	<MRL*	<MRL*	
NEW CODE NO.	420.1	RG NA								
CASE NO.	3- 44	SEX M	LIVER	1673.0	1000	25	.021	<MRL*	<MRL*	
OCCUPATION	MECHANIST	AGE 57	LUNG	1432.0	1000	25	.091	3.64	2.94	2.54
RESIDENT	LOS ALAMOS	YEARS 13	LYMPH	2.0	50	10	8.000	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	292.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	CANCER	YEAR 1967								
NEW CODE NO.	19948	RG 78								
CASE NO.	3- 58	SEX M	LIVER	1720.0	1000	25	.025	<MRL*	<MRL*	
OCCUPATION	PHYSICIST	AGE 41	LUNG	1130.0	1000	25	.127	5.08	4.50	4.50
RESIDENT	LOS ALAMOS	YEARS 14	LYMPH	19.0	50	10	.082	<MRL*	<MRL*	
STATE	NEW MEXICO		HEART	330.0	100	10	.044	1.44	1.28	1.76
CAUSE OF DEATH	CORONARY CCC	YEAR 1967	VERTEBRAE	69.0	250	10	.441	11.02	183.75	1289.25
NEW CODE NO.	420.1	RG 71	KIDNEY	340.0	100	10	.148	1.48	4.35	1.31
CASE NO.	3- 70	SEX M	LIVER	1720.0	1000	25	.256	10.24	5.93	10.07
OCCUPATION	TECHNICIAN	AGE 47	LUNG	830.0	1000	25	.103	4.12	4.96	4.90
RESIDENT	LOS ALAMOS	YEARS 21	LYMPH	5.0	50	10	.616	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	93.0	100	10	.017	<MRL*	<MRL*	
CAUSE OF DEATH	CORONARY CCC	YEAR 1967	VERTEBRAE	56.0	100	10	.017	<MRL*	<MRL*	
NEW CODE NO.	420.1	RG NA								
CASE NO.	3- 72	SEX M	LIVER	1375.0	1000	25	.148	5.92	4.31	7.32
OCCUPATION	CARETAKER	AGE 43	LUNG	1260.0	1000	500	3.820	7.64	6.96	6.06
RESIDENT	LOS ALAMOS	YEARS 24	LYMPH	4.0	50	10	.624	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	345.0	100	10	.015	<MRL*	<MRL*	
CAUSE OF DEATH	CIRRHOSIS	YEAR 1968	VERTEBRAE	43.0	100	10	.037	.37	8.60	68.23
NEW CODE NO.	581.0	RG 64								
CASE NO.	3- 84	SEX F	LIVER	1380.0	1000	25	0.000	<MRL*	<MRL*	
OCCUPATION	CLERK	AGE 61	LUNG	1055.0	1000	25	.151	6.04	5.73	5.73
RESIDENT	LOS ALAMOS	YEARS 21	KIDNEY	295.0	100	10	.042	.42	1.45	.49
STATE	NEW MEXICO		LYMPH	7.0	50	10	.032	.16	22.86	.23
CAUSE OF DEATH	CORONARY CCC	YEAR 1968	VERTEBRAE	32.0	100	10	.002	<MRL*	<MRL*	
NEW CODE NO.	420.1	RG NA								
CASE NO.	3- 86	SEX F	LIVER	1710.0	1000	25	.039	1.56	.91	1.55
OCCUPATION	PRO-PAINTE	AGE 34	LUNG	920.0	1000	25	.091	3.64	3.96	3.06
RESIDENT	LOS ALAMOS	YEARS 03	LYMPH	5.0	50	10	.118	.59	118.00	1.18
STATE	NEW MEXICO		KIDNEY	425.0	100	10	.003	<MRL*	<MRL*	
CAUSE OF DEATH	DIABETES MELL	YEAR 1968	VERTEBRAE	48.0	100	10	.022	<MRL*	<MRL*	
NEW CODE NO.	260.0	RG 52								
CASE NO.	3- 88	SEX M	LIVER	2000.0	1000	25	.134	6.16	3.08	5.24
OCCUPATION	FIREMAN	AGE 43	LUNG	1710.0	1000	25	.093	3.72	2.18	2.18
RESIDENT	LOS ALAMOS	YEARS 17	LYMPH	8.0	50	10	.038	.19	23.75	.24
STATE	NEW MEXICO		KIDNEY	358.0	100	10	.030	.30	.86	.26
CAUSE OF DEATH	CARDIAC	YEAR 1968	VERTEBRAE	55.0	100	10	.004	<MRL*	<MRL*	
NEW CODE NO.	420.1	RG NA								
CASE NO.	3-108	SEX AA	LUNG	978.0	1000	250	12.340	49.36	50.09	50.89
OCCUPATION	TECHNICIAN	AGE 40	LYMPH	6.0	50	10	.238	1.19	198.33	1.48
RESIDENT	LOS ALAMOS	YEARS 24	KIDNEY	258.0	100	10	.336	3.36	13.44	4.83
STATE	NEW MEXICO		VERTEBRAE	120.0	250	100	.091	.18	1.46	10.35
CAUSE OF DEATH	PNEUMONIA	YEAR 1969								
NEW CODE NO.	493.9	RG NA								
CASE NO.	3-142	SEX AA	LUNG	1152.0	1000	250	6.906	27.62	23.96	23.96
OCCUPATION	ENGINEER	AGE 48	LYMPH	4.0	50	10	.189	.94	236.25	2.36
RESIDENT	LOS ALAMOS	YEARS 14	KIDNEY	350.0	100	10	.016	<MRL*	<MRL*	
STATE	NEW MEXICO		VERTEBRAE	130.0	250	100	.142	.35	2.73	19.12
CAUSE OF DEATH	CARDIAC ARREST	YEAR 1969								
NEW CODE NO.	433.1	RG 82								
CASE NO.	3- 24	SEX M	LUNG	432.0	1000	250	.060	.24	.38	.38
OCCUPATION	PHYSICIST	AGE 43	LYMPH	4.0	50	10	.379	1.85	462.50	4.62
RESIDENT	LOS ALAMOS	YEARS 25	KIDNEY	350.0	100	10	1.173	11.73	33.51	10.05
STATE	NEW MEXICO		VERTEBRAE	60.0	100	50	.165	.29	3.22	22.54
CAUSE OF DEATH	HEART ATTACK	YEAR 1969								
NEW CODE NO.	420.1	RG 78								
CASE NO.	3- 48	SEX F	LUNG	1364.0	1000	500	1.955	3.91	2.87	2.87
OCCUPATION	MICROBIOLOGIST	AGE 55	LIVER	1080.0	1000	500	2.134	4.27	3.95	6.72
RESIDENT	LOS ALAMOS	YEARS 26								
STATE	NEW MEXICO									
CAUSE OF DEATH	MYOCARDIAL INF	YEAR 1969								
NEW CODE NO.	420.1	RG 61								

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			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ASSAYED (CC)	ACTIVITY PER WHOLE VOLUME (DIS/MIN)	ACTIVITY PER GRAM WET (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD GRAM (DIS/MIN)
CASE NO.	S- 64	SEX M	LIVER	1280.0	800	250	3.000	0.02	4.70	7.99
OCCUPATION	PHYSICIST	AGE 49	LUNG	652.0	800	250	8.700	11.48	17.48	17.48
RESIDENT	LOS ALAMOS	YEARS 45	LYMPH	4.0	25	10	.074	.18	46.25	.46
STATE	NEW MEXICO		KIDNEY	265.0	250	10	.039	.07	3.68	1.18
CAUSE OF DEATH	BRAIN HEMO	YEAR 1970	VERTEBRAE	100.0	100	10	.003	<MRL*	<MRL*	
NEW CODE NO.	E970.0	RG NA								
CASE NO.	S- 76	SEX M	LIVER	1720.0	900	10	.096	4.08	2.78	4.73
OCCUPATION	LABORER	AGE 64	LUNG	1045.0	800	250	10.960	21.92	20.48	20.48
RESIDENT	LOS ALAMOS	YEARS AA	LYMPH	20.0	25	10	.302	.98	49.00	.49
STATE	NEW MEXICO		KIDNEY	404.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	HEPATIC FAIL	YEAR 1970	VERTEBRAE	90.0	200	10	.070	1.48	15.56	108.00
NEW CODE NO.	583.9	RG 64								
CASE NO.	S- 80	SEX M	LIVER	2013.0	900	10	.269	13.45	9.68	11.38
OCCUPATION	PRO FORCE	AGE 58	LUNG	977.0	900	250	4.489	8.98	15.56	15.56
RESIDENT	LOS ALAMOS	YEARS AA	LYMPH	8.0	25	10	.196	.44	61.25	.61
STATE	NEW MEXICO		KIDNEY	343.0	100	10	.014	<MRL*	<MRL*	
CAUSE OF DEATH	BAD HEART	YEAR 1970	VERTEBRAE	125.0	200	100	.087	.17	1.36	9.74
NEW CODE NO.	429.1	RG 93								
CASE NO.	S-108	SEX M	LIVER	2058.0	900	90	.501	9.01	2.44	4.15
OCCUPATION	AEC PR FRC	AGE 83	LYMPH	4.0	25	10	.041	.10	25.62	.26
RESIDENT	LOS ALAMOS	YEARS AA	KIDNEY	248.0	100	10	.010	<MRL*	<MRL*	
STATE	NEW MEXICO		VERTEBRAE	94.0	200	100	.035	.07	.71	4.95
CAUSE OF DEATH	HEART ATTACK	YEAR 1970								
NEW CODE NO.	428.1	RG NA								
CASE NO.	S-116	SEX M	LIVER	1863.0	900	100	.444	2.22	1.19	2.03
OCCUPATION	AEC COMM	AGE 65	LUNG	1228.0	1000	250	.196	.78	.64	.64
RESIDENT	LOS ALAMOS	YEARS 14	KIDNEY	304.0	100	10	.017	<MRL*	<MRL*	
STATE	NEW MEXICO		VERTEBRAE	96.0	200	100	.063	.13	2.25	15.75
CAUSE OF DEATH	ASTHMA	YEAR 1970								
NEW CODE NO.	441.9	RG 76								
CASE NO.	S-118	SEX F	LIVER	1263.0	900	100	.014	4.07	3.22	5.48
OCCUPATION	TECHNICIAN	AGE 32	LUNG	688.0	1000	100	.074	.74	1.08	1.08
RESIDENT	LOS ALAMOS	YEARS 20	LYMPH	8.0	25	10	.021	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	265.0	100	10	.005	<MRL*	<MRL*	
CAUSE OF DEATH	CANCER	YEAR 1970	VERTEBRAE	120.0	200	10	.128	2.56	20.32	142.22
NEW CODE NO.	199.9	RG 62								
CASE NO.	S-150	SEX M	LIVER	1690.0	1000	250	1.089	4.36	2.58	4.38
OCCUPATION	CHEMIST	AGE 41	LUNG	1360.0	1000	250	2.344	9.38	6.89	6.89
RESIDENT	LOS ALAMOS	YEARS 11	KIDNEY	345.0	100	10	.008	<MRL*	<MRL*	
STATE	NEW MEXICO		VERTEBRAE	50.0	200	100	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	HEART ATTACK	YEAR 1971								
NEW CODE NO.	428.1	RG 74								
CASE NO.	7- 4	SEX M	LIVER	2020.0	1000	250	.496	1.98	.78	1.28
OCCUPATION	ACCTNT	AGE 76	LUNG	590.0	1000	250	.785	2.82	4.78	4.78
RESIDENT	LOS ALAMOS	YEARS 24	LYMPH	4.7	25	10	1.025	2.56	545.21	5.45
STATE	NEW MEXICO		KIDNEY	200.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	CARCINOMA	YEAR 1971	VERTEBRAE	100.0	250	100	.122	.30	3.05	21.35
NEW CODE NO.	199.0	RG NA								
CASE NO.	7- 6	SEX M	LIVER	1800.0	1000	250	1.181	4.72	2.62	4.46
OCCUPATION	PRO FRCE	AGE 52	LUNG	1326.0	1000	250	.198	.43	.33	.33
RESIDENT	LOS ALAMOS	YEARS 14	LYMPH	2.6	25	10	.026	<MRL*	<MRL*	
STATE	NEW MEXICO		KIDNEY	368.0	100	10	0.000	<MRL*	<MRL*	
CAUSE OF DEATH	CARCINOMA	YEAR 19 0	RIB	103.0	250	100	.137	.34	3.33	23.28
NEW CODE NO.	199.0	RG 95								

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TABLE A-V LASL EMPLOYEES KNOWN TO HAVE HIGH POTENTIAL EXPOSURE TO PLUTONIUM

*MRL = MINIMUM REPORTING LEVEL = 0.03 D/M PER SAMPLE VOL ANALYZED   BASED ON TOTAL COUNTS+BKG+AND RECOVERY STATISTICS

			TISSUE	WET WEIGHT SAMPLE (GRAMS)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER ORGAN WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	1- 39	SEX M	LIVER	1553.0	1000	100	1918.117	15181.17	6236.52	18723.15
OCCUPATION	TECHNICIAN	AGE 38	LUNG	855.0	1000	100	532.297	5322.97	6226.05	6226.05
RESIDENT	LOS ALAMOS	YEARS 11	LYMPH	5.0	100	10	45.161	451.61	85049.23	651.96
STATE	NEW MEXICO		KIDNEY	279.0	100	10	1.252	12.52	44.69	14.24
CAUSE OF DEATH	TRAUMA	YEAR 1959	VERTEBRAE	180.0	100	10	43.004	430.04	2389.23	16725.33
NEW CODE NO.	E918.3	KG 75	RIB	21.2	100	10	2.462	24.62	1161.32	8129.25
			HEART	400.0	100	10	2.240	22.40	56.00	16.80
			MUSCLE	199.5	100	10	.158	1.58	7.92	237.55
			SPLEEN	116.0	100	10	2.664	26.28	160.00	27.00
			STERNUM	122.0	100	10	13.646	136.46	1118.52	7824.57
CASE NO.	1-150	SEX M	LIVER	1717.0	1000	100	3.963	39.63	23.08	39.24
OCCUPATION	MACHINIST	AGE 81	LUNG	1120.0	1000	100	30.535	305.35	272.63	272.63
RESIDENT	LOS ALAMOS	YEARS 08	LYMPH	36.0	50	10	3.690	18.45	512.50	5.12
STATE	NEW MEXICO		KIDNEY	332.0	100	10	.276	2.76	8.31	2.49
CAUSE OF DEATH	CARDIAC	YEAR 1959								
NEW CODE NO.	433.1	KG NA								
CASE NO.	2- 4	SEX M	LIVER	1375.0	1000	100	597.200	5972.00	4343.27	7383.56
OCCUPATION	HP LABORER	AGE 68	LUNG	1360.0	1000	100	342.980	3429.80	2521.91	2521.91
RESIDENT	LOS ALAMOS	YEARS 11	LYMPH	5.0	50	10	64.178	320.89	64178.00	641.78
STATE	NEW MEXICO		KIDNEY	280.0	100	10	1.400	14.00	50.00	15.00
CAUSE OF DEATH	LUNG CANCER	YEAR 1961								
NEW CODE NO.	163.0	KG 68								
CASE NO.	2- 30	SEX M	LIVER	1015.0	1000	100	290.926	2909.26	2866.27	4872.65
OCCUPATION	HP MONITOR	AGE 46	LUNG	677.0	1000	100	578.030	5780.30	8538.11	8538.11
RESIDENT	LOS ALAMOS	YEARS 13	LYMPH	12.0	50	10	362.150	1810.75	150895.83	1508.96
STATE	NEW MEXICO		KIDNEY	127.0	100	10	.897	8.97	70.63	21.19
CAUSE OF DEATH	CARDIAC	YEAR 1962	VERTEBRAE	14.0	50	10	1.715	8.57	612.50	4287.50
NEW CODE NO.	456.1	KG 62								
CASE NO.	2- 58	SEX M	LIVER	1718.0	1000	100	3.617	36.17	21.05	35.79
OCCUPATION	PLUMBER	AGE 39	LUNG	1160.0	1000	100	6.427	64.27	55.41	55.41
RESIDENT	LOS ALAMOS	YEARS 11	LYMPH	5.0	50	10	.841	4.20	841.00	8.41
STATE	NEW MEXICO		KIDNEY	323.0	100	10	.454	4.54	14.06	4.22
CAUSE OF DEATH	CORONARY PEN	YEAR 1962	VERTEBRAE	207.0	250	10	.011	*MRL*	*MRL*	
NEW CODE NO.	420.1	KG NA								
CASE NO.	2- 64	SEX M	LIVER	1350.0	1000	100	1.305	13.05	9.61	16.34
OCCUPATION	CARPENTER	AGE 49	LUNG	809.0	1000	100	2.371	23.71	29.31	29.31
RESIDENT	LOS ALAMOS	YEARS NA	LYMPH	12.0	50	10	.500	2.50	208.33	2.08
STATE	NEW MEXICO		KIDNEY	255.0	100	10	0.000	*MRL*	*MRL*	
CAUSE OF DEATH	CARDIAC	YEAR 1962	VERTEBRAE	167.0	250	10	.042	1.05	6.29	44.03
NEW CODE NO.	420.1	KG NA								
CASE NO.	2- 68	SEX M	LIVER	1606.0	1000	100	1.016	10.16	6.33	10.75
OCCUPATION	ENGINEER	AGE 42	LUNG	1059.0	1000	100	.960	9.60	9.07	9.07
RESIDENT	LOS ALAMOS	YEARS 14	LYMPH	7.0	50	10	.335	1.67	239.29	2.39
STATE	NEW MEXICO		KIDNEY	282.0	100	10	.042	.42	1.49	.45
CAUSE OF DEATH	CARDIAC	YEAR 1962	VERTEBRAE	260.0	800	10	.006	*MRL*	*MRL*	
NEW CODE NO.	420.1	KG NA								
CASE NO.	2- 88	SEX M	LIVER	3713.0	1000	100	.822	8.22	2.21	3.76
OCCUPATION	TAX DRIVER	AGE 52	LUNG	703.0	1000	100	.790	7.90	11.24	11.24
RESIDENT	LOS ALAMOS	YEARS 22	LYMPH	13.0	50	10	.387	1.94	148.85	1.49
STATE	NEW MEXICO		KIDNEY	224.0	100	10	0.000	*MRL*	*MRL*	
CAUSE OF DEATH	LIVER CANCER	YEAR 1959								
NEW CODE NO.	156.0	KG NA								
CASE NO.	2-100	SEX M	LIVER	2000.0	1000	50	.230	4.60	2.30	3.75
OCCUPATION	HP MONITOR	AGE 44	LUNG	546.0	1000	100	.990	9.90	18.13	18.13
RESIDENT	LOS ALAMOS	YEARS 15	LYMPH	6.0	50	10	.207	1.03	172.50	1.72
STATE	NEW MEXICO		KIDNEY	263.0	100	25	.713	2.85	10.84	3.25
CAUSE OF DEATH	PERITONITIS	YEAR 1962	VERTEBRAE	355.0	400	10	.457	22.85	64.37	450.56
NEW CODE NO.	434.0	KG 77								
CASE NO.	2-130	SEX M	LIVER	1768.0	1000	100	46.430	464.30	262.61	446.44
OCCUPATION	ENGINEER	AGE 47	LUNG	1144.0	1000	100	54.099	540.99	472.89	472.89
RESIDENT	LOS ALAMOS	YEARS 10	LYMPH	24.0	50	10	1.410	7.05	293.75	2.94
STATE	NEW MEXICO		KIDNEY	378.0	250	10	4.453	111.32	294.51	88.35
CAUSE OF DEATH	CORONARY OCC	YEAR 1962	VERTEBRAE	310.0	500	10	1.130	56.50	177.67	1243.71
NEW CODE NO.	420.1	KG 72								
CASE NO.	3- 14	SEX M	LIVER	1995.0	1000	100	43.192	431.92	216.50	368.05
OCCUPATION	PHYSICIST	AGE 55	LUNG	1003.0	1000	100	1.016	10.16	10.13	10.13
RESIDENT	LOS ALAMOS	YEARS 23	LYMPH	16.0	50	10	.146	.73	45.62	.46
STATE	NEW MEXICO		KIDNEY	105.0	100	10	.100	1.00	9.52	2.86
CAUSE OF DEATH	CARDIAC	YEAR 1955	RIB	5.0	50	10	1.904	9.52	1904.00	13328.00
NEW CODE NO.	420.1	KG 77								

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CASE NO.	3- 16	SEX M	LIVER	1295.0	1000	100	76.525	765.25	701.51	1192.56
OCCUPATION	METALLURGIST	AGE 50	LUNG	625.0	1000	400	23.551	235.51	375.42	376.82
RESIDENT	LOS ALAMOS	YEARS 19	LYMPH	2.0	50	10	10.732	53.66	26645.00	260.45
STATE	NEW MEXICO		KIDNEY	278.0	100	10	.021	<MRL	<MRL	
CAUSE OF DEATH	BRAIN TUMOR	YEAR 1959								
NEW CODE NO.	223.2	KG 75								
CASE NO.	3- 22	SEX M	LIVER	2720.0	1000	100	.300	3.00	1.10	1.80
OCCUPATION	ENGINEER	AGE 53	LUNG	1160.0	1000	500	1.964	3.93	3.39	3.39
RESIDENT	LOS ALAMOS	YEARS 20	LYMPH	29.0	50	10	.083	.41	14.31	.14
STATE	NEW MEXICO		KIDNEY	185.0	100	10	.156	1.56	10.46	3.02
CAUSE OF DEATH	MYCOSIS FNGD	YEAR 1966	VERTEBRAE	145.0	250	10	.017	<MRL	<MRL	
NEW CODE NO.	203.0	KG NA								
CASE NO.	5-130	SEX M	LUNG	71.0	100	1	6.010	601.00	8464.79	8464.79
OCCUPATION	JR SCNTIST	AGE NA	LYMPH	1.0	25	1	22.550	563.75	563750.00	5637.50
RESIDENT	LOS ALAMOS	YEARS NA	MUSCLE	1.0	25	1	.230	5.75	5750.00	172500.00
STATE	NEW MEXICO		RIB	20.0	100	1	.710	71.00	3550.00	26850.00
CAUSE OF DEATH	BIOPSY SAMPL	YEAR 1959								
NEW CODE NO.	229.0	KG NA								
CASE NO.	7- 16	SEX M	LIVER	2002.0	1000	250	3.313	13.25	6.62	11.25
OCCUPATION	MACHINIST	AGE 62	LUNG	1018.0	1000	250	7.551	30.20	29.67	29.67
RESIDENT	LOS ALAMOS	YEARS NA	LYMPH	6.2	25	10	.501	1.25	202.02	2.02
STATE	NEW MEXICO		KIDNEY	221.0	100	10	0.000	<MRL	<MRL	
CAUSE OF DEATH	HEART ATTACK	YEAR 1971	VERTEBRAE	90.0	800	100	.201	.40	4.47	31.27
NEW CODE NO.	420.1	KG 54								

TABLE A-VI SPECIAL CASE STUDYS REPLICATE ASSAYS

<MRL = MINIMUM REPORTING LEVEL = 0.03 D/M PER SAMPLE VOL ANALYZED BASED ON TOTAL COUNTS,BKG,AND RECOVERY STATISTICS

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER ORGAN WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	3- 39	SEX M	LIVER	1950.0	1000	100	2053.350	20533.50	10530.00	17901.00
OCCUPATION	TECHNICIAN	AGE 38	LIVER	1950.0	1000	100	1782.885	17828.85	9143.00	15543.10
RESIDENT	LOS ALAMOS	YEARS 11	LUNG	850.0	1000	100	465.800	4658.00	5480.00	5480.00
STATE	NEW MEXICO		LUNG	850.0	1000	100	488.750	4887.50	5750.00	5750.00
CAUSE OF DEATH	TRAUMA	YEAR 1959	LUNG	850.0	1000	100	572.560	5725.60	6736.00	6736.00
NEW CODE NO.	E918.3	KG 75	LUNG	850.0	1000	100	322.065	3220.65	3789.00	3789.00
			LUNG	850.0	1000	100	1013.625	10136.25	11925.00	11925.00
			LUNG	850.0	1000	100	576.640	5766.40	6784.00	6784.00
			LUNG	850.0	1000	100	532.950	5329.50	6270.00	6270.00
			LUNG	850.0	1000	100	334.645	3346.45	3937.00	3937.00
			LYMPH	5.3	100	10	103.350	1033.50	195000.00	1950.00
			LYMPH	5.3	100	10	15.277	152.77	28824.53	288.25
			LYMPH	5.3	100	10	17.282	172.82	32607.55	326.08
			LYMPH	5.3	100	10	44.495	444.95	83952.83	839.53
			KIDNEY	270.0	100	10	1.674	16.74	62.00	18.60
			KIDNEY	270.0	100	10	.891	8.91	33.00	9.90
			VERTEBRA	180.0	100	10	53.640	536.40	2980.00	20860.00
			VERTEBRA	180.0	100	10	49.572	495.72	2754.00	19278.00
			VERTEBRA	180.0	100	10	25.812	258.12	1434.00	10038.00
			STERNUM	122.0	100	10	16.226	162.26	1330.00	9310.00
			STERNUM	122.0	100	10	11.665	116.65	956.97	6398.77
			RIB	21.2	100	10	2.020	20.20	952.83	6669.81
			RIB	21.2	100	10	3.099	30.99	1461.70	10232.55
			RIB	21.2	100	10	2.268	22.68	1069.81	7488.68
			HEART	400.0	100	10	.520	5.20	23.00	4.90
			HEART	400.0	100	10	3.560	35.60	89.00	26.70
			SPLEEN	116.0	100	10	1.960	19.60	168.97	25.34
			SPLEEN	116.0	100	10	2.215	22.15	190.95	28.64
			MUSCLE	199.5	100	10	.279	2.79	13.98	419.55
			MUSCLE	199.5	100	10	.038	.38	1.90	57.14

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TABLE A-VII   NEW YORK CITY CASES ANALYZED FOR PLUTONIUM

<MRL = MINIMUM REPORTING LEVEL = 0.03 D/M PER SAMPLE VOL ANALYZED   BASED ON TOTAL COUNTS/EFFICIENCY AND RECOVERY STATISTICS

				TISSUE	WET WEIGHT SAMPLE (GRAMS)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER ORGAN WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD MAN (DIS/MIN)
CASE NO.	4- 2	SEX	M	LIVER	410.0	500	25	.050	1.70	2.44	4.15
OCCUPATION	NA	AGE	47	LUNG	625.0	500	25	.246	4.92	7.87	7.87
RESIDENT	NA	YEARS	NA	GONAD	23.0	50	10	.014	<MRL	<MRL	
STATE	NEW YORK			RIB	155.0	250	10	.020	.75	4.84	33.87
CAUSE OF DEATH	GUNSHOT IN ABD	YEAR	1968								
NEW CODE NO.	E919.0	KG	NA								
CASE NO.	4- 4	SEX	M	LIVER	420.0	500	25	0.000	<MRL	<MRL	
OCCUPATION	NA	AGE	50	LUNG	595.0	500	25	.189	3.78	6.35	6.35
RESIDENT	NA	YEARS	NA	GONAD	35.0	50	10	.007	<MRL	<MRL	
STATE	NEW YORK			RIB	160.0	250	10	.009	<MRL	<MRL	
CAUSE OF DEATH	CEREBRAL CONT	YEAR	1968								
NEW CODE NO.	803.0	KG	NA								
CASE NO.	4- 6	SEX	M	LIVER	453.0	500	25	.027	<MRL	<MRL	
OCCUPATION	NA	AGE	38	LUNG	905.0	500	25	.057	1.14	1.26	1.26
RESIDENT	NA	YEARS	NA	GONAD	25.0	50	10	.053	.26	10.40	.42
STATE	NEW YORK			RIB	205.0	250	10	.087	2.17	10.61	74.27
CAUSE OF DEATH	ARTERIOSCLEROSIS	YEAR	1968								
NEW CODE NO.	420.3	KG	NA								
CASE NO.	4- 8	SEX	M	LIVER	275.0	250	25	.026	<MRL	<MRL	
OCCUPATION	NA	AGE	36	LUNG	480.0	500	25	.263	5.26	10.96	10.96
RESIDENT	NA	YEARS	NA	GONAD	34.0	50	10	.020	<MRL	<MRL	
STATE	NEW YORK			RIB	138.0	250	10	.034	.85	6.16	43.12
CAUSE OF DEATH	MULTIPLE INJ	YEAR	1968								
NEW CODE NO.	E825.0	KG	NA								
CASE NO.	4- 10	SEX	M	LIVER	456.0	500	25	.150	3.00	6.58	11.18
OCCUPATION	NA	AGE	46	LUNG	660.0	500	25	.063	1.26	1.91	1.91
RESIDENT	NA	YEARS	NA	GONAD	32.9	50	10	.010	<MRL	<MRL	
STATE	NEW YORK			RIB	170.0	250	10	.100	4.00	23.53	164.71
CAUSE OF DEATH	BARBITURATE POIS	YEAR	1968								
NEW CODE NO.	972.0	KG	NA								
CASE NO.	4- 12	SEX	M	LIVER	207.0	250	25	.069	.69	2.40	6.09
OCCUPATION	NA	AGE	45	LUNG	685.0	500	25	.007	<MRL	<MRL	
RESIDENT	NA	YEARS	NA	GONAD	37.0	50	10	.021	<MRL	<MRL	
STATE	NEW YORK			RIB	150.0	250	10	.019	<MRL	<MRL	
CAUSE OF DEATH	BRAIN SKULL WD	YEAR	1968								
NEW CODE NO.	856.1	KG	NA								
CASE NO.	4- 14	SEX	M	LIVER	250.0	250	25	.060	.60	2.40	4.08
OCCUPATION	NA	AGE	45	LUNG	375.0	500	25	.010	<MRL	<MRL	
RESIDENT	NA	YEARS	NA	GONAD	30.0	50	10	.002	<MRL	<MRL	
STATE	NEW YORK			RIB	160.0	250	10	.053	1.32	8.28	57.97
CAUSE OF DEATH	HEART STAB WOUND	YEAR	1968								
NEW CODE NO.	861.1	KG	NA								
CASE NO.	4- 16	SEX	M	LIVER	550.0	500	25	.014	<MRL	<MRL	
OCCUPATION	NA	AGE	30	LUNG	440.0	500	25	.009	<MRL	<MRL	
RESIDENT	NA	YEARS	NA	GONAD	20.0	50	10	.009	<MRL	<MRL	
STATE	NEW YORK			RIB	150.0	250	10	.014	<MRL	<MRL	
CAUSE OF DEATH	GUN INJ SKULL	YEAR	1968								
NEW CODE NO.	E919.0	KG	NA								
CASE NO.	4- 18	SEX	M	LIVER	615.0	500	25	.061	1.22	2.04	5.80
OCCUPATION	NA	AGE	36	LUNG	660.0	500	25	.075	1.50	2.27	2.27
RESIDENT	NA	YEARS	NA	GONAD	30.0	50	10	.045	.22	7.50	.30
STATE	NEW YORK			RIB	160.0	250	10	.010	<MRL	<MRL	
CAUSE OF DEATH	AUTO ACCIDENT	YEAR	1968								
NEW CODE NO.	E825.3	KG	NA								
CASE NO.	4- 20	SEX	M	LIVER	340.0	500	25	.035	.70	2.06	3.50
OCCUPATION	NA	AGE	40	LUNG	680.0	500	25	.035	.70	1.03	1.03
RESIDENT	NA	YEARS	NA	GONAD	70.0	50	25	0.000	<MRL	<MRL	
STATE	NEW YORK			RIB	205.0	250	10	.005	<MRL	<MRL	
CAUSE OF DEATH	NA	YEAR	1968								
NEW CODE NO.	NA	KG	NA								
CASE NO.	4- 22	SEX	M	LIVER	965.0	500	25	.103	2.06	2.13	3.63
OCCUPATION	NA	AGE	53	LUNG	1000.0	500	25	.010	<MRL	<MRL	
RESIDENT	NA	YEARS	NA	GONAD	25.0	50	10	.001	<MRL	<MRL	
STATE	NEW YORK			RIB	180.0	250	10	.004	<MRL	<MRL	
CAUSE OF DEATH	HEART HYPERTR	YEAR	1968								
NEW CODE NO.	434.5	KG	NA								
CASE NO.	4- 24	SEX	NA	LIVER	300.0	250	25	.051	.51	1.70	2.89
OCCUPATION	NA	AGE	NA	LUNG	670.0	500	25	.021	<MRL	<MRL	
RESIDENT	NA	YEARS	NA	GONAD	50.0	50	10	.012	<MRL	<MRL	
STATE	NEW YORK			RIB	160.0	250	10	.011	<MRL	<MRL	
CAUSE OF DEATH	NA	YEAR	1968								
NEW CODE NO.	NA	KG	NA								

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			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER ORGAN WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER STANDARD ORGAN (DIS/MIN)
CASE NO.	4- 24	SEX M	LIVER	435.0	250	25	.060	.68	1.38	8.34
OCCUPATION	NA	AGE 28	LUNG	350.0	500	25	.017	<RL	<RL	
RESIDENT	NA	YEARS NA	GONAD	40.0	50	10	.011	<RL	<RL	
STATE	NEW YORK		RIB	190.0	250	10	.010	<RL	<RL	
CAUSE OF DEATH	AUTO ACCIDENT	YEAR 1948								
NEW CODE NO.	E825.0	RG NA								
CASE NO.	4- 28	SEX M	LIVER	310.0	250	25	.104	1.44	4.68	7.90
OCCUPATION	NA	AGE 27	LUNG	500.0	500	25	.011	<RL	<RL	
RESIDENT	NA	YEARS NA	GONAD	40.0	50	10	0.000	<RL	<RL	
STATE	NEW YORK		RIB	215.0	250	10	0.000	<RL	<RL	
CAUSE OF DEATH	AUTO ACCIDENT	YEAR 1948								
NEW CODE NO.	E825.0	RG NA								
CASE NO.	4- 30	SEX M	LIVER	470.0	250	25	.020	<RL	<RL	
OCCUPATION	NA	AGE 35	LUNG	435.0	500	25	.041	.42	1.89	1.89
RESIDENT	NA	YEARS NA	GONAD	30.0	50	10	.008	<RL	<RL	
STATE	NEW YORK		RIB	180.0	250	10	.141	3.52	19.58	137.08
CAUSE OF DEATH	GUN INJ HEAD	YEAR 1948								
NEW CODE NO.	E919.0	RG NA								
CASE NO.	4- 32	SEX M	LIVER	489.0	250	25	.058	.58	1.28	8.83
OCCUPATION	NA	AGE 58	LUNG	550.0	500	25	.014	<RL	<RL	
RESIDENT	NA	YEARS NA	GONAD	30.0	50	10	.005	<RL	<RL	
STATE	NEW YORK		RIB	435.0	500	10	0.000	<RL	<RL	
CAUSE OF DEATH	STAB WOUNDS	YEAR 1948								
NEW CODE NO.	E983.9	RG NA								
CASE NO.	4- 34	SEX M	LIVER	365.0	250	25	.033	.33	.99	1.54
OCCUPATION	NA	AGE 31	LUNG	785.0	500	25	.028	<RL	<RL	
RESIDENT	NA	YEARS NA	GONAD	42.0	50	10	.008	<RL	<RL	
STATE	NEW YORK		RIB	155.0	250	10	.002	<RL	<RL	
CAUSE OF DEATH	CHEST STAB WD	YEAR 1948								
NEW CODE NO.	861.1	RG NA								
CASE NO.	4- 36	SEX M	LIVER	350.0	250	25	.002	.02	2.34	3.98
OCCUPATION	NA	AGE 37	LUNG	340.0	250	25	.026	<RL	<RL	
RESIDENT	NA	YEARS NA	GONAD	38.0	50	10	.020	<RL	<RL	
STATE	NEW YORK		RIB	220.0	250	10	.005	<RL	<RL	
CAUSE OF DEATH	STAB WOUNDS	YEAR 1948								
NEW CODE NO.	869.0	RG NA								
CASE NO.	4- 38	SEX M	LIVER	285.0	100	25	.289	.84	2.93	4.99
OCCUPATION	NA	AGE 21	LUNG	630.0	500	25	.095	<RL	<RL	
RESIDENT	NA	YEARS NA	GONAD	49.0	50	10	0.000	<RL	<RL	
STATE	NEW YORK		RIB	220.0	250	10	.031	.77	3.52	26.66
CAUSE OF DEATH	AUTO ACCIDENT	YEAR 1948								
NEW CODE NO.	E825.0	RG NA								
CASE NO.	4- 40	SEX F	LIVER	270.0	100	25	.062	.25	.92	1.56
OCCUPATION	NA	AGE 22	LUNG	640.0	500	25	.011	<RL	<RL	
RESIDENT	NA	YEARS NA	GONAD	15.0	50	10	0.000	<RL	<RL	
STATE	NEW YORK		RIB	200.0	250	10	.010	<RL	<RL	
CAUSE OF DEATH	HEAD INJURIES	YEAR 1948								
NEW CODE NO.	E825.0	RG NA								
CASE NO.	4- 42	SEX M	LIVER	450.0	250	25	.077	.77	1.71	2.91
OCCUPATION	NA	AGE 66	LUNG	540.0	500	25	.012	<RL	<RL	
RESIDENT	NA	YEARS NA	GONAD	37.0	50	10	.003	<RL	<RL	
STATE	NEW YORK		RIB	270.0	250	10	.052	1.30	4.81	33.70
CAUSE OF DEATH	MYOCARDIAL HYPER	YEAR 1948								
NEW CODE NO.	444.5	RG NA								
CASE NO.	4- 44	SEX F	LIVER	480.0	250	25	.118	1.18	2.57	4.36
OCCUPATION	NA	AGE 22	LUNG	377.0	500	25	.034	.68	1.88	1.88
RESIDENT	NA	YEARS NA	GONAD	15.0	50	10	.057	.28	19.00	.76
STATE	NEW YORK		RIB	255.0	250	10	.040	1.00	3.92	27.45
CAUSE OF DEATH	STATUS ASTHMATIC	YEAR 1948								
NEW CODE NO.	241.0	RG NA								
CASE NO.	4- 46	SEX M	LIVER	540.0	250	25	.005	<RL	<RL	
OCCUPATION	NA	AGE 25	LUNG	395.0	500	25	.003	<RL	<RL	
RESIDENT	NA	YEARS NA	GONAD	35.0	50	10	.011	<RL	<RL	
STATE	NEW YORK		RIB	242.0	250	10	.105	4.02	19.11	133.78
CAUSE OF DEATH	MULTIPLE INJ	YEAR 1948								
NEW CODE NO.	E825.0	RG NA								
CASE NO.	4- 48	SEX M	LIVER	380.0	250	25	.057	.57	1.50	2.55
OCCUPATION	NA	AGE 37	LUNG	755.0	500	25	.025	<RL	<RL	
RESIDENT	NA	YEARS NA	GONAD	35.0	50	10	.018	<RL	<RL	
STATE	NEW YORK		RIB	230.0	250	10	.117	2.92	12.72	89.02
CAUSE OF DEATH	MULTIPLE INJ	YEAR 1948								
NEW CODE NO.	868.0	RG NA								

			TISSUE	WET WEIGHT SAMPLE (GRAM)	VOLUME OF SAMPLE (CC)	VOLUME SAMPLE ANALYZED (CC)	ACTIVITY PER VOL ANAL (DIS/MIN)	ACTIVITY PER GRAM WEIGHT (DIS/MIN)	ACTIVITY PER KG (DIS/MIN)	ACTIVITY PER SPECIFIC [illegible] (DIS/MIN)
CASE NO.	4- 54	SEX M	LIVER	3[illegible]	250	25	.051	.51	1.42	2.41
OCCUPATION	NA	AGE 41	LUNG	69[illegible]	900	25	.024	<MDL*	<MDL*	
RESIDENT	NA	YEARS AA	GONAD	50.0	50	10	.008	<MDL*	<MDL*	
STATE	NEW YORK		BIB	250.0	250	10	.018	<MDL*	<MDL*	
CAUSE OF DEATH	MULTIPLE INJ	YEAR 1944								
MEW CODE NO.	9[illegible]	FB NA								

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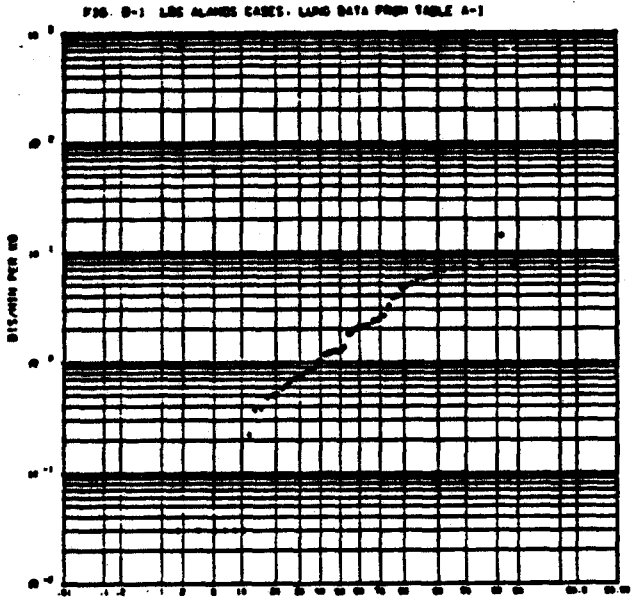
APPENDIX B

CUMULATIVE FREQUENCY DISTRIBUTIONS

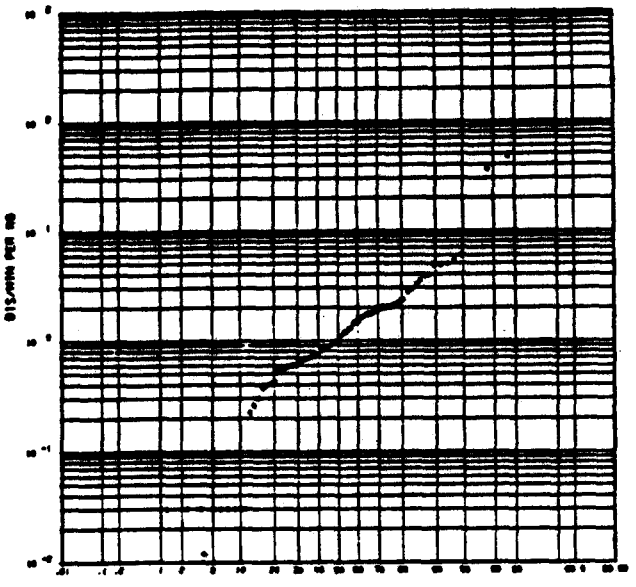
FIG. B-1 LOS ALAMOS CASES. LUNG DATA FROM TABLE A-I



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN LUNG TISSUE CONCENTRATION PER KG
NO OF CASES = 67 MEDIAN = 1.3 5TH AND 95 PERCENTILE = 0.1 - 10.0

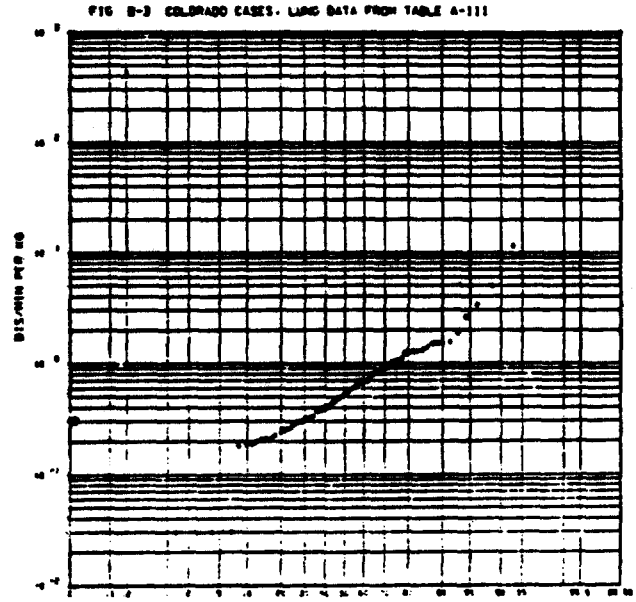
FIG B-2 NEW MEXICO AND OTHER AREAS. LUNG DATA FROM TABLE A-II



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN LUNG TISSUE CONCENTRATION PER KG
NO OF CASES = 96 MEDIAN = 1.0 5TH AND 95 PERCENTILE = 0.1 - 7.0

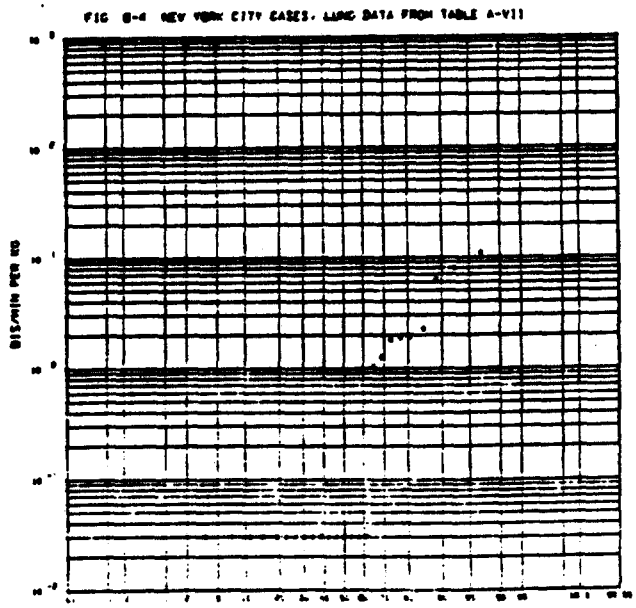
FIG B-3 COLORADO CASES. LUNG DATA FROM TABLE A-III



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN LUNG TISSUE CONCENTRATION PER KG
NO OF CASES = 64 MEDIAN = 2.6 5TH AND 95 PERCENTILE = 0.1 - 2.0

FIG B-4 NEW YORK CITY CASES. LUNG DATA FROM TABLE A-VII

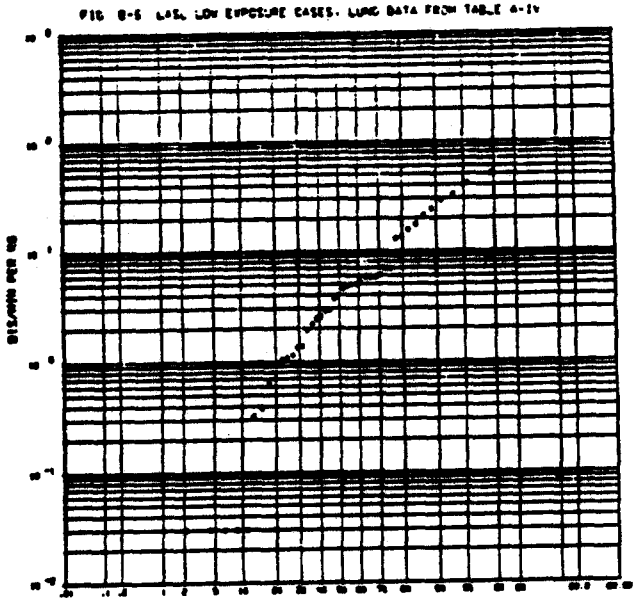


CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN LUNG TISSUE CONCENTRATION PER KG
NO OF CASES = 24 MEDIAN = 0.8 5TH AND 95 PERCENTILE = 0.1 - 10.0

LANL

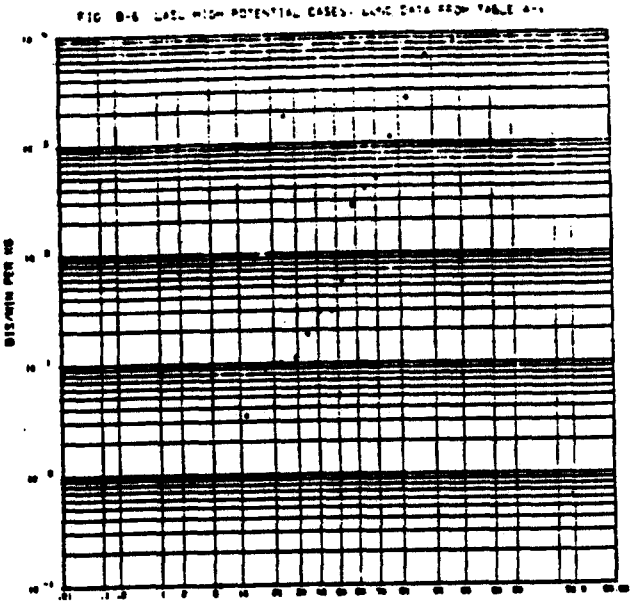
FIG 8-5 LASL LOW EXPOSURE CASES. LUNG DATA FROM TABLE A-IV



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN LUNG TISSUE CONCENTRATION PER KG
NO OF CASES = 44 MEDIAN = 4.0 5TH AND 95 PERCENTILE = 0.1 100.0

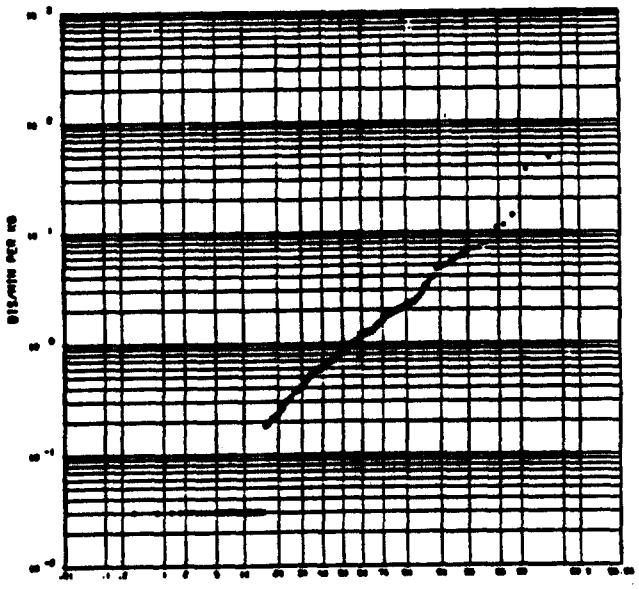
FIG 8-6 LASL HIGH POTENTIAL CASES. LUNG DATA FROM TABLE A-V



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN LUNG TISSUE CONCENTRATION PER KG
NO OF CASES = 16 MEDIAN = 100.0 5TH AND 95 PERCENTILE = 1.0 8.1E+04

FIG 8-7 GENERAL CASES. LUNG DATA TABLES A-I,A-II,A-III,A-VII



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN LUNG TISSUE CONCENTRATION PER KG
NO OF CASES = 217 MEDIAN = 2.0 5TH AND 95 PERCENTILE = 0.1 8.0

LANL

FIG 8-8 LOS ALAMOS CASES. LIVER DATA FROM TABLE A-I

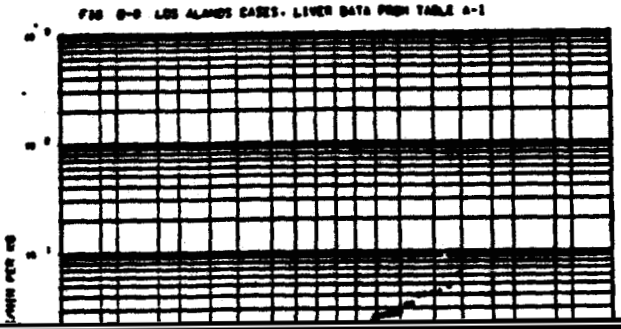


FIG 8-9 NEW MEXICO AND OTHER AREAS. LIVER DATA FROM TABLE A-II

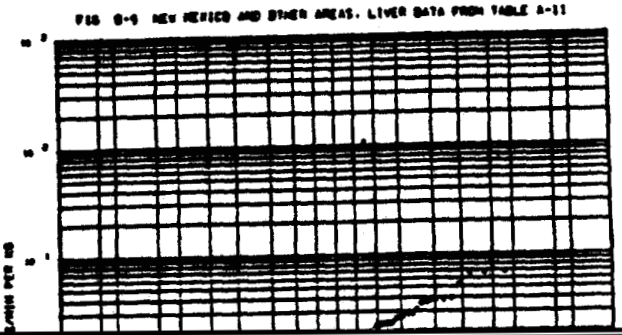
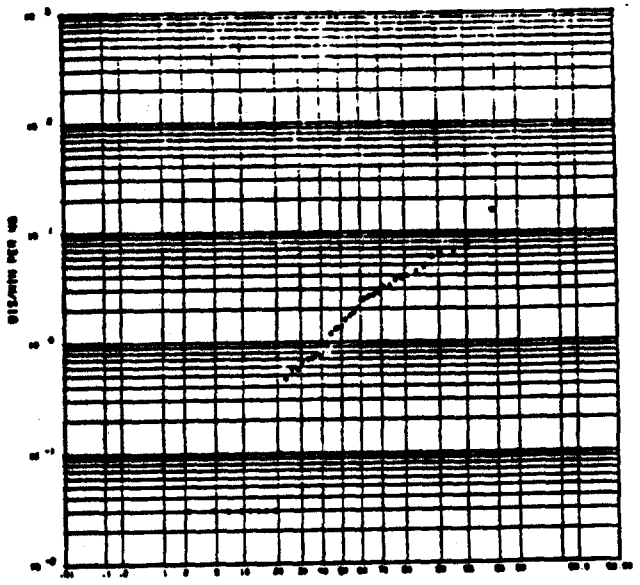
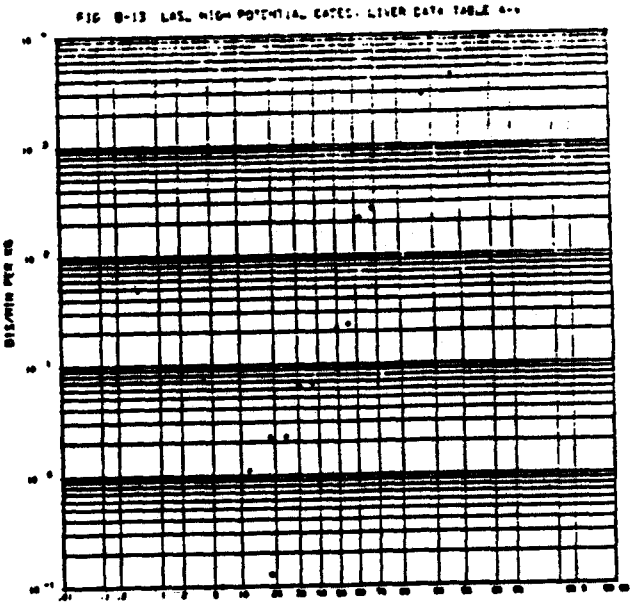


FIG B-12 LASL LOW EXPOSURE CASES. LIVER DATA FROM TABLE A-IV



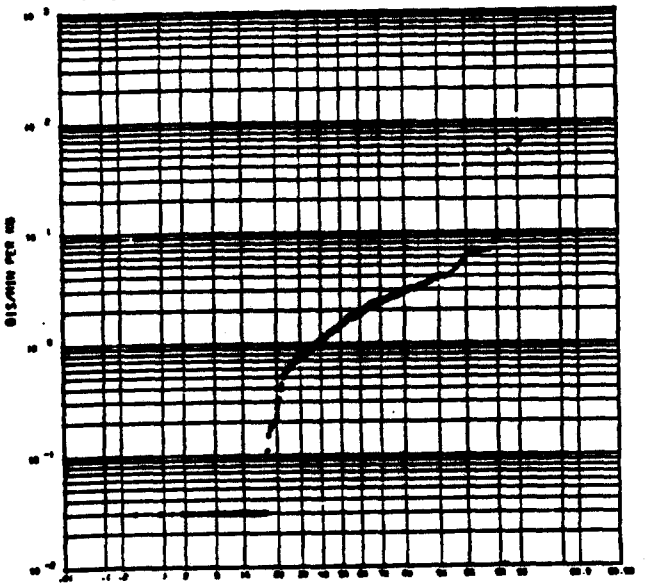
CUMULATIVE FREQUENCY IN PERCENT
LOG-PROBABILITY PLOT OF PU IN LIVER TISSUE. CONCENTRATION PER KG
NO OF CASES = 41 MEDIAN = 1.0 5TH AND 95 PERCENTILE = 0.1, 10.0

FIG B-13 LASL HIGH POTENTIAL CASES. LIVER DATA TABLE A-



CUMULATIVE FREQUENCY IN PERCENT
LOG-PROBABILITY PLOT OF PU IN LIVER TISSUE. CONCENTRATION PER KG
NO OF CASES = 16 MEDIAN = 100.0 5TH AND 95 PERCENTILE = 1.0.1E+04

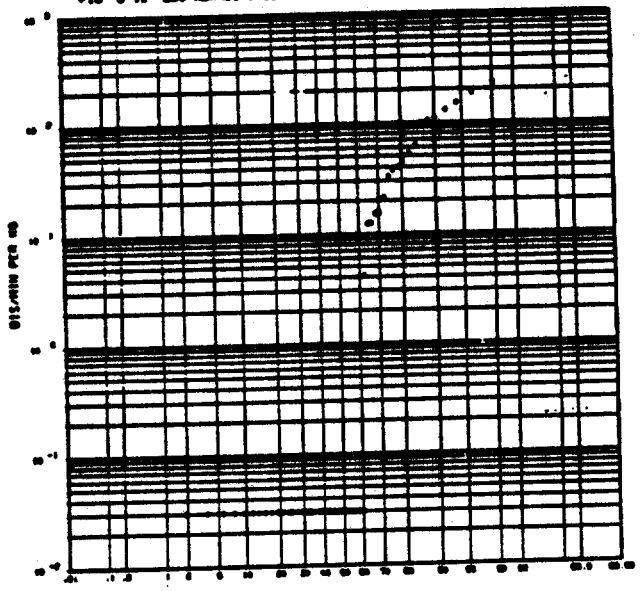
FIG B-14 GENERAL CASES. LIVER DATA TABLES A-I,A-II,A-III,A-VII



CUMULATIVE FREQUENCY IN PERCENT
LOG-PROBABILITY PLOT OF PU IN LIVER TISSUE. CONCENTRATION PER KG
NO OF CASES = 217 MEDIAN = 1.4 5TH AND 95 PERCENTILE = 0.3. 6.0

LANL

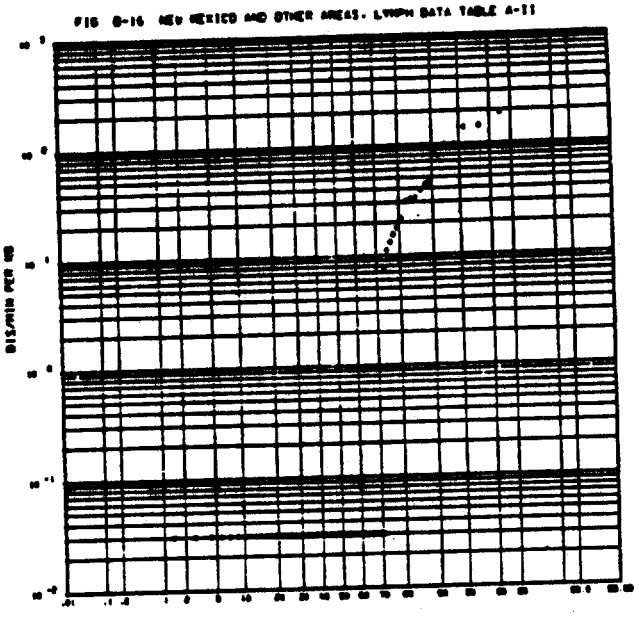
FIG 8-15 LOS ALAMOS CASES. LYMPH NODE DATA FROM TABLE A-I



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF Pu IN LYMPH NODE TISSUE, CONCENTRATION PER KG
NO OF CASES = 62 MEDIAN = 6.0 61% AND 95 PERCENTILE = 0 1,200.0

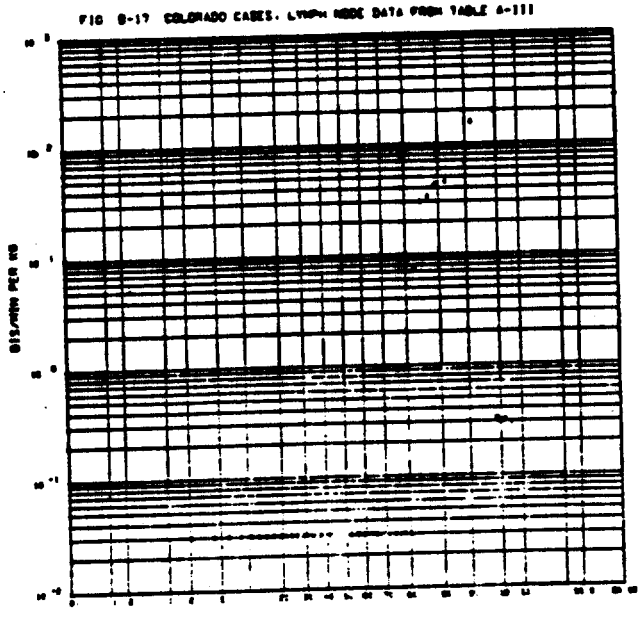
FIG 8-16 NEW MEXICO AND OTHER AREAS. LYMPH DATA TABLE A-II



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF Pu IN LYMPH NODE TISSUE, CONCENTRATION PER KG
NO OF CASES = 66 MEDIAN = 4.0 61% AND 95 PERCENTILE = 0 1,100.0

FIG 8-17 COLORADO CASES. LYMPH NODE DATA FROM TABLE A-III



LOG-PROBABILITY PLOT OF [illegible]
NO OF CASES = 46 MEDIAN = 2.0 61% AND 95 PERCENTILE = 0 1,100.0

LANL

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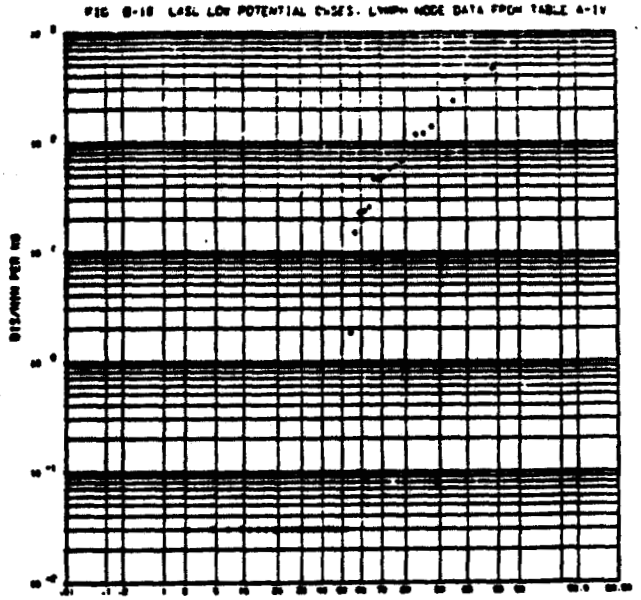
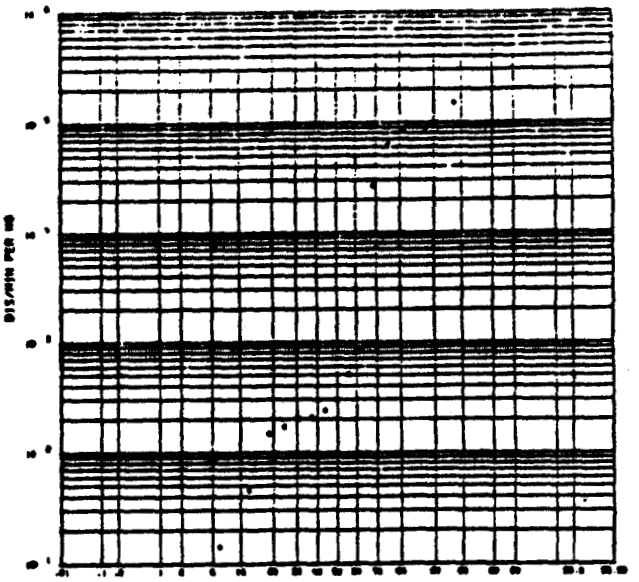
FIG 8-18 LASL LOW POTENTIAL CASES. LYMPH NODE DATA FROM TABLE A-IV



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN LYMPH NODE TISSUE,CONCENTRATION PER KG
NO OF CASES = 42 MEDIAN = 16 0 5TH AND 95 PERCENTILE = 0 6.400 0

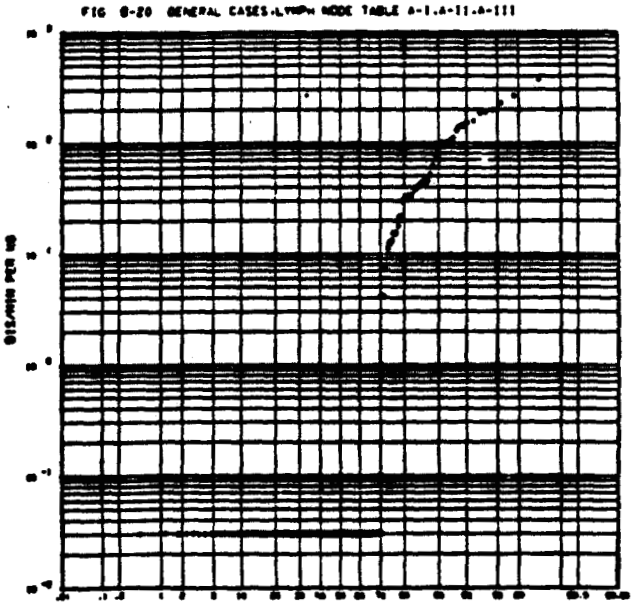
FIG 8-19 LASL HIGH POTENTIAL CASES. LYMPH NODE DATA TABLE A-V



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN LYMPH NODE TISSUE,CONCENTRATION PER KG
NO OF CASES = 14 MEDIAN = 700 0 5TH AND 95 PERCENTILE = 0 1.1E+06

FIG 8-20 GENERAL CASES.LYMPH NODE TABLE A-I.A-II.A-III

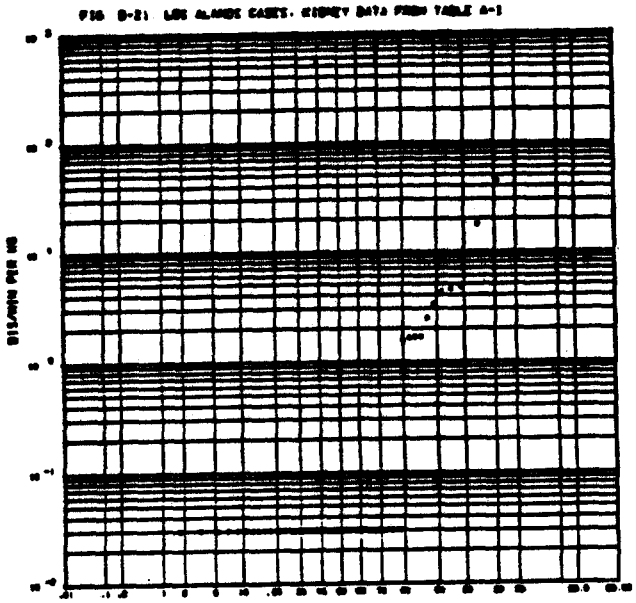


CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN LYMPH NODE TISSUE,CONCENTRATION PER KG
NO OF CASES = 164 MEDIAN = 3 0 5TH AND 95 PERCENTILE = 0 1. 200 0

LANL

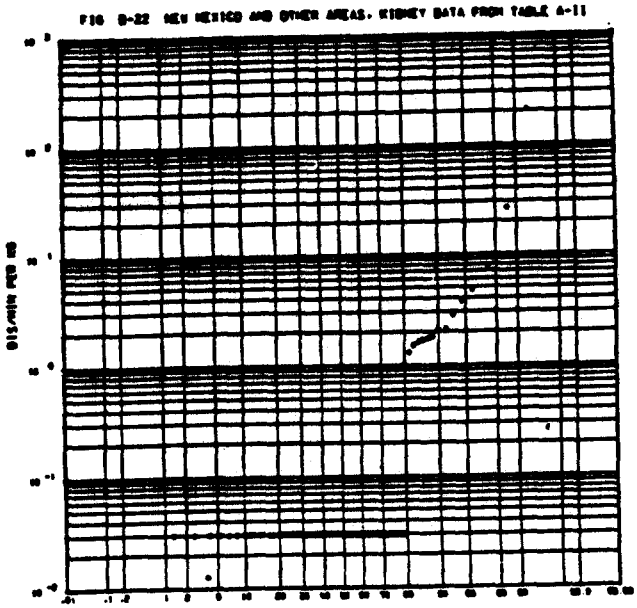
FIG 8-21 LOS ALAMOS CASES. KIDNEY DATA FROM TABLE A-I



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN KIDNEY TISSUE. CONCENTRATION PER KG
NO OF CASES = 64 MEDIAN = 0.1 5TH AND 95 PERCENTILE = 0.01, 10.0

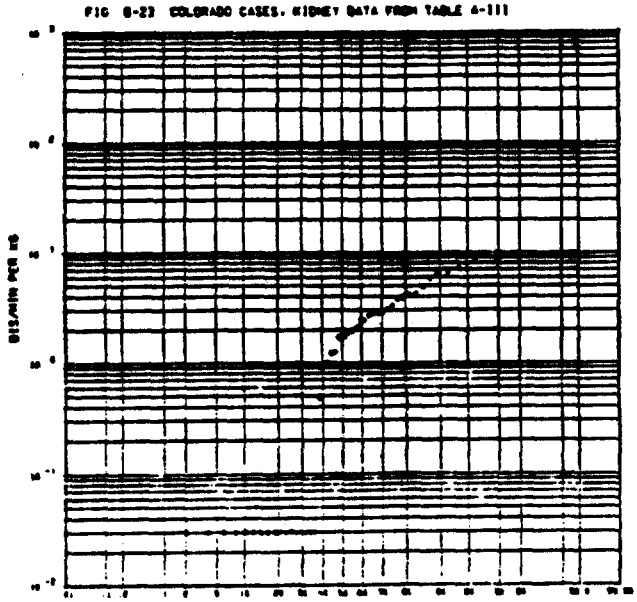
FIG 8-22 NEW MEXICO AND OTHER AREAS. KIDNEY DATA FROM TABLE A-II



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN KIDNEY TISSUE. CONCENTRATION PER KG
NO OF CASES = 66 MEDIAN = 0.2 5TH AND 95 PERCENTILE = 0.01, 6.0

FIG 8-23 COLORADO CASES. KIDNEY DATA FROM TABLE A-III

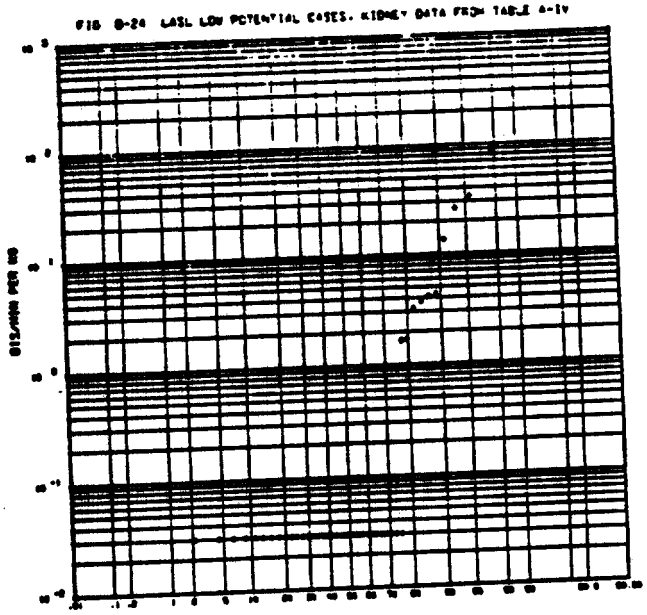


CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN KIDNEY TISSUE. CONCENTRATION PER KG
NO OF CASES = 66 MEDIAN = 1.6 5TH AND 95 PERCENTILE = 0.2, 8.0

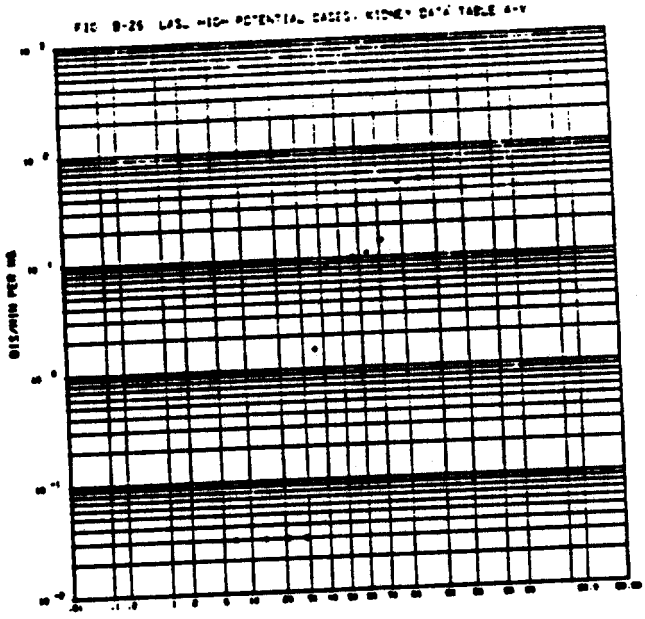
LANL

FIG B-24 LASL LOW POTENTIAL CASES. KIDNEY DATA FROM TABLE A-IV



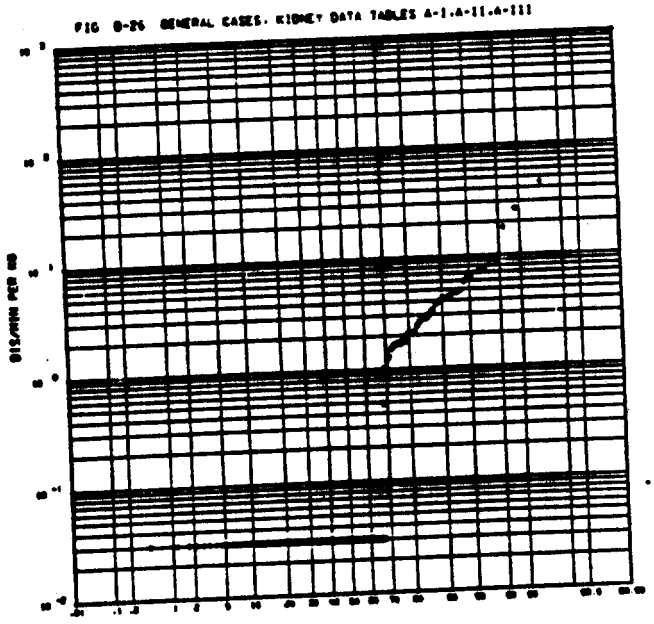
CUMULATIVE FREQUENCY IN PERCENT
LOG-PROBABILITY PLOT OF PU IN KIDNEY TISSUE, CONCENTRATION PER KG
NO OF CASES = 42 MEDIAN = 0 1 5TH AND 95 PERCENTILE = 0 01, 20 0

FIG B-25 LASL HIGH POTENTIAL CASES. KIDNEY DATA TABLE A-V



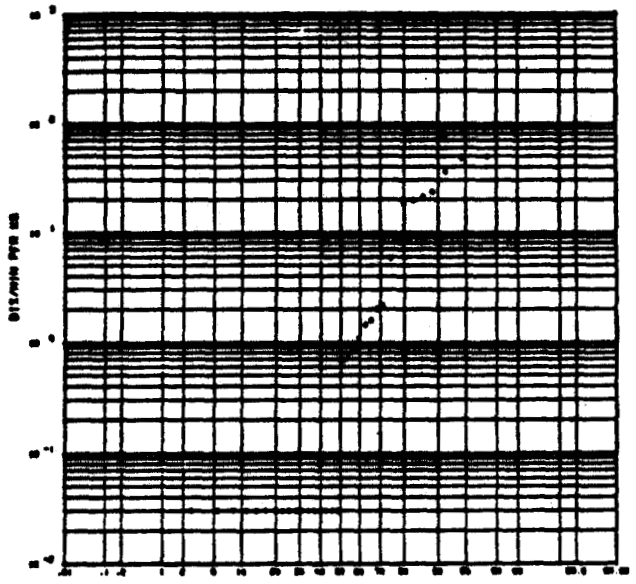
CUMULATIVE FREQUENCY IN PERCENT
LOG-PROBABILITY PLOT OF PU IN KIDNEY TISSUE, CONCENTRATION PER KG
NO OF CASES = 13 MEDIAN = 10 00 5TH AND 95 PERCENTILE = 0 01, 100 0

FIG B-26 GENERAL CASES. KIDNEY DATA TABLES A-I,A-II,A-III



CUMULATIVE FREQUENCY IN PERCENT
LOG-PROBABILITY PLOT OF PU IN KIDNEY TISSUE, CONCENTRATION PER KG
NO OF CASES = 163 MEDIAN = 0 6 5TH AND 95 PERCENTILE = 0 06, 6 0

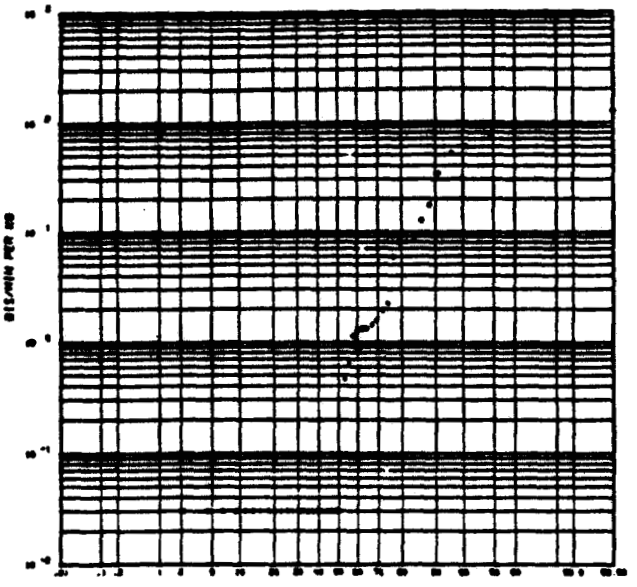
FIG 8-27. LOS ALAMOS CASES. BONE DATA FROM TABLE A-I



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN BONE - CONCENTRATION PER KG
NO OF CASES = 35 MEDIAN = 0 6 5TH AND 95 PERCENTILE = 0 01-60 0

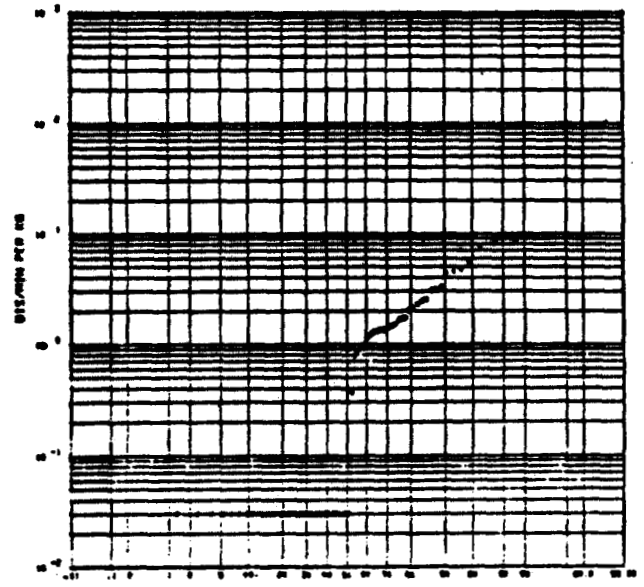
FIG 8-28 NEW MEXICO AND OTHER AREAS. BONE DATA FROM TABLE A-II



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN BONE - CONCENTRATION PER KG
NO OF CASES = 41 MEDIAN = 0 6 5TH AND 95 PERCENTILE = 0 01-50 0

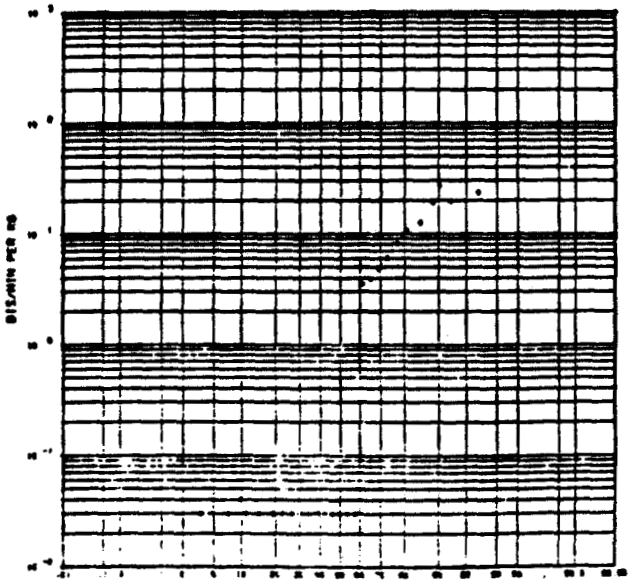
FIG 8-29 COLORADO CASES. BONE DATA FROM TABLE A-III



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF [illegible]
NO OF CASES = 66 MEDIAN = 0 9 5TH AND 95 PERCENTILE = 0 1- 6 0

FIG 8-30 NEW YORK CITY CASES. BONE DATA FROM TABLE A-VII

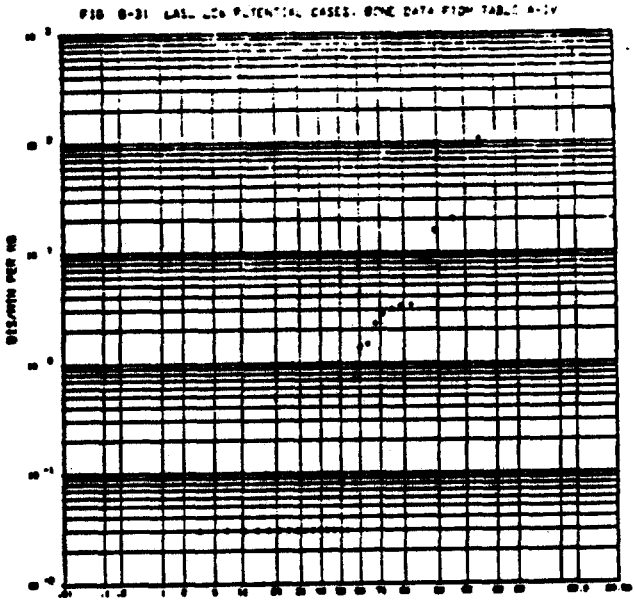


CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF [illegible]
NO OF CASES = 26 MEDIAN = 2 0 5TH AND 95 PERCENTILE = 0 1- 30 0

LANL

FIG 8-31 LASL LOW POTENTIAL CASES. BONE DATA FROM TABLE A-IV

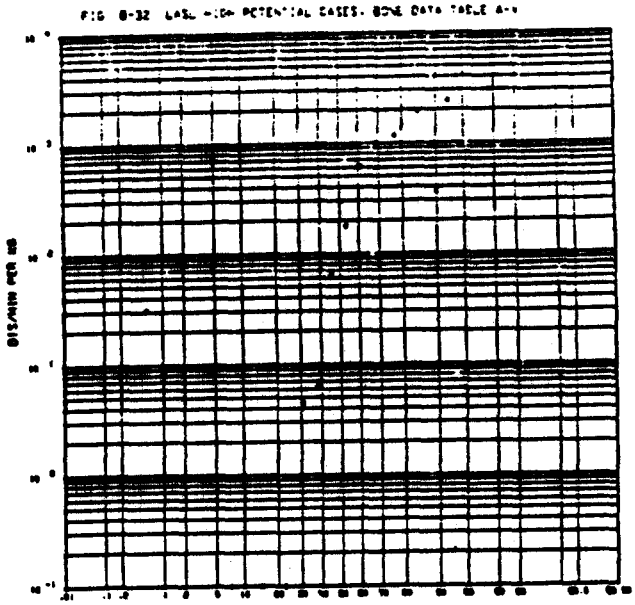


DISMIN PER KG

CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN BONE TISSUE CONCENTRATION PER KG
NO OF CASES = 25 MEDIAN = 0.2 5TH AND 95 PERCENTILE = 0 81.30 0

FIG 8-32 LASL HIGH POTENTIAL CASES. BONE DATA TABLE A-V

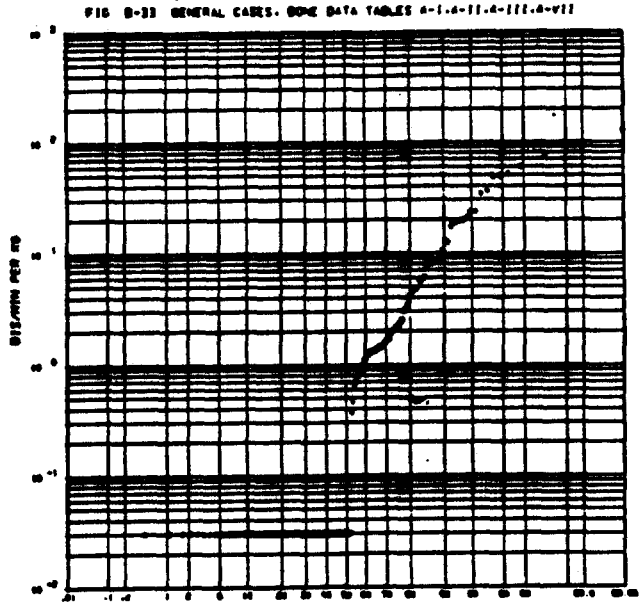


DISMIN PER KG

CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN BONE TISSUE CONCENTRATION PER KG
NO OF CASES = 11 MEDIAN = 60 0 5TH AND 95 PERCENTILE = 0 1.3E+04

FIG 8-33 GENERAL CASES. BONE DATA TABLES A-I,A-II,A-III,A-VII



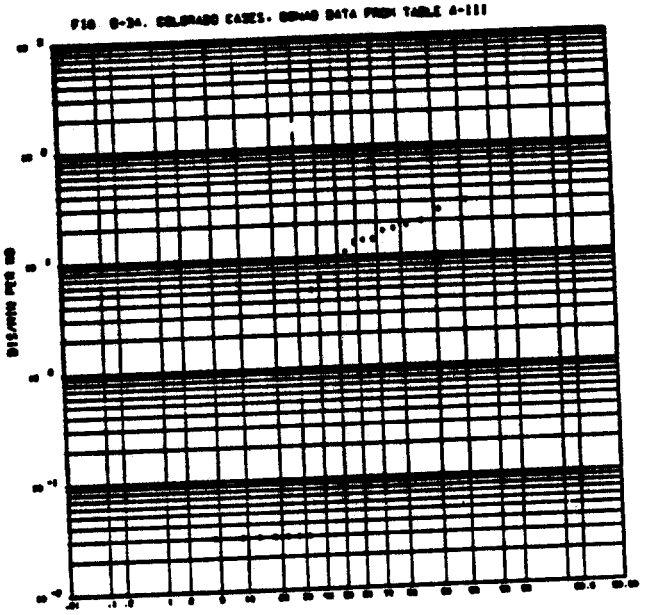
DISMIN PER KG

CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN BONE CONCENTRATION PER KG
NO OF CASES = 166 MEDIAN = 0 6 5TH AND 95 PERCENTILE = 0 62. 20 0

LANL

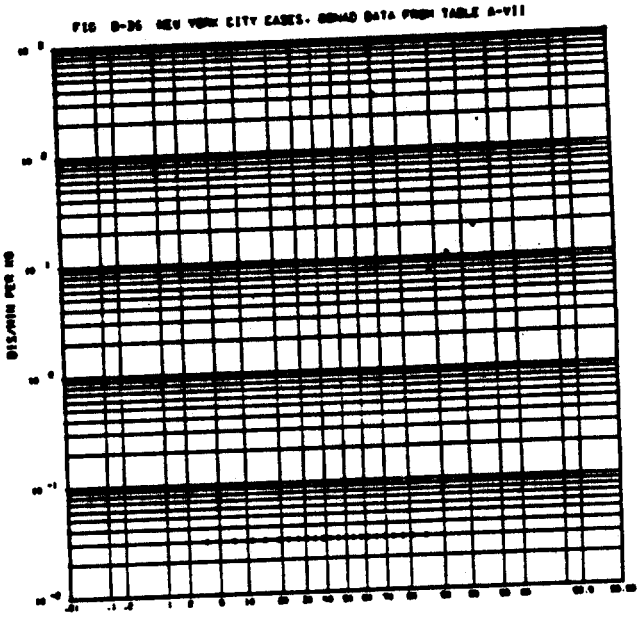
FIG 8-34. COLORADO CASES. GONAD DATA FROM TABLE A-III



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN GONAD TISSUE, CONCENTRATION PER KG
NO OF CASES = 23 MEDIAN = 10.0 5TH AND 95 PERCENTILE = 2.0, 30.0

FIG 8-35 NEW YORK CITY CASES. GONAD DATA FROM TABLE A-VII



CUMULATIVE FREQUENCY IN PERCENT

LOG-PROBABILITY PLOT OF PU IN GONAD TISSUE, CONCENTRATION PER KG
NO OF CASES = 26 MEDIAN = 1.0 5TH AND 95 PERCENTILE = 0.07,10.0

LANL

APPENDIX C

SUMMARY TABLES

TABLE C-I

50TH PERCENTILE DISTRIBUTION OF PLUTONIUM IN HUMAN TISSUE

	Plutonium Disintegrations per Minute per Kilogram					
Nonoccupationally Exposed	Lung	Liver	Lymph Node	Kidney	Bone	Gonad
Los Alamos	1.3(57)[a]	1.1(58)	5.0(52)	0.1(54)	0.4(35)	[b]
New Mexico & U. S.	1.0(76)	0.9(73)	4.0(66)	0.2(66)	0.5(41)	[b]
Colorado	0.5(66)	1.7(60)	2.0(46)	1.4(45)	0.9(65)	10.0(23)
New York	0.4(26)	1.7(26)	[b]	[b]	2.0(25)	1.0(26)
All Populations	0.8(217)	1.4(217)	3.0(164)	0.6(163)	0.6(166)	[b]
Occupationally Exposed[c]						
Potential	4.0(44)	1.0(41)	15.0(42)	0.1(42)	0.3(25)	[b]
High Potential	100.0(15)	100.0(15)	700.0(14)	10.0(13)	50.0(11)	[b]

[a](n) number of samples.
[b]Samples not requested.
[c]Data cannot be compared as a group because of differences in type and duration of exposure.

TABLE C-II

SUMMARY OF PLUTONIUM IN HUMAN TISSUE ESTIMATED FROM LOG-PROBABILITY PLOTS OF CONCENTRATION PER kg OF TISSUE

Population	Tissue	Median (dis/min/kg)	5th to 95th Percentile of Results (dis/min/kg)
General	Lung	0.8	0.1 to 8.0
Low-Potential		4.0	0.1 to 80.0
High-Potential		100.0	1.0 to 1×10^4
General	Liver	1.4	0.3 to 5.0
Low-Potential		1.0	0.1 to 10.0
High Potential		100.0	0.1 to 1×10^4
General	Lymph Node	3.0	0.1 to 200.0
Low-Potential		15.0	0.6 to 400.0
High-Potential		700.0	0.1 to 1×10^6
General	Kidney	0.6	0.05 to 6.0
Low-Potential		0.1	0.01 to 20.0
High-Potential		1.0	0.01 to 100.0
General	Bone	0.6	0.02 to 20.0
Low-Potential		0.2	0.03 to 30.0
High-Potential		30.0	0.6 to 1×10^4

KT:1162(940)

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